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Editorial

Information Management and Business Review (IMBR) provides a digital forum for researchers to share their knowledge and publish research work in the fields of information management, business, management and related disciplines. The work submitted for publication consideration in IMBR should address empirical and theoretical developments in the subjects related to the scope of the journal in particular and allied theories and practices in general. Author(s) should declare that work submitted to the journal is original, not under consideration for publication by another journal and that all listed authors approve its submission to IMBR. It is IMBR policy to welcome submissions for consideration, which are original, and not under consideration for publication by another journal at the same time. Author (s) can submit: Research Paper, Conceptual Paper, Case Studies and Book Review. The current issue of IMBR is comprises papers of scholars from different universities of Malaysia, Indonesia, China and Oman. Strategies For Sustainable Sports Events, Conceptual Discussion Related to Festival Events, Bibliometric Analysis of Cultural Event Publications, Developing a Predictive Model of Crowd Behavior at Music Concerts and Festivals, Unveiling the Transformative Influence of Sponsorship on Event Excellence, Crisis Management Research in the MICE Industry, Bibliometrics Analysis of Event Management in the Digital Era, Study on Designing Successful Hybrid Events, Event Bidding Success Factors of Business Events, Augmented Reality Gaming Experience, Systematic Visual Documentation of the Tribe's Cultural Practices, Symbolic Interpretations of Mah Meri Visual Art, Impact of Eco-Friendly Perceptions on Festival Attendees' Decision-Making, Event Volunteer Motivation Towards Intention to Volunteer, Volunteer Motivation and Satisfaction in Sports Events, Community-Based Tourism Event Attraction, contributing factors of virtual event quality, Cultural Event Typology, Cultural Event Development Model for Quality Improvement of Tourism Event, Role of Management Control System in Mitigating Corruption, Understanding AI Technology Adoption in Educational Settings, Challenges in Adopting Electric Buses, Role of Film in Shaping Travel Intentions and Destination Choices, Predicting Consumer Behavior in E-Commerce Using Decision Tree, Counterfeit Cosmetics Perception Among Muslim Government Servants, Study Examining the Customer Service Experience, Employability of Students Studying Records Management, Enhancing Athletic Well-Being, Consumer Acceptance of Robotic Waiters in Restaurants, Influence of Sustainability Reporting in Enhancing Firm Value, Self-Efficacy and Self-Regulated Learning on Satisfaction and Academic Performance, Money Laundering, Determinants of Supply Chain Performance, Issues and Challenges of Online Counseling Services, Accountants on Environment, Social and Governance (ESG) Standards and Finance Digitalization, Foreign Direct Investment Intentions of Investors, Influence of Perceived Risk on the Performance of the Entrepreneur, Share Price Behavior of the IPO Surrounding the Expiration of the Lockup Period, Influence of Short Travel Reels and Video Reviews on Travel Inspiration, Developing Madrasah Tourism Experience Model, Needs and Readiness of the Islamic Banks to Adopt the Comprehensive Islamic Accounting Standards, Food and Service Quality Influence Customer Satisfaction, Factors Influencing Audit Career Choice, Mitigating Negligence in Regulatory Enforcement, Impact of Technological Advancements on Tax Compliance, Exploring Education Beyond the Classroom, Accounting Internship, Antecedent of Life Insurance Penetration, Impact of Turnaround Strategies on SME Performance, Board Size and Corporate Performance in the Industrial Property Sector, Exploring Stress Coping Strategies for Mental Well-Being, Impact of Workplace Interventions on Employee Stress Management, Leadership Soft Skills, Perceived Trustworthiness and Structural Empowerment and Influence of Proactive Personality, Social Support, Self-Esteem Towards Career Adaptability, Impact of Self-Efficacy on Performance Management, Customer Experience Rating for Achieving Loyalty & Satisfaction, Adoption of Green Practices in the Manufacturing Industry, Use and Adoption of Website and Social Media Marketing, Factors Influencing Work-Life Balance, Representation of Women in Online Resources, Competency-Based Framework Development and Implementation, Issue of Geotourism Destinations, Factors Influencing Innovative Work Behavior, Antecedent of Event Management Intention, Exploration of Social Media's Impact on SMEs Performance, Determinants Affecting the Acceptance of Cashless Payment, Impact of Citizen Journalism via Social Media, Factors Influencing Automotive Lubricant Consumer Purchasing Behavior, Motivation in Learning and Happiness and Acceptance of AI in Mobile Health Apps are some of the major practices and concepts examined in these studies. All the submitted papers were first assessed by the journal committee and then the external editorial team for relevance and originality of the work and then blindly peer-reviewed by external reviewers depending on the subject matter of the paper. After the rigorous peer-review process, the submitted papers were selected based on originality, significance and clarity of the purpose. The special issue will therefore be a unique proposition, where scholars will be able to appreciate the latest results in their field of expertise and to acquire additional knowledge in other relevant fields.

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PAPERS

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Strategies For Sustainable Sports Events: Understanding the Stakeholders Challenge for Collaboration

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Abstract: Ensuring sustainability in sports events is a complex challenge wherein stakeholders play a pivotal role. This study synthesizes existing literature to comprehensively explore the multifaceted dynamics of stakeholder collaboration in sustainable sports events. The diverse interests and goals among stakeholders, identified as a primary challenge, underscore the complexity of achieving sustainability. Drawing on insights, this study emphasizes the need for a shared vision to align stakeholders and mitigate conflicts arising from disparate priorities. Communication and coordination issues are critical challenges, necessitating transparent, two-way communication channels to build trust and enhance collaboration. Power dynamics pose another significant challenge, emphasizing the importance of balancing power among stakeholders to ensure fairness and inclusivity. Long-term engagement requires continuous engagement, collaborative decision-making, and ongoing communication to sustain stakeholders' interest throughout the event's lifecycle. Social inclusivity contributes to the legacy of sustainable sports events, fostering social cohesion, cultural exchange, and promoting human rights. This study aims to provide nuanced insights into stakeholder collaboration challenges, offering practical strategies for event organizers and contributing to ongoing discourse on sustainable sports event outcomes.

Keywords: *Stakeholder collaboration, sustainable sports events, communication issues, power dynamics, long-term engagement, social inclusivity.*

1. Introduction and Background

In the realm of sports events, ensuring sustainability poses a significant challenge, with stakeholders being pivotal in this endeavor (Mair & Smith, 2021; Todd et al., 2017) These stakeholders, involved in organizing and supporting events, play a crucial role in making them not only exciting but also environmentally and socially responsible (Todd et al., 2017). This diverse group includes sponsors and local communities, each with their own ideas and goals (Lau et al., 2017). Sponsors may prioritize attention and profits, while local communities focus on the event's impact on their area. Despite differences, there's an opportunity for everyone to find common ground and work towards shared goals (Wondirad et al., 2020). Effective communication is vital when different people collaborate. Achieving a shared understanding can be challenging, emphasizing the need for clear and open communication to build trust, manage expectations, and enhance mutual understanding (Wondirad et al., 2020). Communication acts as a bridge, connecting everyone involved and smoothing collaboration. Power dynamics come into play in collaboration, influencing decisions and resource allocation (Towner, 2018). Imbalances can lead to problems, making it crucial to balance power among stakeholders to ensure fairness and equal participation (Tiew et al., 2015). In this collaborative initiative, inclusion is a key theme, ensuring that everyone, from athletes to marginalized groups, feels part of the event (Nyanjom et al., 2018). Including diverse voices enriches events and fosters a sense of belonging. This study aims to understand challenges in stakeholder collaboration for creating sustainable sports events. By consolidating relevant literature, the study aims to identify practical strategies and suggestions derived from past research, highlighting the inherent complexities and nuances within these collaborations. A comprehensive understanding provides valuable insights into historical challenges, guiding the current landscape and informing strategic interventions for future research endeavors.

2. Literature Review

The literature review delves into the intricate landscape of stakeholder collaboration in sustainable sports events, acknowledging its pivotal role in achieving long-term viability and positive impacts. Addressing the challenges inherent in this collaboration, we explore diverse interests and goals among stakeholders, emphasizing the complexity arising from conflicting priorities. The subsequent discussion on communication and coordination issues underscores their significance in fostering effective collaboration, with an emphasis on transparent, two-way communication channels as essential tools. The exploration of power dynamics sheds light on the potential imbalances that may impact decision-making and overall sustainability goals, necessitating a focus on fairness and inclusivity. Long-term engagement emerges as a crucial consideration, highlighting strategies to sustain stakeholder interest throughout the event's lifecycle. Additionally, the literature review explores the transformative potential of social inclusivity, promoting diversity, and fostering a sense of unity. By synthesizing these key elements, the literature review provides a comprehensive understanding of stakeholder collaboration challenges, paving the way for strategic interventions in sustainable sports events.

Diverse interests and Goals between stakeholders: Leopkey and Parent (2015) has suggested stakeholders in sports events often have diverse interests and goals, which can lead to conflicts. As noted by Leopkey and Parent, (2015), these differences in priorities among stakeholders pose a significant challenge to achieving sustainability in sports events. Sustainable sports events involve a spectrum of stakeholders, including sponsors, local communities, event organizers, and governmental bodies, each driven by diverse interests (Leopkey & Parent, 2015). Sponsors often seek visibility and a return on investment, emphasizing the commercial aspects of the event. In contrast, local communities may prioritize the social and environmental impacts, seeking positive contributions to their well-being and the environment. The coexistence of these varied interests adds layers of complexity to the collaboration dynamics. Achieving sustainability requires a delicate balancing act, as stakeholders' disparate goals may initially seem incompatible (Parent, 2016). For instance, sponsors focusing on branding and financial returns may inadvertently overlook the potential social and environmental repercussions of the event. Conversely, community groups may perceive certain sponsor interests as conflicting with the event's broader sustainability objectives.

One strategic approach to address these divergent interests is to create a shared vision (Parent, 2016). This involves identifying common goals and values that align stakeholders toward a unified purpose. By fostering a shared understanding of the event's sustainability objectives, stakeholders are more likely to transcend their interests and work collaboratively towards a mutually beneficial outcome. Leopkey and Parent, (2015) posit that the process of aligning interests and values is instrumental in bridging gaps between stakeholders. Identifying areas of convergence facilitates the development of a collective vision for sustainability, mitigating potential conflicts arising from divergent priorities. This shared vision becomes a guiding force, promoting a sense of ownership and commitment among stakeholders, which is pivotal for successful collaboration.

Communication and coordination issues among stakeholders: Abdullah et al., (2016) and Towner (2018) has suggested one of the most common challenges is communication and coordination among stakeholders. Miscommunication or lack of coordination can lead to inefficiencies and conflicts among stakeholders. Effective communication is identified as a linchpin for successful collaboration in sustainable sports events (Parent et al., 2015) The multifaceted nature of sports events, involving various stakeholders such as organizers, sponsors, local communities, and governmental bodies, necessitates seamless communication channels. Miscommunication or a lack of coordination can lead to inefficiencies, and conflicts, and, ultimately, compromise the sustainability goals of the event.

Transparent and two-way communication is particularly emphasized as a means to build trust and manage expectations (Parent, 2016). Trust is foundational in collaborative efforts, and transparent communication contributes significantly to its development. Regular and open communication channels foster trust among stakeholders, creating an environment conducive to effective collaboration. It also helps in resolving conflicts promptly, preventing them from escalating and jeopardizing the overall success of the sports event.

Transparent communication not only builds trust but also enhances the efficiency and effectiveness of the

event management process (Parent, 2016). Well-informed stakeholders are more likely to align their actions with the broader sustainability goals. Regular updates on progress, challenges, and successes foster a sense of collective responsibility, contributing to a more coordinated and impactful sports event.

3. Power Dynamic Challenges in Stakeholder Collaboration for Sustainable Sports Events

Navigating power dynamics is a crucial aspect of stakeholder collaboration in sustainable sports events. (Abdullah et al., 2016; Tiew et al., 2015) highlight that imbalances in influence among stakeholders can lead to unequal distribution of benefits and decision-making power, posing challenges to the event's overall sustainability objectives. Power dynamics can result in certain stakeholders exerting more influence over the event, leading to an unequal distribution of benefits (Tiew et al., 2015). This inequality may manifest in terms of financial gains, marketing opportunities, or decision-making authority. For instance, sponsors or major financial contributors may hold significant sway, potentially overshadowing the interests of local communities or environmental groups.

The unequal distribution of power can significantly impact decision-making processes related to sustainability initiatives. Stakeholders with more influence may prioritize aspects that align with their interests, potentially sidelining broader sustainability objectives. For instance, decisions related to environmental conservation efforts, social inclusivity, or economic development may be skewed in favor of powerful stakeholders' preferences. Abdullah et al., (2016) propose that balancing power among stakeholders is crucial for effective collaboration in sustainable sports events. This involves ensuring that all stakeholders, regardless of their influence or financial contributions, have a voice in decision-making processes. Balancing power is not only an ethical imperative but also a practical strategy to prevent the domination of powerful stakeholders, ensuring a more equitable and inclusive event management process. Abdullah et al., (2016) further emphasize the importance of promoting fairness and inclusivity in power dynamics. By actively involving diverse stakeholders in decision-making processes, event organizers can ensure that the benefits of the sports event are distributed equitably. This approach contributes not only to the ethical conduct of the event but also enhances its overall sustainability.

Social Inclusivity in Stakeholder Collaboration for Sustainable Sports Events: Stakeholder collaboration can also promote social inclusivity. By involving diverse stakeholders such as local communities, athletes, fans, and marginalized groups, sports events can become more inclusive and accessible thus producing promising sustainable sports events. This can enhance social cohesion, cultural exchange, and the promotion of human rights (Ziakas, 2012, 2015). Social inclusivity fosters social cohesion by bringing together individuals from diverse backgrounds (Cicognani et al., 2020). When local communities, athletes, and fans feel included in the event, it creates a sense of unity and shared experience. This inclusive atmosphere contributes to the overall success of the sports event and enhances the positive impact it can have on society. The involvement of diverse stakeholders in sustainable sports events facilitates cultural exchange (Cicognani et al., 2020; Ranasinghe & Pradeepamali, 2019). Cultural inclusivity allows for the celebration and recognition of different cultural backgrounds and traditions. This promotes mutual understanding and appreciation among stakeholders, contributing to a richer and more meaningful event experience. Social inclusivity in sports events aligns with the promotion of human rights (Misener & Mason, 2006). By actively involving marginalized groups and ensuring equal opportunities for participation, event organizers contribute to a more just and equitable society. This approach emphasizes the importance of fairness and respect for the rights of all individuals involved in or affected by the event.

Long-term engagement among stakeholders in sustainable sports events: Maintaining long-term engagement of stakeholders is another challenge. Stakeholders may lose interest or disengage if they do not see immediate benefits or if their concerns are not addressed (O'Brien & Chalip, 2008, Bazzanella et al., 2019). This can affect the sustainability of the event and its long-term benefits to the community. Thus, engaging stakeholders throughout the event management process can also enhance collaboration (Misener & Mason, 2006. Lau et al., 2017). This includes involving stakeholders in decision-making, problem-solving, and evaluation processes. Stakeholder engagement can increase their commitment and satisfaction and ensure that their interests and concerns are taken into account.

Engaging stakeholders throughout the event management process is identified as a crucial strategy to address the challenge of sustaining interest (Misener & Schulenkorf, 2016; Ranasinghe & Pradeepamali, 2019). This involves involving stakeholders in decision-making, problem-solving, and evaluation processes. Continuous engagement ensures that stakeholders feel actively involved and invested in the event's success. Long-term engagement is facilitated by building a sense of ownership among stakeholders (Misener & Mason, 2006; Sánchez Cañizares et al., 2016). When stakeholders feel that their input and involvement contribute to the event's success, they are more likely to remain engaged over the long term. This sense of ownership can be fostered through collaborative decision-making processes and ongoing communication that highlights the impact of stakeholders' contributions.

4. Conclusion and Recommendations

The multifaceted nature of stakeholder collaboration in sustainable sports events necessitates a comprehensive understanding of key elements such as dialogue, communication strategies, power dynamics, long-term engagement, and social inclusivity. In this discussion, this study delves into these critical aspects, drawing insights from existing literature to unravel the complexities and provide strategic guidance for event organizers. Recognizing the challenges and opportunities embedded in stakeholder collaboration, our exploration aims to offer a nuanced perspective that not only addresses current concerns but also contributes to the ongoing discourse on achieving sustainable outcomes in the realm of sports events.

Central to managing diverse interests is an ongoing dialogue among stakeholders (Parent, 2016). Continuous and open communication fosters understanding and appreciation of each stakeholder's perspective, laying the groundwork for collaborative problem-solving. Regular dialogues provide a platform for stakeholders to express their concerns, negotiate priorities, and collectively shape the direction of the sustainable sports event. This emphasizes the complexity inherent in collaboration, where creating a shared vision, aligning interests, and fostering ongoing dialogue are pivotal for navigating these complexities and fostering collaboration toward sustainability (Parent, 2016).

The literature suggests several strategies for effective communication in the context of sustainable sports events. Regular stakeholder meetings, newsletters, and dedicated communication platforms can serve as conduits for keeping all parties informed (Towner, 2018). Moreover, the adoption of technology, such as event management software, can streamline communication processes, ensuring that stakeholders have real-time access to relevant information. The coordination between local authorities, event organizers, and security agencies underscores the importance of transparent communication channels in streamlining plans and responsibilities, addressing critical challenges in sustainable sports events Towner (2018). A strategic focus on transparent, two-way communication is pivotal for building trust, managing expectations, and fostering collaboration.

Achieving sustainability in sports events requires a commitment to long-term equitable collaboration. This involves consistently reassessing and adjusting power dynamics, ensuring that the collaborative process evolves to reflect changing circumstances and stakeholder dynamics. A commitment to fairness in power distribution contributes to the overall success and sustainability of sports events. To mitigate power imbalances, sustainable sports events should actively incorporate the input of various stakeholders in the decision-making process (Ranasinghe & Pradeepamali, 2019; Lau et al., 2017). This includes seeking perspectives from local communities, environmental advocates, sponsors, and other relevant entities. By considering a broad range of voices, event organizers can make more informed decisions that align with sustainability goals while minimizing the risk of disproportionately favoring powerful stakeholders. (Misener & Mason, 2006. Lau et al., 2017) suggest that implementing strategies for ongoing engagement is essential for maintaining stakeholders' interest. This could include regular stakeholder meetings, feedback sessions, and mechanisms for continuous communication. By actively seeking and responding to stakeholder input, event organizers demonstrate a commitment to ongoing collaboration. Long-term engagement contributes directly to the sustainability of sports events. Stakeholders who remain engaged are more likely to support and advocate for sustainability initiatives. This ongoing collaboration ensures that the positive impacts of the event extend beyond its conclusion, creating a lasting legacy for the community and the broader environment.

Measuring and evaluating inclusivity is an essential aspect of ensuring its effectiveness in sustainable sports events (Leopkey & Parent, 2015). Event organizers can implement metrics and assessment tools to gauge the level of inclusivity and identify areas for improvement. This ongoing evaluation process allows for adjustments and refinements to better align with inclusivity goals. Social inclusivity contributes to the legacy of sustainable sports events, inspiring future events to prioritize diversity and equal participation. By involving diverse stakeholders, promoting social cohesion, fostering cultural exchange, ensuring human rights, creating accessible environments, engaging stakeholders for inclusivity, and measuring its effectiveness, event organizers can contribute to a more inclusive and impactful sports event with a lasting legacy.

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A Conceptual Discussion Related to Festival Events in Malaysia

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Abstract: This study explores the rapidly growing subject of festival event management in Malaysia's travel and tourist industry, emphasizing the cultural, social, and economic effects of festivals. The project aims to improve festival management efficiency by identifying stakeholder concerns and investigating best practices. Through a conceptual analysis of 24 papers from Emerald, Science Direct, and Scopus, the study emphasizes the significance of continuous innovation, management frameworks such as EMBOK, and strategic planning. The findings suggest that addressing gaps in administrative practices and specialized education can significantly improve the effectiveness and sustainability of Malaysia's festival events.

Keywords: *Festival Event Management, Tourism Industry, Event Planning, Event Management Process, Tourism*

1. Introduction and Background

Event management is a sub-sector in the tourism industry. This industry is linked to the events management sector because of the sheer volume of events it can produce and the number of foreign business travelers it can attract to a location (Bouchon et al., 2015). Planning, arranging, and carrying out festivals—which can encompass everything from culinary festivals to music and cultural festivals—are all included in festival event management. Festivals are a major factor in drawing visitors, stimulating local economies, and energizing local communities. Andersson & Getz, (2016) explains that festivals and special events draw tourists from a variety of demographics by offering unique experiences and cultural enrichment. Apart from this, it contributes to financial impact as well (Dwyer et al., 2000). Both the general economic development of the area and the expansion and viability of local firms can benefit from a sizable economic influx. In addition, festivals can have positive social and cultural effects in addition to positive economic effects. According to Raj et al., 2017), this type of event can improve community involvement, social cohesiveness, and overall quality of life.

Nonetheless, yet a dearth of discussion among scholars related to event festivals. The measurement of affecting elements in the festival and event business has not received much attention, which suggests that there is a growing interest in this field but a dearth of knowledge (Louw & Esterhuyzen, 2024). In the area of festival event management procedures and administration techniques, there is a specific gap due to the absence of discussion related to event festivals. As a result, there is a need to explore more on the diversity of issues related to the event's festival.

The diversification of festival activities draws more attention from researchers, which suggests that they are still relatively unstudied (Quinn, 2009) According to Mohd Ariffin & Jame, (2021), festivals are a multifaceted phenomenon that is rapidly expanding and is essential to the travel and tourism sector. Researchers poll festival attendees in case studies, and each study is distinct in the range of cultures it examines (Dieck et al., 2018)). Studies on Festivals in Europe (Grappi & Montanari, 2011), the Middle East (Akhoondnejad, 2016), Asia (Li & Yu, 2022), the United States (Yuan & Jang, 2008), Africa (Saayman et al., 2012), and Australia (Savinovic et al., 2017) have all been documented, according to Tanford & Jung, (2017).

Additionally, a variety of research topics are examined in these studies, such as the reasons behind attendees' decisions (Jin & Weber, 2016), customer segmentation (Chang, 2006), importance performance analysis (Baker & Draper, 2013), attendee characteristics (McDowall, 2010), satisfaction (Sohn et al., 2016), and loyalty (Yuan & Jang, 2008). People go to festivals for several reasons, as is often recognized, but it is less clear how these

reasons impact the results.

The significance of research in festival event management cannot be overstated. As festivals gain popularity and economic significance, their success hinges on comprehending the complexities of event management procedures and administration tactics. Studying how to use these distinctive features to draw both local and foreign guests is crucial for Malaysian festival events, where cultural variety and legacy are important factors. Policymakers and event planners might benefit from a study of regional festival landscapes when creating plans that support both tourism and cultural preservation (Andersson & Getz, 2016). With 84.7 million domestic tourists in 2019, domestic tourism in Malaysia reached one of its highest peaks in statistical statistics (Malaysia Tourism, 2022). Malaysia Tourism (2022) states that 3.6 million people were employed in this sector, which generated RM 240.2 billion (15.9%) of the GDP.

Researchers are still debating governance, operations, and festival event management (Laing, 2018). The issue of inadequate time management and sound quality illustrates a practical issue in Malaysia (Hassandarvish, 2022). Thus, it is essential to comprehend the entire event planning cycle, as each stage affects the outcome (Goldblatt, 2008; Laing, 2018; Hazira et al., (2022); Nordvall & Heldt, 2017). This shows that it is essential to comprehend the entire event planning cycle.

2. Literature Review

Event management process: According to Glenn et al., (2023) careful planning and close attention to detail are necessary for event management. Planning a budget, keeping to a schedule, selecting a suitable venue, securing the necessary permits, handling parking and transportation, scheduling speakers or performers, and ensuring compliance with safety and health regulations are all crucial components. Additionally, marketing and communication techniques are crucial for engaging the target audience.

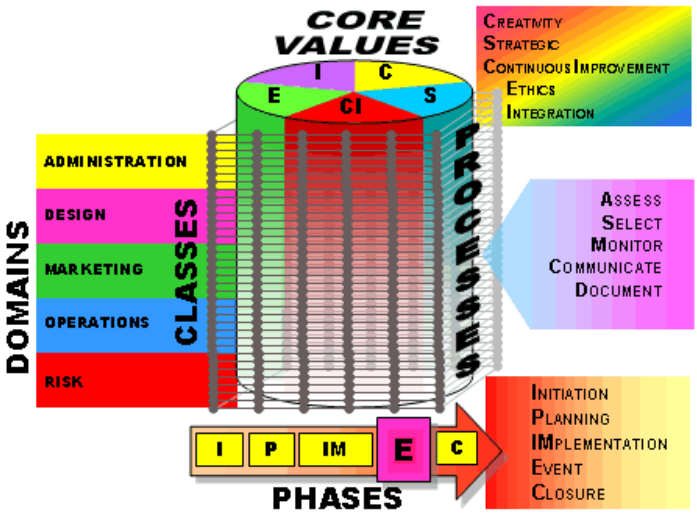
Planning, organizing, leading, and controlling are the four primary responsibilities at the core of management, according to Carpenter et al., (2012) (P-O-L-C framework). The four jobs are intimately related to one another when it comes to running a business. This process involves several processes, including the development of the original concept, careful planning, implementation, and post-event analysis. Every step of the event requires specific responsibilities and considerations to ensure that it meets its objectives and meets the expectations of its stakeholders.

Numerous academics have made substantial contributions to the theoretical literature on event management over the years. Getz, for instance, has published a great deal about strategy management, tourism, and event impacts (Getz, 2007; Carpenter et al., 2012). While Goldblatt wrote seminal books on planning and special events (Goldblatt, 2008), Bowdin advanced the field's knowledge of event management (Glenn et al., 2023). The operational and strategic facets of tourism and event planning are the focus of Nordvall and Heldt's research (Nordvall & Heldt, 2017). Furthermore, prominent figures in the industry have shared their insights about running festivals through publications including Eavis's Guide to Glastonbury (2015), Halpin's on Lollapalooza (Eavis & Eavis, 2019), Leland (2015), and an insider's perspective on the Edinburgh Festival Fringe (MacFarlane, 2018). As a result, event management is acknowledged as an interdisciplinary field that is investigated in both practice and research.

There are a lot of procedures and options to consider when planning an event. Festival events, on the other hand, are classified as exceptional events and must be planned to use a far more appropriate and compatible strategy (Moss, 2018). The researcher emphasizes the use of the EMBOK model for this application of research on the event management process, specifically in organizing festival events.

Event professionals can use the EMBOK (Event Management Body of Knowledge) model as a reference, which outlines the fundamental knowledge and abilities required for effective event management (Goldblatt 2008, p. 65). It covers fundamentals such as identifying stakeholders and formulating plans for events. Planning, marketing, operations, risk management, financial control, and event design are important areas. Managing event locations, applying project management techniques, integrating technology, and guaranteeing sustainability are examples of technical competencies.

Figure 1: EMBOK Model



(**Source:** Goldblatt, 2011)

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There are phases, a process, core values, and domains within the model, as shown in Figure 1. Silvers (2004) developed the Silvers taxonomy, which consists of five key knowledge domains: risk, marketing, operations, design, and administration. It was based on Freeman et al., (2010). the tasks that event stakeholders perform and those that the researcher of this study can investigate under the administration domain are the knowledge domains, which are functional fields of activity (Silvers, 2013; Brown & Stokes, 2021; Adongo et al., 2019; Hazira & Alagas, 2022).

Festival event industry in Malaysia: About an event festival, based on current studies, optimizing the cultural, economic, and social consequences requires improving festival event management strategies. For example, Jones's latest research from 2021 highlights community involvement and sustainability but demonstrates how Malaysia is organizing cultural events differently. This section highlights the necessity of continuous research and innovation to meet the dynamic demands of festival event management in Malaysia. By doing this, the festivals will continue to be significant and successful in promoting tourism and cultural heritage. However, among Malaysian festival event stakeholders, there is a lack of literacy regarding research on the administration domain and event management process. The paucity of past researchers on the subject of event management is highlighted by their limitations, as demonstrated by the works of Bouchon et al. (2015), Jones (2021), Alvarado (2022), and Hazira et al. (2022). To close the knowledge disparity between academic curricula and industry requirements and guarantee that graduates are adequately equipped to meet the expectations of the tourist sector, Bouchon et al., (2015) endorsed the need for specialist event management education. Hence strengthening and increasing Malaysia's festival event industry's management efficiency.

Enhancing the scope of research on festival event management in Malaysia also confers significant benefits to the industry. Through a detailed analysis of the administrative domains and stakeholder event management process, researchers can offer critical insights required to enhance operational efficiency and strategic planning. With this expanded study agenda, researchers like Akhundova, (2024), who emphasize the value of tailoring event management strategies to local conditions and emerging trends, may be able to fill in the gaps. These programs enhance the inventiveness and competitiveness of Malaysia's festival event sector while also

pushing the professionalization of event management methodologies.

As a result, at this critical juncture in its evolution, Malaysia's festival event management industry stands to benefit greatly from more study and innovative methods. A recent study highlights the importance of sustainability, community involvement, and flexibility to socioeconomic shifts to optimize the impact of cultural events. Despite the literature that has already been published showing these shortcomings, current research promises to close the gaps in specialized education and the mismatch between academic curricula and industrial requirements. By broadening our understanding of administrative strategies and event management protocols, Malaysia can strengthen its position as a dynamic tourism destination for both local and international tourists while also optimizing the cultural, economic, and social benefits of its festivals.

3. Research Methodology

This article is a conceptual discussion related to event management. 24 articles were used for an underpinning discussion related to the diversification of the event's festival. All the articles were based on Emerald, Science Direct, and Scopus databases. These articles were chosen due to the relatedness of articles in discussion on the event's festival.

4. Conclusion

Future discussion is in demand for exploring more in-depth issues related to the event's festival namely the inclusion of culture in mitigating the process of organizing an event. A thorough examination of the literature shows that careful preparation, close attention to detail, and the tactical application of many management frameworks and models are essential for successful event management. The multidimensional nature of event management is highlighted by (Glenn et al., 2023), who highlight the crucial elements of scheduling, budgeting, venue selection, permits, transportation, and safety regulatory compliance. The necessity of successfully engaging the target audience is further highlighted by the blending of marketing and communication strategies.

The P-O-L-C framework (Planning, Organizing, Leading, Controlling) is presented by Carpenter et al. (2012) and summarizes the main duties of management. This framework necessitates a methodical approach from the initial concept to post-event analysis because it is closely related to the event management process. This iterative method makes sure that every stage is carefully thought out and carried out, matching the goals and expectations of stakeholders.

Scholars like Getz, (2002), Goldblatt (2008), and Andersson & Getz, (2016) have contributed theoretical works that offer a fundamental comprehension of the operational and strategic aspects of event management. Their studies validate the multidisciplinary nature of the area by fusing theory and practice, together with industry insights from practitioners such as Eavis & Eavis, (2019) and MacFarlane (2018).

Moss (2018) argues that customized approaches are necessary to maximize the cultural, economic, and social effects of festival events. Jones (2021) emphasizes the value of sustainability and community involvement, especially in the setting of Malaysia, where cultural events are conducted distinctively. For festivals to meet the ever-changing demands of festival event management, ongoing research and innovation must be conducted.

Nonetheless, a notable void exists in the literature about the administrative domain and event management procedures among Malaysian festival participants. According to studies by Jones (2021), Alvarado (2022), Bouchon et al. (2015), Hazira et al. (2022), and Jones, (2021), there are gaps in the present research and a need for specialist event management education. This discrepancy indicates a mismatch between industry demands and academic curriculum, highlighting the need for improved management effectiveness in Malaysia's festival and event sector.

Improving research in this area has several advantages. Thorough examinations of administrative domains and stakeholder management procedures can provide vital information for enhancing strategic planning and operational effectiveness. Scholars such as Akhundova, (2024) support customized approaches that are in line with regional circumstances and new trends, encouraging creativity and competition in Malaysia's festival

event industry.

The literature emphasizes how complex and multidimensional event management is, and how important it is to plan carefully, apply management frameworks strategically, and never stop innovating. The EMBOK model and the P-O-L-C framework offer strong frameworks for efficiently organizing events, and contributions from academics and business professionals emphasize the multidisciplinary nature of the discipline.

Festival events offer special opportunities and challenges in Malaysia. To make the most of these events, customized approaches that take into account the cultural, economic, and societal implications are crucial. The effectiveness of the sector is hampered by a significant research void in the administrative field and event management processes among stakeholders.

Filling this knowledge vacuum with more in-depth studies and specialized training will greatly improve Malaysia's festival event management effectiveness. Malaysia may enhance its status as a dynamic tourism destination by integrating ideas from in-depth evaluations of administrative tactics and coordinating academic courses with industry requirements. In addition to maximizing the festivals' cultural, financial, and social benefits, this will advance environmentally friendly and community-focused event management techniques.

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Bibliometric Analysis of Cultural Event Publications (2001-2023)

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Abstract: Scholars from all around the world are paying more and more attention to cultural event studies as evidenced in several academic publication databases. The existing studies are mainly based on empirical studies using surveys and interviews, and some are based on conceptual papers. However, bibliometric analysis of cultural events has been largely neglected. This study uses a bibliometric analysis approach to get an overview of the landscape, development, and trends of cultural event studies. In addition to that, a bibliometric analysis also enables the researcher to identify prominent authors, institutions, and countries that actively participated in the cultural event studies. This study also aimed at establishing a series of visualization maps using VOSviewer software that displays the links between authors, institutions, and keyword occurrences. A total of 3,578 scientific documents relating to cultural events in various forms were retrieved from the Elsevier Scopus database. Using this database, the bibliometric analysis has been able to identify some prominent authors in this field, the most productive institutions, frequent keywords, top funders, and so on. In conclusion, this paper also provides some key information for future researchers in identifying important research gaps by examining the keyword occurrences relating to cultural events.

Keywords: *Bibliometric analysis, cultural events, VOSviewer*

1. Introduction

The event industry is an important economic sector, especially due to its contribution to national income through tourism activities. Events have also been used as a tool to attract tourists to destinations around the world. Studies have shown that many people travel to experience events at some point in their lives (Fordjour & Cruz, 2023). The event industry is diverse and one of the important parts is cultural events. In many countries, cultural events are organized to become part of the tourism calendar. In addition to economic importance, cultural events can also conserve and promote local culture. Cultural events also play a crucial role in shaping the identity and vibrancy of societies around the world (Raposo, 2023). These events encompass a wide range of activities that celebrate, showcase, and preserve the diverse aspects of a community's heritage, arts, tradition, and values. From festivals and performances to exhibitions and workshops, cultural events create spaces for people to connect, share, and appreciate the richness of their own and other cultures.

The research associated with cultural events has emerged since 1949 (Elsevier Scopus, 2024). It started slowly but gained momentum by 2001. The latest database in January 2024 indicated that there are a total of 3,578 published documents relating to cultural events or arts events in various disciplines. In addition to that, several programs of study in event management have also been introduced at both undergraduate and postgraduate levels in recent years (Malaysian Qualification Agency, 2024). Postgraduate students researching this topic are also growing based on the number of theses relating to this topic (Dissertation Sage, n.d.). However, very few studies in the form of bibliometric analysis were carried out to examine the emerging topics, current trends, prominent authors, research networks, and countries of origin associated with this topic (Elsevier Scopus, 2024). This information is important for future researchers researching this field of study. The information presented here based on the bibliometric analysis will provide a bird's eye view of the study in this area. The data for bibliometric analysis in this paper was retrieved from the Elsevier Scopus database available from online library services at Universiti Utara Malaysia. This paper in particular will address the following research questions:

- What is the current landscape, development, and trend of cultural events?
- What are the current stakeholders (authors, affiliations, organizations, countries) impacting the growth of cultural events literature?
- What are the potential research gaps that can be further pursued in cultural events?

2. Literature Review

There have been limited studies carried out on cultural events or cultural festivals using the bibliometric analysis approach (Elsevier Scopus, 2024). Based on the systematic search of the Scopus database, only 12 publications using this method were found. Kement (2024) for example, investigated music festivals research using bibliometric analysis. He managed to extract 462 published documents between 1991 and 2024 from the Scopus database. His study discovered that some themes related to this topic are on the increase such as music festivals, experience, social media, and co-creation. In addition to that, the most notable emerging topic is related to COVID-19. Meanwhile, Mensah et al. (2023) conducted a bibliometric analysis of festival research based on 955 documents published between 1978 and 2020. They found that the most popular themes were festival impacts, sustainability, management, festival quality, satisfaction, behavioral intentions, and festival authenticity.

A research team from the United Kingdom, Fletcher and Bostock (2022) analyzed 480 documents about event literature indexed in Scopus and Scimago Institutional Rankings between 2008 and 2018. Their analysis showed that the United States produced the highest number of published documents and established the widest international collaboration. From their findings, most of the prominent authors were from Australia, Europe, New Zealand, and North America. These authors developed extensive collaborations at both the national and institutional levels, which were also responsible for the growing number of publications on this topic. On the other hand, Srivastava et al. (2022), conducted a bibliometric analysis based on 570 articles related to event management to obtain an in-depth understanding of the research trends from 2006 to 2020. Their analysis indicates that there is a significant growth in the number of publications and citations on this topic. The analysis also identified major 5 clusters of themes: event management, customer satisfaction and service quality, mega-events, legacy sports, and economic feasibility. The findings have some similarities with a study by Mensah et al. (2023).

On the other side of the world, Ghaderi et al. (2023) examined 1,582 articles using bibliometric analysis on the event industry obtained from the Scopus database. The United States ranked first in publication volume with 640 documents, followed by the United Kingdom, Australia, and China with 308, 300, and 299 respectively. However, the most influential works came from Ireland, Canada, and Cyprus with an average citation of 63.8, 45.2, and 39.8. In terms of top-ranked keywords or themes, words such as tourism management, festival tourism, event tourism, festivals, and music festivals were frequently found throughout the publication list. Last but not least, a bibliometric study by Richards et al. (2022) explored the event literature in the non-English languages. This time the data was extracted from the ATLAS Events Group (Biaett & Richards, 2020). The articles analyzed were from Arabic, Croatian, Czech, Dutch, Italian, Portuguese, Slovenian and Spanish languages. One of the objectives is to explore research that may be missing from the mainstream databases. From initial analysis, it was found that most of the articles were published in Portuguese and Italian languages representing 227 and 179 articles respectively from a total of 527 extracted. Only 2 articles were found to be written in Arabic. The major keywords translated from the articles into English were: outcomes and the impact, patterns and processes, planning, design, and management, event experience and meaning, and personal antecedents and decision-making.

The above literature review was aimed at providing a bird's eye view of the research on bibliometric analysis related to cultural events. In general, the number of publications on this topic is growing significantly signaling its importance. The main contributors to this research are still mainly dominated by the United States, United Kingdom, and European countries. One of the main weaknesses of bibliometric analysis is due to its over-dependent on the Scopus database. Future studies using this method should be extended to other databases such as Web of Science, ERA, ATLAS, and others.

3. Method

Among the first mentions of bibliometrics analysis was in 1950 by Wallin (2005). The number of publications using bibliometric analyses has been growing steadily in various fields including social sciences, arts and humanities, business and economics, psychology, education, engineering, medicine, agriculture, and so forth especially within the past 15 years ago (Kumar et al., 2021). Currently, in the Scopus database alone, there are

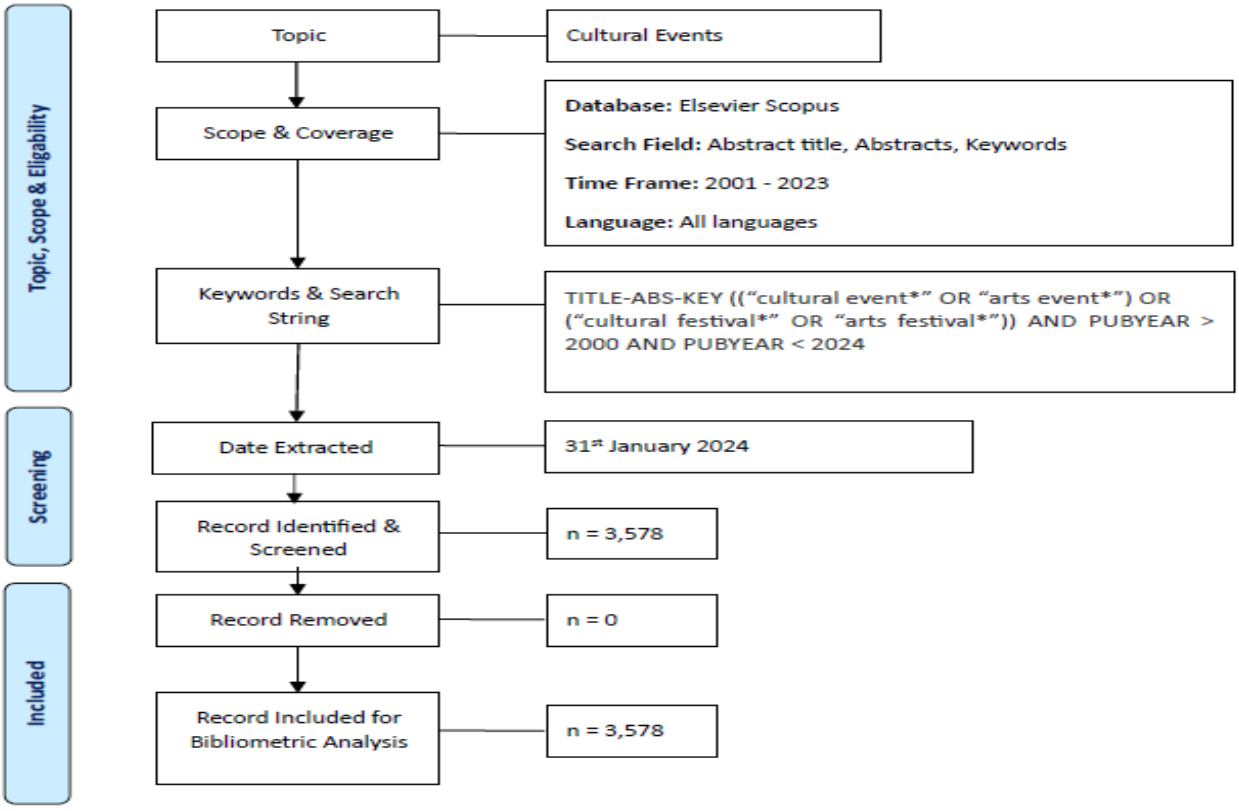
a total of 35,860 documents found with the keyword "bibliometric" indicating an enormous number of publications using this method (Elsevier Scopus, 2024). Furthermore, the creation of databases like Scopus and Web of Science together with the introduction of various computer applications such as VOSviewer, Gephi, and Harzing have enabled a more systematic bibliometric analysis (Otitolaiye & Aziz, 2023).

This paper uses the Elsevier Scopus database as the main source for searching the publication list of materials associated with cultural events, arts events, cultural festivals, and arts festivals. Although the list is not exhaustive as it doesn't include the Web of Science database, it still provides a meaningful large number of publications on this topic, especially within social science disciplines. These keywords were chosen as they appeared very frequently when searching for "cultural events". The search strategy used includes the following keywords:

TITLE-ABS-KEY (("cultural event*" OR "arts event*") OR ("cultural festival*" OR "arts festival*")) AND PUBYEAR > 2000 AND PUBYEAR < 2024

The search limit for the time frame of publications was decided between 2001 and 2023. This is because the number of publications started to show significant increases in 2001. Before that, very few published documents were found on this topic. The search shows that there were 3,578 documents published in the database associated with cultural events within that period. The list of published documents from the database was then retrieved into the Comma-separated values (CVS) file and can be displayed using Microsoft Excel. CVS file stores tabular data (number and text) which are separated by commas. Using VOSviewer, the data from CVS can be analyzed to create various maps based on bibliometric data. VOSviewer is a software tool for constructing and visualizing bibliometric networks (VOSViewer Manual, 2020). The map created by the VOSviewer can display the network visualization of several functions such as the networks between co-authorship and institutions or citations and authors among others. In summary, the following chart exhibits the flow of identification, screening and analysis processes of bibliometric analysis for cultural events (Fig. 1).

Figure 1: Flow diagram of the search strategy



4. Results and Discussion

General publication trends: Based on the executed search strategy above, the majority of publications were in the form of articles representing 63.4% of the total published documents. This is then followed by conference papers (13.9%), book chapters (12.0%), reviews (6.2%), books (2.6%), and the rest as displayed in Table 1. This means that cultural events are covered by almost all types of publications. In terms of subject areas, social sciences (28.5%), arts and humanities (19.0%), and business management (12.3%) are the three top subject areas where cultural events were researched and published as presented in Table 2. This is logical as the research in cultural events was mostly in the social sciences context rather than in physical sciences. Although some publications on cultural events were in computer sciences and engineering domains, they are still largely connected to social sciences elements, for example, one topic in an engineering journal entitled "Engineering students' involvement in sporting events".

Table 1: Document types of distribution of the published document (2001 – 2023)

No.	Types of publications	Percentage
1	Articles	63.4
2	Conference papers	13.9
3	Book chapters	12.0
4	Reviews	6.2
5	Books	2.6
6	Editorials	0.6
7	Notes	0.5
8	Conference reviews	0.3
9	Short surveys	0.3
10	Erratum	0.1
11	Others	0.3

Source: Elsevier Scopus Database

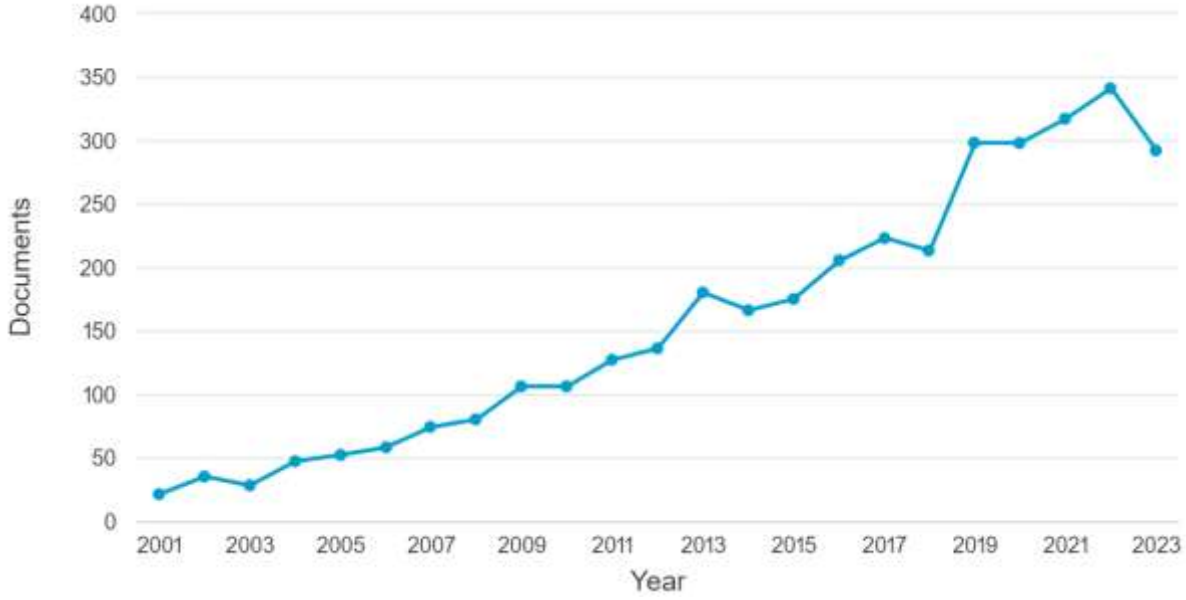
Table 2: Subject areas distribution of published documents (2001-2023)

No.	Subject areas	Percentage
1	Social sciences	28.5
2	Arts and humanities	19.1
3	Business management	12.3
4	Computer sciences	8.0
5	Engineering	5.5
6	Economics	4.0
7	Environmental Sciences	4.0
8	Medicine	3.7
9	Earth and planets	2.2
10	Psychology	2.2
11	Others	10.5

Source: Elsevier Scopus Database

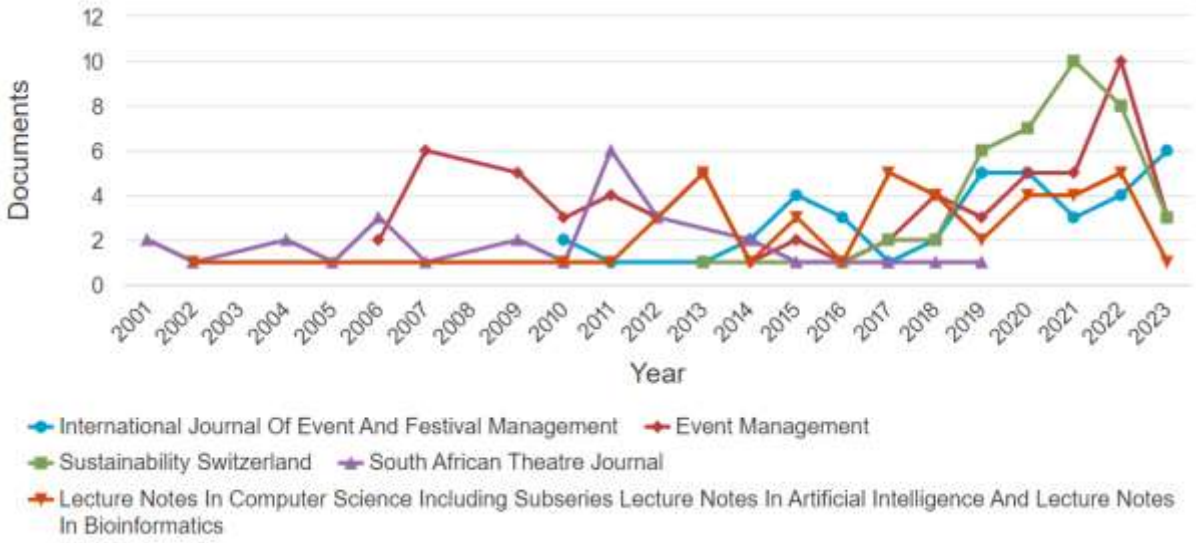
The number of documents published on cultural events has been on an upward trend since 2001 (Figure 2). This indicates the growing amount of interest received from authors around the globe. By 2023, almost 300 documents were published annually on this topic. Meanwhile, in terms of the source of publications, Event Management (64 documents), Sustainability (Switzerland) (40 documents), and International Journal of Event and Festival Management (39 documents) were placed as the top three (Table 4). Sustainability (Switzerland) journal in particular is a multi-disciplinary journal that focuses on social science, geography, planning, and development under the publishing group of MDPI. This journal although does not specifically focus on event management, still became one of the chosen journals for publication on cultural events by authors. Other sources of publications like South African Theatre Journals, Journal of Policy Research in Tourism, Leisure, and Events, International Journals of Cultural Policy, and African Journal of Hospitality, Tourism, and Leisure can be said to be very relevant to event management.

Figure 2: Publications trend (2001 – 2023)



Source: Elsevier Scopus Database

Figure 3: Distribution of documents per year by source (2001 – 2023)



Source: Elsevier Scopus Database

The bibliometric analysis also enables the readers to look at the journal's performance in terms of total publication (TP), CiteScore (CS), Scimago Journal Ranking (SJR), and source normalized impact per paper (SNIP) (Otitolaiye & Aziz, 2023). CiteScore is essentially the average number of citations per document that a title receives over three years. Meanwhile, SJR is a journal ranking indicator that measures the journal's impact and influence or prestige in the Elsevier Scopus database. This is calculated by the average number of weighted citations received by the documents published in the journal over three years. The last one is SNIP, which "measures contextual citation impact by weighting citations based on the total number of citations in a subject field" (Elsevier Scopus, 2024). This calculation enables the direct comparison of citations based on different

subject fields. The citation value is weighted higher when the paper is cited from the same subject field compared to other fields.

In the above context, the Tourism Economics journal was ranked first followed by Sustainability (Switzerland), and Journal of Policy Research in Tourism, Leisure, and Events in terms of CiteScore, SJR, and SNIP. In particular, Tourism Economics obtained a 7.7 CiteScore and 1.092 SJR is a journal based in the United States under SAGE publication with a 69 *h*-Index and currently positioned at Quartile 1 (Scimago, 2024). However, despite a lower ranking, Event Management (previously known as Festival Management and Event Tourism) which is positioned at Quartile 3 became the main target for publication with a total of 64 articles (2001 -2023). Event Management is an open-access journal that requires authors to pay publication fees of USD200 (Cognizant Communication Corporation, n.d.). Event Management takes on average about 86 days from submission to publication, which is reasonably fast. There are various aspects considered by authors when submitting to publication in journals among others, indexing, peer review process, publication fees, processing time, and so forth (Suiter, & Sarli, 2019).

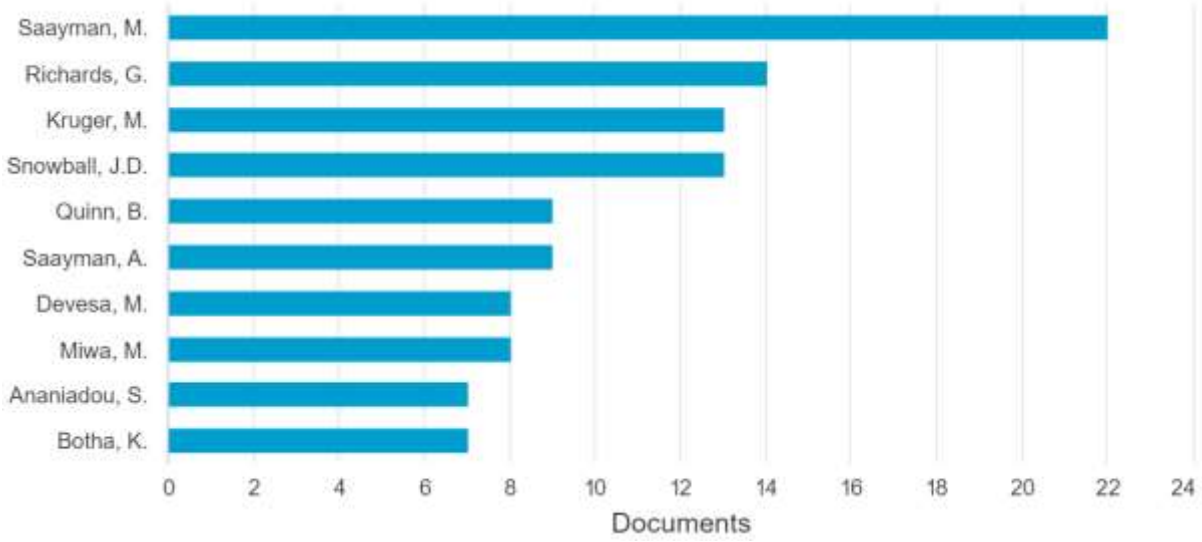
Table 3: Details of journal sources for publications in cultural events

Source titles	T.P.	Source types	CS	SJR	SNIP
Event Management	64	Journal	1.7	0.309	0.655
Sustainability (Switzerland)	40	Journal	5.8	0.664	1.198
International Journal of Event and Festival Management	39	Journal	3.0	0.562	0.852
Lecture Notes in Computer Science	38	Book series	2.2	0.320	0.542
South African Theatre Journals	28	Journal	0.3	0.103	0.211
Journal of Policy Research in Tourism Leisure and Events	21	Journal	4.8	0.561	1.103
CEUR Workshop Proceedings	19	Proceedings	1.1	0.202	0.223
International Journals of Cultural Policy	19	Journal	3.8	0.703	1.880
African Journal of Hospitality Tourism and Leisure	18	Journal	2.1	0.216	0.375
Tourism Economics	16	Journal	7.7	1.092	1.758

Note:
TP – Total Publications, CS – CiteScore, SJR – Scimago journals ranking; SNIP – Source normalized impact per paper
Source: Elsevier Scopus Database

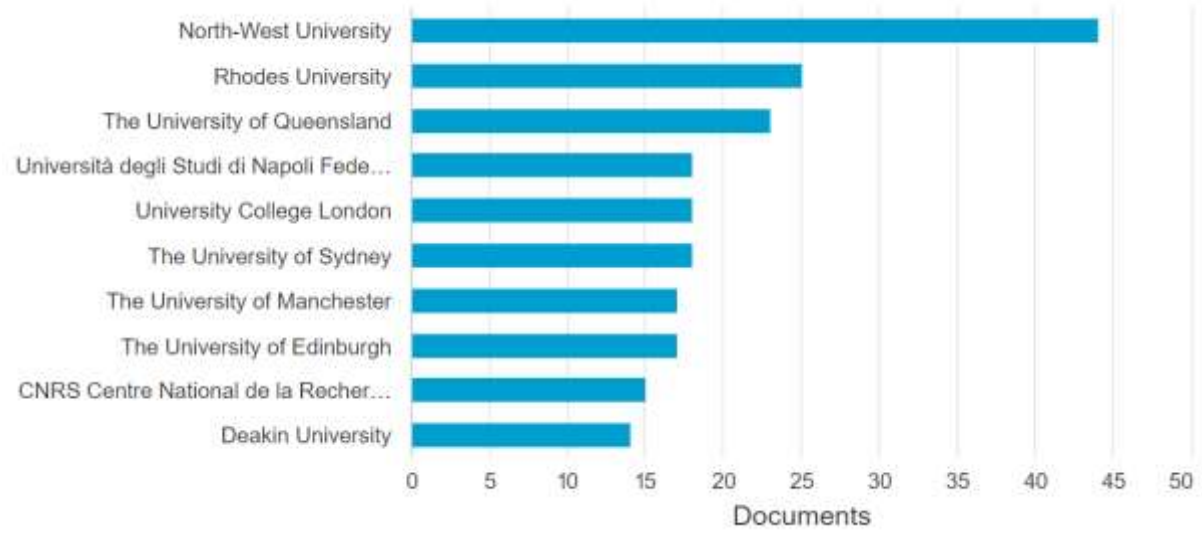
Top research stakeholders: Figure 4 below displays the list of top authors in terms of the number of published documents on cultural events between 2001 and 2023. In detail, Melville Saayman (22 documents), Greg Richards (14 documents), and Martinette Kruger (13 documents) took the top three positions. Greg Richards is currently attached to Breda University of Applied Sciences in the Netherlands and already obtained a 40 *h*-index (Researchgate, 2024). On the other hand, both Melville Saayman and Martinette Kruger are currently affiliated with North-West University in South Africa. Greg Richards and Melville Saayman have authored and co-authored many articles on tourism-related studies. Meanwhile, Martinette Kruger is focusing more on marketing, management, innovations, and strategic management. Surprisingly, North-West University also scored first place with a total of 44 published scientific documents on cultural events, followed by Rhodes University (25 documents) and The University of Queensland (23 documents) as can be seen in Figure 5. One of the reasons why North-West University produced the highest number of scientific documents on cultural events was due to its very productive authors, namely Melville Saayman, Martinette Kruger, and Andrea Saayman as listed in Figure 4.

Figure 4: Top authors working on cultural events



Source: Elsevier Scopus Database

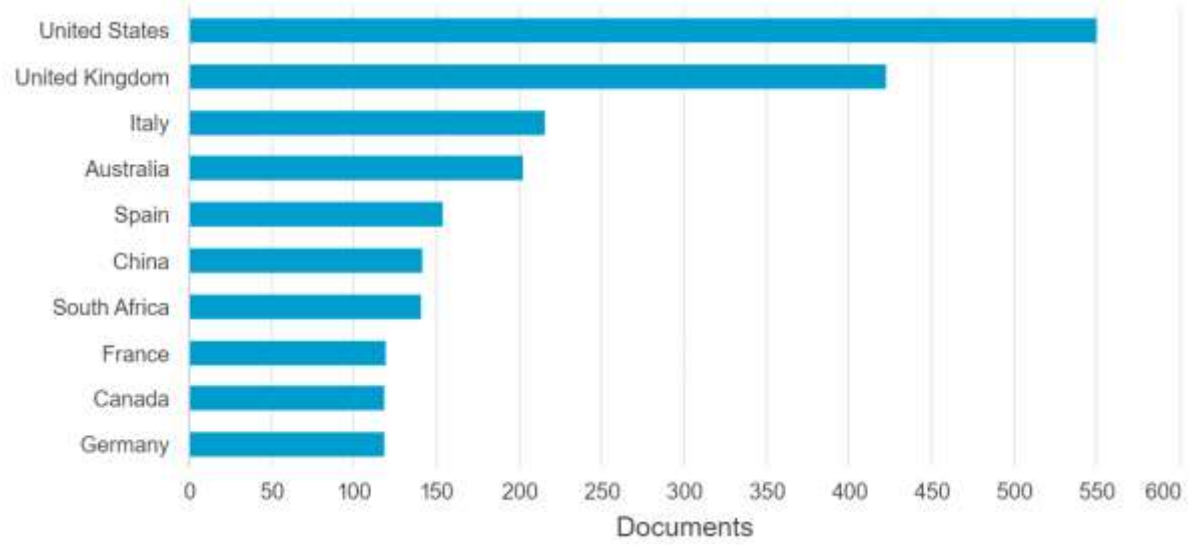
Figure 5: Top Institutions and organizations contributing to cultural event research



Source: Elsevier Scopus Database

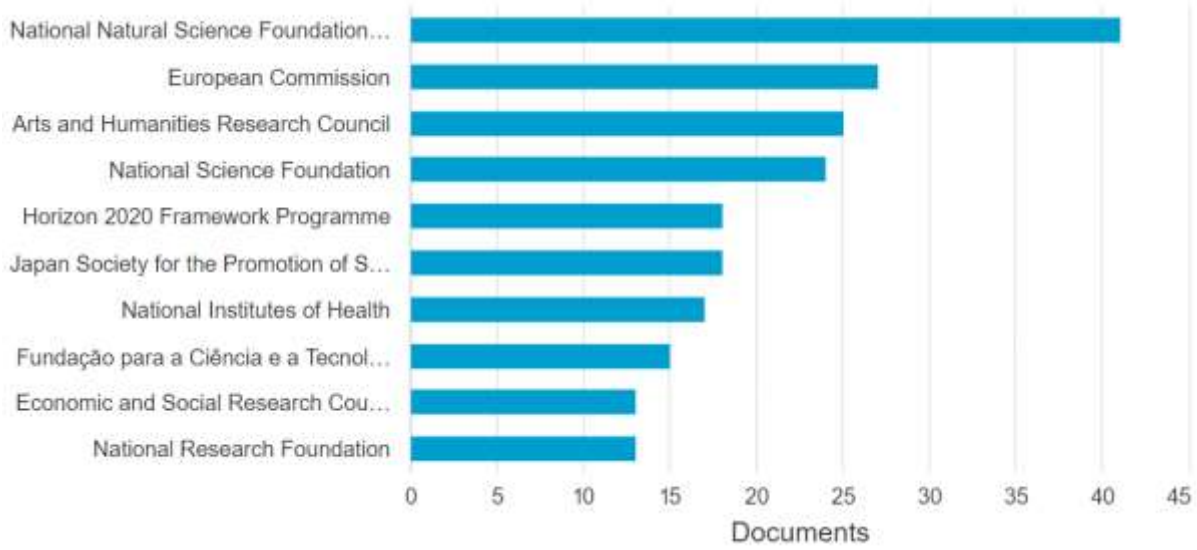
The top 10 countries that actively researched cultural events and published over 100 scientific documents from 2001 to 2023 are displayed in Figure 6. The most productive country was the United States (550 documents), followed by the United Kingdom (425 documents), and Italy (220 documents). From the list, the majority of countries on the top list were from Europe. In terms of research funder, the National Natural Science Foundation of China was found to be at the top of the list with over 40 research projects (Figure 7). The National Natural Science Foundation of China was established in 1986 and tasked with the mission of supporting basic research, nurturing talented researchers, fostering international collaboration, and encouraging socioeconomic development (National Natural Science Foundation of China, 2024). Currently, this organization has awarded about 38,000 grants to 1,500 host institutions in various disciplines. Among the recent research on cultural events funded by this organization were (Diao & Lu, 2022; Liu et al., 2019; Sun et al., 2023; Zhang & Dai, 2023). Next on the list are the European Commission, Arts and Humanities Research Council, and National Science Foundation which individually has funded more than 20 cultural events research projects. Annually.

Figure 6: Top countries contributing to cultural events research



Source: Elsevier Scopus Database

Figure 7: Top funders for cultural events research



Source: Elsevier Scopus Database

Bibliometric analysis: The VOSviewer visualization map displays the networking between top authors who gained at least 3 published documents and 3 citations. Unfortunately, the top authors were not found to have co-authorship with other top authors outside their institutions when researching cultural events (Figure 8). For example, Melville Saayman, Martinette Kruger, and Andrea Saayman co-authored several articles but are affiliated with the same institution. When there are two or more authors from the same country in a publication, only one article will be counted, thus not producing any network link (Viana-Lora & Nel-lo-Andreu, 2022). Figure 9 on the other hand, showcases the network link of inter-institution collaboration in cultural events research. Only institutions with at least 2 published documents on cultural events were included in this network visualization. From the observation, five institutions were found to establish research collaboration, namely Chiba University in Japan, Conseil Européen Pour la Recherche Nucléaire (CERN), Kyoto City University of Arts, University of Arts in Belgrade, and Ars Electronica Linz GmbH, in Austria.

For example, a paper was published entitled "Embrace through the universe: sound design with cosmic muons

and the parameters of solar wind" in collaboration with authors from Kyoto University of Arts, University of Arts in Belgrade, CERN, Ars Electronica Linz GmbH, University of Bern, and Chiba University (Tanaka et al., 2022). This paper revolves around the planning and staging of an artistic performance of the sound of the universe during a cultural event in Tokyo in 2021.

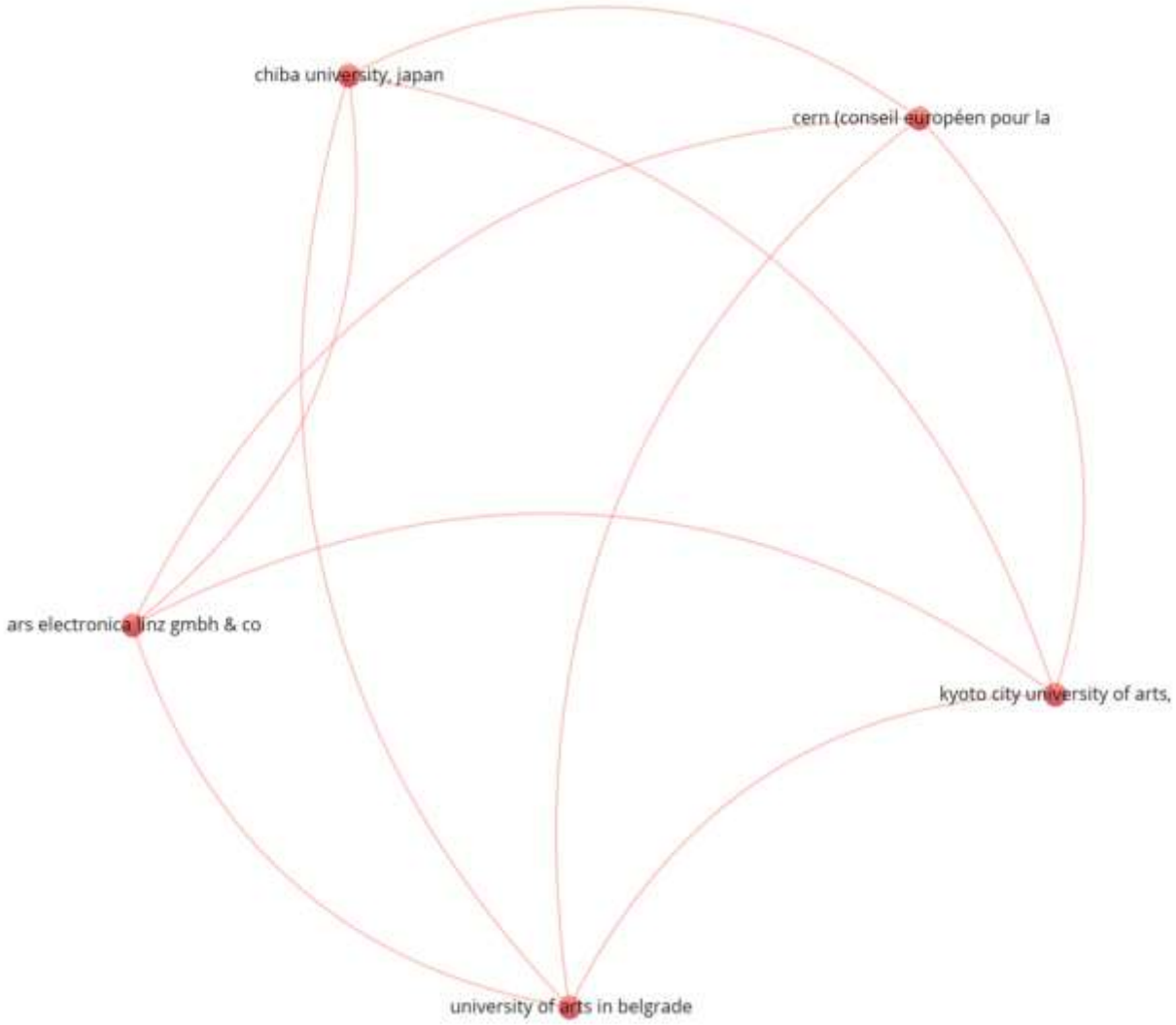
Figure 8: Network visualization map of co-authorship among top authors



Notes: Minimum 3 published documents and 3 citations for each author
Source: VOSviewer

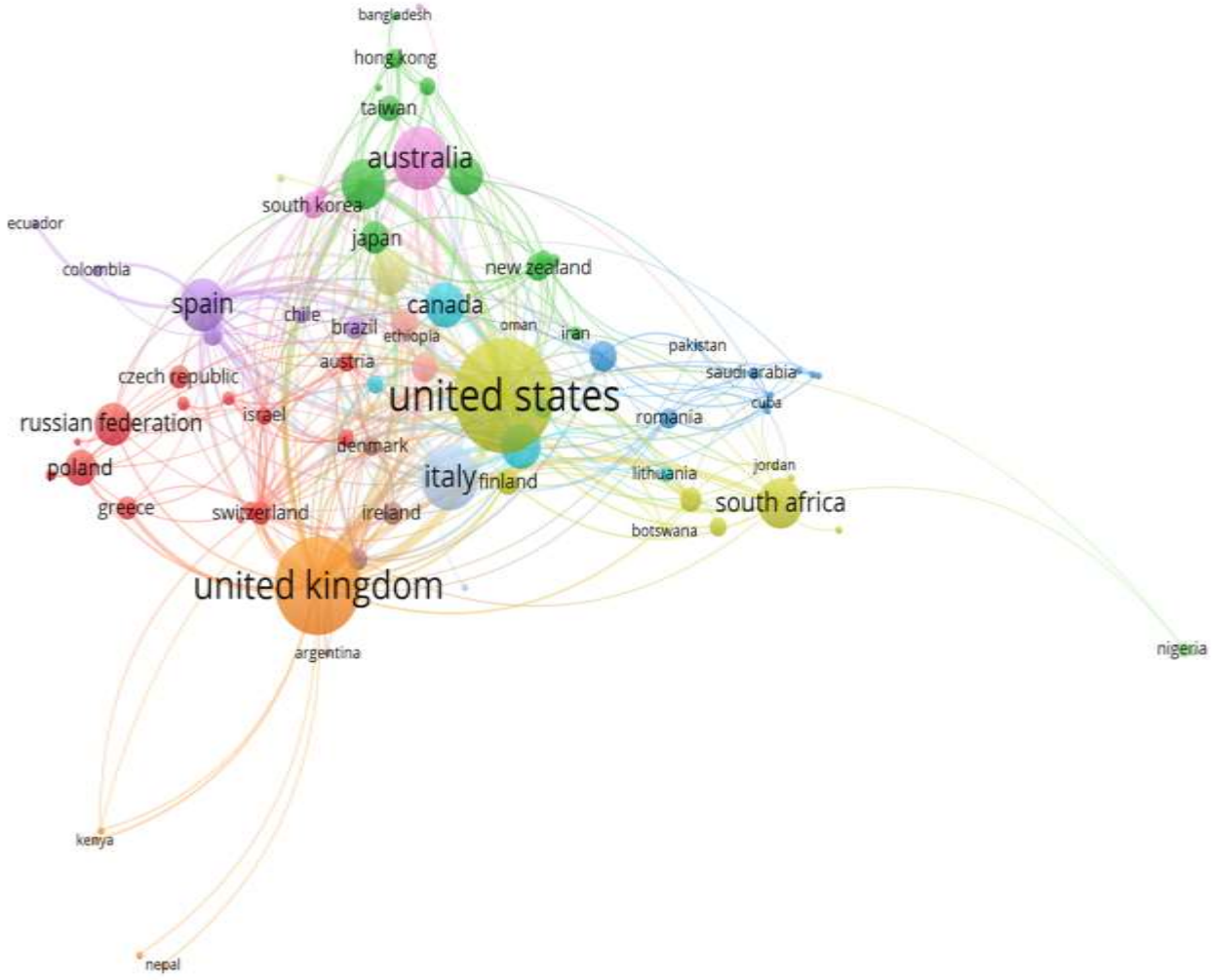
A network visualization map of co-authorship among countries is created based on a minimum of 3 publications and 1 citation yielding a total of 13 clusters (Figure 10). The three most influential countries are the United States (544 documents and 9,240 citations), the United Kingdom (419 documents and 7,520), and Italy (214 documents and 2253 citations). This is represented by the size of the nodes or circles (Brika et al., 2022; Djeki et al., 2021). The largest cluster (represented by a yellow-green color) comprises countries like the United States, Botswana, Croatia, Finland, Jordan, Qatar, South Africa, Turkey, and Zimbabwe. These countries within the same color have common research interests. Meanwhile, the thickness of the link represents the strength of collaboration. The United States formed the largest collaboration links with other countries (link strength=167), followed by the United Kingdom (link strength=165), Spain (link strength=84), and China (link strength=70). Meanwhile, the strongest link between two individual countries was between the United States and China with 20 links.

Figure 9: Network visualization map of co-authorship among institutions



Notes: Minimum 2 published documents without any citation for each author
Source: VOSviewer

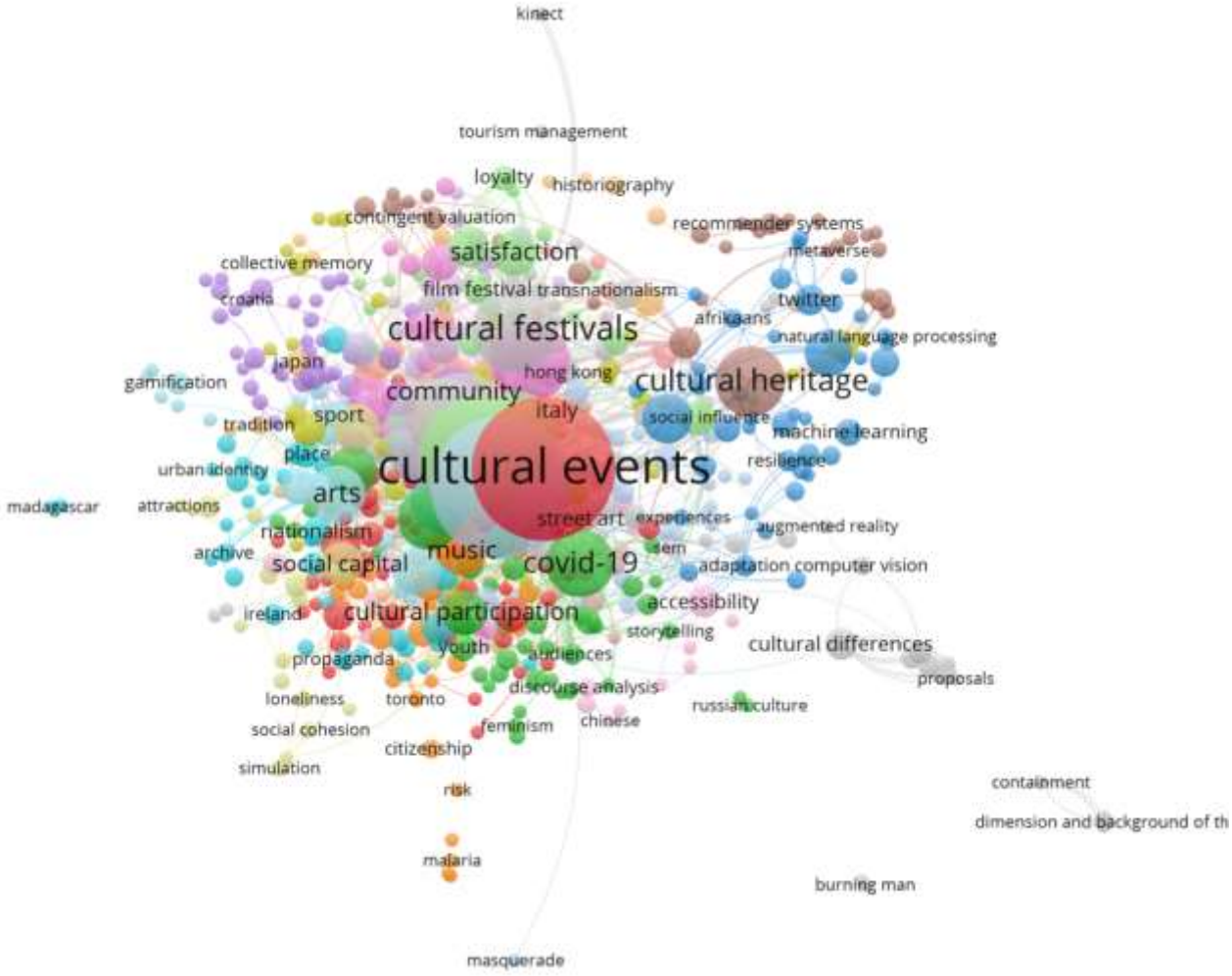
Figure 10: Network visualization map of co-authorship among countries



Notes: Minimum of 3 published documents and 1 citation for each author
Source: VOSviewer

The analysis of the co-occurrence of keywords used in the published documents is presented in Figure 11. After a careful screening process, several keywords were combined due to their similarity in meaning despite different spellings. For example, the word "art festival" was combined with "arts festivals", "event" was replaced with "events", and so forth. This screening process is to avoid similar keywords reappearing many times on the list which will significantly affect the counting process. All these screening processes can be carried out within VOSviewer with the assistance of a Windows notepad and Microsoft Excel. The most frequently used keyword by authors was "cultural events", which appears 139 times. The second is "festivals" (138 times), "culture" (103 times), "arts festivals" (96 times), "cultural festivals" (58 times), and "cultural tourism" (52 times). However, cultural event studies have only established weak associations with other research niches (link strength less than 10) such as smart city, internet-of-thing, big data, willingness to pay, security, aging, sexuality, digital arts, risk, and urban identity to name a few. All these research gaps in cultural events should be further investigated in the future.

Figure 11: Network visualization map of co-occurrence of authors' keywords



Notes: The minimum co-occurrence is set at 3 times.
Source: VOSviewer

5. Conclusion

This paper has successfully analyzed the publication trends, research landscape, and scientific developments related to cultural event studies. The data source was taken from the Elsevier Scopus database with a period of 22 years from 2001 to 2023. The search strategy and screening process indicate that 3,578 scientific documents consist mainly of journal articles, conference papers, book chapters, reviews, and books. The journal named Event Management was found to be the top publisher for cultural events-related studies, followed by Sustainability (Switzerland). The two most productive authors were Melville Saayman and Greg Richards from North-West University in South Africa and Breda University of Applied Sciences in the Netherlands respectively. North-West University in South Africa is also positioned as the top contributor of scientific documents in this discipline. In terms of countries, the United States and the United Kingdom remain the most productive countries when it comes to the number of studies. The majority of other countries on the top list are in Europe. This paper also discovered that the National Natural Science Foundation of China became the biggest funder for research on cultural tourism with over 40 projects worldwide. This may provide crucial information for the researchers in identifying potential funders for research projects on this topic.

The visualization network provided by VOSviewer indicates several key findings and issues relating to cultural events. First of all, the collaboration among top authors and institutions on cultural events studies has been very limited. Thus far, only a handful of institutions collaborated as partners for research projects on cultural events, namely Chiba University in Japan, Conseil Européen Pour la Recherche Nucléaire (CERN), Kyoto City University of Arts, University of Arts in Belgrade, and Ars Electronica Linz GmbH, in Austria. This could be attributed to the fact that studies on cultural events mainly cantered around local interests rather than international affairs. Lastly, network visualization also provides a glimpse of the current popular topics and gaps in cultural events research. In particular, cultural events research associated with smart cities, internet-of-thing, big data, willingness to pay, security, aging, sexuality, digital arts, risk, and urban were found to be highly neglected. These gaps could be further investigated by the researcher in the future to further develop a more comprehensive understanding of this topic.

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Developing a Predictive Model of Crowd Behavior at Music Concerts and Festivals (MCF): A Proposal for a Research Framework

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Abstract: Music Concerts and Festivals (MCF) have experienced steady growth each year, transforming these events into large-scale international gatherings from their humble beginnings in the 1980s. The trend of increasing attendance by festival-goers and concert-goers at MCF has prominently emerged in the 21st century. The attendance of MCF contributes to the formation of crowds, which are indirectly influenced by risky behavior. Consequently, this trend has led to numerous incidents related to risky behavior at MCF. However, there is insufficient research on such behavior, and few existing studies address any predictive models specific to MCF. As a result, there has been a slight increase in aggressive behavioral incidents among festival-goers and concert-goers. This issue has demonstrated the importance of studying crowd behavior among those attending musical concerts and festivals. Therefore, this paper will focus on the important variables related to risky behavior that can cause crowd behavior and bridge the gap by identifying risky behavior among crowds. Additionally, this study will propose a research framework for the development of a crowd behavioral predictive model to anticipate future risk behavior among attendees. This research will employ a mixed-methods approach comprising qualitative and quantitative methodologies as its method of investigation. The research framework will then be used to develop a predictive model of crowd behavior among attendees of MCF that will help to provide significant information for event and concert organizers to understand potential risky behavior among the crowd, hence, help in mitigating or preventing unwanted crowd safety incidents at MCF.

Keywords: *Music concerts and festivals (MCF), Risky behavior, Predictive model, Crowd safety incidents*

1. Introduction and Background

Music Concerts and Festivals (MCF) are known as live music events performances (Webster et al., 2018; Frith, 2007), and these include, jazz music concerts, pop music concerts, rock music concerts, opera music concerts, electronic dance music (EDM), and all music festivals that held larger-scale live music events. Experts point out that live music events have always offered experience, connecting attendees to music uniquely—a tradition that has been alive since ancient times (Bennett, 2015). For example, the jazz music festival has become a trending event that has grown since the 20th century in Europe, where people began attending these events to experience live music and create lasting memories (Whyton, 2018). Moreover, previous studies have found that festival-goers and concert-goers who attend MCF events are mostly young (Carissa et al., 2020). Another researcher also revealed that these young people are involved in risky behavior (Hutton et al., 2021; Garga et al., 2021; Black et al., 2020; Feltmann et al., 2019; Milsten et al., 2017). Attendees represent the primary stakeholders who play an essential role in designing the success of MCF events (Raineri and Earl, 2005). Regrettably, attendees (festival-goers and concert-goers) at MCF are the main contributors to the occurrence of risks, particularly in risky behaviors that may lead to crowd behavior (Ismail et al., 2021). In other words, the crowd has been influenced by risky behaviors. Unfortunately, these issues have impacted the success of MCF, course to leading to incidents of crowd behavior at MCF.

The author found multiple evidence in the last years connected to crowd behavior incidents at MCF especially, at Malaysia. For example, a crowd behavior incident occurred at the Jiwa Kacau concert in Malaysia in June 2023, a sizable crowd engaged in a mosh-pit dance got out of control, leading to an incident of confrontation between security personnel and the crowd amid the artist's performance. Similarly, at Japan's annual five-day-long Rock in Japan Festival in August 2023, a tragedy occurred when four festival-goers broke their ribs while participating in the mosh-pit circle during the artist's performance, as reported by Shannon (2023).

Based on the above evidence, it is proved that the crowd is shaped by behavioral risks that may result in incidents at MCF. Experts have found that the growing situation of crowd behavior incidents in MCF presents a major obstacle to control safety and security at MCF. On the other hand, previous experts have shown significant interest in studying risk (Tangit et al., 2016; Cruwys et al., 2018), but there are still insufficient studies on risk behavior in MCF (Ismail et al., 2021). Consequently, this gap, leading to a lack of understanding by the organizers, is also notable. As stated by Raineri and Earl (2005) the minimal knowledge of risk behavior by the organizer has resulted in a lack of crowd safety and risk management at MCF. This contributed to unintentionally overlooking the occurrence of risk behavior at the event.

The purpose of this study is to address the existing gap by proposing a research framework for investigating crowd behavior at live music events, particularly among attendees at MCF. The objective of this proposal paper is to identify and understand risky behavior in these contexts. It is expected that a new predictive model of crowd behavior will be established by the end of this research study. The framework will provide valuable insights to assist event organizers in effectively preventing and managing risky behavior at MCF. Additionally, Zeitz et al. (2009) have argued that the term 'crowds' does not have a fixed meaning, as it can be used in various contexts. It can be concluded that crowd behaviors may vary depending on the context of the study. This multifaceted perspective emphasizes the importance of further exploration for better understanding and effective management of crowd behavior. Therefore, this study will adopt the term 'crowd behaviors' within the specific context of risk behavior among attendees at MCF.

2. Literature Review

Growth of MCF: Music concerts and festivals (MCF) were the main contributions to the construction of industry tourism, which has not only impacted the social but also the economic aspects of the community (Saragih & Amelia, 2020). Oxford Economics (2021) also mentioned in their report that concerts and live entertainment had a significant direct impact on the nationwide economy, amounting to $132.6 billion in 2019. The global music concert and festival market began to grow year by year in the 20th century.

In 1945, the Newport Jazz Festival, the first and foremost music festival, was held in Newport, Rhode Island. It had a significant impact, leading to the development of eras in modern music festivals. According to the Newport Historical Society (2021), 13,000 people attended this music festival. This tremendous success has indirectly made the place popular, leading people worldwide to recognize the town through this music festival, as reported by Belmore (2023).

With the rapid growth of music concerts and festivals worldwide in the 21st century, countries all around the world have begun hosting these events to enhance their tourism industry and contribute to their national economy. For example, Beyoncé's Renaissance 2023 tour has generated a revenue of $579 million upon completion of all scheduled (tour) performances, as reported by Kaufman (2023). The tour significantly enhanced the tourism industry in the host nations, particularly in Sweden. Beyoncé's Renaissance tour, marked by a 0.2% increase in inflation, led to a surge in hotel and ticket prices, both of which rapidly boosted economic activity in Sweden during May 2023 (Napolitano and Lee, 2023). Meanwhile, it was also reported that Taylor Swift's Era Tour surpassed the record revenue set by Beyoncé's Renaissance Tour in November 2023, accumulating a remarkable $1.04 billion revenue across 60 tour dates, as reported by Sherman (2023). According to Zetlin (2023), Taylor Swift's Era Tour had a huge impact and increased the economy in the USA.

Not to be forgotten, music concerts and festivals have been consistently hosted and grown by countries in Southeast Asia. For instance, after facing economic challenges during the COVID-19 pandemic in 2023, Vietnam took various initiatives to revive its economic activity. A case study by Phuong (2023) highlighted the Blackpink world tour concert in Hanoi as one such initiative to boost the economy. Fortunately, hosting the Blackpink world tour concert significantly contributed to Vietnam's economic growth, and the tourism industry experienced a rapid rise of 20% in mid-June (Phuong, 2023).

Meanwhile, in 2023, statistics indicate that Malaysia is projected to achieve a revenue of US$38.68 million in the music events market (Statisca, 2023). The development of music concerts and festivals (MCF) in Malaysia has provided a significant opportunity for the country to be recognized among international entertainment

music concerts and festivals hubs. According to Zikri et al. (2023), hosting a variety of music concerts and festivals, such as the Good Vibes Festival in Malaysia, has drawn concert-goers and festival-goers from around the world, especially in Southeast Asia. As a result, this festival has increased the demand for Malaysia's currency, cuisine, and hospitality, thereby indirectly contributing to the income of the tourism industry, as reported by Zikri et al. (2023).

Definitions of Crowd behaviors: Bon (2002) urged that crowd behavior is associated with risks for individuals in large gatherings, with some theories suggesting that individuals lose their sense of identity when they become part of the crowd. However, Al-Gadhi (1996), has defined that crowd behavior can be characterized as a temporary gathering of people who collectively respond to stimuli. Based on the Encyclopedia of Human Behavior, crowds are divided into two distinct types: psychological and physical crowds. Further expanded studies by Khazaie and Khan (2019), have offered a nuanced understanding of both psychological and physical crowds. It can be illustrated that physical crowds form when individuals converge unintentionally in a shared space, such as at airports or train stations, each bringing their unique perspectives. Theoretically, physical crowds are characterized by a group of people being present simultaneously in the same area (Riches, 2011). Conversely, psychological crowds emerge when individuals come together for a common purpose, such as attending a music festival like MCF, resulting in a shift from individual to collective identities as they perceive themselves as integral parts of the event community. This is to say, individuals in psychological crowds often adjust their personalities to better fit in with the crowd (Templeton et al., 2018).

As an illustration, risk behaviors tend to transition into manifestations of crowd behavior, indicating a propensity for individuals within crowds to engage in behaviors perceived as risky (Johnson et al., 1977). According to Alhajri et al. (2023), risk behavior manifests differently in various event contexts. For example, in the context of MCF, several notable risky behaviors have been identified and explored by previous researchers. Feltmann et al. (2019) demonstrated that elevated alcohol consumption at MCF events, results in high levels of intoxication. Further research by Feltmann et al. (2020) introduced a novel method aimed at prevention by suggesting improvements to the Alcohol Act at MCF events. However, research on alcohol-related risk behavior at MCF events remains limited, with this constraint persisting even in countries like Sweden, known for its high rate of alcohol use (Feltmann et al., 2019). Therefore, Feltmann et al. (2020) emphasize the detrimental impact of alcohol consumption on various health issues. Additionally, the authors mention that the increasing prevalence of this behavior at MCF can lead to crowd behavior such as violence, injuries, and sexual assault.

Sexual behavior, recognized as a type of risk behavior, has been noted to have the potential to escalate into crowd behavior at MCF. (Alhajri et al., 2023; Cameron Earl, 2008). Several researchers have further explained this particular topic of sexual behavior (Garga et al., 2021; Janssen et al., 2021; Bows et al., 2022; Narvaez et al., 2019; Hill et al., 2019). Observations in this context reveal that crowd sexual behavior at MCF can be categorized into two types: casual sex and sexual harassment. The study reveals that casual sex involves willingly engaging in sexual activity with a partner. However, it also highlights the potential risks associated with casual sex at MCF, where festival-goers and concert-goers may engage in sexual activity with multiple stranger partners (Garga et al., 2021; Janssen et al., 2021). Specifically, Garga et al. (2021) have found that festival-goers and concert-goers engage in casual sex while intoxicated and without a condom. The consequences of engaging in multiple casual sexual encounters can culminate tragically when individuals contract HIV and experience trauma. Narvaez et al. (2019) cited evidence from another source, indicating a connection between the use of club drugs and higher rates of HIV infection.

On the other hand, sexual harassment at MCF can be defined as instances of sexual violence (Bows et al., 2022). Statistics indicate that 90% of women attending MCF have experienced sexual harassment (Bows et al., 2022). In-depth qualitative methods were employed by Hill et al. (2019), revealing a societal lack of focus regarding sexual violence. Similarly, Bows et al. (2022) indicated that this risk behavior has become normalized within society. In light of this gap, which has resulted in significant impacts, sexual harassment significantly affects an individual's emotions, perspective, and overall well-being. For example, Hill et al. (2019), outlined various effects of sexual harassment experienced by females at music festivals and concerts. These effects include heightened vigilance and concern for personal safety, choosing to attend fewer events, adjusting clothing or behavior, modifying their use of festival spaces (such as avoiding the mosh pit circle), reducing or abstaining from alcohol and drug consumption (Hill et al., 2019). Additionally, Hill et al. (2019) cited a

comprehensive study conducted by Fileborn (2019), which found that crowd may experience emotions such as anger, shock, and anxiety, along with decreased tolerance for harassment and antisocial behavior, an increased willingness to intervene as bystanders, and a loss of trust, particularly towards men and security personnel (Hill et al., 2019).

One form of risk behavior, known as aggressive behavior, occurs when individuals harm or injure another person (Tuvblad, 2019). In the context of MCF, aggressive behavior arises when the crowd dances aggressively, potentially causing harm to other festival-goers and concert-goers (Barnes & White, 2019; Milsten et al., 2017). This type of aggressive behavior in MCF settings is commonly referred to as mosh pits (Palmer, 2005). The phenomenon of mosh pits has experienced significant international growth and development over time. According to Barnes & White (2019), in the mosh pit, a distinctive crowd arrangement, attendees engage in vigorous dancing to interact with the artists, music, and one another. Nonetheless, it is important to note that mosh pits can pose risks, including incidents of crowd behaviors (Barnes & White, 2019). However, Riches (2011) has indicated that mosh pits have benefits that can positively impact festival-goers and concert-goers. Instantly, mosh pits can serve as an escape from any problems festival-goers and concert-goers may have, allowing them to release tension and experience ecstasy within the circle of the mosh pit, thus significantly enhancing their pleasure and happiness (Riches, 2011). In contrast, Barnes & White (2019) vehemently challenge Riches's (2011) assertion, contending that although mosh pits may benefit some festival-goers and concert-goers, mosh pits can also inflict harm on others, often without their knowledge (Barnes & White, 2019). Barnes & White (2019) also mention that mosh pit involves actions such as strangling, kicking, and forcefully tackling intended to injure another person. The review paper by Milsten et al. (2017) revealed that the mosh pit poses greater harm to the well-being of festival-goers and concert-goers. Other than that, the mosh pit also has a significant impact on crowd behavior. Milsten et al. (2017) mentioned that mosh pits increase the likelihood of injuries occurring at MCF, especially at a Rock concert. The review by Milsten et al. (2017) referenced a comprehensive study conducted by Janchar et al. (2000), which highlighted that 33% of the total crowd who came to the hospital were identified as having injuries related to mosh pits. Milsten et al. (2017) also highlight that 15% of injuries were cuts and scrapes, while 20% involved musculoskeletal damage. In conclusion, the review paper by Milsten et al. (2017) underscores the substantial impact of mosh pits on the safety and well-being of attendees.

The normalization of drug use at Music Concerts and Festivals (MCF) has contributed to an environment where attendees are increasingly inclined toward engaging in risky behavior (Alhajri et al., 2023). Interestingly, contemporary attendees have increasingly been combining multiple drugs, a phenomenon known as polydrug or substance use (Ponnet et al., 2023; Istvan et al., 2023; Black et al., 2020; Ponce et al., 2019; Calle et al., 2019; Luther et al., 2018). Polydrug use involves the combination of various substances, including "cannabis, marijuana, weed, hash, cocaine, speed or amphetamines, ecstasy or MDMA, magic mushrooms, LSD, and ketamine" (Ponnet et al., 2023, para. 2). On the other hand, Polydrug also can be a combination of drugs and alcohol (Hutton et al., 2021). Moreover, Black et al. (2020), have stated that it has now become the norm among attendees to use polydrug at MCF. The survey was conducted through Facebook ads to identify whether respondents used polydrug at MCF, and the results showed that 91.80% out of 304 respondents had used more than one drug at MCF (Ponnet et al., 2023). In comparison, the OCTOPUS French cross-sectional survey, employed in the study by Istvan et al. (2023), proved to be more appropriate. Specifically, the findings indicated that 314 individuals predominantly used cannabis, ecstasy/MDMA, and cocaine (Istvan et al., 2023). Both statistics confirm the assertion made by Black et al. (2020) that attendees often use illicit drugs at MCF.

Additionally, Lim et al. (2009) found that young people are the primary demographic affected by the harmful effects of drugs. Moreover, Black et al. (2020) reported the deaths of two individuals due to drug use during MCF in New South Wales, Australia, in September 2018. Similarly, Hutton et al. (2021) cited a news report by The Guardian as the source of evidence that six individuals lost their lives due to a combination of substance use, including drugs and alcohol at MCF. Both researchers have provided clear evidence on how the effect of substance use can harm festival-goers and concert-goers. Additionally, the case study by Chhabra et al. (2017) has highlighted that cases related to substance use often inundate the emergency department at hospitals. The findings of the case study revealed that 28 patients who used illicit drugs at MCF were brought to the emergency department, with several of them experiencing musculoskeletal issues (Chhabra et al., 2017). Thus, it has been identified that musculoskeletal issues are among the harmful effects of drug substances.

Demographic Trends Related to Risk Behavior at MCF: The majority of festival-goers and concert-goers engaging in risk behavior at MCF are from the young demographic, as evidenced by the involvement of underage individuals in alcohol consumption. According to Feltmann et al. (2019), the result finding of the cross-sectional study indicates that most of the respondents disagreed with underage involvement with alcohol. Subsequent research by Feltmann et al. (2020) delved into the legal aspects of distributing alcohol to youths under eighteen, highlighting its prohibition.

Next, most casual sexual encounters are predominantly reported among young adults, as highlighted in the study by Garga et al. (2021), underscoring the prevalence of such risk behavior within this demographic group at MCF. Turning to the risk of sexual harassment, as highlighted by Hill et al. (2019), females are identified as the primary victims of sexual harassment at MCF. Approximately 34% of females have faced incidents of sexual harassment, and this issue is not exclusive to females alone (Bows et al., 2022). Conversely, men are also not exempt from this risk, with around 6% of males also experiencing sexual harassment at MCF (Bows et al., 2022).

Moreover, illicit drug consumption at MCF has also been determined to be highest among the young adult demographic (Hutton et al., 2021; Black et al., 2020). Specifically, both researchers have highlighted that festival-goers and concert-goers aged 23 to 25 are actively involved with drugs at MCF. The number of cases related to harm associated with this behavior has rapidly increased, Hutton et al. (2021) reported that six individuals lost their lives due to a combination of substance use, including drugs and alcohol. Similarly, Black et al. (2020) reported the deaths of two individuals due to drug use during MCF in New South Wales, Australia, in September 2018. Riches (2011) has stated that while mosh pits are mainly populated by males, they are not exclusive to this gender and also include females. The report by Riches (2011) has shown that mosh pits are notable among female fans, as females desire to join the circle to participate in it and indirectly experience ecstasy. However, to broaden the demographic, Milsten et al. (2017) have noted that mosh pit dancing is prevalent among young adults.

Safety Measures for MCF Crowds: The consequences of risk behavior on the festival-goers and concert-goers at MCF have caused concern to others. Several strategies provided by researchers have the potential to be applied at MCF to prevent this problem. Among the suggestions is one from Feltmann et al. (2020), who discuss the best strategies to prevent alcohol intoxication, which is to abide by the Alcohol Act. This entails refusing to serve alcohol to visibly drunk festival-goers and concert-goers and denying them entry into the MCF event. Another suggestion by Feltmann et al. (2020), that can be applied to MCF is to prohibit both the serving and consumption of alcohol during the event. Therefore, this successful strategy has been applied by MCF in Sweden with the statement 'Alcohol-Free' (Feltmann et al., 2020).

Many parties have made efforts and planned various strategies to prevent sexual risk behavior at MCF. In line with this, Janssen et al. (2021) surveyed to evaluate the impact of the campaign on exposure to sexually transmissible infections (STIs). The campaign is one of the initiatives by the government of the NSW Ministry of Health to curb this risky behavior. The results indicated that this campaign is effective in promoting casual sexual health among young people by increasing awareness and encouraging them to undergo STI screening (Janssen et al., 2021). Based on the issues addressed by Bows et al. (2022), the layout of MCF often provides opportunities for men, especially, to harass and assault women. Therefore, Bows et al. (2022) have suggested adopting the best strategy proposed by Vera-Gray and Kelly (2020), known as 'safety work,' to prevent this issue at MCF. 'Safety work' refers to the various actions and precautions women take to enhance their safety and reduce the risk of sexual violence, including avoiding certain spaces (Vera-Gray and Kelly, 2020). Similarly, Hill et al. (2019) have also suggested adopting the best strategy proposed by the Women's Liberation Movement, which advocates for the creation of 'safe spaces' originally conceptualized by radical feminists during the 1970s Keenan and Darms (2013), to provide save space at MCF. However, Hill et al. (2019) have urged that this strategy needs to be adapted and made more inclusive. Specifically, it should be tailored to accommodate diverse needs, such as providing spaces for LGBTQ individuals who also frequently experience sexual harassment. Thus, all the strategies in sexual risk behavior are considered best practices for implementation at MCF. In addition, the procedures for preventing polydrug use at MCF have been predominantly discussed by researchers (Ponnet et al., 2023; Ponce et al., 2019; Hutton et al., 2018; Luther et al., 2018). Understanding the risk behavior of festival-goers and concert-goers by event planners and on-site

medical departments is crucial (Hutton et al., 2018). Hutton et al. (2018) proposed several strategies to address these behaviors, emphasizing the role of health coordinators at MCF in raising awareness. This includes promoting health messages, particularly regarding polydrug use, to mitigate incidents such as injuries and harm (Hutton et al., 2018).

Meanwhile, Ponce et al. (2019) conducted a cross-sectional survey to evaluate the connection among personality characteristics, the use of multiple substances, and strategies for minimizing harm among festival-goers and concert-goers. The nine strategies questions are "Buy drugs from a reliable source; Plan my drug use sessions; Set limits on the quantity of drug used; Space out sessions/parties where use drugs; Avoid mixing depressants; Take smaller doses instead of larger doses; Avoid mixing stimulants; Use lower quantity when combining drugs; and Wait for the effects of a dose to decrease before taking another one" (Ponce et al., 2019). Thus, the findings suggest that individuals with higher levels of impulsivity are less inclined to frequently utilize the identified harm-reduction strategies (Ponce et al., 2019). However, despite their potential benefits, the effectiveness of these strategies may be constrained by variations in personality and behavior among festival-goers and concert-goers (Ponce et al., 2019).

In addition, Ponnet et al. (2023) have suggested that the implementation of pill testing, informational sessions on the negative effects of substance use, and provision of free water services can be effective solutions for alleviating the severity of side effects associated with polydrug use. Ponnet et al.(2023) have also suggested the drug-checking strategy proposed by Haug et al. (2023) before entering MCF. To conclude, applying the strategies recommended by researchers with constant care and vigilance enhances the efficacy and efficiency of MCF and indirectly can prevent this issue.

Transitioning to strategies concerning the mosh pit. Milsten et al. (2017) emphasized that while the Occupational Safety and Health Administration (OSHA) develops guidelines primarily for ensuring workplace safety, these regulations can also be valuable for effectively managing mosh pit crowds at MCF. For instance, measures such as hiring additional staff, including qualified security, and implementing crowd control strategies can help enhance safety (Milsten., 2017). Another strategy suggested by Tarlow (2002) for managing the mosh pit during performances is to guide festival-goers and concert-goers away from the center of the mosh pit circle. Therefore, this approach helps protect those who do not participate in the mosh pit from potential injuries or harm.

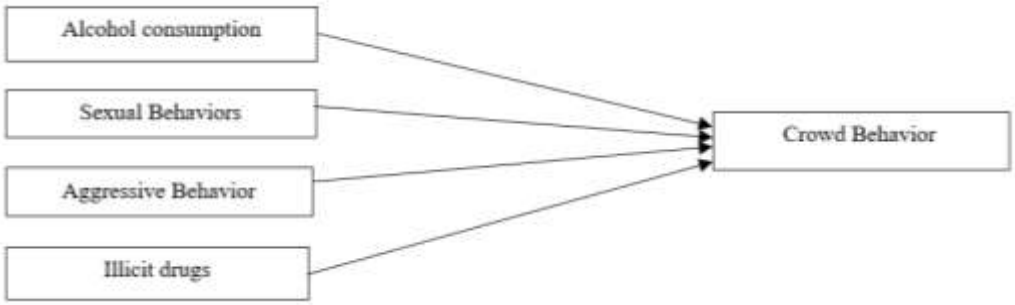
Neglecting Risk Management - A Concern for Safety at Malaysian MCF: MCF has grown steadily each year in Southeast Asia, with Malaysia being a particular focal point. Specifically, focuses on MCF in Malaysia, a country actively engaging with the global music scene and showcasing a diverse array of events spanning various genres. For instance, the Rainforest World Music Festival 2023 not only highlights Sarawak's rich musical heritage but also seamlessly blends the region's unique music genres and culture in this grand festival (New Straits Time, 2023). With the hosting of this kind of music festival in Sarawak, the state has solidified its standing as a regional hub for music tourism and performing arts, as reported by the New Straits Times in 2023.

In line with the development of the MCF industry in Malaysia the Occupational Safety and Health Act 1994 – Act 514 (OSHA). This act is established to ensure the welfare, safety, and health of Malaysian workers. A previous study by Mohd Khir et al. (2019) found that the establishment of the Occupational Safety and Health Act 1994 – Act 514 (OSHA) is crucial in the Malaysian event industry, especially in the context of MCF. This act proves to be instrumental in controlling crowds, particularly in mitigating risks among attendees, and organizers are required to adhere to this act. The author also stated several other legislations relevant to the context of the Malaysia event industry, such as the Factories and Machinery Act 1967 (Act 139), Environmental Quality Act 1974 (Act 127), Explosives Act 1957 (Act 207), Peaceful Assembly Act 2012 (Act 736), Fire Services Act 1988 (Act 341), Civil Aviation Act 1969 (Act 3), and Employees' Social Security Act 1969 (Act 4).

However, despite the regulatory framework provided by legislation such as OSHA, the lack of understanding of risk behavior has also affected Malaysia, leading to crowd behavior, albeit not as prominently as internationally. Nonetheless, evidence shows that cases and incidents related to crowd behaviors are gradually increasing in Malaysia. For example, crowd behavior incidents occurred at the Future Music Festival 2014, leading to 19 attendees involved in drug cases and the deaths of six attendees due to excessive doses at the same event

(Tangit et al., 2016). Ismail et al. (2021) conducted in-depth qualitative interviews among festival-goers and concert-goers. The study discovered instances of sexual risk behavior, alcohol consumption, and drug use at MCF. Further findings indicate that most interviewees reported firsthand observations of individuals sneaking drugs, and alcohol, and engaging in intimate conduct during MCF (Ismail et al., 2021). Based on this previous finding, sneaking drugs and alcohol has been identified as a major issues in crowd behavior at MCF events in Malaysia. Additionally, there is evidence of mosh pit incidents occurring in Malaysia in 2023, though fortunately, no injuries or harm were reported (New Straits Times, 2023). While Malaysia may have lower statistics on incidents related to crowd behavior at MCF, the situation highlights a concerning trend: organizers frequently neglect effective risk management practices, thereby increasing potential safety concerns at these events. Finally, after conducting the literature review, the crowd behaviors research framework has been developed for the development of predictive models (Figure 1).

Figure 1: Development of Predictive Model



3. Research Methodology

Previous studies on risk behavior in Malaysia have predominantly utilized a single method (Tangit et al., 2016; Ismail et al., 2021), resulting in limitations in the available data. To address this issue, the proposed research study employs a mixed-method approach, integrating both quantitative and qualitative techniques, which is considered the best strategy for comprehensively understanding the research problem (Creswell, 2018). By using both methods the result offers more robust conclusions compared to employing either method independently (Creswell, 2014). The proposed research study will also apply the sequential explanatory strategy, where the first phase will utilize the quantitative method, followed by the qualitative method in the second phase (Creswell, 2018). This strategy aims to obtain preliminary results through the pilot study using a quantitative method in the first phase, followed by a comprehensive analysis in the second phase using qualitative methods.

In the first phase, the researchers will investigate the perspective of the crowd, which refers to the demographic population of festival-goers and concert-goers in Malaysia. The sampling technique for this phase will utilize its non-probability sampling, specifically convenience sampling. Convenience sampling involves selecting respondents based on convenience and practicality, making it suitable for pilot testing (Sundram et al., 2016). This sampling technique is appropriate for the study because the researchers will conduct the pilot test at any MCF event in Malaysia that is available at that particular time. Moreover, the instrument used in the study will be a survey, specifically employing a questionnaire. According to Sudram et al. (2016), questionnaires yielded the most accurate results, indicating that the data collected was valid and reliable. Researchers opted for this instrument due to unreliable data in past studies (Ismail et al., 2021), and by utilizing surveys, the researchers aim to mitigate such issues in future studies. The quantitative data analysis will be conducted using the Statistical Package for the Social Sciences (SPSS), Partial Least Squares Structural Equation Modelling (PLS-SEM) will also be applied.

After that, the data explored in phase one will be refined, analyzed and utilized in the second phase to conduct further in-depth investigations. The qualitative stage will focus on in-depth interviews, a method that enables researchers to understand and explore the interviewees' social world (Rutledge and Hogg, 2020). This method facilitates the collection of rich data from interviewees' words, metaphors, pictures, and feelings. The second

phase will commence with the researcher selecting festival-goers and concert-goers from MCF. Then, these selected people will participate in focus group discussions. This type of data collection will enable participants to express their opinions by responding to questions from the moderator and engaging in discussions with one another, where they can share stories and comment on each other's perspectives (Krueger and Casey, 2014).

The next step involves data analysis, during which researchers will explore, describe, report, interpret, and validate the data obtained from the focus group discussions using thematic analysis. Nowell et al. (2017) have highlighted many benefits of applying thematic analysis in data analysis, including its usefulness in summarizing key features of a sizable data collection and facilitating a structured approach to handling data. Thematic analysis helps researchers produce systematic and conclusive final results that can identify important themes, ultimately leading to the development of a crowd behavior predictive model.

In summary, the study will utilize a mixed-method approach employing a sequential explanatory strategy consisting of two phases. The first phase involves distributing surveys among attendees at MCF, while the second phase refines the data collected in phase one. Focus group discussions will be conducted with selected participants from festival-goers and concert-goers, and thematic analysis will be applied to interpret the qualitative data.

4. Conclusion

As previously mentioned, even though music concerts and festivals (MCF) hold the potential for profitability, they also carry risks associated with the event venue and crowd (Tenu and Ciocoiu, 2020). Tenu and Ciocoiu (2020) argued that the presence of risk is a crucial factor in assessing the success and quality of an event. Unfortunately, there have been instances at MCF where risky behavior, particularly concerning alcohol, drugs, sexual behavior, and mosh pits, was not taken seriously by organizers and was met with indifference (Alhajri et al., 2023). It has become normalized for attendees to engage in undesirable behaviors at music concerts and festivals, highlighting the critical need to address this issue for the sake of the economic future and the well-being of the crowd. To address this issue, this study will focus on exploring crowd behavior at MCF.

This study will have the capacity to identify and understand the risk behavior among attendees. It is expected that this study will help organizers enhance their knowledge of risk behavior within the MCF industry. The study also highlights effective solutions to assist organizers of MCF events in Malaysia in addressing issues such as sneaking drugs and alcohol, mosh pit incidents, and inappropriate sexual behavior among attendees.

Primally, the proposed research framework will be an important reference in developing a predictive model of crowd behavior. This research framework will serve as the initial step for organizers to identify and understand risk behaviors. Additionally, it will be beneficial for festival-goers and concert-goers to recognize risk behaviors in which they may have indirectly participated, potentially reducing such behaviors at MCF. Subsequently, the predictive model of crowd behavior is expected to be beneficial for organizers in analyzing anticipated future risk behavior among crowds during the planning phase.

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Synergies of Success: Unveiling the Transformative Influence of Sponsorship on Event Excellence

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Abstract: This study delves into the intricate dynamics of sponsorship strategies, media exposures, and event organizer practices within the Malaysian events industry. Employing a quantitative research approach, the research sampled 110 corporate sponsor representatives, utilizing a structured questionnaire to collect data. Analysis, carried out using Statistical Packages for Social Science Version 26.0 (SPSS Version 26.0), incorporated both descriptive and inferential methods. The findings illuminate a significant positive relationship between sponsorship strategies and media exposure with event success, accompanied by a noteworthy negative relationship between event organizer practices and event success. These results underscore the pivotal role of sponsorship and media exposure in influencing successful events, providing valuable insights for corporate sponsors and event organizers alike. Importantly, the study emphasizes the need for organizations to reassess their sponsorship approaches, fostering successful events by fortifying policies and aligning mutual objectives. As the events landscape continues to evolve, this research contributes to the broader discourse, guiding industry practitioners in optimizing strategies for sustainable success in the dynamic Malaysian events industry.

Keywords: *Event Management, Sponsorship, Event success, Symbiotic relationships, Brand visibility*

1. Introduction and Background

Sponsorship is the most important element in marketing communications for every type of company and organization among other types of marketing communications (Azmil et al. 2023). The intricate web that ties between corporate aspirations, event organizers' strategic goals, and the ever-changing event industry is the symbiotic relationship between sponsorship and event success. Po-Lin et al. 2021 stated team performance and sports fandom significantly influenced sports fans' connection to the sponsor brand, with higher fandom leading to a stronger connection after the success of their favorite team. The analysis of sponsorship advantages becomes especially important in the context of Malaysia, where the events sector is still growing and delivering a wide range of services. The events sector in Malaysia is still growing and delivering a wide range of services. The business event industry has experienced significant growth and continues to outpace tourism, contributing to the financial gain of the host community (Khairiah, Ismail 2022). A lens through which to examine the strategic interactions between sponsors and event organizers is provided by an understanding of the reasons why businesses invest in event sponsorship, such as the search for opportunities, the application of market growth strategies, and the development of brand awareness.

Event tourism in Malaysia has the potential to boost economic growth, increase international tourist arrivals, and create job opportunities. The collaboration between Dirigo Events Sdn. Bhd. and Kuala Lumpur Marathon is one striking illustration from the Malaysian events sector. Leading Standard Chartered wanted to make the most of the Kuala Lumpur Marathon, which is an annual event that draws a wide range of attendees and a lot of media coverage. Through the strategic alignment of their sponsorship with particular elements of KL Marathon such as media exposures, Standard Chartered was able to greatly enhance their brand visibility and make a substantial contribution to the event's overall success. This case study provides a concrete example of how sponsorship—especially in the form of media exposure—can significantly increase the significance and success of events in the Malaysian environment. The role of the media is essential to create visibility of this partnership and achieve set sponsorship aims (Noor et al, 2022).

Furthermore, the academic exploration of sponsorship benefits in the Malaysian events industry is not only

pertinent but also essential for businesses seeking to maximize their sponsorship budgets and event coordinators seeking effective means of attracting sponsors. Previous research has highlighted the importance of media attention as a critical component of sponsor-event success. For instance, Noor et al. (2022) found in their study that traditional and social media outlets played a significant role in informing businesses about sponsorship opportunities and connecting with the public, both of which enhanced the event's success. Through the usage of media, sponsors were able to ensure visibility and exposure to their target audience by generating branding and publicity. To make sponsorship decisions, sponsors and sponsored properties needed to maintain a strong connection, which was greatly enhanced by media interaction. Additionally, media plays a crucial role in promoting sponsor-sponsored properties, which helps businesses create value and cultivate relationships. All things considered, the media provided a forum for interaction, promotion, and communication that aided in the development of relationships and increased the success of sponsorship programs. Event-sponsor suitability has a positive effect on Brand Image, according to the research conducted at Jazz music events in Traffic Surabaya (Azmil et al. 2023).

This article seeks to enhance the larger discussion on event sponsorship and its impact on attaining success in Malaysia's dynamic events industry. It accomplishes this by thoroughly examining real-world instances and incorporating ideas from earlier research.

2. Literature Review

Sponsorship Strategies: Although sponsorship strategies have been thoroughly studied in various situations, the focus of event sponsorship has primarily been on large-scale events and sports-related activities, resulting in a lack of research on sponsorship in the context of business events (Li, 2022). Mega-events and sports sponsorships frequently attract attention because of their worldwide popularity, intense media attention, and substantial economic consequences. These studies have explored the complexities of partnerships, analyzing how sponsors utilize these events to increase brand exposure, target specific demographics, and accomplish strategic marketing goals. However, business events, such as exhibitions, have the potential to bring economic effects and cultural diversity to destinations, making sponsorship in this context important (Koronios et al., 2021). Different types of sponsorships have been identified in business events, including cash/financial sponsorship, networking events sponsorship, digital sponsorship, and outdoor advertising sponsorship (Li, 2022).

In contrast, sponsorship research has focused less on business events, which include conferences, trade exhibitions, and corporate meetings. This omission is remarkable considering the distinct dynamics and goals connected with corporate gatherings, which frequently focus on the sharing of information, networking, and professional growth. Comprehending sponsorship tactics within the framework of business events is vital for sponsors and event organizers alike, as these collaborations may greatly affect brand positioning, industry sway, and overall event triumph.

By broadening the scope of sponsorship research to encompass corporate events, one might discover unique difficulties, possibilities, and effective tactics within this field. By closing this divide, academics and experts in the field may contribute to a more thorough comprehension of the dynamics of sponsorship, promoting ideas that can be utilized to improve the success of a wider range of events. Sponsorship strategies represent the carefully crafted plans and approaches that companies employ to establish meaningful partnerships with events, aligning their brand with specific activities to achieve strategic objectives. In the realm of event sponsorship, strategies play an important role in determining the success and impact of the sponsorship engagement. These strategies often encompass various elements, including financial considerations, brand alignment, activation plans, and the identification of target audiences. In the field of sports sponsorship, research has focused on narrow strategic goals, but there is a need to explore sponsorship's viability for wider strategic aims and contexts (Dombrowski, 2015).
H1: There is a significant relationship between sponsorship strategies and event success.

Media Exposure: Media exposure in sponsorship is a key factor in influencing consumers' responses to social media advertisements (Saleh et al. 2023). In the context of event sponsorship, the effectiveness of social media advertising is intricately tied to how the sponsorship arrangement is disclosed and the nature of the content

shared post-event. The study suggests that employing different types of disclosure and post-event content can be strategic in mitigating negative reactions and enhancing the overall impact of social media ads associated with event sponsorship (Shuqair et al. 2023).

In the context of event sponsorship on social media, a clear paid partnership disclosure helps manage persuasion resistance by offering transparency about the commercial nature of the content, potentially fostering a more positive reception from consumers (Saleh et al. 2023).

Post-event content becomes equally critical. The nature and tone of the content shared after the event can influence how consumers perceive the brand and the sponsored event (Nguyen, Dinh, Toan. 2022). Engaging and authentic post-event content that resonates with the audience and aligns with the event's objectives can contribute to a more positive overall response. Additionally, the study by Sreejesh et al. showed that spectators' cognitive and emotional responses towards both the events and the sponsoring brands play a key role in the formation of hedonic-utilitarian value judgments, which in turn predict consumers' purchase intention towards the brand (Xue, 2022).

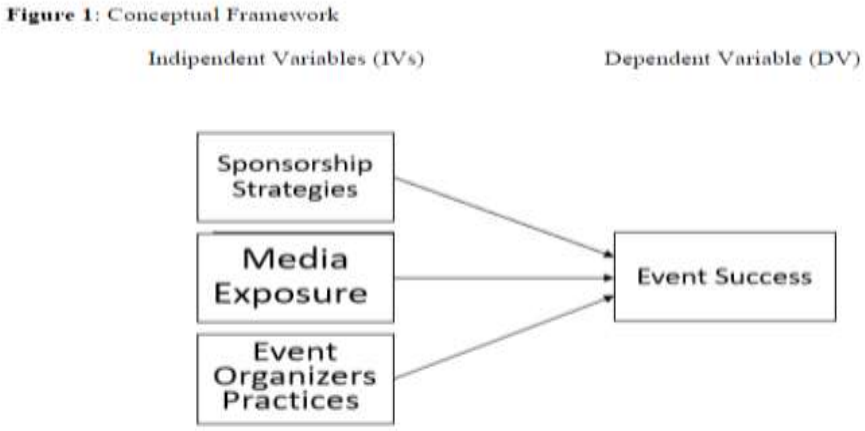
In essence, by implementing a paid partnership disclosure and crafting compelling post-event content, sponsors and event organizers can enhance transparency, trust, and resonance, thereby optimizing the impact of their social media advertising efforts in the context of event sponsorship. These findings suggest that the content shared after the event, including the messaging and communication strategies employed, can shape consumers' perceptions of the brand and the event, ultimately influencing their attitudes and behaviors towards both (Zulqarnain, Iqbal & Muneer, 2023)
H2: There is a significant relationship between media exposure and event success.

Event Organizer Practices: Effective event organizer practices in managing event sponsorship play a crucial role in fostering successful partnerships and optimizing the benefits for both sponsors and the event itself. Aligning event objectives with the goals and values of potential sponsors is crucial for enhancing the attractiveness of the sponsorship opportunity. Understanding sponsors' marketing objectives and aligning them with the event's mission and target audience can help create a mutually beneficial partnership. This can be achieved by identifying the types of sponsorships that are suitable for the event, such as cash/financial sponsorship, networking events sponsorship, digital sponsorship, and outdoor advertising sponsorship (Guo, 2023).

Sponsorship packages can be customized to meet the diverse needs and budgets of potential sponsors, allowing them to choose elements that align with their marketing goals and target demographics. This customization enables sponsors to have greater control over their investment and ensures that they are reaching their desired audience effectively (Baarman et al. 2020).

Maintaining transparent communication throughout the sponsorship process is crucial for building trust with sponsors and avoiding misunderstandings. It is important to clearly articulate the benefits, expectations, and deliverables in sponsorship agreements (Holloway, 2024). This helps sponsors understand what they can expect from the partnership and ensures that both parties are on the same page. Transparent communication also allows for effective evaluation of the transparency of software development life cycle (SDLC) products and processes, leading to improved communication, software maintainability, and stakeholders' productivity (Ofem, Isong, & Lugayizi, 2022).
H3: There is a significant relationship between event organizer practices and event success.

Figure 1: Conceptual Framework



3. Research Methodology

The research design employed in this study is descriptive, clarification, and correlational, focusing on corporate sponsor representatives with a total of 110 respondents. The correlational method encompasses three independent variables: sponsorship strategies, media exposure, and event organizer practices. Non-probability sampling was utilized to select participants, emphasizing a pragmatic approach for exploring the relationships between the identified variables. The survey approach was adopted as the primary method for data collection, employing a structured questionnaire comprising five sections (Sections A, B, C, D, and E) and containing a total of 56 questions.

4. Results and Discussion

Profile of Respondents: The demographic analysis of the respondents reveals a gender distribution where 60.8% are male, and 39.2% are female. In terms of age distribution, the age group with the highest representation is 30 - 35 years old, constituting 30% of the respondents. The educational backgrounds of the respondents vary, with 35.1% holding a degree, 25.9% possessing a diploma, and 18.4% with an SPM qualification. Additionally, 9.3% have a PhD qualification, and 11.3% hold a Master's degree.

Regarding professional experience, a significant proportion of respondents (27.9%) have 5 - 7 years of service, followed by 20.4% with 8 - 11 years of experience, and 16.6% with 1 - 3 years of service. Moreover, 27.5% have 11 - 15 years of experience, and 7.6% have more than 15 years of service in their respective organizations.

Within the organizational structure, a majority (82.3%) of respondents work under a female immediate supervisor, while 17.7% report to a male immediate supervisor. These demographic insights provide a foundational understanding of the profile of the study participants, setting the stage for a more nuanced analysis of the research findings related to sponsorship strategies, media exposure, and event organizer practices in the corporate context.

Descriptive Statistics, Cronbach Alpha, and Pearson Correlation of All Study Variables: The analysis reveals a robust correlation between media exposure and event success, as indicated by a correlation coefficient (r) ($r=0.513$, $p<0.000$). This statistically significant finding underscores a substantial positive relationship between media exposure and the success of corporate-sponsored events. The higher the level of media exposure associated with an event, the more pronounced the positive impact on its overall success.

This result aligns with the understanding that effective media exposure, encompassing various channels and

promotional strategies, contributes significantly to enhancing the visibility, reach, and engagement of an event. Such positive correlations are crucial insights for corporate sponsors and event organizers, emphasizing the pivotal role that media exposure plays in optimizing the outcomes and achievements of sponsored events within a corporate setting. Further detailed analyses and interpretations of these results will provide a comprehensive understanding of the dynamics between media exposure, sponsorship strategies, and event organizer practices in the context of corporate-sponsored events. The 3rd Asia Pacific State of the Art Events Research Conference

The analysis indicates a positively significant relationship between sponsorship strategies and event success, with a correlation coefficient (r) of 0.462 and a p-value less than 0.000. This result underscores the existence of a meaningful correlation between the strategic approaches taken by corporate sponsors and the overall success achieved by the sponsored events.

The positive correlation suggests that a well-thought-out and effectively implemented sponsorship strategy tends to contribute positively to the success of the associated events. Successful sponsorship strategies may involve careful selection of sponsorship elements, strategic partnerships, and innovative activation plans. These findings offer valuable insights for corporate sponsors, emphasizing the importance of deliberate and well-planned sponsorship strategies in achieving favorable outcomes for the sponsored events.

Further exploration of the nuances within sponsorship strategies and their specific impact on distinct aspects of event success will provide a more comprehensive understanding of the dynamics at play in the corporate-sponsored events landscape. The examination of the relationship between event organizer practices and event success reveals a significant and negatively correlated association. The correlation coefficient (r) of -0.350, with a p-value less than 0.000, suggests a notable negative correlation between the effectiveness of event organizer practices and the overall success of corporate-sponsored events.

This negative correlation implies that when event organizer practices are not well-executed or practiced, there is a tendency for a decrease in event success, and conversely, effective and well-implemented event organizer practices are associated with higher levels of event success. In essence, the findings highlight the crucial role of adept event planning, coordination, and execution in achieving positive outcomes for sponsored events within the corporate context.

Understanding the negative correlation prompts further investigation into specific event organizer practices that may hinder or enhance event success. This nuanced exploration will provide valuable insights for event organizers and sponsors alike, enabling them to refine strategies and practices for optimal results in future corporate-sponsored events.

Multiple Regression Analysis – Coefficients: The R-squared value, representing the proportion of variance in the dependent variable (event success) explained by the independent variables (sponsorship strategies, media exposure, and event organizer practices), is calculated as 0.330. This result indicates that approximately 33% of the variability in event success can be attributed to the studied independent variables.

Conversely, the remaining 67% of the variance in event success is not accounted for by the examined sponsorship strategies, media exposure, and event organizer practices. This suggests that there are other factors or variables, not explicitly considered in this study, that significantly contribute to the variation in event success. Identifying and understanding these unexplored factors could provide additional insights into the complexities of corporate-sponsored events and offer avenues for further research and strategic adjustments.

The R-squared value serves as a valuable metric to gauge the explanatory power of the studied independent variables. While the explored factors contribute meaningfully to event success, acknowledging the presence of unexplored variables highlights the multifaceted nature of corporate-
sponsored events and encourages a comprehensive approach to future investigations and event planning strategies.
H1: There is a significant relationship between sponsorship strategies and event success.

The above-mentioned hypothesis predicts a relationship between the variables, which indicates that sponsorship strategies can affect the event's success. The previous study proved that sponsorship strategies play a crucial role in the success of events. Research has shown that event sponsorship can enhance brand image, cover costs for event organizers, and improve the financial status of the event (Li et al. 2022).

The findings of the research provide statistical evidence supporting Hypothesis 1 (H1). The p-value associated with sponsorship strategies is reported as 0.027, which is below the commonly used significance threshold of 0.05. This implies that the relationship between sponsorship strategies and event success is deemed statistically significant.

Furthermore, the regression coefficient (β) for sponsorship strategies is 0.264, and the t-value is 2.245. The positive sign of the coefficient indicates a positive relationship, and the t-value being greater than 2 suggests that the relationship is not likely due to random chance.

In practical terms, this means that as the value of sponsorship strategies increases, there is a corresponding increase in the success rate of the event. This positive association underscores the importance of deliberate and effective sponsorship strategies in contributing to the overall success of corporate-sponsored events. The findings provide actionable insights for event organizers and corporate sponsors, emphasizing the need for strategic planning and execution of sponsorship initiatives to optimize event outcomes.
H2: There is a significant relationship between media exposure and event success.

A relationship was found between media exposure and event success. The results are consistent with the previous studies showing the correlation between media exposure and event success. Media exposure plays a significant role in the success of events. It has been found that media exposure of corporate social irresponsibility (CSI) events negatively impacts firm performances, leading to reputation damage and additional costs for regulatory compliance and reputation rebuilding (Ye, Li, & Pei, 2024).

Based on the findings of this research, the p-value of media exposure is 0.229 which implies that the relationship of this variable is significant with the event success (β = 0.220, t = 2.215, p = 0.029). Therefore, H2 is supported implying that there is a significant relationship between media exposure and event success, which means that as the value of media exposure increases, the event success rate will increase.

H3: There is a significant negative relationship between event organizer practices and event success.
The research findings indicate a statistically significant relationship between event organizer practices and event success, as evidenced by a p-value of 0.029, which is below the conventional significance threshold of 0.05. This supports Hypothesis 3 (H3). The 3rd Asia Pacific State of the Art Events Research Conference

The regression coefficient (β) associated with event organizer practices is reported as -0.220, with a t-value of -2.215. The negative sign of the coefficient suggests a negative relationship, and the t-value being greater than 2 implies that the relationship is not likely due to random chance.

Practically, this implies that as the value of event organizer practices increases, there is a corresponding decrease in the success rate of the event, and vice versa. The negative relationship indicates that ineffective or poorly executed event organizer practices may contribute to a decline in event success. A study by Jeff, Wrathall., Effie, Steriopoulos. (2022) successful event management hinges on the ability to predict and monitor event costs and revenues. Inadequate preparation, poor coordination, and budgeting errors can result in financial challenges, potentially turning expected profits into losses and causing cash flow issues. This underscores the critical significance of meticulous planning and coordination in event organization to maintain financial health and overall success.

5. Recommendations

In summary, this study delved into the complex dynamics between sponsorship strategies, media exposure, event organizer practices, and their collective impact on event success. The findings of the research collectively conclude that these factors indeed play important roles in determining the success rate of an event.

Positive Impact of Sponsorship Strategies and Media Exposure: The study affirms a positive and significant relationship between sponsorship strategies, media exposure, and event success. Successful sponsorship strategies and effective media exposure contribute positively to the overall success of corporate-sponsored events.

Negative Impact of Event Organizer Practices: Contrarily, event organizer practices exhibit a negative and significant relationship with event success. This emphasizes the critical importance of adept event planning, coordination, and execution in achieving positive outcomes for sponsored events.

Sponsorship strategies as the Most Influential Factor: The research highlights media exposure as the most influential factor among the studied variables, showing a positive and significant impact on event success. This underscores the need for strategic media engagement in optimizing the success of corporate-sponsored events. Importantly, all hypotheses posited in the study are accepted, reinforcing the robustness of the relationships identified and substantiated through statistical analysis.

Conclusion

In conclusion, this study not only advances our understanding of the nuanced relationships within the realm of corporate-sponsored events but also provides actionable insights for stakeholders. Acknowledging the significance of sponsorship strategies, media exposure, and event organizer practices is imperative for those involved in event planning, sponsorship decisions, and marketing strategies. As the events landscape continues to evolve, the findings of this study offer practical guidance for optimizing approaches to ensure successful outcomes in the dynamic and competitive space of corporate-sponsored events.

Future research in the realm of corporate-sponsored events can build upon the insights gained from this study, exploring additional dimensions and addressing potential gaps in the existing literature. Investigate the contextual nuances that may influence the relationships between sponsorship strategies, media exposure, event organizer practices, and event success. Consider specific industry contexts, cultural variations, or types of events to uncover unique dynamics. The 3rd Asia Pacific State of the Art Events Research Conference.

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Crisis Management Research (2014-2023) in the MICE Industry: A Review and Research Agenda

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Abstract: The 21st century is seen as a volatile business environment and requires a proper crisis management standard for most organizations including the MICE sector. Nowadays, managers seek to deal with a potential crisis effectively, with minimum losses or to avert the potential crisis in the best case. The goal is obvious: minimize the impact of the crisis or avoid a potential crisis. This study aims to investigate relevant research domains in the MICE/business events industry context. This paper found that there was very limited study on the topic. The topic of crisis management in the MICE/business events industry only started to gain much attention after COVID-19. To understand how crisis management practices have been adopted in the industry, the authors reviewed 32 articles including 29 papers on COVID-19, spanning 10 years, between 2014 and 2023. The findings showed that the research focuses on crisis management, crisis impact, response, resilience, communication, and recovery. Looking back, health-related crises (including COVID-19), political disturbances and terrorism themes are the biggest trends. This study addressed the need for more study on the topic for advancing knowledge, addressing emerging challenges, and applying findings to improve practice and decision-making as well as to develop a newly conceptual framework that places operational resilience on an equal footing with financial resilience, with indicators adapted to the risk profile of the operating model.

Keywords: *Crisis management, MICE, Business events, Disaster management*

1. Introduction and Background

The United Nations-World Tourism Organization (UNWTO) Glossary of Terms does not provide a distinct definition for business tourism or MICE. However, literature about business tourism characterizes it based on the extent of business-related activities within the context of tourism (Hussain et al., 2014). For instance, Haven-Tang et al., (2007) have expounded on the concept of business events, elucidating its comprehensive scope as encompassing various types of trips directly linked to a traveller's professional or business pursuits. These encompass a wide range of activities, such as conferences, meetings, exhibitions, trade fairs, and corporate hospitality events. Business events play a crucial role as a pivotal service sector, serving as a socio-economic catalyst for nations (Kerr et al., 2012). It plays a dual role by not only generating substantial revenue but also providing crucial support to interconnected industries, including hotels, attractions, and meeting facilities (Sable & Bhandalkar, 2019). Nevertheless, there are instances when destinations confront crises and disasters, where business events assume a significant role in facilitating post-crisis or disaster recovery, as emphasized by (Chan & King, 2020), and necessitates the implementation of relevant risk-reducing strategies (Neef & Grayman, 2018).

Crisis management framework is a critical aspect for all industries including business events, particularly considering the COVID-19 pandemic to address potential risks and ensure the safety of their attendees (Kaushal & Srivastava, 2021). In addition, comprehensive protection for businesses in the event industry should encompass crisis management strategies that encompass employee health and wellness, financial stability, legal matters, and customer service (Rudolph et al., 2021). The crisis management framework involves a set of processes and procedures designed to mitigate the impact of crises on businesses. This framework includes four phases: prevention, preparedness, response, and recovery (PPRR) (Wang & Belardo, 2005). The prevention phase involves identifying potential risks and taking proactive measures to prevent crises from occurring (Al-Dabbagh, 2020). The prevention phase encompasses organizational preparedness, where changes in culture, design, or structure can proactively prevent system failures. Additionally, fostering strong relationships with stakeholders can decrease the likelihood of a crisis. These preventive measures are implemented before a crisis occurs. In the context of the coronavirus pandemic, they would have included enhancing health standards and swiftly containing the initial cases as preventive actions, along with bolstering

precautionary measures and healthcare capacity as part of the preparation effort (Bundy et al., 2017). The preparedness phase involves developing plans and procedures to respond to crises (Al-Dabbagh, 2020) which possibility to postpone the occurrence of the crisis (Pedersen et al., 2020). The response phase involves implementing these plans and procedures to manage the crisis (Al-Dabbagh, 2020) which typically has a tactical focus and involves communication (Coombs, 2007), while the recovery phase involves restoring normal business operations (Al-Dabbagh, 2020). The resulting outcome is likely contingent upon various systems, such as organizations, networks, or countries. Systems that deteriorate following a crisis are considered vulnerable, those that recover effectively are deemed resilient, and systems that thrive and become stronger as a result of adversity are referred to as antifragile (Manyena, 2006; Taleb, 2012) These systemic outcomes are also interconnected with the level of preparedness exhibited by organizations during the pre-crisis phase and their actions throughout the three key phases of the crisis (Pedersen et al., 2020).

2. Literature Review

The growth of MICE tourism, recognized as one of the earliest forms of travel, can be largely attributed to the phenomenon of globalization (Davidson & Cope, 2003; Rogerson, 2015). The MICE industry, also known as Business Tourism and Business Events, encompasses a service sector that amalgamates the realms of travel, trade, transportation, and finance. The acronym "MICE" denotes Meetings, Incentives, Conferences, and Exhibitions. This industry stands out as one of the most vibrant and dynamic sectors, having undergone gradual evolution over an extended period. Its origins can be traced back to the early records, which highlight the imperative of knowledge sharing and product exchange through interactive gatherings (Kapia, 2021). In the context of today's globalized world, the ease and rapidity of travel have heightened the susceptibility of tourism to a multitude of risks. Tourism has demonstrated its vulnerability as a sector, having been profoundly impacted by various crises. The World Tourism Organization (UNWTO) has categorized these crises into five distinct categories which are environmental crises, societal and political, health-related, technological and economic, and climate change and global health emergencies have been identified as the two most critical factors for the tourism industry (UNWTO, 2012). The alarming rise in pandemics since 2000, connected to changes in the environment around the world, should be noted. However, the frequency of infectious disease risk was ranked third-last, and the severity of its impact was ranked tenth in the World Economic Forum's Global Risk Report 2020 (Kapia, 2021).

Given the impact of globalization and the rapidly changing market dynamics in today's business environment, crisis management has become a standard topic for organizational managers to address (Vašíčková, 2019). Besides that, in light of the worldwide occurrence of the COVID-19 pandemic and the subsequent economic challenges experienced by numerous nations, crisis management has once again become a focal point for organizations and research efforts (Qiu et al., 2020). Crisis management encompasses the domain of risk management, as crises arise when risks are not adequately and efficiently handled. For example, in the business tourism context, failure to prioritize risk management by service providers may potentially endanger the safety and well-being of tourists (Wut et al., 2021). The current concept of crisis management emphasizes the importance of adopting a proactive management style. This involves daily tasks for managers to identify warning signals that could potentially lead to a crisis and implement measures to safeguard the organization against future crises (King, 2002; Robert & Lajtha, 2002; Wang & Belardo, 2005). According to Kothai (2002), responding quickly, positively, and effectively to a crisis can not only help to manage the situation, but also result in increased market share, better employee relations, and an improved public perception of the organization. The idea of disruption is not a recent one as it has been a part of business conversations for a while. Business leaders have attempted to comprehend, anticipate, and at times, even instigate disruption (Markides, 2006). To help businesses to provide a fast response to a crisis, having a crisis management framework is important.

There are several review papers on crisis management and recovery. A survey of 64 articles published between 2000 and 2012 on post-crisis recovery was done by Mair et al. (2016). The tourism crisis and disaster were also the subject of a brief synopsis. The three domains included crisis readiness and planning, crisis response and recovery, and crisis resolution and reflection (Aliperti et al., 2019). Ritchie & Jiang (2019) analyzed 142 papers on tourist crisis and disaster management. According to them, it was discovered that the publications, including the framework testing, lacked conceptual and theoretical underpinning and displayed uneven study

themes. A bibliometric analysis conducted by Zhu et al. (2019) in 2019 found that COVID-19 and crisis management were among the top six major themes impacting business economics (Bauwens et al., 2022). Bibliometric analysis is a powerful tool for understanding the current state of the business events industry and predicting its future. By examining the literature related to business events, bibliometric analysis can provide insight into emerging trends, new technologies, and changes in customer preferences. With this information, businesses will be better equipped to make informed decisions about their strategies for success in the business events space (Verma & Gustafsson, 2020).

A bibliometric analysis conducted by Wut et al. (2021) synthesized theoretical insights and empirical findings in crisis leadership literature. Similarly, Bukar et al. (2020) presented a synthesis and critical assessment of state-of-the-art crisis management research in hospitality, categorizing articles based on a three-phase framework: pre-crisis, crisis, and post-crisis, which followed the traditional classification of the three-stage crisis management model by Richardson (1994). These studies highlight the importance of crisis management research in the hospitality and tourism industry, including the business events industry. Wut et al. (2021) also stated that past literature reviews emphasized only the research published in top academic journals. However, since crisis management is an interdisciplinary field, Zanfardini et al. (2016) concluded that literature reviews should not be limited to journals with the highest impact factors. Related papers may also exist in lower-impact factor journals. As a result, it would be beneficial to survey journals with lower influence, and this study would also provide insight into those works.

The primary objective of this study is to conduct a comprehensive and systematic examination and evaluation of the existing literature on crisis management within the business tourism or MICE industry. As the field of research continues to expand, a noticeable increase in scholarly papers has been observed in the past decade. Moreover, because of COVID-19, it is anticipated that a significant number of research papers focusing on the implications of the global health crises will emerge soon. By conducting a thematic content analysis of relevant peer-reviewed journal articles, this study aims to identify the current trends, major themes, and agenda for future investigations. As a result, this study seeks to address the following research goals:

- What are the main themes of crisis management literature in the MICE industry?
- What is the future research agenda regarding the MCIE industry and crisis management?

3. Research Methodology

This systematic review of literature followed the procedure outlined in the Preferred Reporting Items for Systematic Reviews and Meta-analysis (PRISMA). The process involved: 1) identifying relevant articles from various databases and sources, 2) collecting records while eliminating duplicates, 3) screening the obtained records, 4) evaluating full-text papers to determine eligibility, and 5) incorporating selected studies into the qualitative synthesis (Liberati et al., 2009).

This article conducted a literature search in electronic databases to locate peer-reviewed journal articles concentrating on crisis management within the business events industry, particularly targeting journals published since 2014. The search encompassed various academic platforms, including Science Direct, Emerald, Web of Science, Taylor & Francis Online, Scopus and Google Scholar databases. These databases were chosen to collect academic journal papers related to the specified topic. This method was deemed appropriate for comprehensively analyzing existing literature, given the interdisciplinary nature of the subject (Wut et al., 2021). The literature search was structured using five keywords: 'crisis management,' 'crisis,' ‘disaster management’, 'business events,' 'MICE,' and 'meetings.' Papers selected for further analysis fulfilled the following criteria.

- Peer-reviewed articles.
- Date Published: 2014-2023
- Source: Academic Journals
- Language: English
- Seeks to study crisis management in the business events/MICE industry.

The search was performed on 16th February 2024 and in total, 32 papers were generated from the literature search which involves different combinations of keywords. The earliest article was published in 2014. Overall, the selected articles were published between 2014 and 2023. The authors assessed the full-text papers retrieved for inclusion in this review.

The titles, abstracts, and complete texts of the papers underwent thorough review and examination. Following the acquisition of initial results, a screening procedure was implemented to eliminate articles not aligning with the predetermined relevance criteria for this study. Only articles satisfying the inclusion criteria were preserved for subsequent analysis, with those failing to meet the criteria being excluded from the final pool of analyzed articles. Attention was paid to the key topics of each article, and they were assigned to one of the six crisis types: political crisis, financial crisis, health crisis, natural disaster and terrorism. Subsequently, the research emphases of the articles were determined and summarized. The identification procedure was executed through content analysis, employing an inductive methodology. In instances where uncertainty regarding classification arose for a specific paper, a novel category was formulated to mitigate ambiguity (Eisenhardt, 1989).

In cases where a paper addressed multiple topics such as crisis prevention and crisis preparedness, it was categorized under the umbrella of crisis management (multiple topics). Consequently, 8 distinct research themes were identified within the broader domain of crisis management, encompassing crisis impact, crisis recovery, crisis resilience, crisis communication, crisis response, crisis event (description, and crisis management (organizational) learning.

4. Results and Discussion

Journals, authors, and year of publication: The result indicates that there were 21 journals. Among these 21 journals, Asia Pacific International Events Management Journal published one paper, Asia-Pacific Journal of Innovation in Hospitality and Tourism (APJIHT) published one paper, Empirical Economics published one paper, Event Management published three papers, GeoJournal of Tourism and Geosites published one paper, International Journal of Contemporary Hospitality Management published one paper, International Journal of Event and Festival Management published nine papers, International Journal of Religious Tourism and Pilgrimage published one paper, Journal of Accountancy and Management published one paper, Journal of Business, Innovation and Sustainability published one paper, Journal Of Convention & Event Tourism published one paper, Journal of Hospitality and Tourism Insights published two papers, Journal of Hospitality and Tourism Management published one paper, Journal of Korea Trade published one paper, Journal of Tourism and Service published one paper, Museum International published one paper, Tourism Review International published one paper, Sustainability published one paper, Tourism Management Perspectives published two papers, Tourism Review International published one paper and Tourism Management published one paper.

Overall, there was a notable preference for event-focused journals, with 9 and 3 papers about the topic of crisis management and its associated research objectives. Within the subset of event-focused journals, the International Journal of Event and Festival Management emerged as the predominant publication outlet.

Table I: Summary of List of journals (N=32)

	Journal	Year Published	Total
1.	International Journal of Event and Festival Management	2022, 2023	9
2.	Event Management	2022, 2023	3
3.	Journal of Hospitality and Tourism Insights	2022, 2023	2
4.	Tourism Management Perspectives	2020, 2023	2
5.	International Journal of Religious Tourism and Pilgrimage	2014	1
6.	Asia Pacific International Events Management Journal	2020	1
7.	Asia-Pacific Journal of Innovation in Hospitality and Tourism (APJIHT)	2023	1
8.	Empirical Economics	2021	1

9.	GeoJournal of Tourism and Geosites	2021	1
10.	International Journal of Contemporary Hospitality Management	2022	1
11.	Journal of Accountancy and Management	2021	1
12.	Journal of Business, Innovation and Sustainability	2023	1
13.	Journal Of Convention & Event Tourism	2023	1
14.	Journal of Hospitality and Tourism Management	2022	1
15.	Journal of Korea Trade	2021	1
16.	Journal of Tourism and Service	2023	1
17.	Museum International	2021	1
18.	Tourism Review International	2022	1
19.	Sustainability	2023	1
20.	Tourism Review International	2022	1
21.	Tourism Management	2022	1

In terms of authorship patterns, the most prevalent collaborative pattern observed in this study was the collaboration between two and three authors, which was found in 7 papers, accounting for 21.21% of the total. Following closely, four-person authorship was also highly adopted and identified in 6 papers, representing 18.18% of the sample. Additionally, there were 4 papers with five authors and single authorship (12.12%), 3 papers with seven authors (9.09%), 1 paper with eight authors (3.03%), and 1 paper with six authors (3.03%). These findings highlight the prevalence of collaborative efforts among authors in academic publications. The most productive first authors in this field were Zahed Ghaderi with 84 publications, followed by Grzegorz Kwiatkowski with 80 publications, Bingjie Liu-Lastres with 71 publications and Cosmas Gatot Haryono with 56 publications.

Based on Table 1 above, the topic of crisis management relating to business events/MICE was published as early as 2014, however with only one publication. The topic is starting to get more attention in the year 2020 onwards. In the year 2023, 14 papers were published, meanwhile, 10 papers were published in 2022, 5 papers in 2021 and 2 papers in 2020.

Types of crises and research focus in the business events industry: Previously, crisis types were classified into three categories: natural disasters, technical error accidents, and human error accidents, based on the degree of organizational responsibility. Natural disasters typically involve limited organizational responsibility due to their occurrence being largely beyond operational control (Coombs, 2021). The development of mitigation strategies is predominantly limited to reactive measures. Technical error accidents, characterized by minimal organizational control over technical malfunctions, inherently carry a low level of organizational responsibility. Conversely, preventable crises, largely attributable to human errors, necessitate organizations to bear the primary responsibility (Coombs, 2021).

The 32 papers revealed that health crisis was the highest type of crisis mentioned (25 papers), followed by general global crisis topic (4 papers), political crisis with 1 paper, and crime/terrorist (2 papers). Among the reviewed papers, 13 papers were related to the impacts of COVID-19, 6 papers were related to the crisis resilience due to COVID-19, 2 papers on crisis recovery due to COVID-19, 8 papers on crisis response which included topic from COVID-19, 2 papers on crisis event (description, and crisis management (organizational) learning and 1 paper on the crisis communication with the focus topic in terrorist attack.

5. Conclusion

This study conducted a systematic review of crisis management literature within the MICE/business events industry spanning from 2014 to 2023, encompassing 10 years. It identified a limited number of articles during the earlier years, followed by a notable surge in related research interests thereafter, especially after COVID-19. The analysis examined various prominent academic journals, delineating the trends in their publication of crisis management studies, and providing insights into authorship patterns. Furthermore, the study offers a comprehensive summary of crisis types and the focus topics within the MICE/business events industry.

Within the realm of crisis management within the MICE/business events sector, the traditional research

focuses were identified to encompass crisis management, crisis impacts and recovery, and crisis response. Additionally, this study outlined that predominant emerging themes over the past decade have centered on health-related crises such as COVID-19, political disturbances, and terrorism crises. Future research directions for crisis management in the business events industry should include the development of a new conceptual framework that places operational resilience on an equal footing with financial resilience, with indicators adapted to the risk profile of the operating model. Additionally, systematically synthesized scholarly findings on COVID-19 in the business and management disciplines and updated previous literature reviews, highlighting the need for further research on crisis management in the context of pandemics and other unexpected events (Hashemi et al., 2022).

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Bibliometrics Analysis of Event Management in the Digital Era: Challenges and Opportunities for Event Planners

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Abstract: To remain competitive, event planners must stay current with the latest trends and technologies, such as virtual and augmented reality, artificial intelligence and the Internet. This paper presents a comprehensive bibliometric analysis using VOSviewer software to provide insight into the intellectual structure of knowledge using citation and co-citation networks, as well as key concepts using a keyword co-occurrence network, on the topic of opportunities and challenges faced by event planners when managing events in the digital era. The investigation begins by examining the Scopus database for articles published with keywords relevant to the topic. VOSviewer software was used for science mapping and network analysis of extracted data. This systematic field mapping helps graphically illustrate the publication evolution between 2015 and 2024 and identify the current research interests and potential directions for future research. A total of 125 articles were included comprising 44 conference papers, 39 original articles, 9 book chapters, 5 books, and 2 reviews. The United States, United Kingdom and Germany were the principal countries of origin of publications. The most frequently appearing keywords were "information management" with 116 occurrences and "network security" with 68 occurrences. The top five keywords with the greatest total link strength were information management, network security, security information and event management, cybersecurity, and intrusion detection. It is imperative that stakeholders, including funding agencies, event management organizations, researchers, and event managers, collaborate to ensure that the volume of quality research in this area keeps pace with the rapid advancements transforming the industry.

Keywords: *Event management, Digital event management, Challenges, Opportunities, Event planner, Literature Review, Network Analysis, Bibliometrics, VOSviewer*

1. Introduction and Background

The digital age has had a huge influence on the event management sector, creating challenges and opportunities (Bladen et al., 2022). This study aims to apply bibliometrics to summarize the knowledge structure and to provide insights into the evolution, impact, and gaps of adopting digital technology in handling events. The advent of the digital technology era has brought about a paradigm shift in the field of event management, presenting both challenges and opportunities. The rationale for this study lies in the rapid digital transformation that reshaping the event management industry. The integration of digital technologies has revolutionized the way events are planned, executed and evaluated, thereby imposing a thorough understanding of the emerging trends, challenges and opportunities (Hassan & Quader, 2022). This paper seeks to identify the most influential articles, authors and research themes in the domain of event management in the digital era. Furthermore, it is also important to uncover the challenges faced by event planners in leveraging digital technologies and highlight the opportunities that digital technologies present for enhancing event experiences and outcomes.

A holistic view of the current research landscape should be provided to guide future research directions in the field of event management (Miles & Shipway, 2020). Furthermore, the insights derived from this bibliometric analysis can assist event planners in navigating digital transformation, thereby contributing to the advancement of the event management industry in the digital era (Kaurav et al., 2020). The analysis is based on a careful review of articles that serve as a reference for this study. These articles, which have been meticulously selected for their relevance and contribution to the field, provide the foundation for this bibliometric analysis. Through this study, it is hoped to shed on the involved dynamics of event management in the digital era and pave the way for future research and practice.

Thus, the research questions have been created to identify the emerging trends in event management research in the digital age by determining the most popular countries and what are the seminal works in the field of digital event management and discovering the citation analysis related to the impact and relevance of research on digital event management. With the rise of remote work and virtual events, people may now attend events from anywhere in the globe (Chodor, 2020). However, event planners must guarantee that distanced attendees are engaged and included in the event experience. Adopting digital technology in daily life may boost participant engagement, offer more interesting and dynamic experiences, and aid in data-driven decision-making (Qi et al., 2024). Gamification, social media integration, and live polling are all ways that digital tools and platforms may encourage involvement and cooperation (Apostolopoulos & Potsiou, 2022). The internet has enabled event planners to access a worldwide audience, allowing them to attract a wide spectrum of guests. The digital era has both obstacles and opportunities for event planners. By accepting these changes and remaining adaptive, companies may survive in the digital world while continuing to provide excellent events for their attendees. The findings of this study will serve as a guideline for event planners to identify the factors that contribute to the transformation of traditional event management practices by adopting digital technology. Thus, helps the event planners to gain knowledge on the innovative strategies for enhancing attendee engagement in digital and hybrid events. Moreover, event planners can extract the best practices for adaptability and contingency planning in digital event management.

The digital age has brought about a paradigm shift in the way we live, work and interact with one another. This transition has also significantly impacted the event management industry. Navigating through the era of technological advancements, event planners are faced with new challenges and opportunities. The rapid pace of technological advancements has disrupted the traditional event management landscape. Event planners must now stay abreast of the latest trends and tools to remain competitive. This includes understanding and leveraging technologies such as virtual and augmented reality, artificial intelligence, and the Internet of Things (IoT) (Khanal, 2024). Moreover, with the increasing reliance on digital platforms and tools, event planners must ensure the security of their attendees' personal and financial information (Disimulacion, 2020). This requires implementing robust cyber security measures and staying vigilant against potential threats specifically the crackers who will try to eavesdrop on any information transmitted over the network. In the digital age, people are constantly bombarded with information and stimuli (Şahin & Demirbilek, 2022). This has led to a phenomenon known as the "attention economy" where individuals have limited attention spans and are selective about what they choose to engage with (Jung, 2021). Event planners must find innovative ways to capture and maintain the attention of their attendees, both online and offline. Furthermore, the rise of remote work and virtual events has made it easier for people to attend events from anywhere in the world. However, the challenge faced by event planners is to ensure that remote participants feel engaged and included in the event experience.

Despite the challenges faced by event planners, they will also gain benefits from adopting the technology in their daily lives in handling the events such as digital technology can enhance participants' engagement. Digital tools and platforms offer event planners the opportunity to create more engaging and interactive experiences for their participants (Buhalis et al., 2023). This can include using gamification, social media integration, and live polling to foster participation and collaboration. Another payback that event planners will also get from adopting digital technology in completing their daily event tasks or transactions is the data-driven decision-making process (Sarker & Datta, 2022). The digital age has made it easier for event planners to collect and analyze data about their events and attendees. This data can be used to make more informed decisions about event design, marketing and attendee engagement strategies. The application of a network is one of the main requirements to connect people with other elements of event management systems that are responsible for the distribution of data as input and information as output to all related users in the events conducted (Laghari et al., 2021). The Internet has made it possible for event planners to reach a global audience, regardless of geographic location (Parncutt et al., 2021). This global reach presents a unique opportunity to expand the reach of events and connect with a diverse range of attendees from around the world. Besides, digital tools and platforms allow event planners to personalize the event experience for each attendee (Estanyol, 2022). This personalization includes tailoring content, recommendations, and networking opportunities based on individual preferences and interests.

The digital age has brought about a new set of challenges and opportunities for event planners. While the rapid

pace of technological change can be daunting, it also presents exciting possibilities for creating more engaging, interactive and personalized event experiences. By embracing these changes and staying adaptable, event planners can thrive in the digital age and continue to deliver exceptional events for their attendees.

2. Literature Review

The advent of the digital age has profoundly transformed the event management industry, presenting both challenges and opportunities for event planners. This paper explores the key challenges and opportunities that event managers face in the digital landscape. The event management industry is undergoing a significant transformation due to the rapid advancement in digital technologies. Bibliometric analysis is a quantitative method used to analyze the body of scientific literature related to a particular topic (Linnenluecke et al., 2020). By examining the number of publications, citations, and other metrics, bibliometric analysis can provide valuable insights into the evolution of a field, the key players, and the most influential research directions (Janik et al., 2021).

Event planners face several challenges in the digital era, in which digital technologies have made it possible for new entrants to the market to compete (Cozzolino et al., 2021). Another challenge faced by event planners in the digital era is changing consumer behavior. Attendees are increasingly using digital channels to research and book events, which requires event planners to adapt their marketing and sales strategies (Nalbant & Aydın, 2023). Not only that, the abundance of data available through digital technologies can be overwhelming, making it difficult for event planners to identify and utilize the most relevant information.

However, despite the challenges, digital technologies also present significant opportunities for event planners. The digital platforms enable event planners to reach a wider audience and promote events more effectively. Besides, digital technologies allow event planners to collect and analyze data about attendees, enabling them to create personalized experiences and build stronger relationships (Rocha et al., 2021). Digital tools can streamline event planning processes, reduce costs, and improve efficiency.

Conducting a bibliometric analysis related to event management challenges and opportunities in the digital technology era is essential to identify the research gaps. By analyzing the existing literature, bibliometric analysis can identify areas where further research is needed to address the challenges and opportunities facing event planners (Celuch, 2021). In addition, bibliometric analysis can track the emergence of new technologies and research directions, helping event planners stay informed about the latest trends. Event planners can compare their research output with other institutions or researchers and do benchmarks to identify areas for improvement that also contribute to their performance. Furthermore, bibliometric analysis can provide evidence-based insights that can inform event planning decisions and strategies (Sharifi, 2021).

Digitalization has significantly impacted the event industry, changing how events are planned, executed, and evaluated. A bibliometric analysis revealed that digital technologies have made it easier for event planners to handle issues such as crowd management and tracking human mobility during mass events (Furno, 2021). Technologies such as the Internet of Things and special-purpose mobile applications have been instrumental in this regard.

The digital age has presented several challenges in event management, including issues of digitalization and implementing digital technologies. However, it has also opened up opportunities for innovation and efficiency. For instance, the use of digital technologies has enhanced customer experience and facilitated the creation of event-based social networks (Manikandan et al., 2024). Despite the growing number of literature on this topic, there are still gaps that need to be addressed. For instance, more research is needed on the dependency of digital technologies on the event type (Benbya et al., 2020). Furthermore, future research directions include technological aspects of online event-based social networks, issues of crowd management and security of mass events and issues of attendees' acceptance of novel digital technologies.

This research is significant as it contributes to the understanding of the impact of digitalization on event management. It provides insight into the challenges and opportunities presented by the digital age, thereby informing strategies for effective event management. Moreover, by identifying gaps in the literature, this

research paves the way for future studies in this field.

3. Research Methodology

This research employs a bibliometric analysis approach to examine the challenges and opportunities in event management in the digital age. This quantitative method allows for the exploration of patterns, trends and gaps in the existing literature (Chawla & Goyal, 2022). The search strategy involved the use of specific keywords and phrases related to event management challenges and opportunities in the digital age. These included "event management", "digital", "challenges", "opportunities" and "bibliometric analysis". Boolean operators (AND, OR) were used to combine these keywords to refine the search.

The Scopus database was used to retrieve relevant literature. The Scopus database was chosen due to its extensive coverage of literature in the field of event management and digital technologies (Pirola et al., 2020). The initial search yielded a large number of articles when using the "event management" keyword itself without filtering. The inclusion criteria included articles that were peer-reviewed, written in English and published between the years of 2015 and 2024, and types of documents filtered to original articles, conference papers, book chapters, books and reviews. The exclusion criteria included articles that were not directly related to the research topic, such as focusing solely on event management without any reference to the digital age.

The selected articles were then subjected to bibliometric analysis. This involved the use of the VOSviewer software tool to analyze the data and generate bibliometric indicators such as citation counts based on country, co-citation analysis and keyword analysis. These indicators provided insights into the most influential works in the field, the relationship between different works, and the most frequently discussed topics. By employing a bibliometric analysis, this research aims to provide a quantitative assessment of the literature on event management in the digital age, highlighting the challenges and opportunities that have been identified and discussed in the field.

4. Results and Discussion

Bibliometric analysis of publication output: Extracted publications from the Scopus database were examined for performance analysis which descriptively examined and described the performance of published articles. All the published articles selected for this study must be in English. Of a total of 125 articles published in Scopus, 99 were considered based on selected filtering as shown in the following Search String:

Search String:

TITLE-ABS-KEY ("event management" AND opportunity* OR challenge* AND digital* OR technology*) AND PUBYEAR >2015 and PUBYEAR <2024 AND (LIMIT-TO (DOCTYPE, "ar")) OR LIMIT-TO (DOCTYPE, "re") OR LIMIT-TO (DOCTYPE, "cp") OR LIMIT-TO

(DOCTYPE, "bc") OR LIMIT-TO (DOCTYPE, "b")) AND (LIMIT-TO (LANGUAGE, "English")).

As stated in the Search String, the filtering of documents was based on English language only, the year published ranges from 2015 until 2024 and document types selected include article, review, conference paper, book chapter and book contributing to 99 documents extracted for the analysis. This volume of articles indicates a substantial body of literature related to this study, suggesting that it is an area of active research and interest. Two articles were excluded that refer to the "note" document type. The volume of articles published is depicted in Table 1. This ensures that the analysis is focused on recent and relevant literature selected for this study. The exclusion of the "note" document type helps maintain the focus on more substantial and comprehensive works.

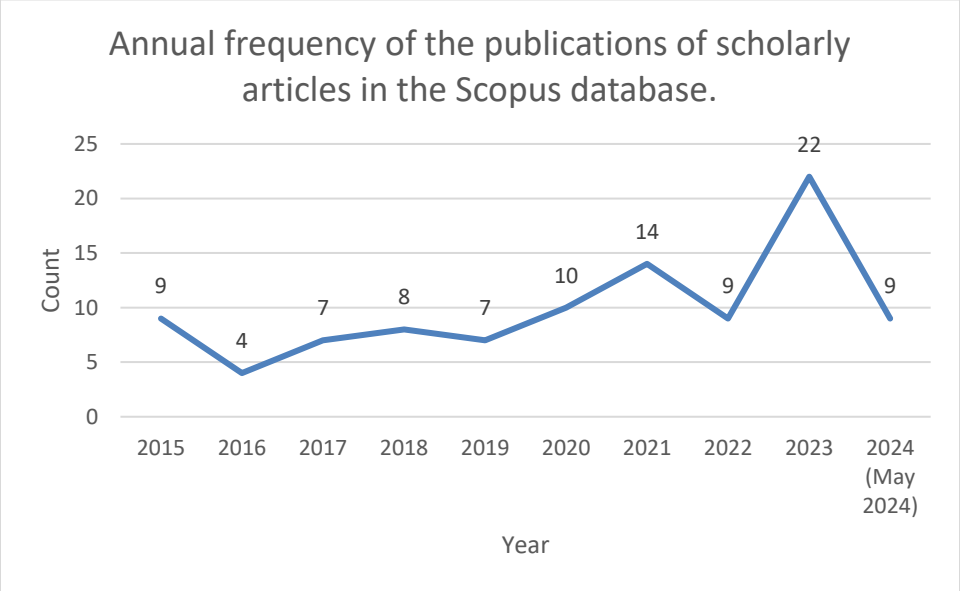
Table 1: Articles included in Scopus from 2015 until 2024

Before filtering				After filtering			
Articles included		**Articles Excluded**		**Articles included**		**Articles Excluded**	
Article	50	Note	2	Article	39	Note	2
Review	3			Review	2		
Conference	53			Conference paper	44		
paper	11			Book chapter	9		
Book chapter	6			Book	5		
Book							
Total	**123**	**Total**	**2**	**Total**	**99**	**Total**	**2**

Table 2: Annual frequency of the publication of scholarly articles in the Scopus database

Year	Count
2015	9
2016	4
2017	7
2018	8
2019	7
2020	10
2021	14
2022	9
2023	22
2024 (May 2024)	9
Total	**99**

Figure 1: Annual frequency of the publications of scholarly articles in the Scopus database



Based on Table 2 and Figure 1, the annual frequency of citations of articles in the Scopus database was maximum in the year 2023 with 22 articles published. This suggests that interest and research activity in the field have been increasing over time, reaching a peak in 2023. It could also indicate that the research published in 2023 was particularly influential, as evidenced by the high number of citations in which the research has been conducted during the COVID-19 pandemic which impacts the event industry. The results of this analysis provide valuable insights into the evolution of the field over time. The increasing frequency of citations suggests that the field is growing and that recent research is having a significant impact. This information can be useful for researchers to understand the current state of the field and identify trends and gaps in the literature.

Bibliometric analysis of the citations based on countries: Citation by countries with a maximum number of countries per document is 25; minimum number of documents of a country is 5 and minimum number of citations of a country is 1. The result generated shows that out of the 43 countries, 7 meet the thresholds as shown in Figure 2 until Figure 5. The top countries contributing to this bibliometric analysis were dominated by the United States with 290 citations, followed by the United Kingdom with 162 citations and Germany with 133 citations.

Figure 2: Top 7 countries contributing to the publications in this study

Create Map

Verify selected countries

Selected	Country	Documents	Citations	Total link strength
☑	france	6	38	1
☑	germany	6	133	1
☑	malaysia	7	11	1
☑	united kingdom	16	162	1
☑	india	11	41	0
☑	italy	9	41	0
☑	united states	14	290	0

Figure 3: Pie chart of the top 7 countries contributing to the publications in this study

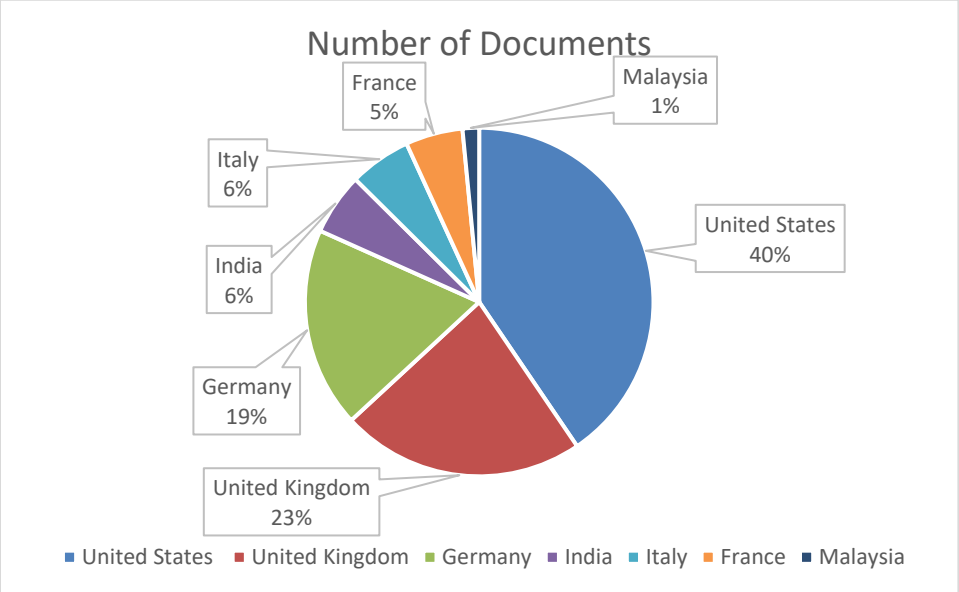


Figure 4: World map of the top 7 countries contributing to the publications in this study

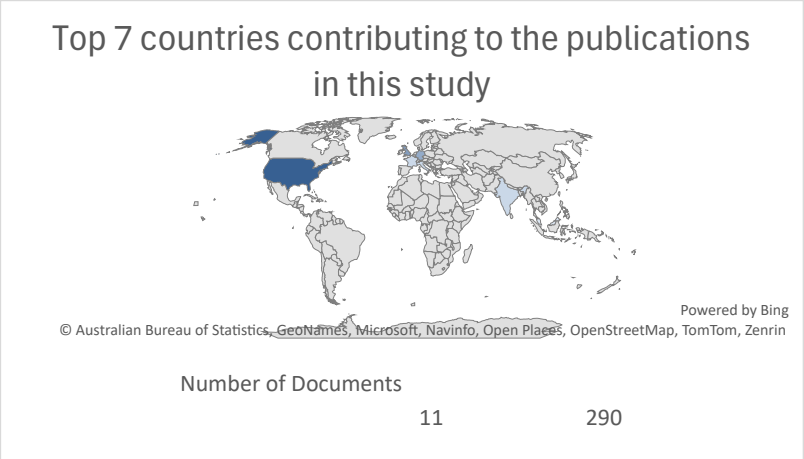


Figure 5: VOSviewer output showing the top 7 countries contributing to the publications in this study



This pattern shows the number of citations received by the publications from listed countries. The United States leading the list with 290 citations indicates that research conducted in the United States had a significant impact on this field. It shows that researchers in the United States have been producing high-quality work that others in the field find valuable and cite in their research. Ranked second in the United Kingdom with 162 citations, indicating that it is also a major contributor to this field. Another key player is Germany with 133 citations signifies that German research also contributed valuable insights.

The citation counts for these countries reflect the impact and influence of their research in the field of event management in the digital era. It is important to note that while citation count is a useful metric, it is not the only measure of research quality or significance. Other factors, such as the relevance of research to real-world applications and its contribution to advancing knowledge and understanding in the field, are also important.

Bibliometric analysis of co-citation based on authors: The minimum number of citations of an author is 8, Out of the 8559 authors, 33 meet the threshold. For each of the 24 authors, the total strength of the co-citation links with other authors was calculated in this analysis. The authors with the greatest total link strength were selected as shown in Figure 6 and Table 3 respectively.

Table 3: Co-citation based on authors list

Author	Number of citations
Getz D.	42
Mair J.	18
Bouramdane A.A.	16
Ziakas V.	16
Rahman M.K.	13
Ostfeld A.	11
Radoglou-Grammatikis P.	10
Sarigiannidis P.	10
Wang L.	10
Antchak V.	9
Azarderakhsh R.	9
Buhalis D.	9
Finkel R.	9
Hart W.E.	9
Li Y.	9
Robertson M.	9
Silvers J.R.	9
Thiesse F.	9
Chen T.	8
Hu C.	8
Liu Y.	8
Wang Y.	8
Grand Total	**259**

In a co-citation analysis, two works are considered to be co-cited if they are both cited by a third work. The strength of the co-citation link between two works is determined by the number of times they are co-cited. Based on the result shown in Table 3 and Figure 6, the top author works that have a high number of citations are Donald Getz who contributes 42 citations and is most frequently cited by others. For each of the 24 authors who met the threshold, the result shows the total strength of the author's co-citation links with other authors. This indicates how often Getz. D's work is cited alongside other works, which suggest relationships between different research topics and areas that were discussed in the next section. The author with the greatest total link strength is Donald Getz, who published a book entitled "Event Studies: Theory and Management of Planned Events" with 42 citations that show his work is not only frequently cited but also often cited in conjunction with other influential works. This indicates that his work is considered foundational in the event management area and also has been influential in shaping the direction of subsequent research.

It is important to note that while co-citation analysis can provide valuable insights into the structure and evolution of a scientific field, it is only one of many possible bibliometric measures. Other factors, such as the relevance of research to real-world applications and its contribution to advancing knowledge and understanding in the field are also important.

Bibliometric analysis of co-occurrence based on all keywords: In a co-occurrence analysis, two keywords are considered to co-occur if they appear in the same article or the number of co-occurrences of two keywords is the number of publications in which both keywords occur together in the title, abstract or keyword list. The strength of the co-occurrence link between two keywords is determined by the number of times they appear together.

The type of analysis using co-occurrence with the unit of analysis selected is "All keywords" and the counting method uses "Full counting" with a minimum number of occurrences of a keyword set to 5. The result shows that out of the 1032 keywords extracted from the published articles, 10 keywords meet the threshold. For each of the 10 keywords, the total strength of the co-occurrence links with other keywords was calculated. The keywords with the greatest total link strength were selected. Based on Figure 7 and Figure 8, results show that the top four keywords with the greatest total link strength were information management with 29 occurrences, security information and event management (siem) (22), network security (17), cybersecurity (14) and intrusion detection (9).

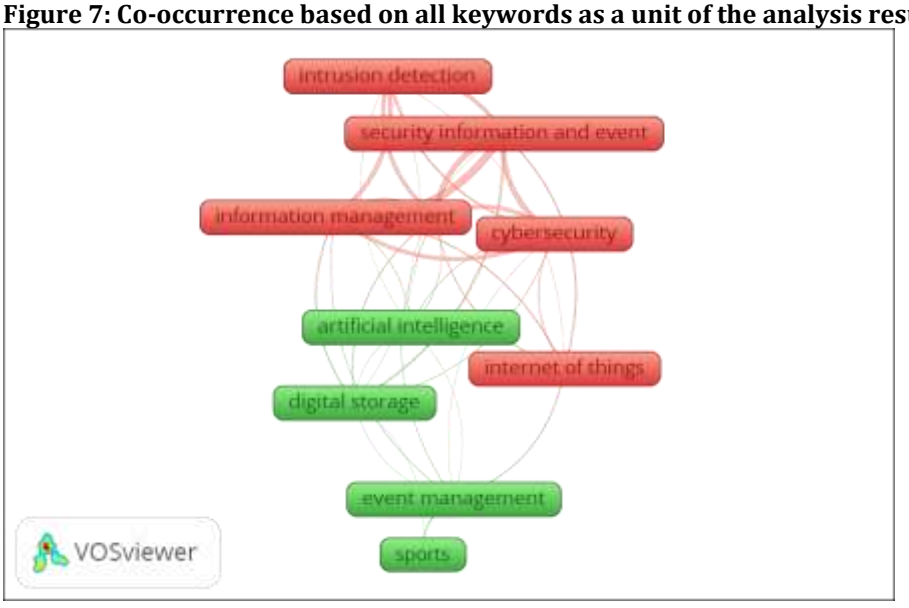
Figure 6: Co-occurrence based on all keywords as a unit of the analysis result list

Create Map

Verify selected keywords

Selected	Keyword	Occurrences	Total link strength
☑	information management	29	58
☑	security information and event management (siem)	22	54
☑	network security	17	51
☑	cybersecurity	14	39
☑	intrusion detection	9	33
☑	digital storage	7	18
☑	internet of things	9	18
☑	event management	18	14
☑	artificial intelligence	6	10
☑	sports	5	5

Figure 7: Co-occurrence based on all keywords as a unit of the analysis result



For each of the 10 keywords, the total strength of their co-occurrence links with other keywords was calculated and indicates how often these topics are discussed in conjunction with other topics and shows the relationship between different research areas. Based on Figure 6 and Figure 7, the top keyword with the greatest total link strength is information management with 58 total link strength. This suggests that information management is a key topic in the field of event management in the digital era. It indicates that managing information

effectively is a significant challenge and opportunity in the event management field.

Second in the row is security information and event management (siem) with 54 total link strength suggesting that security information and event management is a crucial aspect of event management and indicates that managing security information and events is a significant challenge. Network security with a total link strength equal to 51 also indicates that securing networks is a significant challenge and the same goes for cybersecurity ranked number four in the list suggesting that it is important to detect and prevent cybercrime or cyber intrusions. They must also protect participants' personal and financial information by employing strong cyber security measures and remaining attentive to any attacks. The "attention economy" necessitates novel approaches to capturing and maintaining participants' attention, both online and offline.

5. Conclusion

In the rapidly evolving digital and technology era, event planners must embrace bibliometric analysis to stay informed about the latest challenges and opportunities. By analyzing the scientific literature, event planners can identify research gaps, monitor emerging trends, benchmark their performance, and make informed decisions that will drive success in the competitive industry (Ogutu et al., 2023).

Bibliometric analysis offers detailed insights using VOSviewer software, highlighting citation and co-citation networks, and keyword co-occurrence networks. This paper maps the publication evolution from 2015 to 2024, identifying current research interests and potential future directions. This paper emphasizes the importance of information management and network security as the most frequently appearing keywords. Effective information management in the digital era is crucial and event planners need to be adapted to collecting, analyzing and utilizing data to make informed decisions (Yitmen et al., 2021). This could involve using digital tools to track attendee behavior, measure event success, and personalize the event experience. Security has become a paramount concern with the increasing digitalization of events (Farayola et al., 2024). Event planners need to be aware of potential security threats and implement robust security measures using security information and event management tools to monitor network activity and detect potential security incidents.

As an event becomes more connected, the security of the network infrastructure becomes critical, and the networks must be secure to protect sensitive data and ensure the smooth running of the event when conducting events (Toledano, 2024). Event managers need to be aware of potential cyber threats and implement measures to protect against them. This could involve training staff on cybersecurity best practices and implementing secure systems and processes. Event managers need to use intrusion detection systems to monitor the networks and systems' malicious activity (Radoglou-Grammatikis et al., 2021).

This topic highlights the need for event planners to stay up to date with the latest digital trends and challenges. By understanding and addressing these issues, event planners can leverage the opportunities of the digital age to create more successful and engaging events. It is important to note that while these are currently the most frequently discussed topics, the field is rapidly evolving, and new trends and challenges are likely to emerge in the future. Therefore, continuous learning and adaptation are key to success in event management in the digital era.

For future research, further investigation into the integration of digital technologies in event management and the development of strategies to enhance event practices and industry innovation. Directions for future research include exploring the dependence of digital technologies on event types, online event-based social networks, crowd management, and attendees’ acceptance of new digital technologies.

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Enhancing Attendee Engagement: A Study on Designing Successful Hybrid Events in Malaysia

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Abstract: This study seeks to address the void by exploring hybrid event design and, attendee engagement and experience in the Malaysian context. It is also hoped to provide event stakeholders with information that will help them design successful hybrid events that prioritize attendee engagement and enhance the overall event experience. By understanding the needs and preferences of attendees, event organizers can tailor their strategies to create seamless and interactive experiences for both on-site and remote attendees. This study will contribute valuable insights to the growing field of hybrid events in Malaysia and guide event planners in delivering impactful and memorable experiences to all attendees. From the findings, none of the studies related to hybrid events have been conducted in the Malaysian context. This study was conducted by using electronic database searching from reputable databases such as Scopus, Science Direct and Google Scholar. 52 articles that are related to hybrid events were published from 2014-2023. Hybrid event is a new trend in organizing events. It offers a unique opportunity to cater to both in-person and virtual attendees.

Keywords: *Hybrid event, Attendees engagement, Event experience, Malaysia*

1. Introduction and Background

The COVID-19 pandemic has accelerated the adoption of hybrid events, which seamlessly integrate in-person and virtual elements to create a dynamic inclusive and flexible experience for attendees. This format allows events to continue while accommodating social distancing guidelines and travel restrictions. Hybrid events in Malaysia provide opportunities to sustain engagement, learning and connections amidst revolving restrictions, However, designing hybrid events that optimize the attendee experience remains a challenge.

This study aims to address the knowledge gap around maximizing attendee engagement and experience of hybrid events in Malaysia. By gathering insight into attendee needs and preferences, the study provides event organizers with strategies for creating seamless and interactive hybrid events. The goal is to contribute insight that will allow event professionals to deliver impactful, memorable experiences for both physical and virtual participants. Understanding attendees' perspectives will enable organizers to tailor hybrid events that prioritize engagement across platforms. This research aims to guide the best practices for emerging hybrid event models in Malaysia. The finding will benefit the field by helping equip organizers to create successful hybrid events that keep attendees meaningfully involved regardless of participation format.

The COVID-19 pandemic has had a profound and lasting impact on the travel and tourism industry, which has been severely impacted by widespread lockdowns, travel restrictions, and decreased consumer confidence. Specifically, airlines, cruise lines, hotels, restaurants, attractions such as national parks and protected areas cultural heritage sites, travel; agencies, and tour operators have all suffered significantly (Aburumman, 2020; Foo et al., 2020). Client loss is the primary impact of the pandemic on tourism-related firms, leading to mass layoffs and unemployment (Bui et al., 2022). During the pandemic, large gatherings were either banned or severely restricted. This has an impact on the event sector, which relies on human mobility in practice. The pandemic's most profound impact is the widespread cancellation and delay of events across various sectors, particularly in the event industry (Madray, 2020; Bartis et al., 2021). Since the COVID-19 pandemic started spreading in 2020, thousands of events worldwide have been postponed or cancelled, leaving a significant impact on entertainment, sports, and cultural industries (Congrex Team, 2020). In Malaysia alone, the estimated financial damage from these cancellations and postponements has been substantial, with a potential loss of millions of ringgit in revenue and an economic impact is Ringgit Malaysia 1.5 billion (MACEOS, 2020).

Therefore, event organizers must pivot their strategies and explore virtual and hybrid event options to continue providing services to clients and attendees. By embracing technology and innovative solutions, event organizers can navigate through the obstacles posed by the pandemic and deliver successful events.

To sustain business, the event organizer must adapt to the pandemic. Event organizers play an important role in organizing events because they have been appointed by the client to organize the event from planning to implementation and evaluation (Fadillah, 2015; Priyatmoko et al., 2022). The transition towards digital and blended events has forced event planners to adapt quickly to new technologies and strategies (Madray, 2020). As the event landscape continues to transform, event professionals must stay abreast of the latest innovations and advancements in event planning and management (Lekgau & Tichaawa, 2021). Due to COVID-19 constraints, actors in this industry must devise new event-planning techniques (Bukovska et al., 2021).

The integration of alternative technologies (AR), virtual reality (VR), and other emerging technologies is likely to create new and innovative experiences for attendees while also presenting new challenges and opportunities for event professionals (Dolasinski et al., 2021). As these technologies advance, they will likely transform the way events are designed, delivered, and experienced, opening up new opportunities for event professionals and further expanding the field of event studies. There are a few scholars that have been discussing hybrid events such as White, 2014; Porpiglia et al., 2020; Priyatmoko et al., 2020; Rubinger et al., 2020; Jauhiainen, 2021; Sox et al., 2014; Sox et al., 2015; Sox et al., 2017; Pakarinen, 2018; Nilsson, 2020; and Hameed et al., 2021. Scholars have extensively discussed hybrid events; despite the growing popularity of hybrid events, there is a dearth of research on the adaptive processes and strategies employed by event organizers in response to the shift towards hybrid events. Thus, leaving a void in our understanding of this critical aspect of event management. Furthermore, a finding by Lumanauw and Suastawa (2023) emphasizes the need to explore the effects of hybrid events on participant engagement and satisfaction.

Despite the increasing adoption of virtual and hybrid events, a significant knowledge gap remains in the current academic discourse, with little scholarly attention devoted to understanding their complexities and potential benefits (Legkau and Tichaawa, 2022). Because of the trends towards online events that the global pandemic has accelerated, it is advisable to investigate and comprehend hybrid events. As the event industry continues to evolve, research on hybrid events is essential for adapting to the changing landscape and meeting the needs of both virtual and in-person attendees. By addressing this gap in the literature, researchers can provide crucial findings for event organizations looking to navigate the new normal of hybrid events.

Hybrid events, which combine online and offline audiences pose a unique set of obstacles that go beyond simply hosting a virtual event. By blending these two formats, event planners must navigate the complexities of managing multiple channels, ensuring seamless connectivity and engagement, and catering to the diverse needs of both online and offline participants. However, the complexity of hybrid events is not as widespread as that of virtual ones (Sakovets,2023). Despite the challenges, many event marketers predict that hybrid events are poised to become increasingly prevalent in the future. A survey conducted by Bizzabo, a leading event platform, found that an overwhelming 97% of event marketing professionals expect to see more hybrid events in the years to come (Bizzabo, 2022). This shows that hybrid events have high demand and will be a new norm for the event industry. While hybrid events offer numerous advantages, they also require a high level of expertise and effort to execute successfully. According to Above Creative Event (2022), effective hybrid events involve much more than just hosting an event, as they require creative design and video production, sourcing suitable venues, developing virtual event platforms, integrating on-ground and online features, and crafting comprehensive offline and digital marketing campaigns.

Academia and industry have witnessed a shift in how events are viewed. Previously, the focus was on logistical and operational elements; however, there is now an increasing discussion and debate among them about events as a constructed experience (Orefice, 2018). Different audiences have different experiences, highlighting the need for a design-focused approach rather than just management (Orifice, 2018). According to Getz and Page (2019), there has been a significant change in the field of research, where the focus is shifting from management to event design. This transition has created a promising and unexplored area for future studies. In 2014, Goldblatt explained that event management encompasses various stages, such as research, design, planning, coordination, and evaluation (Hazira et al., 2019). Daniel et al. (2012) explored various aspects of

event management, including event design and organization. This study shares important discoveries about the importance of event design in the overall event management process. Similarly, Hessel (2016) examined the impact of technology on physical events and highlighted the need for a fresh approach to event design in the era of hybrid events. However, there is still a lack of understanding and awareness of the event process, especially in the context of business events in Malaysia (Al-Hasan and Chris, 2019; Mohd Nasir et al., 2019). Hence, it is crucial for the Malaysian government and all relevant stakeholders in the business event industry to collaborate in formulating a fresh and targeted strategy for conducting business events (Mohd Nasir et al., 2019).

Event studies are fields with an abundance of literature on event management. In this literature, event design is featured as a key element, alongside other essential components such as event marketing, budgeting, stakeholder networking, logistics, operations, and events (Allen et al., 2008; Bowdin et al., 2011; Ferdinand and Kitchin, 2017). However, an increasing number of discussions focus on the social aspect of planned occasions and the ability of event organizers to create a unique experience for attendees. This shift from simply managing events to actively designing them has led to a new field of study (Brown 2014; Antchak and Ramsbottom 2020). In today's business, design plays a vital role in connecting creativity and innovation (Antchak & Ramsbottom, 2020). Creativity involves coming up with a new idea, finding a new solution to an existing problem, and exploring new possibilities. The literature on service design and design management presents an intriguing opportunity for researchers in the event field to enhance their understanding of event design (Orifice, 2018). Viewing events as platforms for engaging stakeholders over the long term implies that design plays a strategic role. The notion of design as a strategy is recognized as a fresh area of study within the realm of events (Antchak and Ramsbottom, 2020; Orifice, 2018). When designing an event, it is important to shift the focus away from the vogue concepts of the audience, and instead concentrate on specific individuals who will be participating or attending. As event designers, it is important to create and coordinate the emotional and intellectual elements of an event to provide a life-changing experience (Antchak and Ramsbottom, 2020). This demonstrates that a well-designed event can improve or impact attendees' experiences positively or negatively. Experience poses a challenge because event designers lack control, and even with the same props and script, no two experiences are identical (Candi, M. & Beltagui, A., 2016).

2. Results and Discussion

The study was conducted by conducting online searches in leading academic databases, including Scopus, Science Direct, Google Scholar, and Web of Science, using a combination of keywords and filters limited to articles published between 2014 – 2023, to identify relevant articles on hybrid events. 51 articles are related to hybrid events with different themes. The list of articles is as below:

Table 1: Study of hybrid events from 2014 – 2023

Authors	Title	Country
Princhankol et al. (2023)	Outcomes from Professional Experience Provision for Students Through Media Development and Special Hybrid Events During Covid-19 Pandemic	Thailand
M.S. Sakovets (2023)	Virtual and Hybrid Events as A Fast-Growing Event Industry Trend	Belarus
Dewi Jaimangal-Jones (2023)	What role can virtual and hybrid events play in addressing sustainability and social inclusion?	UK
Maiju Richterich (2023)	Digital transformation in the event industry – answering the competence needs of event professionals with Hybrid Ninja	Finland
Lumanauw & Suastawa (2023)	Evaluasi Komunikasi pada Hybrid Event (Studi Kasus Konvensi III Bali Tourism Board di Bali)	Indonesia
Ansah et al. (2023)	Reflecting on Hybrid Events: Learning from a Year of Hybrid Experiences	Germany
Wade et al. (2023)	Hospitality And Analysis of Feeling in Hybrid Events and on Digital Platforms During the Covid-19 Pandemic	Nil

Rasconi (2023)	Feedback report from the first Par Aqua hybrid meeting with considerations on challenges and advantages of mixed events	Cyprus
Meriläinen, Janica (2023)	New normal of B2B trade fair events: on-site, online, hybrid or something else?	Finland
Mahadewi (2023)	Hybrid Event: Utilization of Digital Technology in Organizing Events during the COVID-19 Pandemic in Indonesia	Indonesia
Chhatwal et al (2023)	Future Trends of the Exhibition Industry: Hybrid, Digital Technology and AI	European
Nechita et al. (2023)	Hybrid Events as a Sustainable Educational Approach for Higher Education	Romania
Brown & Drakeley (2023)	Designing the Virtual and hybrid event experience	General
Doran et al. (2023)	Planning virtual and hybrid events: steps to improve inclusion and accessibility.	UK
Lekgau & Tichaawa (2022)	Exploring the Use of Virtual and Hybrid Events for MICE Sector Resilience: The Case of South Africa	South Africa
Hammound et al. (2022)	Technological Innovation in Tourism and Events industry: A hybrid future of Event	Egypt
Firmansyahrani et al. (2022)	Conference Hybrid Event as a New Alternative Event in The Covid-19 Pandemic.	Indonesia
Hanaei et al. (2022)	Emerging Standards and the Hybrid Model for Organizing Scientific Events During and After the COVID-19 Pandemic	UK
Hussein et al. (2022)	The Role of Hybrid Events in Reviving the Hotel Industry in Egypt after the COVID-19 Pandemic: An Exploratory Study	Egypt
Estephania Canessa Araya **Alice Nordgren**	Marketing Hybrid Events A qualitative study investigating the event industry during the Covid-19 pandemic and the change from physical to hybrid events	Sweden
Viliano (2022)	Implementasi Penyelenggaraan Event Hybrid International Fragrance Association (IFRA EXPO) Oleh Dyandra Promosindo	Indonesia
Soepriyanto et al. (2022)	Development of virtual classroom for hybrid live teaching mode	Indonesia
Schulte-Römer & Gesing (2020)	Online, offline, hybrid: Methodological reflection on event ethnography in (post-)pandemic times	Iran
Priyatmoko et al. (2022)	Virtual and hybrid event: how Indonesian event organizers adapt during the COVID-19 pandemic	Indonesia
Ellis et al. (2022)	Application of human factors at hybrid meetings: facilitating productivity and inclusivity	UK
Zhong et al. (2022)	Binaural Audio in Hybrid Meetings: Effects on Speaker Identification, Comprehension, and User Experience	General
Puccinelli et al. (2022)	Hybrid conferences: opportunities, challenges and ways forward	France
Wjiewickrama & Nawarathna (2022)	Hybrid Events As A Tool to Promote MICE Tourism in Sri Lanka: A Management Perspective	India
Constantinides & Quercia (2022)	The Future of Hybrid Meetings	General
Khan & Sethi (2022)	Transition from Face-to-Face to Hybrid Hackathons	Finland, Estonia

	During Covid-19 Pandemic	and Latvia
Kelum et al. (2022)	Online and Hybrid Teaching and Learning: Enhance Effective Student Engagement and Experience	India
Garg et al. (2021)	Hybrid Workshops During the COVID-19 Pandemic—Dawn of a New Era in Neurosurgical Learning Platforms	India
Dousay et al. (2021)	Hybrid or Virtual Conferencing: that is the Question	General
Mariana P. Silva (2021)	The Age of Hybrid Events: Amplifying the Power of Culture Through Digital Experiences (Music Festivals Feat. Technology)	Portugal
Ayhan et al. (2021)	A survey about preferences of future FESSH congresses: virtual, in-person, or hybrid	European
Assadi & Johansson (2021)	The best of both worlds? A study of how hybrid events can create strong experiences	Sweden
Sumandiyar et al. (2021)	The effectiveness of hybrid learning as instructional media amid the COVID-19 pandemic	Indonesia
Khaleque et al., (2021)	Experience Technology. How the Creative Industries Help Increase Audience Engagement at Virtual and Hybrid Events	Denmark
Hameed et al. (2020)	Will "Hybrid" Meetings Replace Face- To-Face Meetings Post COVID-19 Era? Perceptions and Views from The Urological Community	56 countries
Nilsson (2020)	Hybrid Events Breaking the Borders: Transferring your hybrid event into an engaging and inclusive experience for different audiences and stakeholders	Finland
Saatçi et al. (2020)	(Re)Configuring Hybrid Meetings: Moving from User-Centered Design to Meeting-Centered Design	UK
Triyason et al. (2020)	Hybrid Classroom: Designing for the New Normal after COVID-19 Pandemic	Thailand
Simons (2019)	Events and online interaction: the construction of hybrid event communities	Netherland
Karin Hamann (2019)	The Use of Hybrid Meeting Formats to Increase International Collaboration in Scientific Research	German
Hamm et. al (2018)	Hybrid and virtual conferencing modes versus traditional face-to-face conference delivery: A conference industry perspective	Australia
Pakarinen & Hoods (2018)	From hybrid events to the next generation - interactive virtual events: Viewed from three different stakeholders' point of view	Europe
Sox et al. (2017)	Virtual and Hybrid Meetings: Gaining Generational Insight from Industry Experts	US
Sox et al. (2015)	Virtual and hybrid meetings: A mixed research synthesis of 2002-2012 research	Nil
Ivkov et al. (2015)	Visitors' Motives for Attending a Hybrid Event: A case study on agricultural fair	Serbia
Hasan & Dwyer (2014)	Designing a Hybrid Academic Workshop: Lessons from the Field	USA
Sox et al. (2014)	Including Virtual and Hybrid Meeting Planning Within the Curriculum: A Knowledge Management Perspective	USA

Based on the table above, most of the studies on hybrid events have been conducted outside of Malaysia. None of the studies have been explored by researchers in Malaysia. Thus, it is important to understand the hybrid event in the Malaysian context. Most of the study above focuses on hybrid event trends and perspectives. Only

a few studies discussed hybrid event design. It is important to discuss further hybrid event design and to create more engagement and lasting impressions.

3. Conclusion

By conducting a thorough investigation into the process of organizing hybrid events, this study will seek to close the academic gap that Yozcu et al. (2023) identified. Through interviews, the study will examine the obstacles faced by event planners. This is due to several complexities faced by the event professional, namely technological problems due to fluctuations in internet connectivity (Saatçi et al., 2020); poor hybrid event design (Saatçi et al., 2020); Yung et al., 2022); uncertainty in technology acceptance of hybrid events (Dieck et al., 2021; Perdana & Mokhtar, 2022; Saatci et al., 2020); and poor performance of human resources, especially in handling communication processes among the event's team throughout the process of organizing a hybrid event (Chodor, 2020; Helsen et al., 2022; Saatci et al., 2020). Apart from this, attendees of hybrid events perceive the lack of integration between physical and remote events as a challenge. Audience engagement is seen as a crucial consideration in the planning and execution of the hybrid event, with a focus on creating an immersive and memorable experience.

By examining the integration of physical and virtual audiences within the framework of hybrid events, the study will also address the academic gap that Brown and Drakeley (2023) highlighted. Furthermore, the study will investigate the experiences of stakeholders to understand their perspectives on the organizational and logistics aspects of a hybrid event.

Event stakeholders' involvement during the process of organizing a hybrid event is also seen as a challenge due to the organizational and logistics aspects of the event. Therefore, this study will also fill in the academic gap mentioned by Fulcher et al. (2020) and Weiniger and Matot (2021) on the need to investigate an event's stakeholders' experience in conducting a hybrid event.

In conclusion, hybrid events are emerging as a cutting-edge trend in event planning, offering a unique and innovative way to engage attendees and expand the reach of events. Hybrid events offer a unique opportunity to cater to both in-person and virtual attendees, providing a wider reach and a more inclusive atmosphere. By incorporating elements of event design and focusing on attendee experience, organizers can craft an event that seamlessly integrates technology, creativity, and interpersonal connections, resulting in a memorable and impactful experience. As the event landscape transforms and the way people engage with events continues to shift, grasping the nuances of the event experience will be pivotal in creating successful and influential events that leave a lasting impression.

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Event Bidding Success Factors of Malaysia's Business Events: Exploring the Potential Gap in Destination Selection Attributes

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Abstract: Understanding the destination selection attributes is crucial for the survival of the business events industry at any destination. This is particularly pertinent in the business events industry, where competition is strong in the current economic situation. As the landscape of business events continues to evolve, destinations must strategically position themselves to attract and retain these valuable gatherings. The decision-making regarding the selection of the business event destination is prone to be influenced by various potential attributes that are yet to be determined through further exploration. The association or event organizer may exercise their judgment or discretion in selecting the venue, giving them a great deal of flexibility. For Malaysia to be the preferred destination and improve its ranking in international business events especially in Asia Pacific, the products and services supply must be relevant and meet the expectations of the external market. Despite the importance of the business event industry, much of the existing scholarly work has been predominantly focused on the destination selection attributes for leisure and international sports events only. Thus, this paper aims to extend the body of knowledge by investigating whether similar outcomes can be elicited when it comes to business events, with a particular emphasis on understanding the concept and attributes within the context of Malaysian business event associations. Additionally, this study will assist the local hosting and organizations to develop their bid and marketing strategies appropriately by offering exceptional products and services that are customized to meet the expectations of their intended associations.

Keywords: *Business event, MICE, Destination selection attributes, Destination competitiveness*

1. Introduction and Background

Business events are viewed as significant drivers of economic development, generating numerous benefits that reach beyond capital earnings. The Asia Pacific region, including Malaysia, has long been a thriving hub for a wide range of business events, including conferences, trade fairs, and exhibits (KPMG, 2022). This industry has had tremendous economic development in recent years because of increased investment, international trade, and consumer spending (Kim & Gursoy, 2021). Cities and destinations are competing for the opportunity to hold prestigious conferences and exhibitions, with the potential to increase tourism and international recognition. Due to the intense competition among destinations, governments and destination management organizations have made substantial investments in developing infrastructure, marketing campaigns, and incentive programs to strengthen their position in the marketplace. In response to the industry's expansion, the Malaysian government has established supportive policies and frameworks. The Malaysian government has launched the Malaysia Business Events Strategic Marketing Plan 2021-2030 (SMP), which primarily emphasizes three strategic dimensions: optimization, foresight, and competitiveness (MyCeb, 2022).

Malaysia's SMP objectives include boosting its share of hosting international business and sporting events in Asia and being among Asia's top five business event destinations. Building on this strategic framework, Malaysia introduced MyTripleE, a support program designed to encourage local organizers to host regional and international business events (MyCeb, 2024). Additionally, in 2023, the government and ministry contributed RM24.4 million to revitalize the business event industry (News Straight Times, 2023). The proactive efforts indicate Malaysia's commitment to strengthening its position as a leading destination for business events in the Asia-Pacific region, which is in line with its goal to boost competitiveness. However, due to the lack of clear

guidelines for bidding on international business events, it is crucial to explore the concept of business event attributes within the context of Malaysian business event associations to identify any potential gaps. Understanding this allows Malaysia to successfully steer and enhance its strategic plans in the business event market, fulfilling the expectations of international stakeholders.

2. Literature Review

The Evolution of the Business Events Industry in Malaysia: One of the areas in tourism with the greatest expansion rates is business events or in other names, meetings, incentives, conferences, and exhibitions (MICE). Globally, the business event industry has been growing rapidly in competition to hold business meetings due to the economic benefits that the sector offers to the host venue (Rogers & Wynn-Moylan, 2022). Examining the period from 2008 to 2018 for instance, there has been an annual 8% increase in the number of international conferences worldwide (Cró & Martins, 2018. Due to its vast global market size, the international meeting sector has made tremendous contributions to national economies (Crouch et al, 2019). Given the rapid expansion of the commercial event industry, many governments and private investors in regions have made major investments in convention centers, exhibition halls, and lodging facilities to attract major conferences and exhibits (An, et al, 2021).

Undeniably, business events are important engines for socio-economic progress in Malaysia. Scholars have continuously emphasized their crucial contributions to economic, social, and cultural development (Anas et al., 2020; Crouch et al, 2019; Hazira et al., 2022). Malaysia has established itself as a key player in the business events industry over the last decade, as demonstrated by the facilitation of over 2,651 events, which drew approximately 1.3 million international delegates and resulting a revenue impact of around RM16.7 billion (Banerji, 2022). This achievement is a consequence of prolonged and consistent effort initiated in the early years when the Sarawak Convention Bureau (SCB) was established in 2006 to promote business events in Sarawak, while the Malaysia Convention and Exhibition Bureau (MyCEB), founded in 2008, focuses on promoting business events throughout Malaysia on a global scale (Nwobodo et al., 2020). Subsequently, Malaysia's business events industry has experienced further positive expansion. In 2018, there were 1,014 recorded exhibits, compared to 859 events the previous year. The Klang Valley hosts 95% of all trade shows, indicating its significance as a primary destination. According to the Malaysian Association of Convention and Exhibition Organisers and Suppliers (MACEOS) (2020), business events in Malaysia are highly profitable, generating RM1111 for every Ringgit spent by the government.

Despite the positive growth from 2018 to 2019, the 2020 Statistical Report on International Association Meetings by ICCA reflects the impact of the pandemic, with many congresses being canceled, rescheduled, or shifted to virtual or hybrid formats (ICCA, 2021). Undeniably, this has had an enormous impact on global markets and various industries, resulting in industry leaders and players in the respective fields including Malaysia, to innovate and develop novel strategies to survive in this circumstance. (Abdul Razak et. al, 2023). For instance, MyCEB, along with industry stakeholders, has launched the Malaysia Business Events Strategic Marketing Plan (SMP) 2021–2030, which is in line with the Ministry of Tourism, Arts, and Culture's National Tourism Policy 2020–2030, and MyTripleE program to boost Malaysia's appeal (MyCeb, 2022). Remarkably, through committed effort, Malaysia has secured 132 upcoming business events that are expected to draw 170,000 participants resulting in an estimated economic impact of RM1.89 billion from 2022 to 2030. (Meeting and Conventions Asia, 2022).

Destination Selection Attributes: Destination attributes represent distinctive elements of a non-residential site that attract travellers away from their homes. In the business event industry, acquiring and maintaining a competitive edge is paramount. According to Jo, et. al, (2019) and Crouch, et. al (2019), MICE destination tourism authorities and marketers are required to be well conversant in their destination's advantages and disadvantages to plan and implement effective marketing strategies. Thus, it is crucial to know which characteristics of the location and the convention and exhibition facilities have an impact on the choices made by the event planners and participants. In the earlier study, Crouch and Ritchie (1998) identified several categories of site-selection factors, including accessibility, local support, extra-conference opportunities, accommodation facilities, meeting facilities, information, site environment, and other criteria. Many publications were covered by this study (Lee & Lee, 2019; Ahn et. al, 2017; Garcia & Wang, 2017) where the

attributes discovered were primarily associated with a destination's physical features, such as natural landscape and infrastructural facilities. However, a recent study underscored the significant influence of accessibility on destination selection, which extends beyond physical attributes. Lee (2017) and Park et al. (2018) have emphasized the importance of accessibility in impacting destination preferences, which is in line with the findings by Kim et al. (2019). The authors highlighted that accessibility encompasses not only physical accessibility but also regulations regarding visas and overall ease of travel. Destinations with clear, efficient, and convenient visa processes are more likely to be considered by event organizers and attendees.

In addition, many scholars have proposed that CVBs should formulate marketing policies that enhance destination capacity and competitiveness (Lee et al., 2016), improve network capacity and collaborative partnerships among local stakeholders and foster innovation while incorporating supplementary activities to enrich the business tourism experience (Colombo & Marques, 2019). Similar to what (Colombo & Marques, 2019) pointed out, several authors have reached a consensus on the importance of overall experience in business tourism and events (Abulibdeh & Zaidan, 2017; Alananzeh et al., 2019; Śląska, 2024). Despite the previous studies which concentrated primarily on the importance of physical attributes of destinations, it is also crucial to incorporate additional recreational and leisure alternatives, often known as "leisure tourism" (Lichy and McLeay, 2018). Furthermore, in another recent study by Ridley (2023), the author highlighted how business traveller's safety and security areas have evolved over the years, likely to continue in the post-pandemic with a greater emphasis on health risk.

Interestingly, as found in other studies, the importance of destination selection attributes may vary depending on the contextual elements of the destination and the viewpoints of both event organizers and participants in various types of business events (An, et. al, 2021). Certain features are believed to be more significant than others, depending on the research context and destination setting. There may be possible differences in the sets of qualities and variety of destination attributes that can be affected by the sub-category of business events that organizers value most when determining which site is best for the specific kind of event (Nwobodo, 2020). However, event management studies focusing on business events have been understudied (Kim and Kaewnuch, 2018), which drives the researcher to explore the potential gaps in the next section.

Exploring the Gap of Malaysia's Destination Selection Attributes: The business event concept and destination selection attributes have been thoroughly reviewed in the literature, resulting in the identification of potential gaps. There are two significant gaps: a practical gap and a research gap. These gaps, which underscore areas needing further investigation and implementation, will be discussed below.

Practical Gap

In the business event industry, Malaysia was among the earliest countries to recognize the business event industry as a lucrative and prominent market segment (Nwobodo et al., 2020). In 2011, the industry generated $1 billion in revenue and employed approximately 16,700 individuals. By ICCA analysis, Malaysia was ranked ninth in the Asia Pacific rankings in 2019; Singapore, India, Thailand, and Chinese Taipei were ranked fifth and eighth, respectively, in the Asia Pacific rankings. Singapore topped the list of cities in the Asia-Pacific region, with Kuala Lumpur coming in seventh (ICCA, 2019). According to earlier research by Hazira et al. (2022), Malaysia saw a sharp decline in its global ranking from 2015 to 2017. However, in 2018, it became more comfortable with a ranking of number 37 to number 33. Additionally, growth in the country's business industry was observed in 2018, which was a result of the enforcement of a strategic plan introduced by the MyCEB in 2016. However, 2020 has proven to be arguably the most revolutionary year in the industry across the past few decades. The Covid-19 pandemic forced the cancellation of several events, including a major event (Yusof, 2020).

The downward trend and inconsistent rankings for Kuala Lumpur and Malaysia as discussed above are in contradiction with the launch of Malaysia's Business Events Roadmap 2016 (Hazira et. al, 2022), which outlines its strategic plan. In the planning of the Roadmap, one of the first goals targeted is to increase its market share of international conferences, conventions and exhibitions taking place in Southeast Asia, along with the strategy to build a strong team alliance for winning more bids to Malaysia; to get local host support to bid for business events and to be the preferred business events destination (MyCeb, 2016). This objective aligns with the newly launched Strategic Master Plan (SMP) 2021 – 2030 which also aims to attract more international

business events to Malaysia (MyCeb, 2022).

According to Jo et. al (2019), destinations should be aware of and carefully study the political landscape within buying centers as well as the intricate bidding process outlined in the governing documents for the chance to gain an edge in the bidding process. Recognizing the importance of this, several countries have taken the initiative to provide directions or guidelines regarding bidding, which can serve as a reference and source of support for industry players and bidding associations as they prepare to bid for international events. These measures are due to the intense rivalry in the bidding process for large-scale events. The UK government for instance, has released the Gold Framework to assist in deciding whether to bid for and host major sporting events (Department for Culture, Media, and Sport UK, 2015), while Auckland Tourism, Events and Economic Development has published Guidelines for Successful Event Bid, offering insights into the stages, theory, requirements, and success factors of event bidding (Auckland Tourism, Events and Economic Development, 2012). However, there is a dearth of studies on any established guidelines for bidding on the major business event in Malaysia. The Malaysian government has not and yet made it clear what and which guidelines the industry should adhere to when it comes to bidding for international business events to help identify strategies that industry participants use to determine the crucial components necessary to achieve a successful bid.

Research Gap

Numerous studies conducted between over the past decade have mostly delved into the concept of business events as a driving force in travel and tourism industry (Rogers & Wynn-Moylan, 2022; Anas et. al, 2020; Cró & Martins, 2018; Suryadana, 2018; Crouch et. al, 2019; Adros & Wee, 2019; Ray, 2019; Hazira, et. al, 2022), business event destinations mostly discusses the impact of business event and tourism on destinations both economically and the destination image (Kumar & Hussain, 2021; Nwobodo et. al, 2022; Lu, Zhu & Wei, 2020; Promlung & Kovathanakul, 2018; Bueno et al., 2020; Marques and Pinho, 2021; Marais et al., 2017, Suryadana, 2018; Zhang, Liu & Bai, 2022; Danthanarayana, 2023), and characteristics of business event destinations focuses on the selection parameters which comprising the infrastructures, accessibility, lodging, safety and security, social support, cultural offerings, seasonal factors, marketing and publicity, and environmental sustainability (Houdement, 2017; Jo et. al, 2019; Crouch et. al, 2019; Nolan, 2020; Alananzeh, 2019; Colombo & Marques, 2019; Jo et. al, 2019; Crouch et. al., 2019; Nwobodo et. al 2020).

Most site selection frameworks were developed before the Covid-19 pandemic, which halted the business event industry. While some studies have focused on cleanliness and healthcare, recent studies examining the influence of safety on destination selection particularly in the post-pandemic era, remain relatively under-explored (Ridley, 2023). The author further highlighted there is a lack of understanding of the issues and challenges for the event's bidding.

3. Research Methodology

This article is a conceptual paper based on the discussion with 59 articles from Science Direct, Emerald, and Scopus databases.

4. Conclusion

This study attempted to enhance the understanding of the concept of bidding attributes in the Malaysian context through the analysis of potential gaps found through a comprehensive review of destination selection attributes in the business event industry. This study aims to assist the stakeholders in the business events industry in Malaysia, including government organizations, associations, media, investors, and key industrial players to collaborate to formulate a proactive plan and strategy to position Malaysia as a top choice for international business events. It is proposed that future studies may investigate further aspects of the bidding process attributes that have not been commonly addressed by current scholars. Moreover, it would be beneficial to investigate if there are significant differences in the attributes and processes depending on the characteristics or types of events in the business event sector.

Advertently, this study will explore the facets of the destination selection process and attributes from the viewpoint of Malaysian associations, which may have direct involvement and experience in the bidding process.

By comprehending the expectations of external decision-makers and identifying key attributes, this analysis could aid event organizers, destination marketing organizations, and governmental bodies in considering adjustments to meet the perceived priorities of external decision-makers. This is in line with the objectives set in the Business Event Roadmap 2016 and SMP 2021 – 2030 for Malaysia to become a competitive bidder for international meetings and conferences. These adaptations might require the implementation of a proactive strategy to develop a workforce with the necessary capabilities, skills, knowledge, and specialization, whether facilitated by the government, public and private organizations, or industry players. Implementing such measures could help improve the industry's competitiveness, resulting in a growth in events and enhancing the country's reputation as a top Asia Pacific destination for international corporate events. Finally, this study provides insights for future research on destination selection attributes and their implications, particularly in the Malaysian context.

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Augmented Reality Gaming Experience: Assessing Satisfaction Level Towards Post Event Behavior for MARA 1.0

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Abstract: The proliferation of Augmented Reality (AR) technology has significantly transformed the gaming industry by merging digital content with the physical environment. This study focuses on assessing player satisfaction and subsequent behaviors in response to Mission AR Apocalypse (MARA) 1.0, an AR game designed to enhance educational engagement for Universiti Teknologi MARA (UiTM) students. Developed amidst the COVID-19 pandemic by UnBound Malaysia, this game aims to provide an enriching experience through the integration of educational content within an AR framework. This research investigates four primary factors influencing player satisfaction: immersion and visual experience, ease of use and controls, game content and storyline and technical performance. Utilizing a correlational research design, data were collected from 503 students across 15 UiTM branches via structured questionnaires. The study employs Net Promoter Score (NPS) to measure satisfaction levels and their impact on post-event behaviors, such as the intent to recommend and continue using the game. Findings indicate a high level of satisfaction with immersion and visual experience, ease of use, and game content, though technical performance showed mixed results. These results support the hypotheses that immersive, visually rich AR games with user-friendly controls and engaging content enhance player satisfaction and recommendation intentions. The study concludes that while the majority of players are satisfied, there are areas for improvement, particularly in technical performance, to ensure a more seamless and enjoyable gaming experience. These insights are crucial for developers and educators aiming to optimize AR applications for educational purposes.

Keywords: *Augmented reality (AR) games, Player satisfaction, Immersive experience, Post-event behavior, Game design and engagement*

1. Introduction and Background

The advent of Augmented Reality (AR) has revolutionized the gaming industry, offering players an immersive experience that seamlessly blends digital content with the real world. Unlike traditional video games, AR games superimpose computer-generated images on a user's view of the real world, enhancing the player's perception and interaction with their environment. This unique integration of virtual and real elements has created new possibilities for game design, player engagement, and entertainment.

One of the most notable successes in AR gaming is Pokémon Go, which launched in 2016 and quickly garnered millions of users worldwide. The game's ability to encourage physical activity, social interaction, and exploration of real-world locations highlighted the vast potential of AR technology in gaming (Paavilainen, Korhonen, Alha, Stenros, Koskinen & Mayra, 2017). Following its success, numerous AR games have emerged, each striving to provide a captivating and memorable player experience. As the AR gaming market continues to grow, understanding what drives player satisfaction and how it influences post-game behavior becomes increasingly important for developers and marketers. Satisfied players are more likely to continue playing, recommend the game to others, and participate in future releases or events. Therefore, assessing the factors that contribute to player satisfaction in AR games can provide valuable insights for optimizing game design and marketing strategies.

This research focuses on Mission AR Apocalypse (MARA) 1.0, a new AR game designed to offer an engaging and immersive experience in education for UiTM students. This game was developed by UnBound Malaysia, one of the leaders in digital technology in Malaysia. Collaborating with students from Bachelor of Event Management, UiTM, this game was launched in early 2021 amid the Covid-19 pandemic. The primary objective of this study is to evaluate the satisfaction levels of players and how this satisfaction influences their post-event behavior,

In the context of AR gaming, several factors are believed to influence player satisfaction, including the immersion and visual experience, ease of use and controls, game content and storyline, and the technical performance of the game (Zhou, Duh & Billinghurst, 2008). This study will explore these dimensions to identify which elements are most critical in shaping a positive gaming experience.

Understanding the dynamics of player satisfaction and behavior in AR gaming not only helps in improving current games but also in setting a benchmark for future AR game developments. This research aims to bridge the gap in the literature concerning the evaluation of AR gaming experiences and their subsequent impact on player behavior.

The integration of Augmented Reality (AR) technology in various domains has seen a rapid increase, particularly in the gaming industry, where it has transformed player experiences by blending digital content with the real world. Despite its global advancements, the adoption and implementation of AR technology in the educational field within Malaysia remain relatively nascent. This limited utilization presents several challenges and opportunities that need to be addressed to fully harness the potential of AR.

In the context of Malaysia, the application of AR in educational settings is still in its early stages, with few institutions exploring its capabilities for enhancing learning and engagement (Yunus, Nordin, Salehi, Sun, & Embi, 2013). This nascent stage of AR technology in education means that there is a lack of comprehensive understanding regarding its impact on user satisfaction and subsequent behaviors, such as continued usage and recommendations to peers.

Furthermore, the novelty of AR technology introduces several issues related to user experience, including the ease of use, the quality of visual and immersive experiences, and the technical performance of AR applications (Billinghurst et. al, 2015). These factors are crucial in determining the effectiveness and appeal of AR games, particularly in educational environments where the primary users are students who may have varying degrees of familiarity with advanced technologies.

Given the unique challenges and potential benefits associated with AR technology in Malaysia's educational sector, there is a pressing need for empirical studies that explore these dynamics. Specifically, it is essential to understand how different aspects of AR games—such as immersion, ease of use, content quality, and technical performance—affect user satisfaction and behavior. This understanding can inform the development of more effective AR applications that enhance educational outcomes and student engagement.

This research aims to address this gap by investigating the satisfaction levels of UiTM students toward AR gaming experiences and how these experiences influence their post-event behaviors. By focusing on a representative sample from 15 UiTM branches across Malaysia, this study seeks to provide insights that can guide the future integration of AR technology in educational settings, ensuring that it meets the needs and expectations of students.

2. Literature Review

Immersion and Visual Experience: Immersion is a critical factor in AR gaming, significantly influencing player satisfaction and engagement. The immersive quality of an AR game is largely dependent on the seamless integration of digital elements with the physical world, creating a compelling and believable experience for the player. Azuma (1997) emphasizes that the essence of AR lies in its ability to augment the real world with virtual objects that appear to coexist in the same space. This enhanced perception can significantly elevate the user's sense of presence within the game, making the experience more engaging and memorable.

Recent studies have shown that visual experience is paramount in achieving this immersion. High-quality graphics, realistic animations, and effective use of spatial audio contribute to the overall sensory experience, making the digital augmentation appear more convincing and enjoyable (Billinghurst et. al, 2015). For instance, Pokémon Go's success can be attributed in part to its effective use of AR to create a visually appealing and interactive environment that encourages exploration and engagement with the real world (Paavilainen et al., 2017).

Ease of Use and Controls: The ease of use and intuitive controls are essential for ensuring a positive player experience in AR games. AR games often require players to interact with both digital and physical elements, making the design of user interfaces and control mechanisms particularly challenging. Poorly designed controls can lead to frustration and reduce the overall enjoyment of the game.

Researchers have highlighted the importance of user-friendly interfaces that require minimal learning curves. Zhou et al. (2008) argue that AR applications should prioritize simplicity and intuitiveness to accommodate a broad audience, including those who may not be technologically savvy. In the context of AR gaming, this means designing controls that are natural and responsive, allowing players to focus on the gameplay rather than struggling with the mechanics.

Ease of use also extends to the hardware required to play AR games. The proliferation of smartphones with built-in AR capabilities has made it easier for developers to reach a wide audience without requiring specialized equipment. However, ensuring that the game runs smoothly across a range of devices is a significant challenge that can impact player satisfaction (Dey et al., 2018).

Game Content and Storyline: The content and storyline of an AR gameplay a crucial role in maintaining player interest and encouraging long-term engagement. An engaging narrative can provide context and motivation for players, enhancing their emotional connection to the game and its characters. A well-crafted storyline can also facilitate a deeper immersion, as players become invested in the unfolding events and outcomes.

Studies have shown that players are more likely to return to a game and recommend it to others if they find the storyline compelling and the content rich and varied (Hunicke, LeBlanc, & Zubek, 2004). In AR games, this often involves creating a balance between scripted events and dynamic, player-driven experiences. The ability to interact with the game world in meaningful ways can enhance the sense of agency and involvement, making the experience more personal and engaging (Tutenel, Smelik, Bidarra & de Kraker, 2008).

Moreover, the integration of real-world locations and contexts into the game narrative can provide a unique and memorable experience that differentiates AR games from traditional video games. This location-based storytelling can encourage exploration and social interaction, further enhancing overall enjoyment and satisfaction (Paavilainen et al., 2017).

Technical Performance: The technical performance of an AR game is fundamental to its success and player satisfaction. Technical issues such as lag, crashes, or poor graphics can detract from the gaming experience and lead to player frustration. Ensuring smooth performance across various devices and platforms is a critical challenge for developers.

Studies indicate that technical stability is one of the primary factors influencing player satisfaction in AR games (Soltani & Morice, 2020). This includes not only the game's ability to run without errors but also the quality of its graphics, responsiveness of controls, and accuracy of AR interactions. Advanced algorithms for tracking and rendering are essential for maintaining a high level of realism and immersion in AR games (Billinghurst et. al, 2015).

Moreover, the hardware limitations of mobile devices can impact the performance and quality of AR games. Developers must optimize their games to balance performance with visual quality, ensuring that the game is accessible to a wide audience without compromising the experience (Dey et al., 2018). As AR technology continues to evolve, improvements in hardware and software will likely lead to more sophisticated and satisfying AR gaming experiences.

Net Promoter Score (NPS): NPS is valued for its simplicity and ability to predict business growth. A high NPS indicates a strong base of satisfied customers who are likely to recommend the product or service, leading to increased word-of-mouth referrals and potential growth (Reichheld, 2003).

Despite its popularity, NPS has faced criticism. Some argue that it oversimplifies customer sentiment and does not provide actionable insights (Fisher & Kordupleski, 2018). Others contend that NPS does not account for the

reasons behind customer satisfaction or dissatisfaction, making it difficult to address specific issues (Grisaffe, 2007). Additionally, there is debate over the statistical validity of NPS. Some studies suggest that the 11-point scale used in NPS surveys may not be as reliable as other scales (Kristensen & Eskildsen, 2014).

NPS has been applied across various industries, including retail, healthcare, finance, and technology. In retail, NPS is used to measure customer satisfaction with products and services (Lubis & Khair, 2023). In healthcare, NPS is employed to assess patient satisfaction and loyalty (Krol, de Boer, Delnoij & Rademakers, 2015). In finance, NPS helps banks and financial institutions understand customer loyalty and predict future business growth (Zaki, Kandeil, Neely & McColl-Kennedy, 2016).

The Net Promoter Score (NPS) remains a popular metric for measuring customer loyalty and satisfaction. While it has its criticisms, its simplicity and ability to predict business growth make it a valuable tool for businesses. Future research may explore ways to enhance NPS by combining it with other metrics and qualitative feedback to provide more actionable insights.

H1: Higher levels of immersion and visual experience in AR games significantly increase player satisfaction and their likelihood to recommend the game to others.

Rationale: Immersive and visually rich AR games are more likely to provide a compelling and enjoyable experience, leading to greater player satisfaction and positive word-of-mouth recommendations.

H2: The ease of use and intuitiveness of controls in AR games are positively correlated with player satisfaction and recommending intention.

Rationale: AR games that feature user-friendly interfaces and intuitive controls minimize player frustration and enhance enjoyment, thereby increasing satisfaction and the likelihood of recommending the game.

H3: Engaging game content and a compelling storyline in AR games are positively associated with higher levels of player satisfaction and increased post-event behaviors such as recommendations.

Rationale: Rich and engaging content, along with a well-crafted storyline, captivates players and enhances their overall experience, making them more likely to recommend it to others.

H4: High technical performance, characterized by minimal lag, crashes, and high-quality graphics, is positively related to player satisfaction and intention to recommend the AR game.

Rationale: Reliable technical performance ensures a smooth and enjoyable gaming experience, which is crucial for maintaining player satisfaction and encouraging them to recommend the game.

H5: Higher satisfaction levels in the overall AR game experience are positively associated with increased post-event behaviors, such as recommending the game to others.

Rationale: This hypothesis posits that engaging game experience increases player satisfaction, which in turn influences their intentions to continue playing the game and to recommend it to others.

3. Research Methodology

This study employs a correlational research design to examine the relationships between key variables influencing player satisfaction and post-event behavior in augmented reality (AR) gaming. The research targets a specific population comprising students from Universiti Teknologi MARA (UiTM) across 15 branches in Malaysia. A sample size of 503 respondents was used, representing the total distribution of participants from the different branches.

Data collection was conducted using a structured questionnaire that included items measured on a 5-point Likert scale. This scale was chosen to capture the nuances in participants' perceptions and attitudes towards the AR gaming experience, including factors such as immersion and visual experience, ease of use and controls, game content and storyline, and technical performance.

The collected data were analyzed using Net Promoter Score (NPS) to investigate the relationships between the independent variables (immersion and visual experience, ease of use and controls, game content and storyline, and technical performance) and the dependent variables (player satisfaction and post-event behavior).

Theoretical Framework: Building upon previous studies on motivation and behavioral outcomes (Severt, Chen, & Breiter, 2007; Bauer, Tse, & Weber, 2008), this research will thoroughly investigate four key dimensions: immersion and visual experience, ease of use and controls, game content and storyline, and

technical performance. By synthesizing existing literature and refining conceptual models, the study aims to offer a nuanced exploration of how satisfaction with these aspects of an AR game influences subsequent behavioral outcomes.

Figure 1: Motivation and Behavioral Outcomes



In examining the post-event behavior, the researchers used Net Promoter Score (NPS), a common metric used to gauge the willingness of customers to recommend a product or service to others developed by Fred Reichheld, a consultant and author, in a 2003 Harvard Business Review article titled The One Number You Need to Grow (Reichheld, 2003). Respondents give a rating between 1 (not at all likely) and 5 (extremely likely) and, depending on their response, customers fall into one of 3 categories to establish an NPS score:

- **Promoters** respond with a score of 4 or 5 and are typically loyal and enthusiastic customers.
- **Passives** respond with a score of 3. They are satisfied with your service but not happy enough to be considered promoters.
- **Detractors** respond with a score of 1 to 2. These are unhappy customers who are unlikely to recommend and may even discourage others from you.

By subtracting the percentage of Detractors from the percentage of Promoters, the NPS will be achieved. An NPS of 40% is considered good.

4. Results and Discussion

Gender Distribution: The gender distribution data reveals that out of 503 respondents, 319 are male, constituting 63.4% of the total sample. Meanwhile, 184 respondents are female, making up 36.6% of the sample. This indicates a significant gender disparity among the participants, with males being almost twice as numerous as females. Such a disparity may reflect the demographic composition of the sampled population or may indicate a higher interest or participation rate among male students in activities related to AR gaming.

Table 1: Gender Distribution

Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Male	319	63.4	63.4	63.4
Female	184	36.6	36.6	100.0
Total	503	100.0	100.0	100.0

Education Level Distribution: The education level distribution shows that 186 respondents, or 37.0% of the total sample, are diploma students. In contrast, the remaining 317 respondents, accounting for 63.0%, are degree students. This distribution highlights a higher representation of degree students in the sample. The data suggests that degree students may have greater access to or interest in participating in AR gaming studies, or it may simply reflect the larger population of degree students at the university.

Table 2: Education Level Distribution

Education Level	Frequency	Percent	Valid Percent	Cumulative Percent
Diploma	186	37.0	37.0	37.0
Degree	317	63.0	63.0	100.0
Total	503	100.0	100.0	100.0

Satisfaction

Immersion and Visual Experience: Based on the data from 503 respondents regarding their Immersion and Visual Experience, the majority expressed positive perceptions, with 40% rating it as Excellent and 35% as Good. Conversely, a smaller proportion rated their experience as Poor (7%) or Very Poor (3%). This distribution highlights a generally favorable outlook among respondents, indicating that most viewed their Immersion and Visual Experience positively, while a minority reported less satisfactory experiences. These findings underscore the importance of enhancing visual and immersive elements to maintain high levels of user satisfaction in related contexts.

Table 3: Immersion and Visual Experience

Category	***Frequency***	***Percentage***
Excellent	201	40.0%
Good	176	35.0%
Average	75	15.0%
Poor	35	7.0%
Very Poor	16	3.0%
Total	**503**	**100.0%**

Ease of Use and Controls: Regarding "Ease of Use and Control," the data reveals a predominantly positive sentiment. A significant 70% of respondents rated the experience either as Excellent (30%) or Good (40%), indicating a strong satisfaction with the usability and control aspects. Another 20% rated it as Average, suggesting a moderate level of satisfaction. However, there were indications of room for improvement, with 7% expressing dissatisfaction (Poor) and 3% reporting very low satisfaction (Very Poor). While these percentages represent smaller segments, they highlight areas where enhancements could potentially elevate overall user satisfaction. Overall, the majority of respondents found the Ease of Use and Control to be satisfactory, emphasizing its importance in user experience design while also acknowledging opportunities for refinement to address the concerns of the minority of dissatisfied users.

Table 4: Ease of Use and Controls

Category	***Frequency***	***Percentage***
Excellent	151	30.0%
Good	201	40.0%
Average	101	20.0%
Poor	35	7.0%
Very Poor	16	3.0%
Total	**503**	**100.0%**

Game Content and Storyline: Table 5 provides a clear overview of how respondents rated the "Game Content and Storyline," highlighting the frequencies and percentages for each category from Excellent to Very Poor. A substantial 75% rated the content and storyline positively, with 35% describing it as Excellent and 40% as Good. This indicates a strong overall satisfaction with the game's narrative aspects. However, 15% found it to be Average, suggesting a moderate level of satisfaction, while 7% rated it as Poor and 3% as Very Poor, representing smaller segments dissatisfied with the content and storyline. These findings underscore the critical role of narrative quality in gaming experiences, as the majority of respondents viewed it favorably.

Nonetheless, addressing the concerns of the minority dissatisfied users could further enhance overall player enjoyment and engagement with the game.

Table 5: Game Content and Storyline

Category	*Frequency*	*Percentage*
Excellent	176	35.0%
Good	201	40.0%
Average	76	15%
Poor	35	7.0%
Very Poor	15	3.0%
Total	**503**	**100.0%**

Technical Performance: Table 6 provides a breakdown of how respondents rated the "Technical Performance" of a product or service, illustrating both the frequencies and percentages for each level from Excellent to Very Poor.

Table 6: Technical Performance

Category	*Frequency*	*Percentage*
Excellent	126	25.0%
Good	176	35.0%
Average	126	25.0%
Poor	50	10.0%
Very Poor	25	5.0%
Total	**503**	**100.0%**

The majority of respondents rated the performance positively, with 60% (25% Excellent and 35% Good) indicating satisfaction. Another 25% found the technical performance to be Average, suggesting a neutral stance. However, there were notable concerns among some respondents, with 10% rating it as Poor and 5% as Very Poor. These ratings highlight areas where improvements in technical aspects could potentially enhance overall user satisfaction and perception. Overall, while a significant portion of users were satisfied with the technical performance, addressing the issues raised by dissatisfied users could lead to improved customer experiences and product competitiveness.

Overall Satisfaction: The table reveals that a majority of respondents expressed positive sentiments towards their overall satisfaction levels, with 35% indicating they were "Very satisfied" and 45% stating they were "Satisfied." Collectively, this reflects a high satisfaction rate of 80%. However, there is also a notable portion of respondents who are either neutral (10%), dissatisfied (7%), or very dissatisfied (3%). These groups highlight areas where improvements or adjustments could potentially enhance overall satisfaction. Addressing concerns raised by dissatisfied users and maintaining positive experiences for the majority could lead to higher overall satisfaction and continued customer loyalty.

Table 7: Overall Satisfaction

Category	*Frequency*	*Percentage*
Very satisfied	176	35.0%
Satisfied	226	45.0%
Neutral	50	10.0%
Dissatisfied	35	7.0%
Very dissatisfied	15	3.0%
Total	**503**	**100.0%**

Intention to Recommend: Referring to Table 8, out of 503 respondents, 30% are extremely likely to recommend the game, and 40% are very likely to do so. Another 20% are somewhat likely to recommend it, while 7% are not very likely and 3% are not likely at all to recommend the game. Overall, the majority of respondents (70%) have a strong inclination to recommend the game.

Table 8: Post-event Behavior

Category	*Frequency*	*Percentage*
Extremely likely	151	30.0%
Very likely	201	40.0%
Somewhat likely	101	20.0%
Not very likely	35	7.0%
Not likely at all	15	3.0%
Total	**503**	**100.0%**

NPS Results: The Net Promoter Score (NPS) is traditionally calculated based on a 0-10 scale. However, in this case, the data is given on a 5-point Likert scale. For this research, we will define the categories as follows:
Promoters: "Extremely likely" and "Very likely"
Passives: "Somewhat likely"
Detractors: "Not very likely" and "Not likely at all"

Next, we calculate the percentages of promoters, passives, and detractors among the total respondents. The NPS is then calculated as follows:

$$\text{NPS} = \%\text{Promoters} - \%\text{Detractors}$$

Promoters (Extremely likely + Very likely): *n*352 (70%)
Passives (Somewhat likely): *n*101 (20%)
Detractors (Not very likely + Not likely at all): *n*50 (10%)

NPS = %Promoters − %Detractors = 70% − 10% = **60**

Thus, the NPS for the game is **60**. This indicates a strong likelihood of recommendation, as a higher NPS generally reflects greater respondent satisfaction and loyalty.

Discussion
The results reveal that the game is highly regarded in terms of immersion and visual experience, with 75% of respondents rating it as either Excellent or Good. This indicates that the game's visual and immersive elements are effective, although a small percentage (10%) found their experience less satisfactory, suggesting potential areas for improvement. Therefore, H1 is supported by this result.

Ease of use and controls also received predominantly positive feedback, with 70% of respondents rating it as Excellent or Good. While 20% rated it as Average, a minor segment (10%) expressed dissatisfaction, highlighting opportunities for enhancing the usability and control aspects to cater to all users. This proves that the H2 is true.

Regarding game content and storyline, 75% of respondents expressed high satisfaction, rating it positively. However, 15% rated it as Average and a smaller group (10%) as Poor or Very Poor. This underscores the importance of maintaining high narrative quality while addressing the concerns of the dissatisfied minority to improve overall player engagement. In essence, H3 is supported.

The technical performance received mixed feedback, with 60% rating it positively and 25% neutrally. Notably, 15% of respondents were dissatisfied, pointing to specific technical issues that need to be addressed to enhance the overall user experience and satisfaction. With 60% positive feedback, H4 is also supported.

Overall satisfaction with the game is high, with 80% of respondents feeling satisfied or very satisfied. However, 20% of respondents were neutral or dissatisfied, indicating that while the majority are pleased with the game, there is room for improvement to elevate the experience for all users and ensure continued customer loyalty. This also validates the H5.

5. Conclusion and Recommendations

Some recommendations are posited below:

Enhance Immersion and Visual Experience:

- Continue investing in high-quality graphics and immersive elements.
- Conduct user testing to identify specific visual aspects that may need refinement to convert the 10% less satisfied users into advocates.

Improve Usability and Controls:

- Simplify and streamline game controls based on user feedback.
- Offer customizable control settings to cater to a wider range of player preferences.

Maintain and Elevate Narrative Quality:

- Regularly update and expand the game content and storyline to keep players engaged.
- Address specific feedback from the 10% who rated the storyline as Poor or Very Poor to ensure the narrative remains compelling.

Address Technical Issues:

- Prioritize fixing bugs and optimizing the game's performance.
- Implement regular updates and patches to resolve technical issues promptly.

Boost Overall User Satisfaction:

- Engage with the community to gather detailed feedback on areas of dissatisfaction.
- Offer exceptional customer support to address player concerns swiftly.
- Introduce new features and improvements based on user suggestions to enhance the overall gaming experience.

By focusing on these recommendations, the game can build on its strengths and address areas of concern, ultimately leading to higher satisfaction and loyalty among the players.

Conclusion

The survey results indicate that the game is generally well-received, with strong performance in key areas such as immersion, visual experience, ease of use, controls, game content, and storyline. A significant majority of respondents rated these aspects as Excellent or Good, confirming the hypotheses (H1, H2, and H3). Despite these positive outcomes, there are notable areas for improvement, particularly in technical performance and overall satisfaction, where some respondents reported neutral or negative experiences. This mixed feedback on technical performance (H4) and overall satisfaction (H5) highlights the necessity for targeted enhancements.

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Systematic Visual Documentation of the Mah Meri Tribe's Cultural Practices

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Abstract: The purpose of photography is identical to that of language and writing. Photography's operation must be evaluated in light of various explanatory, interpretative, and theoretical linguistic assertions due to visual art's multifaceted and multifunctional nature. In documentary photography, people, situations, objects, and events are depicted straightforwardly and narratively; This paper first gives a brief overview of the history and facts related to the beliefs and culture of the Mah Meri tribe in Peninsular Malaysia in photo documentary reporting. The primary purpose of this research is to conduct a thorough analysis of cultural traditions and environmentalist ideals. Accordingly, Mah Meri requires systematic and organized visual data, and the collection of qualitative data is essential. In a phased study, ethnomethodological techniques were used to collect periodic primary data. Throughout this systematic documentation procedure, more time was needed to collect in-depth information about personal lifestyles and religious practices. In conclusion, this research contributes to the modern accessibility of digital data sources by achieving an understanding of the Mah Meri tribe through the discovery and deconstruction of traditional beliefs unknown to the public.

Keywords: *Mah Meri Tribe, Cultural Portrayal, Ethnomethodology, Systematic Documentary, Photojournalism*

1. Introduction and Background

Malaysia's indigenous population, known collectively as the "Orang Asal," comprises diverse ethnic groups categorized into three main groups: the Negrito, Senoi, and Proto-Malaysian. Within these broader categories, there are 95 subgroups, each with distinct languages and cultural practices. The "Orang Asli" is a significant subgroup of the Orang Asal, accounting for approximately 13.8% of Malaysia's national population as of 2017 (Indigenous World Malaysia, 2020).

Among these indigenous groups, the Mah Meri tribe stands out. The Mah Meri belongs to the Aslian Mon-Khmer branch of the Austroasiatic language family and is categorized as a Southern Indigenous language group along with Semelai, Semoq Beri, and Temoq (Benjamin, 1976). Predominantly residing on Carey Island in Selangor, the Mah Meri are known for their deep-seated cultural traditions and ancestral beliefs, which are celebrated through various festivals and ceremonies (Masron, Masami & Ismail, 2013).

The Malaysian Indigenous Development Agency highlights that the term "Mah Meri" translates to "orang hutan" (forest people) or "orang bersisik" (scaly people), and they are also referred to as "orang laut" (sea people). Over the years, the Mah Meri have evolved from obscurity to embracing technology and literacy, yet they continue to uphold their traditional rituals and ancestral customs, which form the core of their identity.

Photography has transcended its traditional role of preserving family legacies to become a powerful tool for identity and communication (Van Dijck, 2008). The field of photography is diverse, with various forms serving significant purposes across different sectors such as business, science, the arts, sports, and medicine. Digital photography, in particular, has revolutionized the industry by merging art with technology, thereby enhancing its impact and reach. The visual arts, through reference materials like films and books, continue to narrate the stories of ancestors, as seen in the works documenting the Mah Meri tribe (Razak, 2013).
To effectively interpret photographs, it is essential to analyze three types of contextual information: internal, native, and external (Barrett, 1986). Photographs can be analogous to linguistic assertions on explanatory, interpretative, and theoretical levels. Photography, comparable to language or written words, is a primary method of communication (Mustaff, 2013). Comprehensive use of instructional documentation opens more avenues that may lead to unexpected insights (Alnervik, 2018).

In the context of systematically documenting the cultural portrayal of the Mah Meri tribe, emphasis must be

placed on interpretation and visual analysis. Visual scenes described by Zitnick, Parikh, and Vanderwende (2013) include various information regarding objects' presence, attributes, and spatial relationships. Such detailed linguistic assertions regarding explanations, interpretations, and theories are crucial for preserving sustainable development within a systematic documentary framework (Barrett, 1986).

Figure 1: The Portrait of Mah Meri Tribe



Picture by: Mohd Shariful Hafizal

2. Literature Review

Historical Context and Evolution of Documentary Photography: Documentary photography has evolved significantly since its inception in the 19th century, where it served primarily as a tool for historical documentation and social reform. Pioneers like Mathew Brady and Lewis Hine used their cameras to capture the realities of war and child labor, respectively, thereby influencing public perception and policy (Stott, 1973). The transition to digital photography and the proliferation of the internet have further transformed the field, making it easier to capture, edit, and share images on a global scale (Van Dijck, 2008). This technological evolution has expanded the scope and impact of documentary photography, enabling it to serve diverse purposes across various fields such as business, science, and the arts.

Indexing Visual Information: Visual media activities are archived and represented visually in both still and moving images, providing valuable data for research. Jewitt (2012) emphasizes the importance of observable data in research, noting that visual recording can be utilized in various ways, including participatory videography, interviews, and field research. Harris (2015) argues that moving images offer multiple viewpoints, enhancing the ability to track, gather, assess, report, and share research results. Visual aids and instructional resources highlight the unique characteristics of visual analysis as a teaching and learning strategy (Bishop & Verleger, 2013). Lorang (2010) underscores the importance of visual adaptation in interpretive and theoretical documentation to effectively compress the research topic's narrative and information.

Systematic Documentation: Systematic documentation involves meticulous planning, organization, and research. Boon, Hirschkorn, Griener, and Cali (2009) describe this approach as essential for constructing cohesive and logically presented documentaries. The process begins with determining the subject and conducting extensive research, including reading relevant literature, conducting interviews, and analyzing historical or archival documentation (Hodson, 1999; Atkinson & Coffey, 2004). Once the research is complete, a clear and structured outline is created, followed by the recording phase, which employs high-quality equipment and diverse methods to capture the subject matter compellingly. The final phase involves editing the material into a cohesive and engaging documentary and disseminating it to the intended audience through various channels (Smith & Schryer, 2009; Nohl, 2010).

Technological Advances in Documentary Photography: The advent of modern technology has revolutionized documentary photography. Digital cameras, advanced editing software, and online platforms have greatly enhanced the ability to capture, process, and disseminate visual data. Innovative tools like drones, 360-degree cameras, and augmented reality (AR) have opened new possibilities for documenting and presenting cultural practices (Lister, Dovey, Giddings, Grant, & Kelly, 2009). These technologies enable more immersive and comprehensive documentation, allowing researchers to present richer and more detailed visual narratives.

Ethical Considerations in Documentary Photography: Ethical considerations are paramount in documentary photography, particularly when dealing with indigenous communities. Researchers must ensure informed consent, respectful representation, and avoid exploitation (Barrett, 2020). Ethical frameworks, such as those outlined by the American Anthropological Association (AAA, 2012), provide guidelines to conduct research that respects the dignity and rights of participants. These frameworks emphasize the importance of transparency, community involvement, and sensitivity to cultural contexts.

Comparative Analysis with Other Indigenous Tribes: Comparing the cultural portrayal of the Mah Meri tribe with other indigenous tribes in Malaysia and Southeast Asia offers a broader context. Studies on tribes like the Batek, Jahai, and Temiar reveal unique cultural elements and common challenges, including the impacts of modernization and the loss of traditional lands (Carey, 1976; Endicott, 2012). These comparisons highlight the distinctiveness of the Mah Meri culture and the universal issues faced by indigenous communities, enriching the understanding of their cultural practices and resilience.

3. Research Methodology

This study employs an ethnomethodological approach to explore and document the cultural practices of the Mah Meri tribe. Conducted over a day on Carey Island, the research focuses on immersive interaction with the tribe. Data collection is structured into five distinct stages, each contributing to a comprehensive understanding of the Mah Meri's cultural and social dynamics.

According to Friend and Caruthers (2016), conducting effective research in documentary photography involves several critical steps: selecting a location, choosing respondents, obtaining their permission, conducting research, determining the significance of the results, and reporting them. These steps are integral to ethnomethodology-based qualitative methods used in photo documentaries.

In the initial stage, researchers and photographers will collect secondary data to build a thorough

understanding of the Mah Meri tribal community's behavior and characteristics. This involves an extensive review of relevant literature, including books, journals, and articles, to gather insights into the tribe's cultural practices, social structures, and historical background.

The second stage involves direct observation of the Mah Meri tribe's daily interactions and behaviors. Researchers will immerse themselves in the tribe's environment, meticulously documenting social dynamics and cultural practices through detailed field notes and visual recordings. This observational study aims to capture the essence of the tribe's way of life. The photo documentary method will be utilized to interpret these observations, analyzing the data through explanatory, interpretive, and theoretical lenses. This approach ensures a comprehensive understanding of the internal, original, and external contexts of the Mah Meri community, facilitating effective communication through visual storytelling.

Data Collection

Phase 1: Participant Interviews

The initial phase involves conducting in-depth interviews with members of the Mah Meri tribe. These interviews aim to gather detailed information about their culture, traditions, beliefs, and daily practices. Open-ended questions will be used to encourage participants to share their experiences and perspectives in their own words.

Phase 2: Observation

In this phase, researchers will observe the Mah Meri tribe's daily activities and interactions. This observational approach helps capture the nuances of their lifestyle, social structures, and community interactions. Detailed field notes and visual recordings will be taken to document these observations accurately.

Phase 3: Visual Documentary Documentation

Visual documentation is a critical component of this study. Researchers will capture photographs and video footage of the Mah Meri tribe's cultural practices, including rituals, ceremonies, and daily activities. This visual data will provide rich, contextual insights into the tribe's way of life and help preserve their cultural heritage.

Phase 4: Cultural and Ritual Documentation

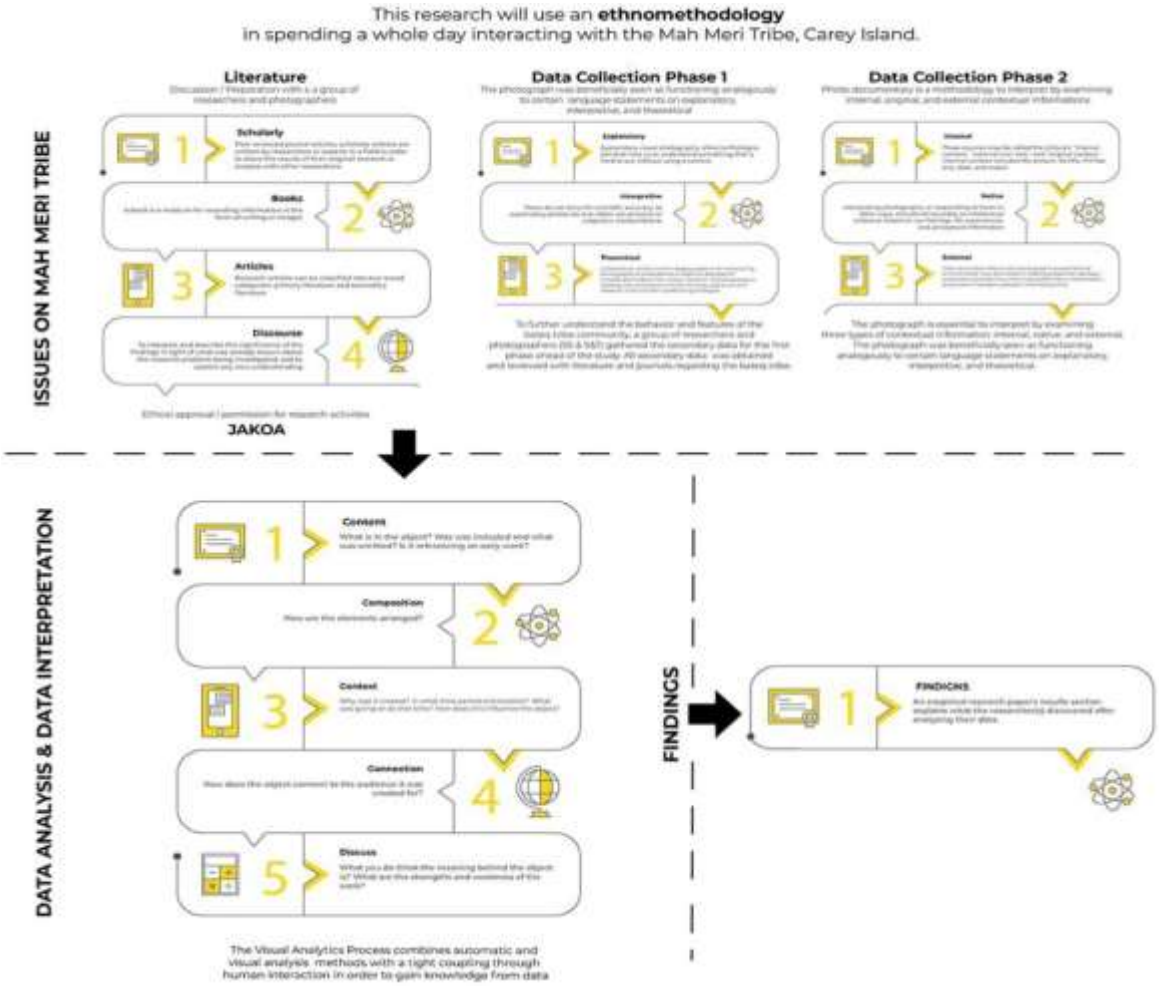
The fourth phase focuses specifically on documenting the Mah Meri tribe's spiritual ceremonies and memorial days. These events are integral to understanding the tribe's cultural identity and religious beliefs. Researchers will record these ceremonies, paying close attention to symbolic actions, artifacts, and the roles of participants.

Phase 5: Data Synthesis and Analysis

In the final phase, the collected data will be synthesized and analyzed to construct a comprehensive visual and narrative account of the Mah Meri tribe's culture. This analysis will involve reviewing the visual recordings, field notes, and interview transcripts to identify key themes and patterns. The goal is to provide a detailed and accurate representation of how the Mah Meri establish social order and maintain their cultural practices through everyday behaviors.

By employing these methods, the study aims to create a thorough and respectful documentation of the Mah Meri tribe. This research contributes to the broader understanding of indigenous cultures and their preservation by providing valuable insights into the Mah Meri tribe's cultural heritage and social organization.

Figure 2: Research Framework on Systematic Visual Documentation of the Mah Meri Tribe's Cultural Practices



Methodological Considerations for Documentary Photography: Due to their comprehensive environment, documentaries have proven more effective at convincing audiences and accurately portraying reality (Nichols, 2010). Academic institutions have recently utilized documentary films more frequently to disseminate knowledge. According to Friend & Caruthers (2016), films can assist researchers in exploring social considerations and current inequities in access to education and communicating their discoveries.

Ethical considerations in documentary photography are paramount. Researchers must protect the integrity of the photographs and the people they depict. Terry Barrett (2020) emphasizes that interpretive photography should portray subjects in a way that is favorable, artistic, shocking, or compelling. This ensures that the images convey a meaningful message to the viewer. Mustaff (2013) notes that photographs should allow viewers to form their interpretations and experience a range of emotions. This means that the images might be abstract or literal, depending on the intended message.

Data collection in documentary photography requires meticulous planning. This includes careful consideration of scene composition, lighting, and interviewing techniques. Nichols (2010) highlights the importance of photographing the surrounding area to provide context. Properly designed photographs are crucial, as they significantly impact the message conveyed to the audience. By integrating these methodological and ethical considerations, researchers can produce documentaries that are not only visually compelling but also respectful and insightful representations of their subjects.

Table 1: Data phased as a scaled function analogous to certain language statements on explanatory interpretation, interpretation and theory by examining internal, original and external contextual information

Data Phase 1: A (1)	**Explanatory:** Visual photography refers to the use of photographs to reveal and elucidate details that are not easily perceptible to the naked eye. These images serve as powerful tools for understanding complex or subtle phenomena, providing clarity and insight that might otherwise be inaccessible without the aid of a camera.	
Data Phase 1: A (2)	Through careful composition and focus, explanatory photographs can highlight specific aspects of a subject, offering viewers a deeper and more comprehensive understanding of the underlying details and nuances that are otherwise hidden from plain view.	

Data Phase 1: B	**Interpretive**: Visual photography does not aim for scientific accuracy as explanatory photos do. Instead, it focuses on personal or subjective interpretations. These photographs convey the photographer's individual perspective, emotions, and artistic vision, offering a unique and often evocative representation of the subject. Interpretive photography encourages viewers to engage with the images on a personal level, inviting them to explore their interpretations and emotional responses, thus enriching their understanding of the subject through a more intimate and nuanced lens.	
Data Phase 2: A	**Theoretical:** Visual photography involves creating a category system to interpret photographs, integrating specific considerations of the medium into existing art criticism formats. This method contributes to art criticism research by offering structured questioning strategies. Theoretical frameworks allow researchers and critics to systematically analyze and critique photographs, enhancing the understanding of photographic works within the broader context of visual arts and cultural studies	

Data Phase 2 - B	**Internal**: The internal context of visual photography refers to the elements contained within the photograph itself. These sources can be identified as the picture's "internal context," which includes the image, its title (if it has one), the date it was taken, and the identity of the maker. This context provides essential information that helps to understand the photograph's creation and initial intention, allowing viewers to gain insights into the circumstances and perspectives that shaped the image.	

Data Phase 2: C	**Native:** The native context of visual photography highlights that interpreting or responding to photographs should go beyond intellectual analysis. It should include our feelings, life experiences, and perceptual information, as well as a deeper understanding of the cultural and contextual background of the image. Integrating these elements provides a holistic and enriched perspective, allowing viewers to fully appreciate the photograph's significance and nuances	

Data Phase 2: D	**External**: The external context of visual photography pertains to the photograph's presentational environments. This context includes how and where the photograph is being presented, how it has been delivered and received, and how other interpreters have understood it. Additionally, it encompasses the photograph's placement in the history of art. By considering these external factors, viewers can understand the broader impact and significance of the photograph, as well as its reception and interpretation over time. This holistic approach provides insights into the photograph's influence and legacy within the artistic and cultural landscape.	

4. Results and Analysis

Indigenous Peoples and Their Connection to the Land: Indigenous peoples have a profound and intrinsic connection to the land and the natural environment. This bond is reflected in the rich diversity of their cultures, languages, and traditional knowledge systems. The Mah Meri tribe, like many other indigenous communities, exemplifies this deep relationship with their surroundings through their cultural practices, spiritual beliefs, and everyday interactions with nature.

Challenges of Globalization and Industrialization: In the contemporary world, globalization and industrialization exert significant pressure on indigenous civilizations. These forces threaten the survival of traditional ways of life, making the extinction of unique cultures increasingly probable. The encroachment of modernity often disrupts the harmony that Indigenous peoples maintain with their environment, leading to the erosion of their cultural heritage and traditional knowledge. The use of an ethnomethodology-based systematic documentary to study the Mah Meri tribe provides a robust approach to documenting and preserving their culture. Ethnomethodology focuses on understanding how individuals make sense of their daily lives and social interactions. This method is particularly effective in investigating the communication and social structures within the Mah Meri community, offering insights into how they organize their lives and sustain their cultural practices.

Documenting and Protecting Mah Meri Culture: Through this systematic approach, the research documents the Mah Meri tribe's cultural rituals, social interactions, and spiritual beliefs. By capturing these elements visually and contextually, the documentary serves as a vital tool for cultural preservation. It not only records the tribe's way of life for future generations but also raises awareness about the importance of protecting indigenous cultures from the impacts of globalization and industrialization. The visual documentary method enhances the understanding of the Mah Meri tribe's culture by providing a vivid and immersive portrayal of their daily lives. This approach allows viewers to engage with the tribe's experiences on a deeper level, fostering empathy and appreciation for their unique cultural identity.

Figure 3: Published on a local online news portal regarding the ritual festival of the Mah Meri tribe using the concept of data phase one (1) methodology/source and pix by Mohd Shariful Hafizal B Aminuddin



The Mah Meri tribe's cultural preservation involves capturing their authentic spiritual beliefs and interpersonal interactions. Ethnomethodological research facilitates the documentation and preservation of indigenous culture through the meticulous analysis of visual data. This approach includes examining body language, art, and other forms of visual communication to understand how the Mah Meri perceive and interact with their environment. By interpreting these visual cues, researchers can uncover the deeper significance behind the tribe's practices and behaviors, providing valuable insights into their cultural heritage and social dynamics

Figure 4: Published on a local online news portal regarding the ritual festival of the Mah Meri tribe using the concept of data phase two (2) methodology/source and pix by Mohd Shariful Hafizal B Aminuddin



Ethnomethodology and Visual Data Analysis: E. Laurier (2020) concludes that examining social life through the lens of ethnomethodology provides a unique perspective on how humans construct social order through traditional behaviors in specific contexts. This approach is particularly valuable in understanding the Mah Meri tribe, as it sheds light on the intricate ways in which their cultural practices and social interactions are organized. Visual data analysis emerges as a powerful tool for preserving Indigenous cultures, allowing researchers to delve into the rich history and significance of human behavior. By analyzing visual cues, researchers can gain profound insights into the cultural and social dynamics of the Mah Meri tribe, contributing to the preservation and appreciation of their heritage.

Figure 5: Published in Utusan Malaysia on November 17, 2022: At the ICCS2022, a photojournalistic documentary and the "Indigenous Research-Base" concept were showcased.


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Gaya • SENI
Research-Base Indigenous
di Festival Antarabangsa 'Orang Asal'
SENI FOTO

Importance of Indigenous Expertise and Policy Implications: Recognizing the uniqueness of each Indigenous culture is crucial in visual data analysis. Engaging an Indigenous specialist ensures that the study respects the community's perspectives and needs. This collaboration enhances research validity and fosters respectful documentation.

This study provides a framework for analyzing visual data in Indigenous contexts, guiding other researchers and supporting policy development. It aligns with SDG No. 4: Quality Education, promoting inclusive and equitable education for Indigenous communities. Additionally, it supports SDG No. 1: No Poverty, by informing strategies to alleviate poverty among the 'Orang Asli' community.

The findings are valuable to the *Jabatan Kemajuan Orang Asli, Malaysia* (JAKOA), and other stakeholders, offering insights into preserving Indigenous cultural and artistic heritage. This study aids in creating initiatives to protect and celebrate the unique traditions of the Mah Meri tribe and other Indigenous groups in Malaysia.

In conclusion, the ethnomethodology-based systematic documentary on the Mah Meri tribe is a powerful means of documenting and protecting indigenous culture. It highlights the tribe's deep connection to their land and environment, showcases their cultural diversity, and underscores the urgent need to address the challenges posed by globalization and industrialization. Through this research, the Mah Meri tribe's cultural heritage is preserved and celebrated, contributing to the broader effort to safeguard the world's indigenous civilizations.

5. Discussion & Conclusion

How a Systematic Documentary Can Help Scholars Understand Indigenous Societies: The Case of the Mah Meri Tribe

In an increasingly digitized world, the importance of visual information is paramount. This study enhances modern accessibility to digital data by exploring and deconstructing the traditional beliefs of the Mah Meri tribe. Through the systematic collection and efficient storage of this information, researchers can better investigate and understand their surroundings.

Using ethnomethodology in the systematic documentary, researchers gained profound insights into the Mah

Meri tribe's social, religious, and cultural portrayals. This approach provided a comprehensive view of the tribe's customs, language, and social interactions. The study highlighted the tribe's use of various visual cues, such as gestures, body language, and facial expressions, which are integral to their communication. These visual indicators, combined with spoken language, facilitate effective communication and comprehension within the tribe.

Significance of the Outcome: The outcome of this research is significant for several reasons:

Cultural Preservation: By documenting the Mah Meri tribe's cultural practices, this research preserves invaluable aspects of their heritage that might otherwise be lost. The systematic documentary method captures detailed visual and contextual data, creating a rich repository of the tribe's customs, rituals, and social interactions**.**

Enhanced Scholarly Understanding: This research provides scholars with a comprehensive and nuanced understanding of the Mah Meri tribe. The use of ethnomethodology allows for an in-depth analysis of the tribe's social order and communication methods. This detailed documentation helps scholars appreciate the complexity of the tribe's cultural practices, which might not be fully conveyed through textual data alone.

Framework for Future Research: The methodological approach used in this study can serve as a model for future research on other indigenous societies. By demonstrating the effectiveness of combining visual documentation with ethnomethodological analysis, this research sets a precedent for how to systematically study and document cultural practices. This framework can be adapted and applied to various indigenous communities, facilitating a broader understanding and preservation of diverse cultures.

Policy Development: The findings of this study can inform policymakers working to promote inclusive and equitable quality education (SDG No. 4) and develop strategies to alleviate poverty in Indigenous communities (SDG No. 1). By providing a deeper understanding of the Mah Meri tribe's cultural and social dynamics, this research helps policymakers design initiatives that are culturally sensitive and effective in addressing the specific needs of Indigenous populations.

Resource for Cultural Institutions: Organizations like the Jabatan Kemajuan Orang Asli, Malaysia (JAKOA), and other cultural institutions can use the data from this study to develop programs and initiatives aimed at preserving and promoting indigenous heritage. The detailed visual documentation serves as an educational resource, fostering greater awareness and appreciation of the Mah Meri tribe's unique cultural contributions.

Conclusion

In conclusion, the systematic documentary on the Mah Meri tribe not only enhances our understanding of their cultural practices but also provides a valuable framework for future research and policy development. This approach ensures that the cultural nuances and social intricacies of the Mah Meri tribe are recorded and appreciated in their full complexity, contributing to the broader effort to safeguard the world's indigenous civilizations.

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Symbolic Interpretations of Mah Meri Visual Art: A Conceptual Approach Using Peirce's Semiotic Theory

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Abstract: This study examines the visual art heritage of the Mah Meri tribe through a semiotic analysis. The research uses Charles Sanders Peirce's Semiotic Theory as the foundational framework to decode the symbolism embedded in Mah Meri's artistic expressions. The aim is to understand and document the deep meanings behind these symbols and their impact on the cultural identity and historical narratives of the Mah Meri tribe. An ethnographic approach is employed for data collection, including field observations, photographic and videographic documentation, and qualitative interviews with community members. The findings reveal that Mah Meri's art is rich in symbolic meanings that reflect the tribe's cultural identity and history. The study also highlights the adverse effects of modernization on traditional art forms, necessitating urgent preservation efforts. This research makes significant contributions to visual anthropology by emphasizing the importance of semiotic analysis in understanding and preserving indigenous art. It calls for increased efforts in documenting and protecting the visual heritage of the Mah Meri tribe to ensure its transmission to future generations.

Keywords: *Semiotic Analysis, Mah Meri Tribe, Visual Art Heritage, Cultural Identity, Charles Sanders Peirce, Symbolism, Ethnography, Indigenous Art, Visual Anthropology*

1. Introduction and Background

The Mah Meri tribe, one of the indigenous communities of Peninsular Malaysia, is renowned for its rich cultural heritage and distinctive artistic expressions. As one of the many Orang Asli (aboriginal) tribes, the Mah Meri possess a unique cultural identity intricately linked to their traditional art forms. These art forms, encompassing wood carvings, masks, and other visual arts, are aesthetic expressions and carry profound symbolic meanings that reflect the tribe's historical narratives, spiritual beliefs, and social values (Santano & Thwaites, 2022).

In recent years, the Mah Meri's cultural heritage has faced significant threats from the forces of modernization. Rapid economic development, urbanization, and the influx of global cultural influences have gradually eroded traditional practices and knowledge (Coluzzi, 2016). This has raised concerns about the sustainability and preservation of Mah Meri's artistic heritage, which is integral to their cultural identity and continuity (Mustaffa Halabi, 2013; Abdul Razak, 2014).

This study addresses these concerns by conducting a comprehensive semiotic analysis of the Mah Meri tribe's visual art heritage. By applying Charles Sanders Peirce's Semiotic Theory, the research aims to decode the symbols and meanings embedded in Mah Meri's artistic expressions. Semiotics, the study of signs and symbols, offers a powerful tool for understanding how the Mah Meri communicate their cultural identity and values through visual art (Lester, 2005).

The primary objectives of this research are threefold: first, to analyze the characteristics and significance of the symbols used in Mah Meri art; second, to document and interpret these artistic expressions in the context of the tribe's cultural heritage; and third, to explore the impacts of modernization on the preservation and transmission of Mah Meri art. Through an ethnographic approach, this study will employ qualitative methods, including field observations, photographic and videographic documentation, and interviews with community members and cultural experts (Pink, 2022; Schwartz, 1989). The findings of this research are expected to

contribute to visual anthropology by providing deeper insights into the symbolic richness of Mah Meri art and its role in cultural preservation. Furthermore, the study aims to highlight the urgent need for effective strategies to safeguard Mah Meri's visual heritage against the pressures of modernization. By doing so, it seeks to ensure that the artistic legacy of the Mah Meri tribe can be preserved and appreciated by future generations (Abdul Razak, 2012).

2. Literature Review

Semiotic Theory and the Work of Charles Sander Peirce: Semiotic theory, particularly the work of Charles Sander Peirce, provides a framework for analyzing the symbols and meanings in Mah Meri's art. Previous studies on indigenous art forms emphasize the importance of preserving cultural heritage in the face of globalization (Hoopes, 2014). This theoretical approach helps decode the complex layers of symbolism embedded in traditional crafts, rituals, and performances of the Mah Meri tribe, ensuring their cultural narratives are preserved and understood.

Photography as Sustainable Design in Visual Communication: As Mustaffa Halabi (2013) emphasized, photography is similar to language or written words and is considered a fundamental communication medium. Photography exists in various genres of different functions. The field of photography, especially digital photography, which dominates the world today, is a combination of art and technical skills that contributes significantly to other fields such as business, science, arts, sports, and medicine (Mustaffa Halabi, 2013). With reference materials like video and print media, it is possible to ensure the continuity of their ancestor's stories (storytellers) and maintain the originality of their visual arts (Abdul Razak, 2014).

Understanding Symbolism in Anyaman Kelerai of Indigenous People: In their book, *"Kearifan Tempatan: Dari lisan ke Aksara dan Media"* (2015), discussed the indigenous people's values via the theme anyaman kelerai, which holds explicit and implicit meanings related to their religion and daily lives for blessings. The research discovered that any man kelerai motifs such as Bunga Cina, Bunga Melor, Tampok Manggis, Tapak Harimau, and Tapak Anjing are inspired by nature(A. Hamid, 2015). These motifs manifest the indigenous community's thoughts, transforming signs from their surroundings into plaited designs (Isnin & Abd Aziz, 2022).

According to Jo Komar(2014), the materials used for plaiting also reflect the indigenous people's beliefs and rituals. Mengkuang Pandanus, for example, is believed to protect people from meddling with delicate species. Furthermore, there are specific periods, such as during a full moon, when it is appropriate to gather Sengkang leaves to prevent the leaves from becoming fragile and ensure their longevity (Komar, 2014).

3. Research Methodology

This research adopted an ethnographic approach to understand the Mah Meri community and their cultural expressions. This included long-term participant observation, visual documentation through photography and videography, and qualitative interviews with community members and cultural experts. Ethnographic research methods are well-established in anthropology for gaining deep insights into cultural practices and community dynamics (Atkinson, 2007). Visual ethnography, in particular, is practical for documenting and analyzing visual aspects of culture (Pink, 2022).

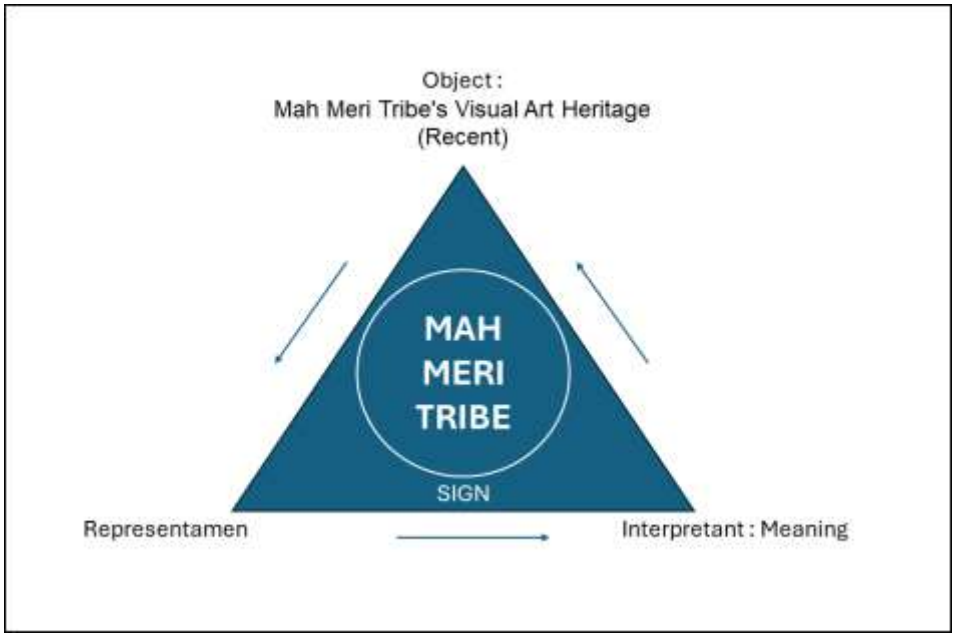
Ethnographic Approach: An ethnographic research approach is adopted to understand the Mah Meri community's cultural expressions comprehensively. This involves long-term, non-active field participant observation, allowing for an immersive exploration of the community's daily life and artistic practices.

Data Collection: Data will be collected through photographic and videographic methods, providing visual documentation of Mah Meri's art forms, rituals, and cultural practices. Qualitative data will be gathered from field visits to key sites, such as Pulau Carey, and interactions with the Department of Orang Asli Development (JAKOA). The Talanoa method, known for its in-depth and inclusive discussions, will be employed to gather rich, qualitative insights.

Quantitative Analysis: Quantitative data will also be collected to assess the impact of modernization on the Mah Meri tribe's art and cultural heritage. This dual approach ensures a comprehensive understanding of the subject matter.

Semiotic Framework: Charles Sander Pierce's Semiotic theory will be employed as a theoretical framework for this research. This semiotic approach allows for an in-depth analysis of the symbolism embedded in the Mah Meri tribe's artistic expressions. By decoding the meanings and significance of their art, we can gain valuable insights into their cultural identity and historical narratives.

Figure 1: In-depth analysis of the symbolism embedded in the Mah Meri tribe's artistic using Charles Sander



4. Results and Discussion

This research enhances the field of visual anthropology by highlighting the role of image representation in preserving and understanding cultural heritage. By applying Peirce's Semiotic Theory, the study offers new perspectives in semiotics, potentially inspiring further theoretical developments. The ethnographic approach provides valuable case studies for academic courses, enriching the discourse on cultural preservation. The findings can inform strategies to protect and sustain the Mah Meri tribe's traditional art forms. Insights from this research can guide the development of culturally sensitive tourism initiatives. The study can serve as a basis for designing programs that economically and socially empower the Mah Meri tribe. The analysis revealed that Mah Meri's art is rich in symbolic meanings, reflecting the tribe's cultural identity and historical narratives. The impact of modernization on traditional art forms was also documented, showing a shift towards contemporary themes while maintaining traditional elements.

The findings underscore the significance of visual representation in preserving cultural heritage. By applying semiotic theory, this study provides a deeper understanding of the Mah Meri tribe's artistic expressions and their role in maintaining cultural continuity. Previous studies have highlighted the importance of documenting visual heritage to sustain cultural identity, as digital media can play a crucial role in preserving the originality of indigenous arts (Abdul Razak et al., 2023). This research builds upon these insights, demonstrating how semiotic analysis can decode the symbolic meanings embedded in traditional crafts, thereby contributing to preserving and promoting the Mah Meri tribe's cultural heritage.

5. Conclusion

This research highlights the need for effective strategies to preserve the Mah Meri tribe's art and cultural heritage. Future studies should focus on the impact of cultural preservation initiatives and explore the use of digital media in documenting indigenous art forms. Previous research has demonstrated that digital media can play a vital role in preserving cultural heritage by maintaining the originality and continuity of visual arts. Such approaches can ensure that traditional art forms are documented and accessible for future generations, promoting cultural sustainability and continuity.

Preserving the Mah Meri tribe's art and cultural heritage requires comprehensive documentation and understanding of their symbolic expressions. By applying a semiotic analysis, this research provides valuable insights into the cultural identity of the Mah Meri tribe, contributing to visual anthropology and offering practical benefits for cultural preservation and sustainable tourism.

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The Impact of Eco-Friendly Perceptions on Festival Attendees' Decision-Making

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Abstract: People are becoming increasingly concerned with environment as the society becomes more environmentally conscious and this is on a global basis. Festivalgoers are now very much concerned about the environmental impact of the events they go to, a consumer behavior shift. As a result of that, festival organizers are taking this into account when developing their strategies for future festivals. This research examines the influence of eco-friendly perceptions on the decision-making process among festival visitors. The study used an extended version of the planned behavior model which takes into account attitudes, subjective norms, anticipated positive emotions, expected negative emotions, and perceived behavioral control concerning decision-making. This correlation study focuses on attitudes towards attending eco-friendly events in terms of behavioral intention, subjective norms, positive anticipated emotion, negative anticipated emotion, and perceived behavioral control. 197 data sets were collected through convenience sampling of event management students at UiTM Puncak Alam via different online platforms were used for the analysis. The SPSS was used for the analysis of results through reliability tests, correlations, and regressions. The result indicated that there was a significant relationship between all the variables involved in participating in eco-friendly events. Four independent variables show a significant beta coefficient for subjective norm, positive anticipated emotion, negative anticipated emotions, and perceived behavioral control. Meanwhile, another independent variable, attitude does not significantly influence behavioral intentions. The limitations, recommendations, and implications of the study were suggested for future research.

Keywords: *Decision-making, Extended model of goal-directed behavior, sustainability, eco-friendly, festival*

1. Introduction and Background

Presently, there has been a growing recognition and awareness of environmental concerns worldwide. The increasing awareness that individuals' actions have consequences on their environment has resulted in increased initiatives to decrease carbon footprints. Environmental awareness encompasses not just the daily purchases and consumption of individuals, but also expands to their participation in events. As a result, environmentally conscious individuals are more inclined to attend eco-friendly events as opposed to regular events, which can have a significantly higher detrimental impact on the environment (Kim & Lee, 2023). Kim and Lee (2023) found that persons who have a strong environmental consciousness tend to favor eco-friendly choices. The reason for this is their awareness of the impact their purchase decisions have on the environment, which compels them to adopt sustainable practices and eco-friendly alternatives. Furthermore, the decision to attend an event today is increasingly influenced by a widespread recognition of environmental issues (Song et al., 2012; Kim & Lee, 2023). Therefore, an increased awareness of the environmental effects of attending events necessitates that individuals take sustainability concerns into account when deciding whether or not to participate. Holmes and Mair (2018) suggest that festivals should operate in an environmentally responsible manner, and that festival attendees should be encouraged to live more sustainable lives.

Festivals are distinguished by various features, including on-site or off-site lodging, food vendors, diverse performances, and a large number of attendees (Alonso-Vazquez et al., 2019). Festivals have a significant environmental impact due to several variables, including energy use, waste production, and emissions from transportation. For example, the arrival and departure of numerous visitors to festival locations might result in the release of substantial amounts of carbon emissions. In addition, temporary food and beverage establishments often produce a significant amount of garbage, much of which is not biodegradable. This circumstance necessitates a collaborative endeavor to incorporate sustainable practices in every aspect of festival planning and execution.

Several studies indicate that festival management' delay response to environmental problems and their lack of understanding of the greening process are major barriers (Marumo, 2023; Harris & Schlenker, 2018; Laing & Frost, 2010). On the other hand, the crucial factor is the level of individuals' participation in these activities. Despite the efforts of the organizer to implement green initiatives among participants, these measures will be ineffective unless participants voluntarily engage with them. Marumo (2023) supports this by highlighting that attendees' attitudes and behaviors represent the third major challenge or barrier to festivals adopting green practices. Most festival managers are working to reduce negative environmental impacts (Wong, Wan, & Qi, 2015), and while festival attendees express a willingness to support green initiatives (Viviers, Botha, & Marumo, 2017), the challenge is that attendees attitude and awareness do not translate into actual behavior (Marumo, 2023).

Therefore, this study aims to understand the fundamental processes that influence festival attendees' decision-making with environmental sustainability. This study uses the extended model of goal-directed behavior as its conceptual framework to explore how green notions influence festival-goers' decision-making. The results obtained from this research will help in understanding the complex and multi-faceted decision-making process among festival attendees, with a focus on environmental sustainability, and give important insights into developing marketing strategies for both destination marketers and festival organizers aimed at creating eco-friendly festivals and achieving sustainable event industry.

2. Literature Review

Extended model of goal-directed behavior: The change in decision-making can be comprehended through an extended model of goal-directed behavior, which is based on the theory of planned behavior and the theory of reasoned action but includes other factors that also influence behaviors. The theory of reasoned action (TRA) in 1975 explains volitional or intentional behaviors. TRA proposes that behavioral intentions are predicted by two major factors: attitude toward behavior and subjective norms. In 1991, Ajzen extended this model to create the theory of planned behavior (TPB), which retains all elements of TRA but includes a new construct: perceived behavioral control. This refers to individual perception of how easy or difficult it is to conduct an action. Perugini and Bagozzi (2001) enhanced the Theory of Planned Behavior (TPB) by introducing positive and negative anticipated emotions, desires, and past behavior, leading to the Model of Goal-Directed Behavior (MGB). The goal-directed behavior theory posits that an individual's behavioral intention, which is the primary and immediate determinant of actual action, is formed through several processes. These processes include motivation (desire towards the behavior), volition (attitude towards the behavior and subjective norm), non-volition (perceived behavioral control), emotion, and habit (Han 2021). The wider model takes into account not only one's attitude and subjective norms when attending events, but also anticipated emotions and perceived behavioral control. When individuals take into consideration their choice's impact on the environment, they are motivated to behave in a way that matches with their environmental values; thus, making them more likely to attend occasions that show their dedication towards sustainability. Through the concepts of the extensive model, event planners can even reach closer to their audiences by describing to them what it means for an eventgoer to invest in attending green events and supporting environmental protection. Therefore, as there has been an increase in sustainable events, understanding and applying principles from the extended model of goal-directed behavior will lead to the creation of memorable event experiences.

Attitude: According to the theory of planned behavior, an individual's attitude refers to their overall evaluation of a given behavior, which can be positive or negative (Ajzen, 1991). This attitude is based on the individual's beliefs about the likely consequences of engaging in that behavior. When individuals believe that performing a particular behavior, such as pro-environmental actions, will lead to positive outcomes that align with their values and convictions, they are more likely to develop a favorable attitude toward that behavior (van Valkengoed, Abrahamse, and Steg, 2022). The positive attitude leads to increased individual intention to engage in the behavior as they view it as environmentally beneficial and fitting their principles and values (Manosuthi et al., 2020; Munerah et al., 2021). In other words, a person is more likely to exhibit pro-environmental behaviors if they have positive attitudes towards them resulting from a cost-benefit analysis made and the personal feeling of right and wrong. Thus, the following hypothesis is proposed:
H1: There is a positive effect between attitude and behavioral intention to participate in eco-friendly festivals.

Subjective Norms and Green Practices: Subjective norms refer to an individual's impression of societal constraints that influence their decision to either engage in or abstain from specified actions (Ajzen, 1991). Subjective norm, in essence, is a crucial factor influenced by normative ideas on influential individuals and the desire to conform to their expectations (Meng et al., 2020; Moon, 2021). The level of compliance motivation with subjective norms is dependent on how individuals perceive the importance of expectations from key individuals. These referents include individuals such as family members, relatives, instructors, supervisors at the workplace, or peers who have influenced an individual's behavior and viewpoint on life (Meng et al., 2020). In the context of green practices, these referents have the power to influence individuals to participate in sustainable practices. The endorsement and encouragement of environmentally friendly practices by these referents can strongly influence an individual's subjective norms and, in turn, their intention to engage in green practices. Therefore, the following hypothesis is proposed:
H2: There is an effect between subjective norms and behavioral intention to participate in eco-friendly festivals.

Anticipated Emotion: Anticipated emotions are the emotional responses that are expected to occur after a particular behavior. These responses can be either positive or negative (Maduku, 2024). When someone experiences a high degree of the anticipated psychological benefits of engaging in a certain behavior, they are said to be experiencing positive emotions. On the contrary, individuals experience negative emotions when they anticipate significant psychological harm resulting from not engaging in the behavior. These two heightened emotional expectations have an impact on people's ability to make decisions (Bagozzi et al., 1998). Anticipated emotions serve as the hedonic motive in the decision-making process, facilitating positive results and preventing negative consequences (Song et.al., 2012). For instance, customers who expect to feel good after reaching their sustainable consumption goals are more likely to create positive intentions toward sustainable consumption. Likewise, if individuals expect to experience unpleasant emotions due to their failure to achieve their standards of sustainable consumption, they are more likely to have positive intentions to participate in sustainable consumption to avoid these negative emotions (Maduku, 2024). The role of anticipated emotions is crucial in motivating consumers to engage in sustainable consumption. This is because the emotional consequences of sustainable consumer choices can effectively influence the decision-making process. Research conducted by Haj-Salem et al. (2022), Lu et al. (2020), and Odou and Schill (2020) strongly support the significant role of emotions in shaping consumers' sustainable behavior. As such, this study posits the following hypotheses:
H3: There is a positive effect between positive anticipated emotion and behavioral intention to participate in eco-friendly festivals.
H4: There is a positive effect between negative anticipated emotion and behavioral intention to participate in eco-friendly festivals.

Perceived Behavioral Control: Perceived behavioral control refers to an individual's evaluation of how easy or difficult it is to engage in a particular action. Additionally, it was shown that perceived behavioral control has a direct impact on behavior, as it is closely related to actual behavioral control (Ajzen & Madden, 1986). Perceived behavioral control acknowledges that even if someone has a positive attitude toward behavior and believes that others support it, they might still refrain from the behavior if they perceive significant barriers. Under the context of green practices, prior studies reveal a positive correlation between perceived behavioral control and the intention of environmentally friendly actions, such as recycling, conserving, eating organic food, and buying green products (Paul et al., 2016). Research by Fadilla et. al., (2022) found that perceived behavioral control showed a positive and significant result of green intention. This study demonstrates that perceived behavioral control has a positive and considerable impact on consumers' inclination to purchase or use environmentally friendly products. Hence, this study proposed the following hypothesis in the context of eco-friendly festivals:
H5: There is a positive effect between perceived behavioral control and behavioral intention to participate in eco-friendly festivals.

3. Research Methodology

The variables in this study were measured using a descriptive study technique. The study population comprises students enrolled in the Event Management Program at UiTM Puncak Alam. The samples were acquired using

convenience sampling techniques. The questionnaires were distributed to participants using several online platforms, resulting in a total of 197 completed questionnaires. The instruments utilized in this study were derived from Song et. al (2012) and were measured using a five-point Likert scale, with responses ranging from 1 (strongly disagree) to 5 (strongly agree). The Statistical Package for Social Sciences (Version 28) was employed to conduct descriptive, reliability, correlational, and multiple regression analyses. Multiple regression analysis was used to assess hypothesis testing and the strength of the relationship between variables. In addition, Pearson's correlation analysis was employed to identify the nature and degree of the associations between the variables.

4. Findings and Discussion

Table 1: Demographic profile of respondents

VARIABLE	FREQUENCY	PERCENTAGE
GENDER		
Males	34	17.3%
Females	163	82.7%
Total	**197**	**100%**
AGE		
19-21	63	32.0%
22-24	121	61.4%
>25	13	6.6%
Total	**197**	**100%**
RACE		
Malay	190	96.4%
Chinese	1	0.5%
Other	6	3%
Total	**197**	**100%**

Profile of Respondents: Table 1 shows the demographic profile of the 197 respondents who participated in the study. The data demonstrates a huge gender gap, with females comprising a much larger proportion (82.7%) than males (17.3%). The majority of respondents fall within the 22-24 age range (61.4%), followed by the 19-21 age group (32.0%). The racial composition of the respondents is predominantly Malay (96.4%), with smaller proportions of Chinese (0.5%) and individuals from other racial backgrounds (3%).

Table 2: Descriptive Statistics

Variables	Cronbach's Alpha	Mean	Std. Dev.
Attitude	0.965	3.7728	0.74667
Subjective Norm	0.973	3.7449	0.78000
Positive Anticipated Emotion	0.980	3.6853	0.75925
Negative Anticipated Emotion	0.986	3.5774	0.85269
Perceived Behavioral Control	0.974	3.6650	0.76311
Behavioral Intention	0.973	3.7234	0.77401

Descriptive Statistics: Table 2 presents the descriptive statistics for the study variables. Cronbach's alpha result shows that all variables score between the range of 0.986 and 0.965. Cronbach's alpha coefficients are higher than the generally accepted standard of 0.70 implying that all the variables examined in this study had excellent internal consistency. These results show that the tools used to measure attitudes, subjective norms, anticipated positive and negative emotions, perceived behavioral control, and behavioral intentions are accurate and give consistent results, which supports the study's findings. Next, the mean analysis shows that attitude has the highest mean score (3.7728), meanwhile perceived behavioral control has the lowest score (3.6650). The mean results indicate a generally positive disposition toward the attitude, with moderate levels of subjective norm, positive anticipated emotion, negative anticipated emotion, perceived behavioral control, and behavioral intention.

Table 3: Correlations

	Attitude	Subjective Norm	Positive Anticipated Emotion	Negative Anticipated Emotion	Perceived Behavioral Control	Behavioral Intention
Attitude	1					
Subjective Norm	0.819**	1				
Positive Anticipated Emotion	0.809**	0.850**	1			
Negative Anticipated Emotion	0.669**	0.792**	0.816**	1		
Perceived Behavioral Control	0.796**	0.848**	0.875	0.856**	1	
Behavioral Intention	0.793**	0.867**	0.887**	0.830**	0.896**	1

***. Correlation is significant at the 0.01 level (2-tailed).*

Table 3 shows the relationship between five independent variables (attitude, subjective norm, positive anticipated emotion, negative anticipated emotion, perceived behavioral control) and behavioral intention. The results reveal that all variables are significantly positively correlated with each other. Behavioral intention has the strongest correlation with perceived behavioral control (r = 0.896), followed closely by positive anticipated emotion (r = 0.887). Subjective norms exhibit a substantial positive correlation with behavioral intention (r = 0.867), indicating that people's intentions to participate in behavior are strongly influenced by their felt social pressure and control over the conduct. The correlations show that improvements in attitude, subjective norm, positive and negative anticipated emotions, and perceived behavioral control all lead to an increase in behavioral intention. The relationship between attitude and negative anticipated emotion has the lowest correlation (r = 0.669), despite it still being quite significant.

Table 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.931a	0.866	0.863	0.28669

The study employed multiple regression analysis to determine which independent variables best predicted behavioral intention to attend eco-friendly events. Table 4 presents the summary of regression models between independent variables and the behavior intention. The R^2 value is 0.866 which indicates that 86.6% of the variance in dependent variables can be explained by the independent variables. This means that 13.40 % of the variance of independent variables is not included in the study.

Table 5: Regression Coefficients Analysis

	Unstandardized Coefficients		Standardized Coefficients			
	B	Std. Error	Beta	t	Sig.	Result
(Constant)	0.072	0.110		0.656	0.512	
Attitude	0.052	0.054	0.050	0.966	0.335	H1not supported
Subjective Norm	0.218	0.060	0.220	3.661	<0.001	H2 supported
Positive Anticipated Emotion	0.291	0.065	0.285	4.454	<0.001	H3 supported
Negative Anticipated Emotion	0.103	0.050	0.114	2.071	0.040	H4 supported
Perceived Behavioral Control	0.327	0.070	0.322	4.696	<0.001	H5 supported

Based on Table 5, the result shows significance values for subjective norm, positive anticipated emotion, and perceived behavioral control are all less than 0.001 which means that these factors are highly significant

predictors of the dependent variable. This implies that these variables have a strong and statistically significant impact on the outcome being studied. Negative anticipated emotion has a significance value of 0.040 which is less significant as compared to subjective norm; positive anticipated emotion; and perceived behavioral control but still, it carries statistical significance on the outcome. On the contrary, attitude with a significance value of 0.335 does not significantly impact the dependent variable in this regression model. As a result, attitude may not be necessary in forecasting the outcome and cannot be considered a statistically significant predictor under these conditions.

The standardized coefficients (Beta) also show how strongly each predictor affects the dependent variable. The strongest effect is perceived behavioral control (β = 0.322) indicating that people's perception of their ability to perform certain behaviors has more consequences than others as a result of it. Next, followed by positive anticipated emotion (β = 0.285), indicating that the expectation of positive experiences is a major motivator. Subjective norm (β = 0.220) also indicates considerable effect showing how much social pressures or norms affect behavior significantly. This finding is consistent with other research that indicates perceived behavioral control and subjective norms are important variables that influence festival attendees to participate in green practices (Fadilla et.al. 2022) However, although negative anticipated emotion (β = 0.114) has a statistically significant effect it is lower than other predictors. Therefore, this study determines that Hypotheses H2, H3, H4, and H5 have been supported, indicating that subjective norm, positive anticipated emotion, negative anticipated emotion, and perceived behavioral control are significant predictors of the dependent variable. However, this model does not support Hypothesis H1, which suggests that attitude is a significant predictor. This finding contradicts a study by Paul et.al. (2016) that indicates attitude was the strongest predictor of intention to purchase green products.

5. Conclusion and Recommendations

The study highlights the relationships between attitude, subjective norm, positive anticipated emotion, negative anticipated emotion, and perceived behavioral control and how these relationships affect people's behavioral intentions to attend environmentally friendly events. The findings of this study demonstrate that all five of the independent variables are significantly correlated. However, only four of the variables which are the subjective norm, positive anticipated emotion, negative anticipated emotion, and perceived behavioral control are significant predictors of the behavioral intention to participate in the green practices in festivals. The most effective predictor of behavioral intention among these variables is perceived behavioral control. This emphasizes the importance of individuals' perceived ease or difficulty in carrying out the activity, implying that when people feel more capable of attending environmentally friendly activities, their intention to do so increases dramatically. These insights are valuable for event organizers and policymakers aiming to enhance participation in eco-friendly events, as they highlight the importance of fostering a supportive social environment, enhancing positive emotional expectations, and reinforcing individuals' confidence in their ability to attend such events. This study focused exclusively on the participants specifically UiTM students' viewpoint and did not include all participants at eco-friendly festivals. Future research should include a more diverse group of individuals, including festival managers and exhibitors. The information can offer a comprehensive view that organizers can utilize to develop efficient marketing and operational plans. Furthermore, implementing a longitudinal study design would enable a comprehensive analysis of eventgoers' motivations over time, allowing for the identification of the most relevant factors that determine their decision to attend an eco-friendly event.

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Regression Analysis of Dimensions Event Volunteer Motivation Towards Intention to Volunteer

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Abstract: Volunteerism at events, from small to large-scale festivals such as sporting competitions, is critical to their success. Understanding event volunteers' motivations is crucial for organizers in terms of recruiting, retaining, and managing volunteer resources efficiently. This study aims to examine the relationship between dimensions of event volunteer motivation which include leisure motivation, purposive motivation, egoistic motivation and external influence on the intention to volunteer. Previous studies have found that these multi-dimensional motivational factors are essential for fostering an individual's decision-making process towards volunteering at an event. Positive effects on volunteer motivation will be analyzed using regression analysis in this research. In general, the results derived from the study will assist event organizers in understanding how their volunteers make decisions about taking part in the festivals they organize as well as designing ways of recruiting, managing and holding onto them for attaining ultimate success during such occasions.

Keywords: *Volunteerism, Event Volunteer, Volunteer Motivation, Intention to Volunteer*

1. Introduction and Background

Volunteering is a profound and selfless kind of community involvement and civic responsibility in which people give their time, skills, and efforts to help various causes, organizations, or initiatives without expecting monetary return. Volunteerism has a tremendous impact on our communities and fosters a shared sense of accountability, whether through disaster relief, long-term efforts, or achieving societal change. Volunteering activities have developed as a significant and growing trend not only in Malaysia but also worldwide. The increasing numbers of demand for event volunteers, especially at major events shows how volunteer activity has become significant and plays a vital role in the business (Ahmad et al., 2020). Volunteering is often seen as a meaningful way to get engaged in society and cause positive changes. Event organizers depend on volunteers to make sure that events are running smoothly and successfully regardless of whether the scale is small or large events (Senevirathna et al., 2023).

The reasons for volunteering at events are crucial and differ depending on the size and nature of the event (Ahn, 2018). Understanding what motivates volunteers is important for organizations and volunteer coordinators because it enables them to attract, retain, and manage volunteers effectively. There is no organization without volunteers; hence they are very significant (Ahmad et al., 2020). Tapping into such incentives while offering a supportive environment that offers rewards will result in long-term volunteerism by organizations that can help achieve their goals better.

2. Literature Review

Volunteer Management: According to Rashid et al. (2023), volunteerism is often defined as giving without expecting anything in return; people donate their time and abilities without getting any money back, unlike social workers who get paid for what they do. According to Bakri et al. (2021), Malaysia's community development and social welfare depend on volunteerism. Hidzir et al., (2021) also reveal that volunteers contribute to a variety of social and community initiatives using their skills, time, enthusiasm, moral responsibility and local expertise. Rashid et al.(2023) note that event volunteers play a crucial role in the organization and implementation of various events such as cultural festivals, sports tournaments, charity fundraisers and community outreach programs in Malaysia.

Volunteer Motivation: There is a remarkable effect of volunteer motivation on future volunteering intentions,

which plays a significant role in determining the likelihood of an individual's voluntary participation in the future (Senevirathna et al., 2023). It has been found by Jung and Ha (2021) that those volunteers who are motivated by purpose and fulfillment have stronger intentions to continue helping others. Additionally, studies demonstrate that individuals whose motivation is driven by the need to make an impact or contribute toward a cause are more likely to persist in their volunteering efforts (Cho et al., 2020). For organizations looking for long-term commitment and retention, they must know why and how volunteer motivation can be fostered as a strategic necessity (Gudzinskiene & Kurapkaitiene, 2022). Moreover, skill and opportunity also might affect people's future volunteering intentions. There are various issues related to whether a person would choose to become a volunteer or not, apart from having all the skills required for this decision (Marta et al., 2010), time availability among other factors such as access to volunteer opportunities, organizational support are major reasons why people tend to be volunteers (Koutrou, 2018). Previous research findings identify several motivational factors such as leisure motivation; purposive motivation; egoistic motivation; and external influences (MacLean & Hamm, 2007, Treuren, 2013, Ashfaq et al., 2020, Schlesinger & Gubler, 2016). Understanding and tackling these issues can help volunteers build long-term commitment and organizational sustainability.

Leisure motivation and intention to volunteer: Volunteering allows people to break away from monotony, discover new paths, and spend their leisure time with interesting activities. Strigas (2001), refers to leisure motivation as activities for relaxation and recreational needs meanwhile, volunteerism is related to a love of sports, enjoyment, and deep interests (Bang and Chelladurai, 2003). Leisure motivation is a unique aspect of volunteerism that enhances people's sense of enjoyment and well-being. Others also stated that leisure motivation arises from a desire to engage in enjoyable and meaningful activities linked to one's interests, passions, and hobbies. Volunteers may be drawn to activities that allow for socialization, skill development, or recreational enjoyment (Strigas & Jackson, 2003), whereas volunteerism is related to a love of sports, enjoyment, and profound interests (Bang & Chelladurai, 2003). One reason why people choose to volunteer at sporting events is because they gain satisfaction from spending their time on such activities. Ali & Hamid (2020), found that voluntary motivation was a significant predictor of intention whereas Schlesinger & Gubler (2016) reported that leisure motivation was significantly associated with volunteering intention among young adults. Volunteering enables people to break away from monotony, discover different paths and engage in interesting activities during leisure time. Through volunteering activities, people can gain new experiences that they would not have gotten otherwise; for example working at a music festival might let you see your favorite band perform live whilst working at a sports event will let you view the athletes' performance on the field (Teixeira et al., 2023). Therefore, the hypothesis has been developed as follows:
H1: There is a positive effect of leisure motivation toward the intention to volunteer.

Egoistic Motivation and Intention to Volunteer: Volunteering for personal gain rather than altruistic reasons may be referred to as egoistic motivation. Some of these volunteers get involved because of self-interest and would like some sort of reward such as a new hobby, building their networking, or improving their resume (Haski-Leventhal, 2009). In addition, it has been shown that the need for personal benefits and rewards can be linked to volunteering (Schlesinger & Gubler, 2016, Ashfaq et al., 2020). People in this category would contribute to volunteering opportunities because they want to feel good about themselves or have a sense of purpose. Such individuals might decide to volunteer due to various reasons such as; increasing their social status boosting their professional development through learning new skills and networking (MacLean & Hamm, 2007, Schlesinger & Gubler, 2016). Personal rewards and possibilities for self-improvement are common consequences of having an egoistic drive toward volunteerism (Antoni, 2009). Meanwhile, using volunteer opportunities to develop one's abilities and resume might be a good reason for participating in volunteer activities (Marchesano & Musella, 2020). Overall, egoistic drive can be a real and crucial aspect of volunteers because it offers personal rewards and prospects for advancement. Therefore, the hypothesis has developed as follows:
H2: There is a positive effect of egoistic motivation toward the intention to volunteer.

Purposive Motivation: Purposive motivation, or the desire to contribute to a meaningful cause or make a positive impact, is another important factor in volunteering intention (Ashfaq et al., 2020, Gazley, 2012). Volunteerism relies extensively on purposeful motivation which motivates people to participate in unpaid assistance activities with clear objectives and desires. These incentives are different across people but they

usually revolve around wanting to make a positive impact in society; supporting causes one is passionate about; gaining personal satisfaction and fulfillment; learning new skills and experiences; developing significant links with others; and advancing their personal growth and development (Marchesano & Musella, 2020). Purposive motivation drives volunteer participation keeping organizations effective in their operations. Thus, by recognizing this fact, organizations can develop fulfilling experiences for volunteers such that both collective fulfillment and individual satisfaction are attained. Further inquiry into goal orientation in volunteering will be useful in improving strategies for the recruitment, retention, and satisfaction of volunteers (Zhigang et al., 2022). Understanding purposive motivation in volunteering allows organizations and communities to successfully recruit and retain volunteers, create meaningful volunteer opportunities that align with their interests and goals, and ultimately maximize the impact of volunteer efforts (Stukas et al., 2016). Therefore, the hypothesis has developed as follows:
H3: There is a positive effect of purposive motivation toward the intention to volunteer.

External Influence: External influence has a significant impact on the level of volunteers in the community. External influence, including social pressure, organizational support, and cultural norms can also influence an individual's intention to volunteer (Ashfaq et al., 2020; Schlesinger & Gubler, 2016). Additionally, Bańbuła, (2021) stated this decision may be affected by society standards, cultural values, and peer pressure. These external factors either encourage or discourage people from volunteering depending on how volunteerism is seen and appreciated in their particular environment. According to Rais et al., (2021), studies have shown that individuals often come across volunteering opportunities through friends' networks, family members, coworkers or other volunteers. Furthermore, exposure to volunteering through educational institutions, such as college or university courses, can also encourage people to get involved (Rais et al., 2021). External influences such as the availability of volunteer opportunities, access to resources and support, and an individual's overall view of the organization or cause being supported can all have a significant impact on their decision to volunteer (Sahri et al., 2013). Therefore, the hypothesis has developed as follows:
H4: There is a positive effect of external influence on the intention to volunteer.

Intention to Volunteer: The dependent variable of the study is the intention to volunteer. To make it possible for them to fulfill the purpose of volunteering, a volunteer engaged in different types of events for various reasons or objectives. The major reasons for being a volunteer at an event were mentioned in previous studies; personal challenge, team membership, appreciation and respect, learning different languages and cultures, meeting new people and making friends with them, as well as participating in sports (Rozmiarek et al., 2023). This statement was also supported by Ahn (2018) where people with strong attachments to sports events might be inspired to volunteer and participate in voluntary activities. In addition, the intentions and expectations of sports event volunteers are used by sports organizations to design challenging and interesting volunteering systems that offer valuable experiences while enhancing volunteers' skills and knowledge in exchange for their complete dedication and commitment (Teixeira et al., 2023). Retaining present volunteers as well as recruiting new ones is important to an organization. There is a need to retain present volunteers alongside attracting others who are seen to be beneficial for the company too(Clary et al., 1998).

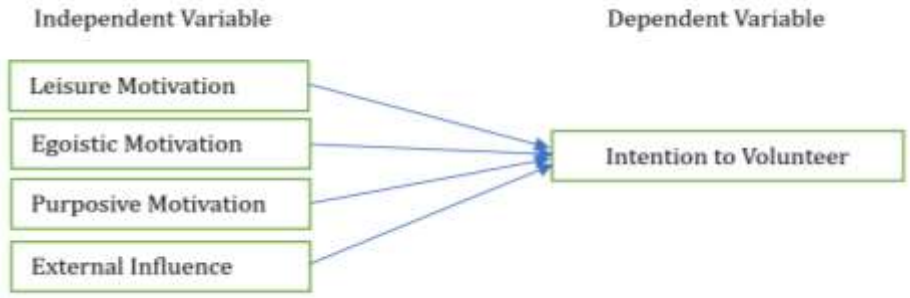
3. Research Methodology

The study's approach is correlational research, with the analysis generated based on an investigation of the volunteer motivation scale modified from Ahn, Y. (2018). The data was gathered from students at a higher education school who have previously volunteered for an event. This study, which includes 151 respondents, was conducted using convenience sampling. The survey was done using a questionnaire distributed online via a Google form. The questionnaire was derived from Ahn, Y. (2018) and guided by a literature review for the current study. The questionnaire was divided into four (4) sections, three (3) of which contained the independent variables and one (1) section with the dependent variables. The final questionnaire includes items about volunteer motivation, such as leisure motivation, egoistic motivation, purposeful motivation, and external influence. The participants' demographic information was measured using an ordinal and nominal scale, while the constructs were measured using a Likert scale. The study's data were analyzed using linear regression statistical tests in SPSS.

Conceptual Framework

To conduct this study, the event volunteer motivational scale served as the independent variable (IV) which consists of Leisure Motivation, Egoistic Motivation, Purposive Motivation and External Influence. Meanwhile Intention to Volunteer is labeled as the dependent variable (DV).

Figure 1: Proposed Conceptual Framework



Based on the framework above, the hypothesis is tested as the following:

H1: There is a positive effect of leisure motivation toward the intention to volunteer.
H2: There is a positive effect of egoistic motivation toward the intention to volunteer.
H3: There is a positive effect of purposive motivation toward the intention to volunteer.
H4: There is a positive effect of external influence on the intention to volunteer.

4. Findings and Discussion

Table 1 shows the analysis data regarding the demographic background of the participants. A total of 151 participants completed the surveys. The data indicates that the majority of the respondents are female, accounting for 51 percent, while the male respondents amount to 74 individuals or 49 percent. The survey revealed that 43% of the respondents fall between the age range of 18-22 years old, while 29.1% are aged between 23-27 years old. Additionally, 27.9% of the respondents are 28 years old or older. The survey had the most significant level of engagement from students, accounting for 72 responses, which is 47.7 percent of the total. Employed individuals had the second greatest participation rate, with 45.7 percent, while the contribution from jobless individuals was only 6.6 percent.

Table 1: Demographic Profile of the Respondents

	Factors	N	%
Gender	Female	77	51
	Male	74	49
Age Group	18-22		
	23-27	65	43
	28-32	44	29.1
	33-37	16	10.6
	38-41	4	2.6
	42 and above	3	2.0
Occupation		19	12.7
	Employed		
	Unemployed	69	45.7
	Student	10	6.6
		72	47.7

Descriptive Statistics: The descriptive statistic for the study's variable is shown in the table above. The 5-point scale, with 1 representing a strong disagreement and 5 representing a strong agreement, is used to evaluate each variable. The outcome reveals that egoistic motivation had the highest mean, 4.26 with a

standard deviation of 0.645. Leisure motivation comes in second with a mean of 4.26 and a standard deviation of 0.692, while purposive motivation comes third with a mean of 4.22 and 0.645 standard deviation. Intention to volunteer as a dependent variable for this study shows a mean of 4.14 and a standard deviation of 0.675. Meanwhile, external influence had the lowest mean, 3.87 with a 0.877 standard deviation.

Table 2: Descriptive Statistic

Construct	N	Mean	Std. Deviation
Leisure Motivation	151	4.26	0.692
Egoistic Motivation	151	4.29	0.645
Purposive Motivation	151	4.22	0.645
External Influence	151	3.87	0.877
Intention to Volunteer	151	4.14	0.675

Reliability Statistics: When determining measurement accuracy, reliability is linked to the measuring tool's consistency and stability. Cronbach's alpha was used in dependability statistics to measure how well the items are positively related to one another and whether they are internally consistent. Table 2.0 shows the reliability statistics for the variable.

Table 3: Reliability Statistic

Construct	Mean	No of Items	Cronbach Alpha
Leisure Motivation	4.26	2	0.784
Egoistic Motivation	4.29	3	0.815
Purposive Motivation	4.22	4	0.833
External Influence	3.87	3	0.725
Intention to Volunteer	4.14	3	0.852

Based on reliability analysis, all the instruments are valid as Cronbach's alpha is .934. Table 3 shows the details of each dimension used in this study. Cronbach's alpha coefficient was performed to measure the internal consistency of survey items. As shown in Table 3, the Cronbach's Alpha is between 0.725 and 0.852 items. According to Salkind (2014), a Cronbach's alpha that is greater than .6 is questionable, .7 is acceptable, .8 is good, and .9 is excellent. Therefore, all constructs are accepted as being reliable for this research.

Correlation: Correlation is the analysis of the connection between variables. This study examines the relationship between leisure motivation, egoistic motivation, purposive motivation, external influence, and the intention to volunteer. The correlation will reflect the direction and significance between all variables. It will determine whether the variables have a positive or negative correlation.

Table 4: Correlations

		Leisure Motivation	Egoistic Motivation	Purposive Motivation	External Influence	Intention to Volunteer
Leisure Motivation	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	151				
Egoistic Motivation	Pearson Correlation	.659**	1			
	Sig. (2-tailed)	<.001				
	N	151	151			
Purposive Motivation	Pearson Correlation	.610**	.713**	1		
	Sig. (2-tailed)	<.001	<.001			
	N	151	151	151		
External	Pearson Correlation	.342**	.331**	.593**	1	

Influence	Sig. (2-tailed)	<.001	<.001	<.001		
	N	151	151	151	151	
Intention to Volunteer	Pearson Correlation	.529**	.564**	.725**	.551**	1
	Sig. (2-tailed)	<.001	<.001	<.001	<.001	
	N	151	151	151	151	151

***. Correlation is significant at the 0.01 level (2-tailed).*

The table above demonstrates a correlation analysis between leisure motivation, egoistic motivation, purposive motivation, and external influence toward the intention to volunteer. The interpretation of the correlation result for this study is based on Hair et. al. (2006). The result shows purposive motivation is a high correlate and positive relationship (r=0.725, p<0.001) with intention to volunteer. Meanwhile, external influence (r=0.551, p<0.001), egoistic motivation (r=0.564, p<0.001) and leisure motivation (r=50.529, p<0.001) show a moderate and positive relationship. Therefore, the researchers accept all the hypotheses, affirming that all four types of motivations positively affect the intention to volunteer.

Regression Analysis: In this study, regression analysis was used to examine one or more independent variables that were thought to have an impact on the dependent variable. To test the hypothesis of the study, regression analysis was conducted. This section will specifically address the coefficient of determination (R2), which quantifies the proportion of variability in the dependent variable that can be accounted for by the variability in the independent variable. In addition, it pertains to the beta coefficient (β), which estimates the outcome of a multiple regression analysis conducted on standardized variables. The table below shows the findings of the conducted regression analysis.

Table 5: Regression between Leisure Motivation, Egoistic Motivation, Purposive Motivation, and External Influence towards Intention to Volunteer

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.751[a]	.564	.552	.452	1.867

Based on the R square value, only 56.4 percent of the dependent variable can be accurately predicted by the independent variable. This means that there are still 43.6 percent of independent factors that were not considered in this study, however, still can influence the result.

Table 6: Regression Coefficients

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Result
	B	Std. Error	Beta			
(Constant)	0.589	0.276		2.135	0.034	
Leisure Motivation	0.113	0.074	0.116	1.539	0.126	H1 not supported
Egoistic Motivation	0.085	0.090	0.081	0.941	0.348	H2 not supported
Purposive Motivation	0.498	0.099	0.476	5.033	<0.001	H3 supported
External Influence	0.155	0.053	0.202	2.934	0.004	H4 supported

Based on the table above, leisure motivation (β = 0.116; p = 0.126), and egoistic motivation (β = 0.081; p = 0.348) were found to have no effect on the intention to volunteer. Therefore, H1 and H2 were rejected. In contrast, purposive motivation (β = 0.476; p = <0.001) and external influence (β = 0.202; p = 0.004) show a positive effect on the intention to volunteer. Therefore, H3 and H4 were accepted.

Purposive motivation and the intention to volunteer to show a positive effect between the variables. Individuals who are motivated by a feeling of responsibility are most likely to have a higher intention to volunteer. This is

indicative of the fact that purposeful motivation is the most powerful predictor of the intention to volunteer. Previous researchers stated that volunteer who are driven by purposive motivation usually view their volunteer work as an opportunity to contribute back to society and are willing to commit to the cause that they are supporting (Ye et al. 2022). Not only purposive motivation, but external influences also have a significant impact, which suggests that the expectations of society and the influence of peers play a significant role in determining whether the individual tends to volunteer or not. This result is in line with the study that was carried out by Sahri et al. (2013) where the external influence in event volunteerism becomes a factor that encourages people to volunteer for particular events. In addition, peer pressure, societal norms, and group dynamics are all factors that can influence an individual's willingness to volunteer.

5. Conclusion and Recommendations

The study provides valuable insights into the complex interplay of motivational factors that shape an individual's intention to volunteer. Acknowledging that people volunteer for different reasons, both intrinsic and extrinsic, is vital for organizations and policymakers who want to establish effective strategies to develop an abundant and lasting volunteer service (Gazley, 2012, MacLean & Hamm, 2007). Based on the findings, it is recommended that volunteer recruitment and retention efforts should focus on appealing to a range of motivational factors. This may involve designing volunteer opportunities that offer a sense of leisure and personal fulfillment, as well as opportunities for egoistic growth and purposive contribution (Treuren, 2013). However, it is important not to rely solely on egoistic motivations when it comes to volunteering, elements of altruism and a genuine wish to help others are needed to balance these motives. Organizations also should consider the role of external influences, such as social networks and community support, in fostering volunteer intention and sustained engagement (Stukas et al., 2016). By recognizing this complex association between motivation for volunteering efforts, organizations can better fit their recruitment and management processes with varying interests and dreams of probable and actual volunteers to build this more interactive group who is interested in the task of becoming more dedicated, especially in terms of what motivates them.

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A Study on Volunteer Motivation and Satisfaction in Malaysia's Sports Events

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Abstract: Despite the critical role of volunteers in the success of sports events, there is limited research in Malaysia on how volunteer motivations and experiences impact their satisfaction. This research examines volunteers' vital role in ensuring successful sports events, emphasizing volunteer motivation, experience and satisfaction among undergraduates and postgraduate students at a local Malaysian university. The study utilizes quantitative analysis where significant correlations between these variables were discovered revealing that volunteer motivation and positive event experiences are important to enhancing volunteer satisfaction. Data from eighty students (80) showed that event-related factors such as the opportunity to be part of a prestige event and witness behind-the-scenes activities are significant motivators and key drivers of voluntary participation. The findings indicate a significant beta coefficient supporting event-related motivation and volunteer experience towards volunteer satisfaction while purposive volunteer motivation did not gain significance. Overall, the research underscores the necessity for event planners to prioritize volunteer satisfaction by understanding and addressing their motivations and experiences, ultimately contributing to more meaningful and successful events.

Keywords: *Event Volunteer, Sport Event, Event Experience, Volunteer Satisfaction*

1. Introduction and Background

Volunteers play a critical role in sports events' success and contribute significantly towards community development as well as the operations of community-based organizations. Volunteers' role is important in organizing and running sports events thus contributing to cost savings and efficiency (Kim, 2017). Sports events such as Kuala Lumpur SEA Games and local marathons in Malaysia largely rely on volunteer participation implying that it is important to know what drives volunteers and how their experiences affect volunteer satisfaction. Recent studies highlighted motives behind individual's decision to participate as volunteers at sports events. Some of the motivations include altruistic desires, career prospects, socializing or personal satisfaction (Atanasova & Draganov, 2022). For instance, at the 2019 Osprey Valley Open it was found that commitment together with motivation directly affects satisfaction among other things like community feeling which indirectly influences volunteer experience (Bang, Smith, Park, & Lee, 2022). The importance of understanding this drive lies in the fact that it can facilitate Malaysian event organizers to devise better volunteer programs that can promote and increase volunteer satisfaction. Despite the pivotal role played by volunteers in sports events, little is known about volunteer motivations and experiences in Malaysia which may influence their satisfaction (Latif, Nawi, Zid, Bakar, & Rajli, 2022). This gap must be filled to plan for strategies aimed at improving volunteer satisfaction and retention leading to more successful and well-organized sports events.

This research area could also provide valuable insights into an investigation into how effective ways to manage volunteers and successful events (Kim, 2017; Atanasova & Draganov, 2022). In Malaysia, various factors influence volunteers' experiences including support provided to them during their volunteering job; and roles given alongside overall event administration. Good communication skills should be exercised while providing necessary training together with acknowledging achievements which will all serve as motivations towards future participation among volunteers (Atanasova & Draganov, 2022). Event managers therefore need to look at these issues keenly so that they can adequately manage volunteers during different functions held thereby ensuring that every person who comes out as a volunteer feels appreciated and satisfied. This study aims to investigate how volunteer motivation and experience relate to satisfaction from volunteering. Despite previous findings indicating a positive relationship between volunteerism, success of events and community development; this investigation seeks to further understand factors that specifically influence satisfaction

levels among individuals involved in sports industry management through volunteering.

2. Literature Review

Malaysia's sports industry is of great significance to the economy of this country, it is forecast to generate substantial revenues. Malaysian interest in sports has been growing which has led to an increase in demand for sports events as various entities, corporations and individuals use them for diverse reasons such as marketing purposes and social responsibility. Nevertheless, the successful organization of these events depends largely on the contribution of volunteers. It is important to investigate what motivates these volunteers and how satisfied they are to make sure that all participants have a good time. (Barron & Rihova, 2011; Teixeira, Banza, Almeida, & Sesinando, 2023). The study of volunteer motivation and satisfaction in sports events has gained significant attention in recent years (De Clerck, Aelterman, Haerens & Willem, 2021; Chen, Wang & Tang, 2022). For instance, Alfes, Antunes and Shantz (2017) discuss how volunteer satisfaction and continuance intention are critical to sustaining volunteerism, emphasizing the need to understand volunteer experiences and motivations to improve satisfaction and retention. Additionally, Lee, Kim, Koo and Won (2019) highlighted the importance of volunteer satisfaction in influencing the attitudes and behaviors of volunteers in sports events.

Volunteer Motivation: Volunteer motivation is a term used to describe the reasons why people volunteer (Kamarudin, Jun, Rashid, Devaraj, & Shamsuddin, 2020; Ye, Cheng, Chen, & Li, 2022). It is the combination of factors that drives them to do something for free for an organization or cause. In sports events, it can be divided into three primary categories: external motivation, purposive motivation and event-related motivation (Angosto, Bang, Bravo, Díaz-Suárez, & López-Gullón, 2021; Dickson et al., 2022). External motivation refers to things like social benefits, career opportunities and personal enjoyment that volunteers receive from taking part in such activities (Smith, 2020). Furthermore, these external motivations in volunteering may include recognition or rewards from others, skill acquisition or experience gaining or even duty fulfillment as explained by Alam, Sun and Campbell (2021). Additionally, among other things that motivate individuals to take part in voluntary events are interacting with like-minded individuals gaining new skills and adding value to their CVs highlighting the existence of external motivations (Angosto et.al, 2021). All these abilities assist individuals who want to invest their time into volunteerism. For example, a study conducted during the Volunteer Motivation for the Military World Games in October 2019 found participants were motivated by interactions with volunteers whose interests matched those of the military as well as games (Ye et al., 2022).

On the other hand, purposive motivation is influenced by a will to contribute towards making a difference or having a positive influence on society (Olberding & Olberding, 2024). Volunteering in events is driven by purposive motivation which means that volunteers have their objectives or aims when they take part in these activities. Purposive motivation as one of the factors determining volunteer involvement was also underscored in research conducted by Rozmiarek et al., (2021). On his part, Sharififar, Jamalian, Nikbakhsh, and Ramezani (2011) acknowledge that some components of purposiveness predict sports volunteers' commitment thereby showing that individuals are career-orientated and aim at personal growth while participating in sports events. Moreover, the research established that volunteers are motivated to self-improve through the desire to learn from event organizers and improve their skills by getting involved hands-on (Venske 2019). Consequently, these findings together emphasize the importance of understanding and utilizing purposeful motivation for engaging volunteers efficiently within various event contexts.

Conversely, event-related motivation is concerned with the aspects of volunteering activities themselves such as enjoying nature and the thrill of the occasion, unique ambiance, and the entire event experience (Angosto et al., 2021). Recent studies have also revealed that being part of a prestige event and having access to backstage operations and logistics are factors that motivate volunteers and participants the most (He & Chen, 2022). Additionally, live performances or competitions based on this context can make people feel thrilled and in a festival mood (Giannoulakis, Wang, & Felver, 2015; Vinnicombe & Wu, 2020). The immersive and dynamic nature of the event can create a memorable and enjoyable experience that reinforces volunteer commitment (Nichols & Ralston, 2015). To sum up, different factors contribute to volunteer motivation. The importance of each factor varies depending on the person as well as the specific event they are volunteering for (Schlesinger & Gubler, 2016; Kamarudin et al., 2020; Ye et al., 2022).

H1: There is a positive effect of volunteer motivation (purposive) towards volunteer satisfaction.

H2: There is a positive effect of volunteer motivation (event-related) on volunteer satisfaction.

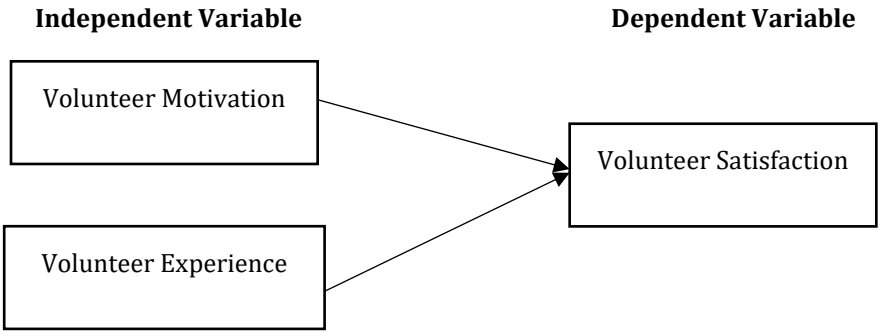
Volunteer Experience: Volunteer satisfaction is key to future involvement and the overall success of an event. According to various studies, positive volunteer experiences are determined by many different things, including having meaningful duties to perform that offer room for personal growth and receiving enough support throughout (Ranjan, 2016; Bang et al., 2022). Moreover, when given deserved recognition or being trained, and well supported with adequate assistance provided, volunteers feel valued and this leads to higher satisfaction levels (Teixeira et.al, 2023). The study conducted by Atanasova and Draganov (2022) showed that good communication skills along with proper organization management could greatly improve the volunteer experience. Additionally, it is said that when volunteers understand their responsibilities and feel supported, their satisfaction increases, as demonstrated in a study on event volunteering by Olberding & Olberding (2024). In addition, clear role definitions and regular feedback help volunteers feel more competent and appreciated.

Equally, it is important to appreciate the work of volunteers and improve their overall experience. One way to do this is by occasionally showing gratitude for the volunteers' efforts through recognition or public appreciation which can lead to greater satisfaction for the volunteers and encourage them to stay (Cobos & Templeton, 2022). This means that assigning tasks that correspond with their interests and abilities offers a chance for them to appreciate their significance (Kim, 2017). In addition, offering opportunities for personal growth as well as professional development like training sessions, networking events or workshops designed to develop skills based on individual volunteer's interests and goals improves volunteer satisfaction even more. Hence, the event organizer must create an environment where they would feel supported and included, valued, and motivated to continue participating actively (Power & Nedvetskaya, 2022). Therefore, events should offer meaningful tasks, sufficient support systems, personal growth opportunities, and social connections among others to ensure a high retention rate thus boosting a high volunteer satisfaction level.
H3: There is a positive effect of volunteer experience on volunteer satisfaction

Volunteer Satisfaction: Various factors such as motivations, sense of community and management practices influence sports volunteer satisfaction. Research has indicated that volunteers are predominantly driven by an interplay of self-development and altruism factors as they desire to help others, develop their communities and acquire new knowledge (Olberding & Olberding, 2024). In addition, satisfaction is particularly high among repeated volunteers since it tends to foster belongingness and community amongst them. This implies through their roles in events such as volunteering and derive significant personal fulfillment which boosts their overall happiness and well-being (Atanasova and Draganov 2022). Furthermore, adequate training as well as good working conditions are essential elements of effective volunteer management strategies that in the long run improve the social capital of these individuals thereby positively impacting their satisfaction levels at work (Zhigang et. al, 2022). Similarly concerning large-scale sports festivals like Olympic Games volunteers' satisfaction is linked with how they perceive the event's legacy may be shaped besides determining personal growth opportunities for them (Gang, Yoon, Park, Yoo, & Pedersen, 2022; Teixeira et.al, 2023).

Additionally, the volunteer experience is a complex process involving direct or indirect relationships between motivation-satisfaction-commitment-community thus requiring a multi-faceted approach to volunteer management (Lachance, Bakhsh, Thompson, & Parent, 2021). Nevertheless, some organizational weaknesses exist such as early planning organization and distribution of volunteers whose high overall satisfaction suggests great significance or value attached by volunteers in being part of it (Atanasova & Draganov, 2022). In summary therefore this comprehensive understanding of volunteer satisfaction shows the importance of tailored strategies to offer good volunteer experience to ensure lasting commitments together with positive results from the volunteering events.

Figure 1: Conceptual Framework



3. Research Methodology

In this research, quantitative research has been conducted to investigate the effects of volunteer motivation and experience on volunteer satisfaction among undergraduate and postgraduate students in a local university. 80 of the event volunteers who participated in this study were 44 males (55%) and 36 were female (45%). Most of the students were aged between 18 to 23 years old (67.50 %), 5 of them were aged more than 25 years old (6.3%) and 21 of them were aged between 31 to 41 years old (26.3%). In addition, 45 of the volunteers were married (56.3%) and 35 of them were single (43.8%). Most of the respondents, with a total of 53 were full-time students (66.3 %) and 27 of them were employed (33.8%). After data collection, the data was analyzed using Pearson Correlation and Regression Analysis. Before the analysis, a preliminary analysis was conducted to assess the reliability and validity of the items.

4. Findings

Reliability Analysis

A reliability analysis refers to how well the scale's numbers measure the same variables and Cronbach's alpha is the most common way to measure how reliable the items using SPSS. The values of Cronbach Alpha indicate how closely all the items have high internal consistency on variables. As shown in Table 1, the volunteer motivation (purposive) had 5 items and the Cronbach Alpha value was 0.964 which was interpreted as high internal consistency. Next is volunteer motivation (event-related) had 6 items and the Cronbach Alpha value was 0.980 which was also interpreted as high internal consistency. The result is similar to volunteer experience ($\alpha = 0.864$) and volunteer satisfaction ($\alpha = 0.949$) in that both variables indicate the Cronbach alpha was greater than 0.07 and all variables tested were high internal consistency and applicable to use in this study.

Table 1: Reliability Analysis

Variables	No of Items	Cronbach Alpha Values (>0.07)
Volunteer Motivation_ Purposive	5	0.964
Volunteer Motivation_ Event-related	6	0.980
Volunteer Experience	4	0.864
Volunteer Satisfaction	4	0.949

Normality Analysis

Table 2 shows the descriptive analysis consisting of mean, standard deviation and normality test with skewness and kurtosis. Of the mean values of all variables volunteer motivation (event-related) was the highest mean value with 4.471, volunteer motivation (Purposive) (Mean = 4.395), and volunteer satisfaction had a mean of 4.387 and finally was followed by volunteer experience (Mean = 4.21). The result indicates that most of the respondents agreed with the current practices of managing volunteers. In addition, the skewness refers to the degree of symmetry, or more precisely, the degree of lack of symmetry. Distributions, or data sets, are said to be symmetric if they appear the same on both sides of a central point. Kurtosis refers to the proportion of data

that is heavy-tailed or light-tailed in comparison with a normal distribution. As shown the skewness of all variables has negative skewness and the kurtosis values also had positive kurtosis. To conclude, the data of this study has a normal distribution.

Table 2: Normality Analysis

Variables	Mean	Std Deviation	Skewness	Kurtosis
Volunteer Motivation_ Purposive	4.395	0.909	-1.670	2.536
Volunteer Motivation_ Event-related	4.471	0.743	-1.800	4.742
Volunteer Experience	4.421	0.831	-1.658	2.960
Volunteer Satisfaction	4.387	0.877	-1.420	1.795

Pearson Correlation

The Pearson Correlation assesses the bivariate analysis to investigate the linear relationship between independent variables and dependent variables. As shown in table 3, the result indicates there was a linear relationship which continued for regression analysis. All the coefficient values were greater than 0.8 and the significant values were less than 0.05 and the result all items were positive and highly correlated with others.

Table 3: Pearson Correlation Analysis

Variables	1	2	3	4
Volunteer Motivation_ Purposive				
Volunteer Motivation_ Event-related	0.826**			
Volunteer Experience	0.840**	0.833**		
Volunteer Satisfaction	0.693**	0.850**	0.861__	

Regression Analysis

The regression analysis aims to investigate the influence of volunteer motivation of purposive and event-related, experience towards volunteer satisfaction. From the regression analysis, the R square value was 0.787 indicating 78.7 percent of volunteer satisfaction explained by volunteer motivation purposive, event-related, and volunteer experience. There 21.3 percent was explained by other variables. The next table is the ANOVA table, which reports how well the regression equation fits the data and the result found that the statistical significance of the regression model has significance values less than 0.05, and indicates that, overall, the regression model statistically significantly predicts volunteer satisfaction. In addition, the coefficient table shows the beta values (β) as volunteer motivation (purposive) was -0.318, followed by volunteer motivation (event-related) was 0.448 and volunteer experience was 0.552 indicating there was a weak relationship towards volunteer satisfaction. Furthermore, the significance values as shown by volunteer motivation (event-related) and volunteer experience were less than 0.05 indicating that those variables were statistically significant with volunteer satisfaction. However, the finding for volunteer motivation (purposive) identified has not significant towards volunteer satisfaction.

Table 4: Regression Coefficient Analysis

	Unstandardized Coefficient		Standardized Coefficient			
Variables	**B**	**Std. error**	**Beta**	**t**	**Sig.**	**Result**
Constant	.104	.293		.355	.724	
Purposive	-.307	.112	-.318	-2.727	.008	H1 not supported
Event-related	.530	.172	.448	3.085	.003	H2 Supported
Experience	.583	.160	.552	3.642	.000	H3 supported

Discussion

This research aims to examine the factors that motivate volunteers and particularly look into the link between volunteer experiences and satisfaction. In this study, a survey was conducted among 80 students in Malaysia who had taken part in such events as volunteers. Results show that among the many types of motivation for volunteering, event-related motivation was significantly linked to volunteer satisfaction. However, there was no significant relationship between the purposive aspect of volunteer motivations. According to this research, most students volunteered because of event-related reasons for example chances to experience the ambiance and thrill of an event, a unique atmosphere and enjoy the overall experience of the event. Vinnicombe and Wu (2020) also supported this finding by indicating that many individuals participate in such activities to be able to have fun at live performances or events including behind-the-scenes situations. However, there were some limitations for instance time limitations and financial constraints which acted as major obstacles to student participation in voluntary work as revealed by the study. Even though people may wish they could be volunteers, practical constraints make it impossible for them to achieve their desires (Alias, Ariffin, & Noor, 2021). Consequently, if organizations want more volunteers, then they will have to deal with these issues apart from just focusing on the benefits related to volunteering alone.

5. Managerial Implications and Recommendations

The research underscores the pivotal contribution of volunteers to the success of sporting events and the broader sports event industry. Understanding the factors that impact volunteer satisfaction is crucial. Based on the findings, there is a need for further exploration into specific dimensions of volunteer motivation at sporting events. Additionally, it is recommended to conduct studies that delve deeper into the intricate relationship between volunteer motivation, volunteer experience and satisfaction. These insights can inform managerial strategies aimed at optimizing volunteer management to ensure that every person who comes out as a volunteer feels appreciated and satisfied.

Conclusion

This paper explains how volunteer motivation and experience can influence the satisfaction of the event volunteers. The study found that event-related motivation such as chances to experience the ambiance and thrill of an event, and the unique atmosphere behind the scenes situation are a significant factor that drives volunteer's motivation. Other than that, intrinsic motivations, such as personal growth and skill enhancement, had stronger effects on increased happiness than extrinsic rewards or recognition. Again, volunteers' satisfaction was heightened by positive and engaging experiences which included skill development opportunities, meaningful interactions, and support provided to them. This means that event organizers should focus on helping their volunteer's internal drive to enhance their personal development and skills acquisition. Moreover, creating a supportive environment, and embedding activities that develop skills in this area have an impact on an exciting event characterized by meaningful interactions thereby enhancing the spirit of volunteers hence increasing retention and engagement levels. Therefore, to have more significant events with lower attrition rates and motivated workers understanding the complex interrelationships between experience, motivation(s)and satisfaction is key for any event planner.

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A Change in Event Tourism: Developing Business Model for *Sulayau* Fabric as Community-Based Tourism Event Attraction

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Abstract: This study explores the best model for community-based tourism events (CBTE) model with the inclusion of social innovation as part of the process. Producing *Sulayau* fabric is seen as a factor that contributes to the development of social innovation activities among the community in Sabah. Two workshops were conducted to empower communities to understand the use of the new social innovation tool known as *Memating* and gave support to those communities to improve the quality of their participation in tourism. Semi-structured interviews and observation were used as data collection techniques. The results revealed two interesting findings the need for using the social innovation tool of *Memating* in increasing efficiency among craft traders and the need for marketing strategies in creating visibility of *Sulayau* fabric in Sabah. Future studies are required for an empirical discussion in understanding how the role of social innovation shapes community-based tourism events.

Keywords: *Community event-based tourism, Thread, Social innovation, Rural community*

1. Introduction and Background

The booming of community-based tourism events (CBTE) in Malaysia has raised the demand for the development of new tourist destinations across the country. CBTE refers to engaging local communities in an event or celebration. It involves tourism as part of the local community engagement created experience because of the unique activities of the community. It promotes visitors and local interactions in the community. The interaction contributes to an increase in the local economy and community development. However, whether the community is ready with the local products as part of the event attraction in the community? these questions remain unexplored. For this reason, the involvement of grassroots innovators is deemed important to overcome the challenges faced by the community to increase efficiency and indirectly contribute to social and economic well-being. Our main contribution is the development of a business model process for *Sulayau* fabric as part of community event tourism attraction activities. Our second contribution is that we demonstrate the traditional process of yarning as part of the process of producing *Selayau* fabric, challenges, and strategies to overcome the challenges faced by social entrepreneurs among Murut Bookan, Kg, Pauh, Sook, Keningau Sabah.

2. Literature Review

Yarn is a versatile and essential component in the world of textiles, weaving a thread of creativity and functionality into every fabric. It serves as the building block for countless garments, furnishings, and works of art, possessing the power to transform simple fibers into intricate designs. But before yarn can begin its transformative journey, it undergoes a crucial process known as warping. Warping is the initial step in the weaving process, where individual yarns are carefully arranged and aligned on a loom to create a strong and stable foundation (Hoffmann, 1964). This meticulous technique sets the stage for the interlacing of weft threads, ultimately giving birth to beautiful and durable woven fabrics.

The art of warping involves precise calculations and careful planning. Yarns are measured, stretched, and

arranged in parallel, forming a systematic grid that will dictate the structure and design of the final textile (Murphy, 2000). Whether it is a delicate silk scarf, a sturdy cotton canvas, or an intricate tapestry, the quality of warping directly influences the integrity and visual appeal of the finished piece. Warping is a harmonious marriage of science and artistry, requiring a deep understanding of textile properties, weaving techniques, and aesthetic vision. It demands patience, attention to detail, and a keen eye for symmetry. Skilled weavers navigate the complexities of tension, spacing, and color placement, ensuring that each yarn aligns flawlessly to create a cohesive fabric. The opinion by Chandler, 2009) is focused specifically on warping techniques for rigid heddle looms, and beyond its technical significance, warping carries a symbolic weight in the textile world. It symbolizes the careful preparation, dedication, and commitment necessary for any creative endeavor. Just as the warp yarns provide strength and structure to a textile, the process of warping serves as a metaphor for the underlying foundation of any project, where careful planning and meticulous execution lay the groundwork for success.

Yarn and warping intertwine to form the very fabric of our creative pursuits. From the simplest knitted scarf to the most intricate tapestry, the careful arrangement and alignment of yarn during the warping process breathe life into our textile endeavors. It is a testament to the human ability to transform humble fibers into remarkable works of art. As we reflect on the artistry and significance of yarn and warping, we are reminded of the timeless traditions and cultural heritage embedded within the world of textiles. According to Eriksson, Gustavsson, and Lovallius, 2011), across generations and continents, the techniques of warping have been passed down, preserving the knowledge and expertise of our ancestors. It is a connection that binds us to our roots and reminds us of the enduring nature of craftsmanship.

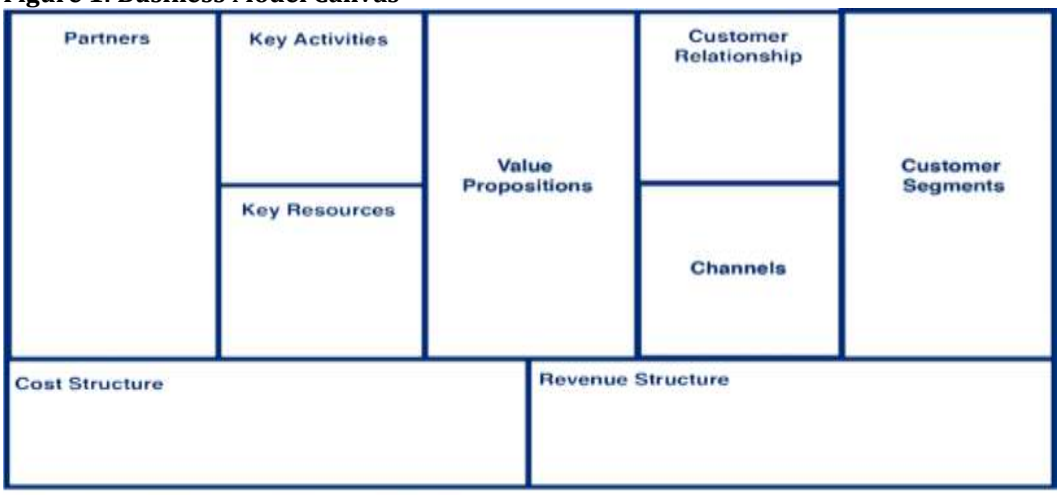
Furthermore, yarn and warping teach valuable lessons beyond the realm of textiles. This field exposes the importance of preparation, patience, and attention to detail in any creative pursuit (Garrett, 1974). They remind us that the strength and beauty of a final product are often determined by the careful planning and execution of its foundational elements.

As yarn and warping are both essential to unearthing creativity and tacit knowledge, eventually it falls under grassroots innovation. Their innovations start from the frugal idea stage, with some common tacit knowledge, and they develop non-disruptive innovations in their backyards and through hardship (Joshi, Chelliah, & Ramanathan, 2015) leading to pre-commercialisation. Furthermore, being given less attention by stakeholders and authorities, their activity is not as impactful as profit-making industries. Nevertheless, the Ministry of Science, Technology, and Innovations (MOSTI) through its agency, *Yayasan Inovasi Malaysia* (YIM) has spearheaded the initiative to nurture and support grassroots innovation to discover innovative processes and products at the grassroots level, with more applied research to enhance stages of development up to pre-commercialization. YIM was founded in 2008 to promote and champion innovation. With a great past track record in catalyzing the translation of innovation to wealth, YIM facilitates the development of innovations.

The inclusion of culture in the community business model is important for nurturing value in the process of cultural sustainability and as an extra economic incentive for community entrepreneurs. Operating from remote regions may provide a challenge for entrepreneurs from rural areas sustainability as the supply chain is different from mainstream entrepreneurs and limitations of management skills, education, and capital (Jacobsen, 2017). Supply chain, limitation of skill, knowledge capital, and reflection of culture between tribes play a role in differentiating the differences between mainstream and rural entrepreneurs. These factors reflect the whole process of the business model among social entrepreneurs.

For the past few years, business canvases have been used by several scholars in elaborating and understanding the whole process of business development strategy. The business model canvas is a model that involves several components of business marketing, operation, and financial capability for producing a product. It is a tool that provides a visual map to record details related to infrastructure management, product, customer interface, and financial aspects. The right of the canvas highlights several key activities that represent the customer relationships, customer segments, channels, and building blocks while the left of the canvas represents the infrastructure management quadrant of the business. The business model describes the rationale of how an organization creates, delivers, and captures values (Ojasalo & Ojasalo, 2018) as shown in Figure 1.

Figure 1: Business Model Canvas



Source: Osterwalder and Pigneur (2010)

There are 9 building blocks of the business model canvas (Osterwalder & Pigneur, 2010):

- Customer segments is an organization that serves one or several customer segments.
- Value proposition that seeks to solve customer problems and satisfy customer needs with value proposition.
- Channels of value proposition that deliver to customers through communication, distribution, and sales channels.
- Customer relationships that are established and maintained with each customer segment.
- Revenue streams that result from value propositions successfully offered to customers.
- Key Resources are the assets required to offer and deliver the previously described elements.
- Key Partnerships are some activities that are outsourced, and some resources are acquired outside the enterprise.
- Cost structure is the business model elements that result in the cost structure.

The use of business canvas as an underpinning process for strategizing business has been discussed by Wrigley, Bucolo and Straker (2016).

3. Research Methodology

A case study was chosen according to four criteria: 1) each case should propose a resolution based on innovation usage in the community; thus, Kg Pauh, Sook, Keningau, Sabah was chosen based on the issues faced by the community in producing *Sulayau* fabric, 2) The local individuals involved should have experienced sewing *Sulayau* fabric and 3) The chosen cases should have reached the mature phase in developing innovation for solving the issues faced by the community. Particularly, the new method should have been applied; for this reason, a new warping board that was named the *Memating* board was introduced at the second workshop. Focusing on these locations was expected to identify cases with high problem pressure and a lack of powerful problem-solving institutions. Understanding of the issues faced by the community was strengthened as follows:

Step 1: A foundation model development according to existing Business Model Canvas.
Step 2: Research objective (RO) development: RO1: is to understand the challenges faced by the community and RO2 is to develop a new social innovation board.
Step 3: Interview protocol establishment according to the literature review.
Step 4: Data collection from interviews and observation from Feb 27, 2023, to July 2023. Furthermore, Kg Sook, Pauh, and Keningau Sabah were visited.
Step 5: Data qualitative analysis with constant comparison.

The qualitative data were analyzed as follows:

- Interview protocol reconstruction based on previous literature. Factual knowledge was obtained, assembled, and moved into a process-related and temporal order. Reconstruction via triangulating information from qualitative interviews, participatory observations, and documents and media reports.
- Identification of the support and challenges faced by the community. Interpretative work was required, as such knowledge is less obvious.
- Data categorization and segmentation with constant comparative techniques. Deduction of commonalities and differences between cases based on conceptual framework categories and dimensions. Identification of rural social innovation (SI) process patterns and the SI critical review of conceptual framework based on the results. Exploration of whether the findings provided empirical evidence for the theoretical framework, where they could aid theory specification and suggest further revision.

4. Results and Discussion

With upwards of 5,000 people, the Murut Bookan community is among the most populous ethnic groups in Sabah. The majority of the Murut Bookan community are Christians. This community celebrates the *Kalimaran* festival, which takes place after the rice harvesting season. They are also known for their traditional dances, namely the *Lansaran* dance and the *Mangunatip* dance.

Two series of workshops were conducted at Kg Pauh Sook, Keningau Sabah. Kg Pauh, Sook is located at Keningau, Sabah. It takes about 2 and a half hours to drive from Kota Kinabalu, Sabah which is the main city of Sabah. There are more than 300 residents around Kg Pauh, Sook, and Sabah. Most of them are self-employed and work at crop plantations. The researchers initiated a social innovation community engagement program with the collaboration of the Youth Innovation Foundation in Feb 2023. Community engagement-based initiatives are included under the common umbrella of SI (Baselice, Prosperi, Marini Govigli, & Lopolito, 2021). The Malaysian government introduced several community programs (MyIS, MaGris, and Ruang Daya Cipta) under the YIM (www.yim.com) umbrella, which is a Ministry of Science of Technology and Innovation.

The first workshop focuses on understanding the issues and challenges the rural community faces in producing the *Selayau* thread. Figure 2 shows the process of making a *Selayau* thread. The first workshop also encounters several observations on the process of warping among the community.

Figure 2: The process of making the *Selayau* thread



Based on interviews with nine (9) informants during the 1st workshop. The elaboration on the discussion is discussed above.

Q1. What are the challenges and abstinence among the Murut Bookan Community in preserving the *Sulayau* thread?

CBTE transforms the cultural attractions of rural communities into consumer products that attract tourists to a destination. Event tourism development makes a connection between the cultural-based product of a community and event tourism destination attraction, yet the main challenge is community readiness as an event-based tourism destination. This research focuses on the development of Kg Pauh, Sook, Keningau, and Sabah as community event-based tourism destinations. *Selayau* garment is one of the local traditional garments made by using traditional techniques. The length of time spent producing *Selayau* garment is a challenge as it takes more than 2 weeks to produce 2 meters of *Selayau* garment in the first process and it took about 2 to 6 months to produce 4 meters of *Selayau* garment. Therefore, the inclusion of a *Memating* frame or tool as part of the process of producing a 4-meter garment assists in increasing the efficiency of the garment process among the rural community at Kg Pauh, Sook, Keningau Sabah. Before beginning the event tourism development project, the interests and issues need to be explored for a better understanding of the real phenomenon of community event-based tourism attraction. This paper introduces foresight tools, community arts and culture, and a social innovation of the *Selayau* Fabric garment technique also known as *Memating* among Muruk Bookan in Sabah. *The meeting* is the beginning stage of the social innovation process of introducing the community to using a new innovative technique for sewing yarn. This technique creates an authority of future tourism development in the hands of the local community, which is appropriate for event tourism development in rural Malaysia. A series of inclusive workshops were used to cultivate innovations in sewing thread among Murut Bookan, at Kampung Pauh, Sook, Keningau Sabah. The 1st workshop was more on feasibility study on the issues and challenges faced among the community and results show that the challenges are:

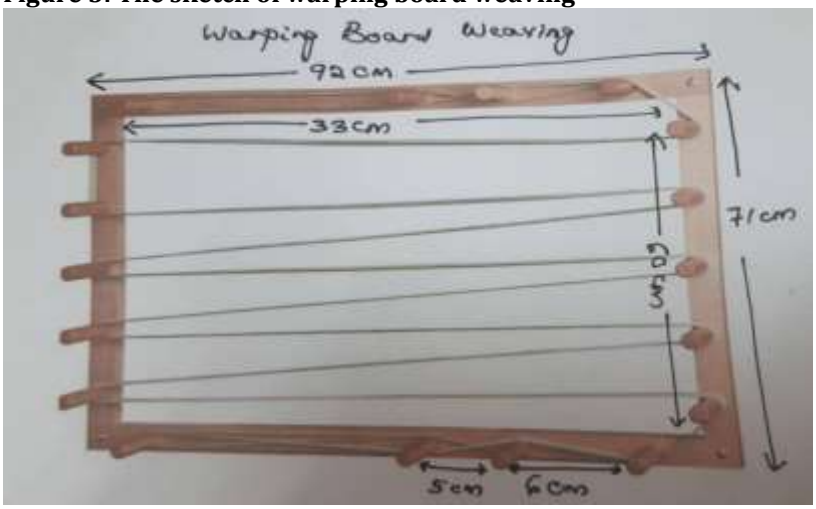
a. Back pain due to prolonged sitting during weaving.
b. High cost of the thread used, with prices increasing from RM1.80 to RM3.60 per roll.
c. Time-consuming process, with the entire weaving taking at least 2 weeks or more, depending on the size of the fabric being produced.
d. The time required to set up the basic weaving structure alone takes 3 days for a long fabric (*Kain Panjang*).
e. Lack of interest among the younger generation.
f. Easily replicated patterns leading to the imitation of designs.

It also found several weaving abstinences. The abstinences are:

a. Do not consume chili before engaging in the weaving process.
b. Do not consume grilled food.
c. Maintain a calm demeanor and avoid getting angry.
d. Wear beautiful clothing.
e. Do not pass underneath the loom.
f. Do not weave after 4:30 PM.

As a result of the 1st workshop, the researcher has drafted a warping board that suits the community and produced a new warping board for weaving. Figure 3 shows a sketch of warping board weaving.

Figure 3: The sketch of warping board weaving



As a result of the sketch draft of warping board weaving the researchers have developed a new warping board that is made from metal. Due to transforming the traditional weaving process into a model weaving process, it is proposed that the Murut Bookan community go through several Phases.

Phase 1: Cultural Innovation in the Weaving Process

Phase 1 involves training and knowledge-sharing from academia to the community. It includes learning about the use of a warping board to replace traditional methods with more efficient techniques. 2nd workshop was organized to create a social innovation culture in the community.

Q2. What are the methods practiced by Murut Bookan for producing *Sulayau* garments?

Selayau garment as a Community Event-Based Tourism (CEBT) product has been heavily promoted in Malaysia, particularly in rural communities. For the past few years, most of the community at Murut Bookan has practiced traditional methods of weaving *Sulayau* Garment. It was found that during the early years, the thread was produced by using sheep wool or pineapple fiber and using natural dyes made from various materials. The traditional weaving materials and tools are as stated above:

a. *Kuun* - Traditional weaving frame or loom.
b. *Atip* - Shuttle used to pass the weft thread through the warp threads.
c. *Bulonon* - Comb used to separate and tighten the warp threads.
d. *Sansag* - Beater used to compact the weft threads.
e. *Sapayan* - Small bamboo sticks used to create patterns and designs.
f. *Ansad* - Sword-like tool used to open the shed (space between the warp threads) for weaving.
g. *Susumad* - Sley or reed used to space and beat down the weft threads.
h. *Apad* - Sword-like tool used to cut the finished woven fabric from the loom.
i. *Kain* - Base fabric or cloth onto which the weaving is done.
j. *Kelerai* - Dried leaves of a specific type of palm tree used for weaving intricate designs and patterns.

The second workshop is more on introducing the *Memating* frame as a social innovation tool in mitigating the efficiency process of producing *Selayau* thread. *Memantine* frame is a new warping board that was built based on the need to overcome the challenges faced by the community at Kg Pauh, Sook, Keningau Sabah. Figure 4 shows the *Memanting* frame used by the community.

Figure 4: *Memanting* frame



Q3. How does the new warping board assist in strengthening the *Sulayau* fabric as a community-based tourism event?

The new warping board increased the efficiency of producing the garment as for the warping process, it only took about 20 minutes rather than 2 weeks to produce 2 meters at the warping stage.

Q4. What is the business model for the Murut Bookan Community in preserving the *Sulayau* thread?

The business model canvas is a model that involves several components of business marketing, operation, and financial capability for producing a product. It is a tool that provides a visual map to record details related to infrastructure management, product, customer interface and financial aspects. The right of the canvas highlights several key activities that represent the customer relationships, customer segments, channels and building blocks while at left of the canvas represents the infrastructure management quadrant of the business. The business model describes the rationale of how an organization creates, delivers, and captures values (Ojasalo & Ojasalo, 2018). In this study, the researcher found several findings. The discussion on the elaboration of the business model as findings is made in Table 1.

Table 1: Business Model for *Sulayau* Fabric

Opportunities	**Value Proposition**	**Cost**	**Revenue**	**Market Segment**
Murut Bookan weaving has a high potential to enter the international market.	The unique cultural characteristics that can be seen in the motifs inspired by the surrounding nature and the ancient beliefs of the Murut Bookan tribe offer a competitive advantage to this embroidery art.	The costs involved in weaving would cover the weaving materials, courses and training, utilities, packaging, pricing labels, internet, transportation, and postage.	Income would be generated from selling beads and Takin embroidery, woven fabrics such as Sulayau garments, and woven baskets (“*kelarai”*).	The products are targeted towards both local and international markets.
Customer Relationship	**Channel**	**Key Partners**	**Resources**	**Key Activities**
To maintain customer loyalty, excellent, prompt, and friendly customer	Marketing channels utilized include cultural festivals (*Kalimaran* - beauty pageants; *Kaamatan* - harvest festival), expos and	Key stakeholders involved in driving this business include government agencies, local authorities, and NGOs.	Materials used for the products include threads, hardwood, expertise, beads, *kelarai* strips, and bamboo.	The main activities of the weaving art include weaving, basketry, marketing, and courses and training.

service is provided.	exhibitions, and social media.			
Strength				
Cultural Uniqueness	**Strong Community Spirit**		**Experienced Instructors**	
The cultural uniqueness of the Murut Bookan tribe is the main attraction in producing Murut Bookan weavings.	*Persatuan Kraftangan Kaum Murut Bookan* (The Murut Bookan Craft Association) has been established to help preserve cultural weaving practices. Various programs related to learning Murut Bookan weaving are conducted every week at the local community hall. Weekly activities such as weaving, beadwork, and others are held at the community hall in Kampung Pauh, Sook, Sabah. These activities foster close-knit relationships within the village community.		Currently, there are three experienced instructors aged 50 and above. Hence, various parties must undertake weaving preservation programs to ensure that the culture and artistry will continue to thrive and not fade away in the face of modernization.	
Weakness				
Low-quality materials: Weavers are limited to using low-quality polyester threads due to the increasing price of high-quality polyester threads.	**Time-consuming production process:** It is found that each piece of fabric produced takes a considerable amount of time, ranging from 2 to 6 months, depending on the size of the fabric desired by the weaver.	**Limited market:** The market is primarily limited to domestic consumers, based on individual or small-scale orders during festive seasons.	**Unstable management:** *Persatuan Kraftangan Kaum Murut Bookan* (The Murut Bookan Craft Association) is newly established due to community awareness of the importance of preserving weaving traditions and generating income.	**Participant commitment:** Weavers' commitment is based on their availability and the demand for their weaving services. Most weavers only visit the community hall during their free time.
Potential Contribution				
Generating income for the local community.	Providing employment opportunities for the local community.		Developing the Sook District through activities related to Community-Based Tourism.	

5. Conclusion and Recommendations

This research contributes to the body of knowledge by elaborating more on the issues and challenges faced by weavers, yet the study was only limited to the Kaum Murut Bookan Tribe at Sabah as it found that to develop an event tourism product, it is vital to develop an appropriate business model for enhancing the production of this product and indirectly change the direction of event management industry from emphasizing only during the event, but towards more on community development.

Therefore, future researchers should explore more on other tribes that faced similar issues among weavers. It is vital to understand more about the issues, challenges, and process of developing *Sulayau* fabric weavers as coping with the issue results in the success of community event tourism attraction in rural areas. Community

event tourism is part of tourism success, thus strategizing strategies in coping with challenges faced by weavers assist in overcoming the issue. The inclusion of social innovation as part of the business model for strategizing and identifying the outcome of coping with social issues is important to ensure the success of community event tourism attraction.

The development of the *Sulayau* weaver has brought multiple benefits. Not only has it breathed new life into the craft and provided economic opportunities for the weavers, but it has also elevated the status of the *Sulayau* woven products on the global market. Tourists and consumers from around the world now appreciate and value the cultural significance and unique beauty of these traditional handwoven pieces. The success of the *Sulayau* weaver development also serves as an inspiration for other communities facing similar challenges in preserving their cultural heritage. It highlights the importance of recognizing the value of traditional crafts, promoting cultural exchange, and supporting local artisans in their efforts to sustain their cultural identity. The *Sulayau* weaver stands as a shining example of how cultural heritage can be transformed into a vibrant and thriving part of contemporary society. By honoring and preserving traditional crafts, we enrich our global cultural tapestry and create a more interconnected and meaningful world.

Transforming the cultural attractions of rural communities into consumer products that attract community-based tourism events to a destination can have both positive and negative impacts. On the positive side, it can provide economic opportunities for the local community by generating income from tourism-related activities and creating job opportunities. This influx of tourists can also lead to a greater appreciation and preservation of cultural heritage, as visitors learn about and engage with the unique traditions and customs of the rural communities. Additionally, tourism can foster a sense of pride and identity among the locals, as they witness their cultural attractions being appreciated by visitors from different backgrounds. Moreover, the increased tourism can spur infrastructure development and improvements in basic amenities in these areas, benefiting the local population. However, there are potential challenges and risks associated with this transformation. Over-commercialization and mass tourism can lead to the commodification of cultural elements, diluting their authenticity and turning them into superficial products solely for tourists' consumption. This might result in a loss of the true essence of the culture and its traditions.

Furthermore, an excessive influx of tourists could put a strain on the environment and local resources, leading to issues like over-tourism, pollution, and degradation of natural landscapes. This may negatively impact the quality of life for the residents and diminish the sustainability of the destination in the long run. To ensure a successful and sustainable approach, it is essential for stakeholders, including local communities, government bodies, and tour operators, to strike a balance between tourism development and cultural preservation. Engaging the local community in decision-making processes, promoting responsible tourism practices, and focusing on authentic experiences can help harness the benefits of cultural attraction transformation while safeguarding the uniqueness and integrity of the rural communities' cultural heritage.

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Examining the contributing factors of virtual event quality toward event satisfaction among attendees

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Abstract: Due to the rising acceptance of virtual events, more empirical studies are needed to determine factors influencing attendees' satisfaction. It is crucial to comprehend the essential factors determining the quality of virtual events as the virtual world continues to define the future of event experiences. Given these considerations, event planners may create and deploy virtual experiences meeting the diverse needs and preferences of the attendees. Hence, the main purpose of this paper is to examine the influence of virtual event quality dimensions on the level of event satisfaction among the attendees. A cross-sectional study was undertaken by administering a survey instrument to collect response data from participants in virtual events. There were 124 valid responses obtained for data analysis. Descriptive and inferential analyses were performed using IBM SPSS version 28. The study findings revealed that there was a statistically significant relationship between the quality of virtual event factors and event satisfaction among the attendees. The results of regression analysis indicated that vividness (p=0.016), functionality (p=0.003), entertainment (p=0.029), fulfillment (p=0.037), privacy (p=0.037), and social presence (p=0.001) were found to be significant predictors of event satisfaction. In conclusion, this study highlights the importance of considering several factors of event quality, particularly in planning and implementing virtual events. Event organizers can enhance attendees' satisfaction through the use of more immersive and substantial virtual experiences, by focusing on attributes such as vividness, functionality, entertainment, fulfillment, privacy and social presence.

Keywords: *Event satisfaction, virtual event quality, virtual events, and attendees*

1. Introduction

Virtual events have gained more traction among the event attendees all over the world. Due to pandemic of Covid-19, it had changed the method on how we deliver our event intention to the participants. The emergence of various digital products, advertisements and media platforms has shifted the costlier physical events to digital or online events that cut more costs in terms of organizing and attending the event (Hu et al., 2017). The popularity of virtual events is attributed much to various factors such as participants' readiness for online events, and the dissemination of information about the virtual events by the social media platform and online groups. In China, due to the growth of its business activity and being the second largest business economics position in the world, the Internet has played a major role in business transactions thus promoting more virtual business events and conferences to attract potential customers (Liu et al., 2017). In addition, due to the COVID-19 pandemic, the demand for virtual events is increasing in more activity-based programs have shifted to virtual experience platforms (VEP) in a study among the Korean population (Kim et al., 2023). This showed the population leaning direction to virtual events and occasions in their life apart from physical events.

Among the issues that plague the success of virtual events is event satisfaction. Event satisfaction is defined as attendees' satisfaction towards various aspects of the virtual events such as social presence, security and privacy, virtual events functionality as well as entertainment element in the event itself. The social presence in which the connection of various parties in the industry that might interest the potential attendees to participate in the virtual events if there are potential new networking or friendship relations can be established from the virtual events (Oshimi et al., 2023). Academic and business events might somewhat become an ideal platform that connects these professionals for future business collaboration. Lacking this element in the virtual events might detract the potential attendees' interest to attend in the future. Furthermore, the security and privacy of the attendees in the virtual events is one of the important indicators of the participants. One might feel insecure if their participation in the virtual events might expose their personal information. This is essential, especially in any virtual events such as gaming, virtual meetings and online offices which may open the participants to wrongful personification by hackers and strangers who want to take advantage (Mohd Tariq et al., 2021). Deficiencies of adequate level of security and privacy in the virtual events being organized may cause the previous participants to not re-attend the future virtual events. These quality characteristics should be given

priority when organizing virtual events to ensure a sufficient level of satisfaction is achieved among virtual event participants. Therefore, the objective of the paper is to examine the influence of virtual event quality dimensions on the level of event satisfaction among the attendees thus allowing for better dimensions to be taken seriously whenever we want to organize virtual events.

2. Literature Review

Event satisfaction: In recent years, the event industry has significantly shifted from traditional physical events to virtual and hybrid formats. Attendee satisfaction in both physical and virtual events has thus become crucial for event organizers to deliver successful experiences. Both physical and virtual events require high-quality and relevant content, which correlates directly with increased satisfaction levels in both settings. In physical events, ambiance, including lighting, acoustics, and overall venue aesthetics, plays a crucial role in enhancing attendee experience and satisfaction (Melly et al., 2023). However, the technical aspects, such as platform stability and audiovisual quality, are critical for attendees' satisfaction in virtual events. Ramli and colleague (2018) indicates that technical glitches and poor-quality streams can significantly detract from the attendee experience. Nevertheless, content quality, interactivity, and engagement are vital factors for both settings of the events. Interactive sessions significantly increase the satisfaction of physical event attendees by fostering participation and engagement. Similarly, features such as live chats, virtual networking rooms, and opinion polls increase attendance at virtual events and increase satisfaction among attendees (Campos et al., 2018; Capasa et al., 2022). In terms of content quality, high-quality and relevant content was found to be significantly correlated with higher satisfaction among attendees (Melo et al., 2022). For example, the technologies of virtual reality offer immersive experiences that can increase satisfaction by providing a sense of presence and engagement (Melo et al., 2022). Moreover, the effective use of event technology, including data analytics and artificial intelligence (AI), can personalize and improve attendee experiences, further driving satisfaction (Chen & Jung, 2024).

Dimensions of virtual events quality: This beginning of virtual events has transformed how people engage with conferences, seminars, and other large gatherings. This rapid shift has necessitated a deeper understanding of attendee satisfaction and the quality of virtual experiences. The quality of these virtual events significantly impacts attendee satisfaction. Recent studies emphasize the importance of vividness in virtual events, particularly with advancements in virtual reality (VR) and augmented reality (AR) (Jung et al., 2016; Liberatore & Wagner, 2021). Vividness, which refers to the richness and realism of the sensory information presented, has been shown to significantly influence perceived usefulness, enjoyment, and attitudes toward virtual shopping experiences (D. Kim & Ko, 2019). Vividness and interactivity are critical design elements that directly or indirectly impact an attendee's sense of presence, sensory experience, attitude, and behavioral intentions in virtual events. Yozcu, Kurgun, & Bağıran, (2023) found that high levels of visual and auditory vividness in VR environments enhance user immersion and satisfaction. Similarly, Wreford, Williams, & Ferdinand (2019) demonstrated that the use of AR to create vivid, interactive experiences can significantly increase attendee engagement and satisfaction. Thus, engaging attendees through vivid and interactive virtual experiences can foster greater immersion, satisfaction, and behavioral intentions.

Functionality refers to the practical aspects of the virtual event platform, including features like chat, Q&A sessions, screen sharing, and recording capabilities. Functional platforms enable seamless interactions and contribute to a smooth user experience. Hung and colleagues (2024) suggests that comprehensive functionality, including interactive tools and accessibility features, is critical for user satisfaction. Moreover, the perceived usefulness and ease of interaction with various platform functionalities directly impact attendee satisfaction (Li et al., 2024).

The speed and quality of feedback provided by the virtual event platform satisfy attendees. Recent studies highlight the importance of real-time interactions and system responsiveness. Hammady and colleagues (2021) found that highly responsive platforms significantly enhance user satisfaction by providing timely feedback and reducing wait times. Similarly, Neuhofer and colleagues (2021) emphasized that responsive virtual event systems improve user engagement and reduce frustration.

In virtual events, entertainment value involves providing enjoyable and engaging content, including interactive

elements, gamification, and dynamic presentations. Hamari and colleagues (2014) indicate that incorporating gamification elements into virtual events can significantly boost attendee engagement and satisfaction. Similarly, a research study found that entertainment value, such as interactive and visually appealing content, strongly predicts user satisfaction in virtual conferences (Jung et al., 2024). Furthermore, it is essential to consider the user-friendliness of the virtual event platform. This encompasses the intuitiveness of the interface, the simplicity of navigation, and the clarity of instructions. Previous studies reaffirm the importance of ease of use in virtual event satisfaction. A study by Pushpakumar and colleagues (2023) found that user-friendly interfaces significantly enhance user satisfaction and reduce the cognitive load on attendees. In addition, the study reported that ease of use positively affects user acceptance and continued use of virtual event platforms (Pushpakumar et al., 2023).

Fulfillment in virtual events can be referred to as the extent to of the event meets attendees' expectations and needs. This includes the relevance and quality of the content, the ability to network, and the overall value derived from attending the event. According to Jung and colleagues (2024) indicated that motivational factors for attending virtual events revealed that preferences of attendees are influenced by online content engagement, the content of the event, being in a global community, meeting like-minded people and professionals, the reputation of the event, keynote speakers, and the use of mobile apps. Perceived values are also an important variable in influencing the satisfaction of users when attending events including the virtual ones. Privacy and security are critical factors for the success of virtual events. Attendees need to trust that their personal information and interactions are secure. Studies highlight growing concerns over privacy and security in virtual environments as they directly influence attendee trust and satisfaction. Moreover, perceived security and clear privacy policies significantly enhance user trust, which in turn boosts overall satisfaction with virtual events.

Social presence is crucial in virtual events. Social presence was originally defined as a sense of being with another (Biocca et al., 2003). Thus, it enhances the feeling of being "with" others in a virtual environment, which in turn improves attendee satisfaction. Social presence is facilitated by interactive features such as video chats and networking lounges, which foster a sense of community and engagement. A high degree of social presence is associated with increased user satisfaction and engagement in online environments. Additionally, the contextual nature of social presence, noting that its effectiveness can vary depending on the platform's design and the participants' preferences. Fauville and colleagues (2021) discusses how video conferencing features, particularly the intensity of social interactions, contribute to both the benefits and potential drawbacks of social presence, such as "Zoom fatigue." However, when appropriately managed, social presence in virtual settings can significantly enhance satisfaction by creating a more engaging and interactive environment. These sources collectively highlight the importance of carefully designing virtual event platforms to maximize social presence, thereby enhancing attendee satisfaction.

The quality of virtual events is multi-faceted, with vividness, functionality, responsiveness, entertainment, ease of use, fulfillment, privacy and security, and social presence all playing crucial roles in shaping attendee satisfaction. Ultimately, the success and sustainability of virtual events can be influenced by the comprehension and improvement of these factors, which can result in more effective and fulfilling events

Methodology

Design and Participants

The study carried out a cross-sectional survey to evaluate the perspectives of university students regarding their satisfaction with virtual events. A convenience sampling approach was employed to select participants from the target population.

Data collection and analysis

A 47-item questionnaire designed to discover the demographic profile, and pattern of attendees attending virtual events and assess the influencing factors of virtual event quality on satisfaction among attendees was distributed to undergraduate students at several faculties in a public university around Selangor, Malaysia. A total of 130 students took part in this study. However, there were 124 valid responses obtained for data analysis. The questionnaire consisted of three sections: (a) the demographic characteristics of attendees, (b)

patterns of attending virtual events, (c) accessing the virtual events quality and (d) overall event satisfaction. A five-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree) was used. The items of the questionnaire were derived from previous literature (Kim et al., 2024).

The data was analyzed using statistical software, i.e., IBM SPSS (Statistical Package for the Social Sciences) version 28.0. The data analysis comprised both descriptive and inferential statistics. The demographic characteristics and frequency of attending virtual events were described using frequencies and percentages. A regression analysis was performed to examine the factors of event quality that influence the overall satisfaction of respondents at virtual events.

4. Results and Discussion

Demographics of Respondents

The demographic profile of respondents includes gender, age, and semester level. There were 124 valid responses for data analysis. Approximately 84% of respondents were female (n=103) and the remaining were male students (n=20; 16.1%). The respondents were between the ages of 20 and 37 years old, with 77.4% (n=96) respondents being below 23 years old and 22.6% (n=28) were 24 years old and older. Students from Semester 1 to 6 participated in this study. More than 20% of them were from Semester 2 (n=36; 29%) and Semester 5 (n=28; 22.6%). Less than 10% were from Semester 6 (n=11; 8.9%) and Semester 1 (n=7; 5.6%). Semester 3 and Semester 4 students were above 15% taken part in this study: 18.5% (n=23) and 15.3% (n=19), respectively.

In terms of virtual events, many of the respondents have attended virtual events from 1 to 6 times in the past 6 months (n=88; 71%) and 82.4% (n=103) went to educational events such as webinars, workshops, symposiums, conferences, etc. Other virtual events also attended by the respondents were business events (meetings, conventions, fairs, exhibitions, incentives, etc.), entertainment events (concerts, shows, award ceremonies, etc.), festival or culture events (carnivals, parades, religious rites, etc.) and sports events (virtual marathon, race, trekking, hiking, etc.), 43.2% (n=54), 36% (n=45), 34.4% (n=43) and 18% (n=23), respectively.

Descriptive analysis

Before further data analysis, reliability and normality analyses were performed. Table 1 presents the findings of the reliability analysis conducted on the instrument used in the study. Reliability analysis is used to determine the consistency of the measuring survey question used and shows the extent to which the measuring instrument can be trusted and relied on in conducting research.

Measurement of the level of reliability of a research variable can be seen from the statistical results of Cronbach's alpha value (α), a research variable used is said to be reliable if it gives values greater than 0.60. Reliability is considered poor when the Cronbach's value is less than 0.60, good if the value is at 0.70 and very good if the value is more than 0.80 (Sekaran & Bougie, 2016). Results indicate that a standard of high reliability for all the measures, spanning the variables of vividness (α = 0.903), functionality (α = 0.901), responsiveness (α = 0.829), ease of use (α = 0.905), entertainment (α = 0.934), fulfillment (α = 0.903), privacy and security (α = 0.904), social presence (α = 0.916) and overall satisfaction (α = 0.931) Hence, all items is said to be reliable to free from random error.

Table 1: Normality and Reliability Analysis

No	Variables	M	SD	Skewness value	Kurtosis value	No of items	α
1	Vividness	4.354	0.593	-0.543	-0.517	6	0.903
2	Functionality	3.724	0.911	-0.287	-0.750	4	0.901
3	Responsiveness	4.098	0.627	-0.557	-0.337	6	0.829
4	Ease of use	4.150	0.729	-0.797	0.681	5	0.905
5	Entertainment	4.192	0.687	-0.560	0.030	5	0.934
6	Fulfillment	4.219	0.601	-0.292	-0.540	5	0.903

7	Privacy and Security	4.206	0.666	-0.534	-0.075	4	0.904
8	Social Presence	4.010	0.800	-0.655	0.422	4	0.916
9	Overall Satisfaction	4.239	0.739	-0.895	1.009	3	0.931

Notes: M=Mean, SD=Standard Deviation, α =Cronbach's Alpha

Correlation analysis

Pearson correlation and linear regression tests were conducted. This section presents the influencing factors of virtual event quality on event satisfaction among attendees. First, correlation analysis was employed to assess the relationship between event satisfaction and virtual event quality, which consists of the following dimensions: vividness, functionality, responsiveness, entertainment, fulfillment, privacy and security; and social presence. Cohen's created criterion benchmarks for small (r=0.10), medium (r=0.30), and large (r=0.50) effect sizes to help interpret the relative size of the correlation magnitudes (Cohen, 2013).

The study results reported that the quality of virtual event dimensions; including vividness ($r=0.610$, $p<0.001$), ease of use ($r=0.603$, $p<0.001$), entertainment ($r=0.751$, $p<0.001$), fulfillment ($r=0.747$, $p<0.001$), privacy ($r=0.722$, $p<0.001$) and social presence ($r=0.707$, $p<0.001$) were considered to have a large positive significant correlation with event satisfaction. Functionality ($r=0.303$, $p<0.001$) and responsiveness ($r=0.470$, $p<0.001$) were found to have a medium positive correlation.

Regression analysis

Regression analysis was performed to examine the contributing factors of virtual event quality towards event satisfaction among attendees are presented in Table 2. The findings reported that 71% of the variance in overall satisfaction is explained by the virtual event quality dimensions in the model. The findings also reveal the standard regression output indicating the effects of individual predictor variables on the dependent variables. The quality of virtual event dimensions including functionality, entertainment, fulfillment, privacy and security and social presence; significantly predicted overall satisfaction. The dimensions of virtual event quality also explained a significant proportion of variance in overall satisfaction, $R^2 = 0.713$, Adjusted $R^2 = 0.693$, $F(8, 115) = 35.653$, $p<0.001$).

The data findings indicated that the standardized coefficients for functionality, entertainment, fulfillment, privacy and security and social presence were -0.152, 0.226, 0.278, 0.219, and 0.244, respectively. The standardized coefficients indicate the strength and direction of the relationship between the predictor variables and dependent variables. Therefore, it can then be interpreted that for each one-unit increase in entertainment level, satisfaction increases by approximately 23%. Similarly, each one-unit percent increase in fulfillment level corresponds to an increase in satisfaction of about 28%. Likewise, a one-unit increase in privacy and security level corresponds to an increase of about 22% and each one-unit increase in social presence level corresponds to an increase in satisfaction of about 24%. However, for each one-unit decrease in functionality level, satisfaction decreases by approximately 15%.

Table 6 shows a regression analysis between the stated factors and the event satisfaction variable. From the regression analysis, it was found that factors such as vividness, functionality, entertainment, fulfillment, privacy and security and social presence were said to have a significant relationship with the respondent's event satisfaction ($p < 0.05$). In terms of vividness, approximately 21% of the respondents are more likely to be satisfied with the event's vividness ($p = 0.016$, coef: 0.214). The finding was concurred by various studies that have examined the quality of virtual events (D. Kim & Ko, 2019; J.-H. Kim et al., 2021). In a study examining virtual reality (VR), vividness was found to significantly enhance perceived enjoyment, leading to greater user satisfaction (D. Kim & Ko, 2019). Moreover, the application of vividness in virtual events has increased the sense of presence, which further enhances the immersive experience and in turn, improves the overall satisfaction of attendees (J.-H. Kim et al., 2021). In addition to that, an e-service quality study, including aspects like vividness and responsiveness, revealed a significant impact on virtual event satisfaction (D. Kim & Ko, 2019).

Table 2: Regression analysis

No	*Variable*	*B*	*SE B*	*Beta*	*t*	*p*	*95% CI*	
1	Vividness	0.214	0.087	0.172	2.446	0.016*	0.041	0.387
2	Functionality	-0.152	0.050	-0.188	-3.026	0.003*	-0.252	-0.053
3	Responsiveness	0.003	0.076	0.003	0.045	0.964	-0.148	0.155
4	Ease of use	0.013	0.082	0.013	0.160	0.873	-0.150	0.176
5	Entertainment	0.226	0.102	0.210	2.214	0.029*	0.024	0.429
6	Fulfillment	0.278	0.132	0.226	2.107	0.037*	0.017	0.540
7	Privacy and Security	0.219	0.104	0.197	2.106	0.037*	0.013	0.424
8	Social Presence	0.244	0.073	0.264	3.346	0.001*	0.099	0.388

The functionality of the event does have a positive association with event satisfaction. However, 15% of the respondents were less likely to agree with the functionality of the event to increase their satisfaction ($p = 0.003$, $\beta = -.0152$). The finding was found to contradict the study about event venue satisfaction which listed the functionality of the event services cape as one of the drivers of the attendees' event satisfaction (Talantis et al., 2020). These findings emphasize that the technical functionality and user experience design of virtual event platforms are key determinants of attendee satisfaction, underscoring the need for event organizers to prioritize these aspects. Yozcu, Kurgun, and Bağıran (2023) found that the functionality of virtual event platforms, including ease of use, accessibility, and the effectiveness of features like networking tools and content delivery, plays a significant role in enhancing attendee satisfaction. When virtual event platforms are functional and user-friendly, they significantly contribute to the overall positive experience and satisfaction of attendees. highlighted the importance of event functionality in ensuring attendee engagement and satisfaction (Yozcu et al., 2023). The research showed that a well-functioning virtual platform, which provides seamless interaction and reliable performance, directly correlates with higher levels of attendee satisfaction (Talantis et al., 2020). Functional aspects like event navigation, interactive features, and the overall stability of the platform are thus crucial in reducing user frustration and enhancing satisfaction. However, this study found that ease of use did not significantly influence the virtual environment satisfaction of the attendees ($p=0.873$)

As for entertainment and fulfillment, the variable was found to be significant in influencing attendee satisfaction when attending an event. About 22% and 28% of the respondents were more likely to be satisfied when there were fulfillment and entertainment dimensions in the event they attended respectively ($p = 0.029$, $\beta = 0.226$; $p = 0.037$, $\beta = 0.278$). The finding is consistent with few literature reviews (Kim & Ko, 2019; Kim et al., 2021) (Kim & Ko, 2019. A study found that incorporating engaging and interactive content, such as gamified experiences and personalized entertainment, plays a crucial role in enhancing the overall satisfaction of attendees at virtual events (Jung et al., 2024). For instance, events that blend educational content with interactive elements and entertainment options, like live polls, quizzes, and networking opportunities, create a more engaging experience that fulfills attendees' expectations. This combination of entertainment and engagement not only keeps participants interested but also fosters a deeper connection with the event, leading to a higher satisfaction level (Song et al., 2024). Moreover, gamification has been shown to significantly impact attendee satisfaction in virtual events. By integrating game elements into the event structure, such as point systems, leaderboards, and rewards, attendees often experience increased motivation, engagement, and enjoyment. Studies indicate that gamification in virtual environments not only enhances user interaction but also boosts overall satisfaction by making the experience more immersive and interactive. Recent research highlights that gamification positively influences satisfaction, engagement, and motivation in virtual learning environments (Zhang et al., 2019). This suggests similar benefits can be expected in virtual events, where gamification can transform passive participation into active involvement, leading to a more satisfying experience for attendees.

Privacy and security do have a positive association with event satisfaction. Privacy and security are increasingly recognized as critical factors influencing attendee satisfaction in virtual events. Research has demonstrated that clear privacy policies and robust security measures significantly enhance user trust and overall satisfaction (Flowers & Gregson, 2012). A study emphasizes that privacy and security concerns directly affect users' trust

in digital platforms, which in turn impacts their satisfaction and willingness to engage with the event (Gal-Or et al., 2018). Similarly, a study in the context of online learning revealed high levels of concern about online privacy and the students were reported to be reluctant to have their webcams on for a variety of reasons, often concerned with the privacy of personal information (Almekhled & Petrie, 2024). Complex, unexpected relationships were also found between online privacy and security concerns and trust. Moreover, social presence was found to be a significant factor influencing the event satisfaction among attendees to virtual events in the current study. This finding is consistent with recent research that highlights the significance of social presence in enhancing attendee satisfaction during virtual events. Social presence, which involves the perception of being "with" others in a virtual space, plays a crucial role in fostering a sense of community and engagement. A systematic literature review found that higher levels of social presence, facilitated by interactive features, directly correlate with increased satisfaction and engagement in virtual environments (Oh et al., 2018).

5. Conclusion

Event satisfaction is one of the essential dimensions that makes the attendees re-attend the event if it is held in the future. As the repeat and loyal consumer is key to establishing a customer base in any business or event, the organizer would need to create a considerable amount of satisfaction in the attendees to allow repetitive purchase behavior to the event organization in the future (Xu, 2020). Based on the findings, future virtual events should incorporate various improvements, especially in the entertainment part of the event. More attendees will be attracted to re-attend the virtual event if the event creates memorable activities and more real and hands-on events rather than just a speech.

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The Cultural Event Typology in Bali

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Abstract: There is limited research focusing on festivals and cultural events. This study aims to enrich previous research on event typology, particularly in cultural events. Additionally, the findings of this research can be applied by event practitioners. This is particularly valuable for organizers from outside Bali who may not be familiar with local wisdom and regulations. A qualitative approach was used to have a better understanding of ritual practices and culture. The researcher observed three cultural events in 2024: the Piodalan and Pengerupukan ceremonies in a village in Gianyar Regency, and the Ogoh-ogoh competition in Denpasar city, Bali, Indonesia. In addition, in-depth interviews were conducted with the village head and unstructured interviews with the participants of the ceremonies. Thematic analysis was conducted to obtain dimensions. Four dimensions of cultural events were found: (1) management – who manages and how the event is managed, (2) function – the purpose of the performing arts, (3) objective – the goal of the event, and (4) audience – who attends the event. This domain was then combined with the typology of performing arts according to Balinese local wisdom, broadly divided into sacred and profane performances, which include Wali, Bebalih, and Balih-balihan dances. This combination was reflected in a matrix of event typologies in Bali. Further research could explore the audience's or the artists' perspectives on presenting each type of performing arts. Expanding the number of villages could also provide insights into different rituals in other villages in Bali.

Keywords: *Cultural festival; Cultural event events; Typology of festival; Typology of event*

1. Introduction and Background

Researchers continue to strive to identify the evolution of planned event types, adapting to the changing times. Planned events can be examined from various perspectives such as function, theme, attendees, scale, and more, making it impractical to have only one typology as a reference (Mysyk, 2020). The classification can also be based on the type of venue, urban design, and adaptations to COVID-19 conditions, including hybrid and online events (Hassanien and Dale, 2011; Smith *et al*., 2021; Schulte-Römer & Gesing,2023; Higgins & Halpin,2022; Yakovchuk, 2022; Simons,2019).

Knowing the types of events is crucial for event organizers and managers to understand the purpose of each event, prepare specific facilities, choose the appropriate venue, and handle other particular requirements for each type of event (Getz, 2008). He divides events based on their forms: (a) cultural celebrations, (b) political and state events, (c) business and trade events, (d) educational and scientific events, (e) arts and entertainment events, (f) sports competitions, (g) recreational events, and (h) private events. Planned events can be categorized based on a portfolio approach, by considering seasonality, market profile, and the value offered by an event, resulting in (1) occasional mega-events, (2) periodic hallmark events, (3) regional events, and (4) local events (Getz & Page, 2020).

Understanding typologies is instrumental in the development of event tourism, is acknowledged as a strategic consideration (Brown et al., 2007; Hughes, Weaver & Pforr (Eds.), 2015; Presenza & Sheehan, 2013; Trost *et al*., 2012; Oklobdzija, 2015). From the perspective of event tourism, Getz & Page (2015) categorize planned events and their venue types into four sections: (a) business, (b) festivals and culture, (c) sports, and (d) entertainment.

This research focuses on festivals and cultural events to explore the typology of events in Bali, Indonesia. In the early stages of Bali's tourism development, the island was renowned for its cultural tourism (Williams & Putra, 1997). However, concerns arose that tourism might significantly impact Balinese culture, shifting it from "cultural tourism" to a "touristic culture." In practice, there has been a dialogic process between tourism and culture in Bali, where tourism is no longer an external force that alters Balinese culture; rather, it has become

an integral part of it (Picard, 1990).

To safeguard and clarify cultural practices, Balinese Hindu communities have categorized their arts and performances into those intended for tradition, religion, and entertainment (Picard, 1990). A core principle upheld by the Hindu-Balinese community is the local wisdom of Tri Hita Karana, which emphasizes harmony among humans (pawongan), nature (palemahan), and the divine (parahyangan), and involves the daily practice of Hindu religious rituals.

The Balinese people's life is inseparable from rituals, traditions, and cultural ceremonies. This has drawn the attention of researchers for many years (Mead, 1970; Di Kleen, 1923). As the only island among thousands in Indonesia with a Hindu majority population, and as the largest contributor to Indonesia's tourism sector, it is no surprise that Bali employs various strategies to preserve its socio-cultural identity. Organizing festivals is one way to sustain cultural heritage (Wulandari *et al*., 2021; Foley, & Sumandhi, 1994).

The Bali Arts Festival organized by the provincial government of Bali is an example of an event aimed at preserving Balinese culture. In 2022, this event attracted 1.5 million visitors over 30 days. The economic transactions from the exhibition of small and medium enterprises amounted to 10 billion Rupiahs. In 2023, the 45th Bali Arts Festival saw an increase in visitors to 1.6 million, including 1,476 international tourists. The festival involved 309 art groups with an estimated 19,000 artists from various regencies/cities across Bali Province (Novlina et al, 2023).

Denpasar, as a municipality in Bali, also utilizes festivals to preserve culture and attract tourists (Mahardika, 2015; Setianti *et al*., 2018). A series of events are created, including the Ogoh-Ogoh Festival, Heritage Omed-Omedan Festival 2018, International Kite Festival, Charm of Serangan Island, Lais Meseluk Market, Denpasar Book Fair, Sanur Village Festival, Rare Bali Festival, and Maha Bandana Prasadha. These are followed by the Denpasar Festival (DenFest), which serves as the culmination of the series. Table 1 shows some data regarding DenFest from 2020 to 2023.

Table 1: Data of Denpasar Festival

Year	Events	Number of visitors	Number of small enterprises	Total transaction (IDR)	Number of artists involved	Number of the community involved
2020	*Online*	17,867	1255	3,388,472,000	64	27
2021	*Hybrid*	26,531	71	492,311,000	1,141	20
2022	*Offline*	48,537	161	3,426,969,250	2,041	46
2023	*Offline*	58,630	178	4,908,028,000	1,648	22

Source: https://satudata.denpasarkota.go.id/dataset/80a0cc6d-b7c0-4782-bc63-0b0d9f12ee87/ resource/ ea71666c-6ff0-414d-8997-3a4ebddb5ca4/download/309.-denpasar-festival-dalam-angka-tahun-2020-2023.xlsx

Besides the Bali Arts Festival (PKB), Bali has a tradition of parading Ogoh-Ogoh during the Pengerupukan ceremony as part of the Nyepi Day festivities, which could be a strong basis for village-centered events. Ogoh-Ogoh represents balance, embodying qualities such as good and evil, divinity and demonism, as well as unity and conflict (Winarta, 2018). Through their youth organizations (Sekaa Teruna Teruni), traditional neighborhoods in Bali create Ogoh-Ogoh annually. Bali has 4,432 customary villages distributed across 9 regencies (Department of Advancement of Customary Communities, 2023), meaning there are at least 4,432 events at the village level.

Apart from the Bali Arts Festival (PKB), Bali holds a tradition of parading Ogoh-Ogoh during the Pengerupukan ceremony as part of the Nyepi (The Silence Day) celebrations. Ogoh-Ogoh symbolizes balance, representing qualities like good and evil, divinity and demonism, as well as unity and conflict (Winarta, 2018). 'Banjar adat' which is a traditional group of neighborhoods in Bali, through their youth organizations (Sekaa Teruna Teruni), create Ogoh-Ogoh every year. Dinas Pemajuan Masyarakat Adat (2023) reports that 4,432 traditional

neighborhoods (*banjar*) are spread across 9 regencies in Bali. This means there are at least 4,432 events at the smallest village level.

In 2017, a total of 7,079 Ogoh-Ogoh were recorded parading through the streets of Bali. It required nearly 30,000 personnel, consisting of 5,626 police officers and 22,291 traditional security guards (pedaling), to assist in securing the event. For comparison, the COVID-19 period Olympics in Tokyo in 2020 required 34,000 police personnel and private security units (Polak-Rottmann, 2020). Kompas.com (2017) on March 17, reports that Buleleng regency had the highest number of Ogoh-Ogoh, with 1,381, followed by Gianyar with 1,355 Ogoh-Ogoh.

Odalan is another religious event in the form of anniversary celebrations held at every temple (pura) scattered throughout Bali. In 2022, the Central Statistics Agency recorded a total of 4,837 temples, consisting of 9 Sad Kahyangan, 189 Dang Kahyangan, and 4,639 Kahyangan Tiga (Adnyana et al., 2017). The series of Odalan events are particularly special because they feature sacred performing arts, known as Wali, which are exclusively dedicated to Sang Hyang Widhi (The God). Tourists attending these events will not find the usual Balinese dance performances named Balih-balihan typically showcased in hotels, restaurants, or open-air theaters, as they are far removed from the sacredness (Ariana, 2023)

Apart from events aimed at cultural preservation and those closely related to religion and tradition, Bali frequently hosts international events such as The 2022 G20 Bali Summit, the 2018 Annual Meeting of the International Monetary Fund – World Bank Group, and The 10th World Water Forum in 2024. Music festivals like Djakarta Warehouse Project, Soundrenaline, and Joyland are examples of how external event organizers see Bali as an ideal location for their events. In these events, Balinese culture is often showcased as a key element.

The organizers, sponsors, and stakeholders of these events, who are mostly from outside Bali, need to understand how to integrate their events with Balinese culture, traditions, and religion. By studying the typology of events, especially festivals and cultural events in Bali, the existing event typologies can be enriched. For practitioners, this research is expected to help event organizers and managers planning to hold events in Bali gain a deeper understanding of local wisdom and apply it to their event management practices.

2. Research Methodology

As researchers, we delve into the rich tapestry of human experience, capturing thoughts, feelings, and perspectives beyond simple numbers. Usually, qualitative researchers perform new concepts and refine concepts grounded in the data (Newman, 2014). We use tools like thematic analysis to make sense of this vast amount of unstructured data. This method allows them to systematically identify recurring patterns and themes within the data, offering valuable insights into human behavior and social issues, especially when we try to dig deeper into this case in Bali.

We believe that thematic analysis is a flexible and adaptable approach that researchers can use to analyze data collected through various methods, such as observation, in-depth interviews and secondary data. It can capture beneath the surface of the data, uncovering the underlying meanings. By identifying and analyzing these themes, researchers can better understand the phenomenon under investigation.

Thematic analysis itself is a multi-step process. Initially, researchers become thoroughly familiar with the data by carefully reading and rereading it to absorb the nuances. This familiarization phase allows them to start identifying potential themes and concepts. Next comes the coding stage, where researchers assign codes to specific data segments that represent relevant ideas or topics. These codes serve as building blocks for the themes that will emerge later.

Once the coding is complete, researchers begin the crucial task of identifying themes (Liamputtong & Ezzy, 2005). They group related codes, searching for patterns and recurring ideas that weave a narrative through the data. These themes represent the core findings of the research, offering valuable insights into the central issues and experiences captured in the data. Researchers then refine these themes, ensuring they accurately reflect

the data and address the research questions that guided the study.

This research focuses on several festivals and celebrations. First, the Piodalan Ceremony in Batuan Village, Gianyar Regency, Bali. The ceremony takes place over 4 days and 3 nights, starting from February 3, 2024. Observations and interviews were conducted on the first day at Pusa Puseh Batuan. This location was chosen because Batuan is one of the oldest villages in Bali, according to the Baturan Inscription written during the reign of King Sri Aji Mara Kata. The inscription, dated 944 Icaka (1022 AD), mentions that artistic activities, including performing arts, were part of everyday life in Batuan. The inscription is still preserved intact at Pura Puseh Batuan (Adnyana *et al*., 2017; Ariana, 2023).

Second, the 2004 Kasanga Festival, an Ogoh-Ogoh competition held by the Denpasar city government. The competition ran from March 1-3, 2024. Twelve winners were selected from 360 Sekaa Teruna Teruni groups that participated. This event was chosen because Denpasar is the largest district in Bali and invests heavily in cultural preservation. Observations were made on March 1, 2022, when the Ogoh-Ogoh finalists were paraded through the city center.

Third, the Pengerupukan ceremony was held one day before The Silence Day (Nyepi) which was on 10 March 2024. Observations were conducted in Banjar Gerih and Banjar Puaya in Batuan Village. Banjar Gerih had over 5 giant Ogoh-Ogoh installations, while Banjar Puaya had 14. Unstructured interviews were conducted to support field observation data.

An in-depth interview was conducted with the Head of Batuan Village, the highest official in the village. The interview topics included the types of events held in the village throughout the year, the village's role in these events, the performing arts that showed in the events, and the village's efforts in preserving arts and culture.

3. Results and Discussion

The Piodalan Ceremony, Pengerupukan, and Ogoh-Ogoh Competition observed are categorized as festivals and cultural celebrations which include commemorative events, carnival parades, and religious rituals (Getz & Page, 2015). In Batuan Village, there are events outside of these categories, such as (a) sports events, including competitions in various sports aimed at connecting with the younger generation, (b) village birthday celebrations, (c) art exhibitions by local art groups, (d) training and seminar events, (e) community welfare services like blood donation and free health check-ups, and (f) donation handover events from companies as part of Corporate Social Responsibility programs. These events occur throughout the year.

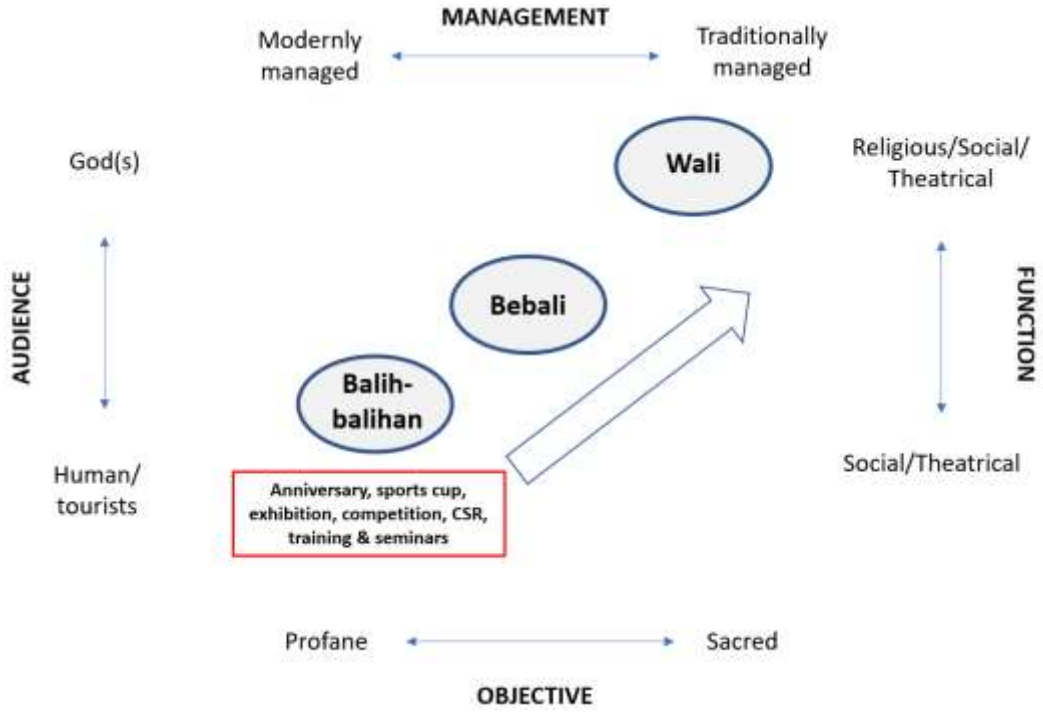
The event organizers and managers of the festivals that were observed were the community groups. They receive support and endorsement from the government at the village, district, municipality, and provincial levels. This support can come in the form of development funds, venues, promotions, and other facilities like security teams. The coding results revealed four dimensions: (1) management – who manages and how the event is managed, (2) function – the purpose of the performing arts, (3) objective – the goal of the event, and (4) audience – who attends the event. Performing arts and cultural attractions were present in every observed festival, in the form of traditional dances, theater, and music. As Suroto & Ardianto (2019) argue, performing arts are an integral part of any event.

Peraturan Gubernur Bali (2017) states that the performance of cultural attractions in Bali is regulated by local regulations and governor decrees. One of the articles, namely Peraturan Daerah Bali (2019). The rules and decree specify the division between profane and sacred cultural arts attractions. Traditional performing arts in Bali are classified into Wali, Bebali, and Balih-balihan (Wang, 2016; Eka, 2023; Asmarandani, 2018). Wali dance is a very sacred performing art, performed by chosen individuals as offerings to God and deities as their representatives. Only certain people are permitted in the area when it is performed. The dances that can be shown to tourists are Balih-balihan-type dances.

Based on the identified dimensions and types of performing arts in Bali, the typology of festival events in Bali can be mapped into a matrix as shown in Figure 1. Events in Bali can be viewed from four dimensions: (1) management, (2) function, (3) purpose, and (4) audience. Each dimension has its spectrum, depicted by arrows

moving left-right or top-bottom. In all observed events, traditional dances accompanied by traditional music and theatrical performances were showcased. As Suroto & Ardianto (2019) argue, performing arts are an integral part of any event. Traditional performing arts in Bali are divided into Wali, Bebali, and Balih-balihan (Wang, 2016; Eka, 2023; Asmarandani, 2018) depicted in the matrix as blue oval shapes. Meanwhile, events that do not primarily involve traditional performing arts, such as anniversary celebrations, sports competitions, exhibitions and competitions, group tourist visits from government institutions, and Corporate Social Responsibility visits from private companies, are represented by red-colored boxes.

Figure 1: The Event Typology Matrix in Bali



Source: own analysis

In the management dimension, there exists a spectrum between modernly managed and traditionally managed events. Performances categorized as Wali are managed by traditional village councils, and religious leaders, and must adhere to the customary village regulations known as Awig-a wig (Bali *et al*., 2021). In the function dimension, as events move towards Balih-balihan, their function becomes more social-oriented due to their entertaining nature. Conversely, as they move upwards towards Wali, their purpose becomes more religious. Although both types involve social and theatrical elements, gatherings and interactions are inherent in every event.

Moving on to the purpose dimension, traditional dance, music, and theatrical performances are regulated by the Bali government which distinguishes between sacred attractions intended for religious and cultural rituals and profane attractions intended purely for entertainment (Bakker, 2015; Dibia, 1985). Lastly, in the audience dimension, the spectrum ranges from deities to humans. In sacred performances, the dances and music played are offerings presented before the Gods and deities as witnesses. Conversely, in Balih-balihan performances, the audience consists of human attendees such as tourists.

4. Conclusion

From the discussion above, it can be concluded that villages serve as the smallest yet most abundant base for event organization in Bali, particularly for cultural and religious festivals. Villages also play a key role in the development of the tourism sector, especially through the village tourism program (Suranny *et al.,* 2023). The

function of Odalan, as described by Dibia (1985), remains evident in the current function of Piodalan, indicating that the tradition is well-preserved. They showcase preserved local wisdom while being open to new ideas (Wohangara**,** 2019).

In the development of events in Bali, both before and after the COVID-19 pandemic, Sunarta *et al*., (2022) observed that the dynamics of events in Bali are closely intertwined with the dynamics of tourism. This connection gives events in Bali a distinctive character compared to those in other regions that are not tourism-related. Some observable characteristics include: (a) events in Bali, in various forms, are closely linked to tourism; (b) events serve various purposes such as fulfilling traditional, cultural, or tourism-related interests; and (c) events in Bali can be categorized as personal, cultural, organizational, or entertainment-based.

Cudny (2014) divides festivals based on (a) attitude to religion. (b) location), (c) social class structure, power distribution, and social roles, (d) important moments in life, (e) season, (f) scale and status/rank, and (g) theme. These findings will complement previous findings on event typology, offering a matrix format to view events from multiple dimensions. Specifically in Bali, there are regulations on how profane and sacred performing arts should be performed when they should take place and their purposes

The author also argues that the cultural and religious elements in Bali's events are inseparable. For those planning to organize events in Bali, it is crucial to understand this typology mapping to ensure compliance with local customs and regulations. These findings can assist event practitioners in designing events to be held in Bali.

Further research could explore the audience's or the artists' perspectives in presenting each type of dance. Expanding the number of villages as research sites could also offer another insight, potentially uncovering variations in rituals.

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Cultural Event Development Model for Quality Improvement of Tourism Event: Case of the 3rd Fishing Boat Festival in Sungsang Village IV, Banyuasin Regency, South Sumatra Province

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Abstract: Tourism related to events is a representation of the selling power of the location where the event is held. Festival events have an important role in increasing the selling value of destinations, but this study found that the 3rd Fishing Boat Festival event has not been packaged properly and there is no target market database targeted as tourists. This study aims to create a model for the development of cultural festivals, based on 5 basic stages, namely research, design, planning, coordination, evaluation and compiling a template for providing a database of targets and target tourists using the definable, sizeable, reachable, relevant segmentation method. This study used a combination method or *mixed method* with *a sequential explanatory* design with a sample of 100 respondents with 3 data collection techniques, namely by direct observation, document study, and interview. This research resulted in 5 stages consisting of 40 steps of festival event management, as well as the targeted tourist segmentation profile. The research contributes to the achievement of the goal of improving the quality of cultural events in tourism villages.

Keywords: *Cultural event, Event festival, Tourism event, Festival market segmentation, Stages of event*

1. Introduction and Background

Tourism is currently the most dynamic economic activity, and it plays an important role in improving the economy for society (Mobaraki, 2023). Global trends show that tourist demand and supply conditions indicate relevance for developing tourism-based events. Global events are an incredible platform for economic development and social regeneration in many cities, regions, countries, and businesses, which have vast resources to organize an event [Booth et al, 2010]. For this reason, special events, especially local events are believed to be one of the potential opportunities to achieve the goals and targets of event-based tourism development (Ivanova, 2021).

Today, with various major changes occurring on a macro scale such as globalization, regionalization, and regional autonomy, a region certainly needs to adopt a new perspective and approach. This is intended so that a region can increase competitiveness and attract the interest of the target market, especially its three main target markets, namely tourists, businessmen, and investors (Wulandari et al, 2015). One of the effective ways to promote the uniqueness and excellence of the region is to hold marketing activities or events. Several studies, it has been shown that event marketing is the right solution for event products that are still trying to build reach and awareness of potential visitors (Rachmadian & Chaerudin, 2021). Event marketing can build direct and real contact with visitors during events (e.g., festivals, exhibitions, or sporting events) and can create a memorable brand experience for everyone (Miller & Washington, 2012).

Pre-observation data by the author in the onsite-finding session of the research, it was found that the 3rd Fishing Boat Festival event has not been packaged properly and there is no target market database targeted tourists. The local committee did not carry out planning that referred to the target visitors needed, the targeted visitor profile, and the timeline of activities towards the implementation of the event that was not properly documented, even though in the opinion of several experts that tourism events create a good image so that they benefit a tourist destination, increase development more evenly, and function to attract foreign tourists and Indonesian tourists (Higgins, 2018). This is based on the fact that tourism events have a significant impact on the decision to visit and increase the popularity of the city (Getz, 2008) and tourism events influence the variables of the decision to visit (Pakarti et al, 2017).

The significant benefits of the implementation of the event then gave the author the background to explore

what and how the local committee carried out the timeline for the implementation of the 3rd Fishing Boat Festival event in Sungsang IV Village, Banyuasin Regency, then made it a fact and offered proportionate steps to be considered in running the event, especially the cultural festival event whose roots are from the activities of the local community as the host of the event. This research is important to be carried out to provide knowledge about how the steps that must be taken by the local committee in carrying out the stages of implementing a local event to improve the quality of local events.

2. Literature Review

Tourism related to the event is a representation of the selling power of the location where the event is held [Gonda; Angler; Csóka, 2021]. Tourism festivals have contributed to marketing destinations, building destination image and branding, attracting tourists, becoming a trigger for special areas and attractions, and being a catalyst for economic development [Al-Azzam, Mohamed & Chiu, 2022]. Festivals as part of special events, have an important role in increasing the selling value of destinations (Chen,2022). So far local authorities in several countries have also used cultural festivals as a medium to bring tourists and aim to extend the visit of tourists who want to see local culture [Richard and King, 2022]. As for the local community, the festival is believed to provide many opportunities for local people to relax and have fun with family, and friends and open new relationships (Ibenwa and Uroko, 2022).

To manage a successful cultural festival, the organizer must pay attention to production factors and festival programs that must give a message about the importance of the festival and make the venue an implementation that respects the cultural values of the people and local community (Thanee, 2010). This is because different perspectives of the community in seeing the use of cultural commodities will affect the participation of local communities [Nurhadi et al, 2023]. The festival's goal is to express experiences, revitalize traditions, build community pride, validate community groups, increase community participation, introduce new and challenging ideas and broaden cultural perspectives (Thanee, 2010).

The problem found in observations in the Sungsang IV tourism village of Banyuasin Regency is that although it is widely known that cultural-related tourism events have a significant impact on tourists' visiting decisions, the 3rd Fisherman Boat Festival has not been well packaged by the local committee. Some academic findings suggest that locally supported festivals, with local resources, will provide benefits in the area [Koreman, 2023]. Festivals also have an impact on network building inside and outside the venue, and of course, have a positive effect on regeneration. [Koreman, 2023]. In addition to not packaging the 3rd Fishing Boat Festival properly, based on pre-research observations, it was also found that there was no market database or visitors targeted by the 3rd Fishing Boat Festival committee, even though various marketing ideas aimed specifically at managing repeat tourists, because the value is very important, of course, festival events are very dependent on tourists who come repeatedly (Al-Azzam; Mohamed; Chiu, 2022).

The existence of a database related to the targeted tourist target market will provide support for the event committee of the 3rd fishing boat festival in Sungsang IV tourism village and will direct strategies in managing cultural events to increase tourists to tourist villages. This will certainly provide a deep understanding of how the target market spends their time attending the event and provide local organizers with information that is important in developing marketing, planning, and management strategies, which aim to contribute to increased revenue, tourist satisfaction, and quality growth in the future [Abkarian et al, 2021]. So the 3rd fishing boat festival in Sungsang IV tourism village can provide significant economic benefits for people in the tourism village. Conversely, event-based tourism also requires the role of residents because the impact is very important, the perception of local people will certainly maximize positive things and minimize negative impacts [Scalabrini; Remoaldo; Fernandes, 2023]. It is also important to look at the content that is considered suitable for the venue for the cultural festival, by discussing with local communities the impact generated when the event is held, the benefits of organizing the event (e.g. the number of participants, the number of tourists and the economic impact) as well as factors that are attractive and expected to achieve benefits to be achieved by the event organizers (Kim; Park; Choi, 2021).

3. Research Methodology

This research is important to be carried out to make a model for the development of cultural festivals, by elaborating the stages in the implementation of festivals based on 5 basic stages described in the stages of event management, namely research, design, planning, coordination, evaluation [Goldblatt, 2002] and compiling a template for providing a database to find out the targets and targets of targeted tourists. And contribute to the achievement of goals to improve the quality of cultural festivals in tourist villages. This is because events are commodities that require proper positioning in the market. The targeted target audience must know the festival and be able to see the value of being involved and present to support it [Booth et al, 2010]. For the preparation of the targeted market database, the segmentation used is the definable, sizeable, reachable, and relevant method (Adcock; Halborg; Ross, 2002).

From a cultural perspective, the festival aims to preserve and innovate through cultural and artistic expressions that reflect the intangible heritage of a community [Aguado et al, 2021]. Based on this definition, this study explores a cultural festival, namely the 3rd fishing boat festival in Sungsang IV tourism village, Banyuasin Regency and aims to improve the quality of the implementation of the festival by exploring how the stages and market segmentation targeted by the festival are carried out.

This study uses a combination method or mixed method with sequential explanatory design by combining qualitative and quantitative research methods sequentially to describe the stages of festival implementation that have been carried out by the local committee then analyzed data, using the Miles and Huberman model, namely, data collection, data reduction, data display, conclusion.

In this study, the population is tourists who visit to witness the activities of the 3rd Fishing Boat Festival in the tourist village of Sungsang IV. The resource persons/informants are (1) Community Drivers of the tourism sector; (2) Local authorities; and (3) tourists.

Data acquisition was carried out quantitatively and the sample used in this study, using *the Random Sampling* technique which provides equal opportunities randomly for each element or member of the population selected to be a member of the sample. Based on visual observation data, tourists who come to Sungsang IV tourism village come of various ages and genders, then sampling the *Accidental* Sampling technique, while qualitative data uses the *Non-Probability Sampling method* with the type of *Accidental Sampling*.

The population and sample size or number of samples in the study are unknown and the error rate has been set at 0.05 or 5% so the formula used is as follows:

Figure 1: Determination of Population and Sample Size

$$= \left[\frac{Z_{\alpha}/2_{\sigma}}{e} \right]^2$$

where:
n = Number of samples
Zα = a measure of confidence level,
α = 0.05 (95% confidence level)

mean $Z\left(\frac{1}{2}\cdot 0.05\right) = Z_{\,1-0.975}$

in the table found 1.96)
σ = standard deviation (0.25)
e = standard error or tolerable error (5% = 0.05)

$$n = \left[\frac{Z\alpha / 2\sigma}{e} \right]^2$$

$$n = \left[\frac{(1{,}96).(0{,}25)}{0{,}05} \right]^2$$

n = 96,04

Based on the data above, the number of samples taken in this study was 97 respondents. However, to achieve representative results, the study took a sample of 100 respondents. Data collection with 3 data collection techniques, namely (1) direct observation during the 3rd Fishing Boat Festival in Sungsang Tourism Village IV; (2) document studies; and (3) interviews. The triangulation data validation process is an effort to increase the validity of observations or *interviews* in the context of research, then testing the validity of data is carried out by triangulation methods, source triangulation.

4. Results

Based on the data found at the research location, using the template of 5 stages of the event, namely research, design, planning, coordination and evaluation can be compared in the table below:

Table 1: Comparison of the Stages of the 3rd Fishing Boat Festival in Sungsang IV Tourism Village, Banyuasin Regency

Types of Stages	On-Site Findings	Concept Description [15]
1. Research	At this stage no research process is carried out, consideration at this stage is based on the experience of implementing activities in the previous year.	The research process is to find out the needs, wants, wants, and expectations of prospective tourists targeted by collecting data and analysis of previous events related to reviews from various parties.
2. Design	At this stage, the process of creating creative ideas is carried out but there is no benchmarking at similar events, referring to the implementation of the previous year's event.	Stages of creative ideas—to create to compile ideas that will be outlined in the implementation of festival events. Observe the idea of similar festivals; brainstorm with key stakeholders.
3. Planning	At this stage, the committee held minimal meetings, discussed proposals for activities that focused on the availability of costs, and did not see the involvement of all festival stakeholders, there was no arrangement of the event timeline.	This planning stage involves the use of time/space/duration In planning meetings, announcing several important matters scheduling meetings, assigning work preparation, compiling and managing event timelines.
4. Coordination	This stage is carried out by community groups in tourism villages, does not involve vendors professionally, there is no contract with vendors and all decisions taken regarding the implementation of the festival are carried out centrally through the head of the festival committee.	The operational phase and implementation of coordination planning with all stakeholders comprehensively, prospective vendors, making vendor contracts, preparing and implementing production schedules, at this stage, the committee will make many important decisions.
5. Evaluation	At the evaluation stage, the meeting was held 1 time, for the submission of matters related to the festival event, for example, if there are production or operational debts that have not been resolved or if there is damage to the equipment used during the activity, no survey was found to collect data, make data tables, analyze data, the final report discusses more matters related to finance.	This stage is connected to the initial stage (research). Distribute surveys, manage survey data, prepare reports of findings and recommendations and submit final reports. This process evaluates each part of the event process through a general comprehensive review of all phases executed.

Source: Processed by researchers based on J. Goldblatt, Special Events: Global Event Management in the 21st Century (2024)

Table 1 shows data that the stages carried out by the organizing committee at the 3rd Fishing Boat Festival were mostly not carried out following the concepts of research, design, planning, coordination and evaluation, although in event management it is necessary to provide an overview using the 'performance management model' as a framework for systematically identifying [Berridge, 2007].

The market database targeted by segmentation uses the definable, sizeable, reachable, and relevant method, in Table 2 as follows:

Table 2: Target Market Segmentation of the 3rd Fishing Boat Festival Event in Sungsang IV Tourism Village, Banyuasin Regency

Segmentation [16]	Description
Definable	This segmentation identifies target travellers based on certain characteristics such as traveller age; demographic conditions of tourists (gender, income, education, occupation); geographical conditions (place of residence, local, regional or foreign tourists); experience of tourists visiting the festival (visitors/new tourists, repeater travellers); Interest in cultural festivals (music, dance, fine arts, or local traditions).
Sizeable	This segmentation refers to a large market potential with a significant number of potentials. It is usually individuals or communities who love local music; tourists who like culture from outside the region or even abroad; community of artists or those who like the marine world, fishing hobby communities, communities who like special cuisine, fans of the art of fishing boat building or local culinary enthusiasts who have a special interest in cultural aspects or attractions held at the cultural festival.
Reachable	This segmentation refers to the effectiveness of communication. Usually, this segment is familiar and close to the work team of cultural festivals, namely individuals or tourist groups that are easily accessible to mainstream communication channels, such as websites, WhatsApp group messages, social media (Facebook/Instagram/Twitter (X)/Tik Tok, etc.), email, or direct promotion; by providing information about festival events, dates, locations, and other event details, which can be easily accessed. This includes individuals or communities who have the potential to be involved and participate in the festival to influence their desire to attend the festival and who have interests or needs that have relevance to the festival, such as fishing communities, students and researchers related to fishing boats.
Relevant	This segment refers to individuals/groups of tourists who have interests, needs, or characteristics directly related to cultural festivals, generally having a strong association with the content, purpose and theme of cultural festivals.

Source: Processed by researchers based on Adcock, Halborg; Ross, *Marketing Principles & Practice* (2002).

Based on the data shown in Table 1 and Table 2, the findings that there was no database of target tourist markets targeted at the 3rd Fishing Boat Festival, and the absence of management event stages at the 3rd Fishing Boat Festival in Sungsang IV Tourism Village, as explained in the introduction section, became the main gaps in this study, so that the view of the festival as an event that plays an important role in social development and the economy of a community, representing how intangible cultural heritage is expressed [Aguado et al, 2021] becomes asynchronous. However widespread the implementation of festivals to develop cultural tourism, there is still an ongoing debate about how the level of ability of festival events to attract tourists, especially from abroad.[Aguado et al, 2021] Of course this likely depends on the quality of the festival event itself, so the model of developing cultural festival events to improve the quality of tourism events offered in this study is presented in Table 3, below:

Table 3: Model of Development of Stages and Market Segmentation of Fishing Boat Festival in Sungsang IV Tourism Village, Banyuasin Regency.

No	Stages	Description	Development Models
1	**Research**	At this stage, 3 steps start with the committee team researching what are the needs and desires of tourists who have been targeted, for example, what tourists need and want as festival visitors, then analyzing and beginning to make a list of the needs and desires of tourists.	1. Collection of a database of tourists who are the target market as visitors to the festival. 2. Analysis of survey results and evaluation of the implementation of previous events (SWOT). 3. Proposed needs and desires of tourists as festival visitors (venue, vendors, suppliers, performers, Food and beverage product, synopsis event, facility on site, technology in events, accessibility, sponsorship, safety and security, special needs access).

2	**Design**	At this stage 7 steps start with creative ideas to be compiled to be outlined in the implementation of the festival, which can be done by brainstorming with informants and main vendors, to obtain input ideas and find out the needs that will be implemented at the festival.	4. Setting a target tourist festival goer. 5. Develop bisnis plan event festival. 6. Determination of work teams based on the mission, goals and targets set. 7. Preparation of festival event cost needs. 8. Develop marketing and promotion plans (social media, email, podcast, TV). 9. Venue setting, vendors, suppliers, performers, Food and beverage product, synopsis event, facility on site, technology in events, accessibility, sponsorship, safety and security, special needs access. 10. Compilation and completion of proposals.
3	**Planning**	At this stage, 9 steps start with preparing a work team timeline, making a comprehensive design to be done by the work team and a scheduled meeting agenda to control the progress of the implementation of the event management process. This is important because, at the planning stage, all ideas and plans begin to be made in detail.	11. Compile a work timeline. 12. Designing a business-based event concept festival event plan. 13. Drafting a contract. 14. Meeting with stakeholders 15. Scheduled meeting agenda with the work team. 16. Generate sales revenues, increase profit, and new sources of funds. 17. Scheduling meeting progress. 18. Determining rundown details. 19. Preparation of risk management.
4	**Coordination**	At this stage, 16 steps indicate that it is starting to be crowded, where there will be a lot of execution of important decisions, especially those related to production, logistics, and handling event and during-event management.	20. Hold a pre-event. 21. The signing of contracts and cooperation agreements. 22. Coordination of local authorities, police, medical teams, ambulances, fire brigades and internal stakeholder events. Including Pre-security. 23. Process production and staging. 24. Provision of logistic events. 25. Implementation of promote events (social media, email, podcast, TV) 26. Volunteer Management. 27. Loading in & out. 28. On-site facilities check. 29. Developing a Contingency Plan 30. Crowd management. 31. Management of tourist registration. 32. During the event. 33. Implement a rundown event. 34. Settlement of debt bills. 35. Spread a Thank you letter.

5	**Evaluation**	In this last stage, 5 steps will test the initial plan, from the results of research in the first stage. So a survey was conducted to find out a general comprehensive overview of all stages that have been carried out, to the preparation of a report on findings and recommendations for the next implementation presented at the post-event.	36. Distributing surveys and data collection. 37. Test whether the initial objectives in the mission, goals and targets have been achieved. 38. Report on festival findings and recommendations. 39. Counting Return of Investment. 40. Carry out post-event activities.

Source: Processed by researchers based on Adcock, Halborg; Ross, *Marketing Principles & Practice* (2002).

Based on the description in Table 3, there are 5 stages consisting of 40 steps namely 40-S or 40 steps to improve the event tourism festival to offer to become a template for the management of the Fishing Boat Festival to improve the quality of the events held. Of course, this needs to be a concern considering that cultural events are important and valuable assets because they are related to the intangible cultural heritage of a region (Corallo et al, 2018).

5. Conclusion

Tourism events attract investment generate tourism circulation and increase the visibility of a region's assets [Corallo et al, 2018]. Because it answers why events must have high quality, especially festivals that aim as tourist attractions to provide personal benefits such as new or increased recreational opportunities for families, individuals and communities [Liang; Illum; Cole, 2008] The increasing quality of the implementation of the Fisherman Boat Festival event in Sungsang IV Tourism Village, Banyuasin Regency is a measure for the implementation of cultural festivals that offer joy, fun, and extraordinary cultural entertainment in the community. [Liang; Illum; Cole, 2008], Even further in the case of festivals of small scale, local identity becomes the most important thing [De Bres; Davis, 2001]. This research was conducted to provide a template for the stages of implementing the Fishing Boat Festival to have an impact on improving the quality of the implementation of the Fishing Boat Festival in the future. The description of the targeted target market according to the previous description is the contribution of this research to the importance of knowing the tourist market targeted by the local committee. However, to assess the measure of the success of the festival as a vehicle for cultural diplomacy is to see the extent to which the festival can combine various objectives [Dines, 2021]. Because the festival opens up opportunities for people whose daily activities are not active to become active. Festivals are associated with the preservation of celebrations of values that exist in society and, of course, are for the survival of the community itself (O'Sullivan & Jackson, 2002).

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The Role of Management Control System in Mitigating Corruption: The Levers of Control Perspective

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Abstract: A Management Control System (MCS) is a comprehensive mechanism organizations can use to ensure that their strategies and plans are effectively implemented to achieve their objectives. This concept paper explores the application of Management Control Systems (MCS), specifically concerning levers of control (LOC), for behavioral control. Based on the comprehensive literature review, it is expected that LOC will be able to provide a pathway to mitigate corruption not only from the perspective of fraud diamond theory but also from the perspective of agency theory. Agency theory highlights the inherent conflict of interest between agents, who have more information about their actions and intentions, and principals, who rely on agents to act in their best interest. This information asymmetry creates opportunities for agents to engage in corrupt practices, such as embezzlement, bribery, or fraud, including unethical behavior that may undermine organizational goals and trust. Effective control mechanisms are essential to mitigate these risks and ensure alignment between agents' actions and principals' objectives. Furthermore, organizations can apply the principles of fraud diamond theory when creating an effective control framework to deter corruption.

Keywords: *Management Control System, Levers of Control, Agency Theory, Corruption.*

1. Introduction

Corruption continues to be a major worldwide problem, hampering economic progress, eroding public confidence, and worsening socioeconomic disparities. The necessity to examine corruption emerged in the 1990s due to several causes, including state failure, deregulation, privatization of the market, and rapid access to information technology, which enhanced individuals' capacity to engage in economic activities (Alhekail, 2019). Corruption can happen in a democratic country and a non-democratic country (Tanzi, 1998). There is no comprehensive, universally accepted definition of corruption (Langseth, 2006). Corrupt behaviors such as nepotism, misuse of power, and bribery are challenges in establishing transparent and accountable governance in an organization. Curbing corruption and establishing ethical governance is not an easy task and requires an effective wide range of strategies (Aktan, 2015). To address the problems, numerous governments and authorities have implemented anti-corruption measures to promote ethical behavior and discourage individuals from participating in corrupt practices.

Despite the initiatives taken to combat corruption, the Corruption Perceptions Index (CPI) 2023 reveals that out of the 180 nations assessed, only 28 countries have experienced an improvement in their corruption levels in the past twelve years, while 34 countries have notably deteriorated. Although efforts have been made worldwide to criminalize corruption and establish dedicated agencies to combat it, corruption levels have not shown any significant improvement on a global scale. Denmark holds the top position in the ranking for the sixth consecutive year up until 2023, with a score of 90. Finland and New Zealand have scores of 87 and 85, respectively, which are very close, followed by Norway (84), Singapore (83), Sweden (82), Switzerland (82), the Netherlands (79), Germany (78), and Luxembourg (78). Regardless, the effectiveness of anti-corruption measures is sometimes questionable due to the number of corrupt cases discovered and emerging throughout the years. For instance, the 1 Malaysia Development Fund Bhd scandal is widely regarded as one of history's most severe corruption scandals (Jones, 2020). It involved the misappropriation and illegal transfer of billions of US dollars from the fund's accounts, as well as the illicit profits obtained through bribery and manipulation of bond prices (Jones, 2020). In addition, sophisticated networks and collusion at high levels pose difficulties in encouraging whistle-blowers and subsequently bringing the case to the prosecution. This widespread problem not only hinders economic advancement but also reduces the efficiency of organizations and undermines individuals' trust in their leaders and processes. One of the primary reasons is the presence of weak governance, as well as inadequate internal controls (Jones, 2020).

Management Control Systems (MCS) help businesses create and sustain sustainable behavioral patterns and help managers do their duties more effectively (Langevin & Mendoza, 2013; Oatley, 1999). Goal incongruence, or goal compatibility among employees and how it can achieve cooperation among the members of an organization, is often one of the issues in management control areas of research (Ouchi, 1979). Management control systems designed to address such behaviors can be perceived to be largely ineffective in identifying, managing, eliminating, or even mitigating the consequences (Tucker et al., 2024).

This concept paper will bring to light the importance of the utilization of Management Control Systems (MCS) for behavioral regulation, specifically based on the four control mechanisms proposed by Simon (1994). However, certain studies have explored the potential development of organizational control mechanisms (Martínez et al., 2003). It is indisputable that these control mechanisms can be simultaneously implemented in the organization to achieve a state of balanced control in a dynamic environment where creativity and innovation are necessary to navigate uncertainties and deviations. The purpose of behavioral control in this study is to examine methods for regulating the extent of corruption inside an organization. This study explores how LOC can effectively mitigate corrupt practices by reducing pressure and eliminating opportunities, capabilities, and rationalizations. It will also examine how LOC can help lower agency costs, drawing on the perspective of agency theory. The next section will discuss MCS, the illusion of control, and the interaction between levers of control and corruption based on the agency theory perspective and fraud diamond theory. `

2. Management Control System (MCS)

Control can be defined as establishing the conditions that drive an organization to achieve predefined outcomes (Fisher, 1995). Control can also be seen as a process of monitoring and regulating activities through hierarchical authority (Challagalla & Shervani, 1997). Control can be implemented at many levels within an organization; consequently, the criteria for effective control may vary across different levels of the business (Fisher, 1995). Management control is defined as the process by which managers ensure that resources are obtained and used effectively and efficiently in the accomplishment of the organization's objectives (Anthony, 1965). The system can be seen as a complex unit of many diverse parts subject to a common plan or purpose (Anthony, 1965). As such, a management control system can be designed to ensure that resources are acquired and utilized effectively and efficiently to achieve the organization's goals (Anthony, 1965).

MCS can contribute to balancing the conflicting goals (Kober et al., 2007) (Bukh & Svanholt, 2020). MCS design may eventually affect the influence and decisions the top management makes (Bukh & Svanholt, 2020), and therefore, it should be effectively established. MCS can also be used to establish clear accountability through appropriate segregation of duties and reporting structure. The existence of and adherence to formal written policies and procedures were seen to be important for reducing risk, especially exposure to legal liability (Tucker et al., 2024). The interactive involvement, for instance, from human resource employees in supporting managers throughout the professional advice allows them to distinguish between what is appropriate and what is not appropriate (Tucker et al., 2024). Authorization established would also allow the managers to mitigate any risks that could prevent the achievement of organizational activities. Utilization of scarce resources is more effectively distributed across the organizations through a proper design of MCS.

MCS was defined by Snell (1992) as a three-component model comprising behavior controls, output controls, and input controls. Input controls are control systems that oversee the knowledge and abilities of employees and other acquired resources of the organization (Snell, 1992). It is implemented to ensure the right resources are available to achieve the desired output or outcomes. The resources could comprise financial resources, human resources, and material resources. As these resources are limited, appropriate policies and procedures must be implemented as guidelines for utilizing them. Guidelines can also be made on the quality of input that meets the specification to contribute to high-quality output, and the selection process involves an effective information system to collect and analyze data related to the input (Snell, 1992). For instance, an effective recruitment process is needed to ensure that the best candidates are selected for the organization and that effective procurement management is in place for reliable suppliers. Not only that, there is a need to ensure contracts are managed and drawn on the best favorable terms to reduce the risk of disruption in achieving the outputs by ensuring that resources are available and meet the quality standard that supports long-term performance (Snell, 1992).

Output control focuses on the results of work and what is being accomplished by the employees. Many organizations fit the requirement of output control (Ouchi, 1979). Output control measurement provides an objective basis by providing the desirable performance (Snell, 1992), reducing bias and subjectivity. It usually involves quantitative information based on financial and non-financial data. Financial data include sales performance, revenue, profit, cost reduction, financial goals, and budget adherence. Examples of non-financial data are customer satisfaction scores, number of complaints, product defect rates, innovation rates, and employee engagement levels. The output control process involves gathering relevant information to set targets to assess performance. Output performance is measured, feedback is provided, and corrective actions are taken if performance deviates from the standard (Challagalla & Shervani, 1997).

Meanwhile, behavioral control is much more focused on the actions, attitudes, and behaviors shaping how the work is done in the organization. Behavior control regulates subordinates' actions on the job (Snell, 1992). Focus must be placed on the problem of achieving cooperation among individuals who hold partially divergent objectives (Ouchi, 1979). Behavioral control often uses qualitative assessments to assess adherence to procedures and compliance with behavioral standards. The advantage of this control is that it is direct (Snell, 1992). Behavioral control involves setting rules to achieve the target, supervising activities to monitor results, and ensuring adherence to standards before rewarding the employees' achievement. Monitoring and feedback are made based on the observed behaviors and procedure adherence. The rewards are then linked to compliance with behavioral standards and following proper procedures. Despite this, behavioral control may be an inefficient way to regulate performance if the monitoring costs exceed the marginal gain from control (Snell, 1992). Regardless, establishing a well-designed system of rewards is crucial for efficiently managing behavior, as individuals tend to concentrate their efforts on rewarded behaviors. The reward can be a tool for motivation in directing the behavior towards the intended direction. Difficulties may occur when individuals are incentivized for actions that appear beneficial at first glance but might hinder the achievement of organizational objectives in certain situations (Snell, 1992).

Despite the variations, organizations can do employee screening at the entrance, which may result in significant expenses for screening and staffing, and then rely on the best mechanism to achieve output controls (Challagalla & Shervani, 1997). Alternatively, organizations can adopt a less stringent approach to staff selection and instead depend on behavior controls (Challagalla & Shervani, 1997). Alternatively, through substantial investments in recruiting, monitoring, and training systems, organizations might prioritize and emphasize input, output, and behavior control concurrently (Challagalla & Shervani, 1997).

3. The Illusion of Control

An employee's perception of control can vary from that of supervisors and co-workers due to personal realities such as past experiences, age, education, or tenure, notwithstanding the potential benefits (Lopez-Valeiras et al., 2022). The Board of Directors exercises control over the actions of top executives on behalf of the firm, while top executives exercise control over middle management, and this control cascades down through the organization (Rosanas & Velila, 2004). It is crucial to contemplate the inherent characteristics of human beings inside the framework of organizations (Rosanas & Velila, 2004). The variations in the impression of control might lead to unintentional adverse outcomes.

An illustration of this can be seen in the Enron corruption controversy, which demonstrated that neither internal nor external auditors can detect problems before it is too late. External auditors may not provide reliable assurance of correct financial statements, questioning their effectiveness in guaranteeing accurate financial reporting (Rosanas & Velila, 2004). It is within the Board of Directors' authority to ensure ethical conduct within the company, suggesting that they have a crucial role in establishing and maintaining ethical standards (Rosanas & Velila, 2004). Despite this, there is concern about whether a corporation can be effectively administered by the Board without the risk of misusing resources, implying potential challenges in governance and oversight (Rosanas & Velila, 2004). The controversy is discussed in the surrounding of Enron’s management control system (Free et al., 2007). Affected by unforeseen changes, the sophisticated management control system could be compromised, ultimately contributing to Enron's demise (Free et al., 2007).

Besides, the complexity and volume of financial data make it difficult for individuals, even those with extensive experience and training, to fully understand and uncover indications of misconduct, highlighting the need for robust systems and controls to manage such information (Rosanas & Velila, 2004). Given that even highly respected professionals can be deceived by complex corruption schemes like Enron's, it is particularly challenging for those without technical training to determine the accuracy of a company's accounts, emphasizing the importance of having multiple layers of scrutiny and effective management controls (Rosanas & Velila, 2004).

4. Levers of Control (LOC) and Corruption

MCS sets specific performance objectives, defines unambiguous expectations, outlines the related consequences in the workplace, and can be utilized to attain desired behavioral results. The significance of MCS has been emphasized since as early as 1965 and remains important today. The control elements can be discussed in the various behavioral context such as corruption (Srirejeki, 2023), unethical behavior (Laguecir et al., B. 2022; Klein et al., 2019; Sherif et al., 2016; Langevin & Mendoza, 2013), dysfunctional behavior (Tucker et al., 2024; Fagbemi, 2012; Soobaroyen, 2005) and fraud (Haron et al., 2023). Although there are other management control systems (MCS) methods, this paper specifically highlights the significance of MCS in behavioral control, particularly in encouraging ethical behavior and mitigating corruption.

Simons (1995) presents a critical analysis of how upper management could prevent control failure through LOC should employees possess the authority or freedom to choose their activities or their conduct. The framework of levers of control has been extensively utilized in the literature on MCS in the past 25 years (Martyn et al., 2016). Pletsch and Lavada, 2016 introduced the importance of monitoring, rewards, activity limits, behavioral limits, management involvement, organizational learning, values, and purposes of the levers of control. The significance of control mechanisms is indisputable, as academics are becoming increasingly concerned with how they can address behavior-related issues such as corruption, fraud, and unethical behavior. For instance, using the Fraud Diamond Theory, Haron et al. (2023) can provide the mechanism for how LOC can prevent fraud in an organization. This conceptual paper will utilize the proposed argument by Haron et al. (2023) by incorporating another perspective based on agency theory and how it can help mitigate organizational corruption.

Agency theory examines the connection between principals (owners or shareholders) and agents (managers or employees), specifically focusing on conflicts resulting from divergent objectives and unequal access to information. The principal is the individual who possesses ownership or shares in a business and grants authorization to an agent to act on their behalf. The agent, on the other hand, is the manager or employee who is entrusted with the power to make decisions and assume responsibility. The conflict of roles can lead to agents following their interests, which may not always correspond with the aims of the principals. *Information asymmetry* and *moral hazards* are among the reasons why the issues have arisen. Four levers of control were introduced to prioritize the management of business strategy via a harmonious interplay of four levers: *diagnostic control* (involving surveillance), *boundary control* (representing behavioral limits), *interactive control* (requiring management participation), and *belief control* (representing fundamental values). The employment of LOC is valuable because it can effectively address corrupt-related matters within the agency theory framework. Figure 1 below summarises how these levers of control can mitigate corruption through the lens of fraud diamond theory and agency theory.

Figure 1: Interaction between levers of control

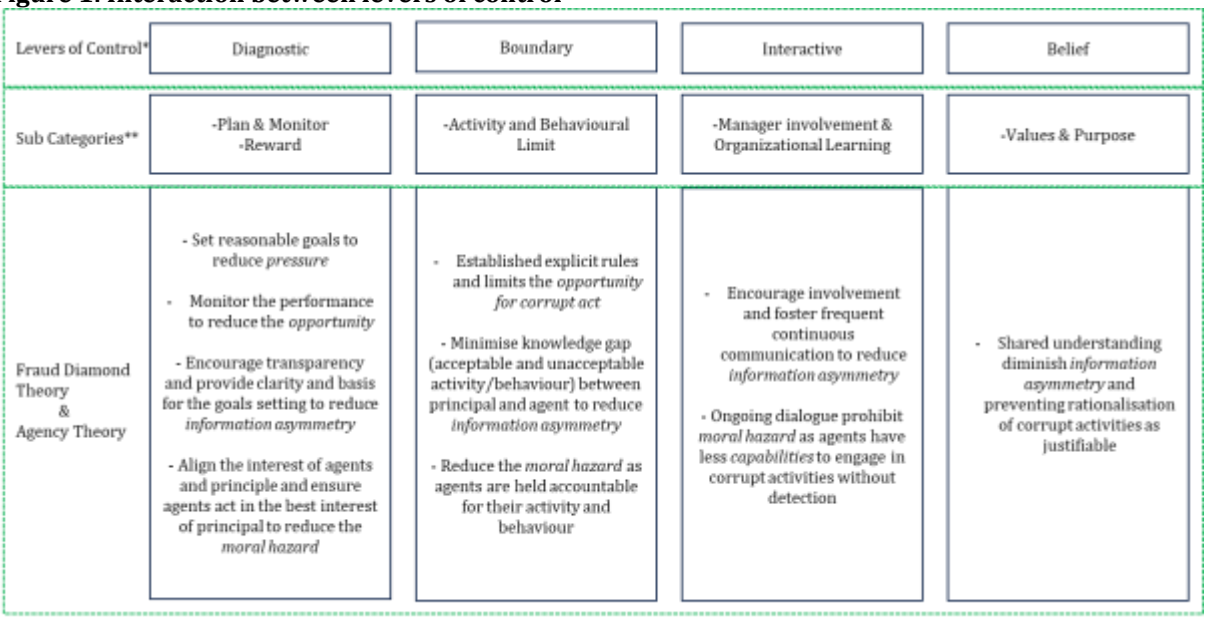


*Figure 1: The interaction between four levers of control, fraud diamond theory and agency theory. (Source: *Simon, 1995, **Pletsch & Lavarda, 2016)*

Diagnostic Controls are feedback systems monitoring organizational outcomes and correcting deviations from preset standards or plans (Simon, 1994). This system may include rewarding the employees as a motivation to achieve the desired standard (Haron et al., 2023; Pletsch & Lavarda, 2016). Corruption occurs when individuals prioritize their personal goals over organizational goals, often driven by personal gain, such as financial benefits, power, or status. This misalignment arises from various factors, including when organizational systems and controls are insufficient, individuals find opportunities to exploit their positions for personal advantage, undermining the integrity and effectiveness of the organization. This can particularly happen when information asymmetry exists. Information asymmetry arises when agents possess greater knowledge about their activities and the organization's operations than principals. This imbalance can result in opportunistic behavior that diverges from the owners' interests. Consequently, agents may engage in behaviors that favor their interests while disregarding the interests of the principals *(moral hazard)*

To avoid this problem and induce performance that fulfills superiors' intentions, elaborate information systems are used that explicitly attach appraisal (Ouchi, 1977) and rewards (Kerr, 1985) to results achieved. A prevalent example is "management by objectives" (Lawler & Rhode, 1976). Organizations need to set explicit reasonable goals and performance standards to ensure that agents understand what is expected of them. This can help to reduce the *pressure* to achieve the goals (Haron et al., 2023). This clarity helps in aligning agents' actions with the organizational objectives. The *information asymmetry* may also be reduced through an effective diagnostic control system emphasizing comprehensive reporting and monitoring systems that provide the principals with accurate and timely information about the agents' performance and reduce the *opportunity* for corrupt activity. This transparency reduces information asymmetry and allows principals to monitor activities more effectively. Organizations should also consider implementing appropriate incentives (Srirejeki, 2023) or rewards to assist in making informed decisions about promotions or terminations.

Boundary control systems are formal systems used to establish explicit limits and rules that must be respected by the organization's members (Simon, 1994). Boundary control can be used through the codes of business conduct and take into consideration the risk to be avoided when designing the boundary control (Simon, 1994). A code of conduct is beneficial as it clearly defines what behavior is considered acceptable and unacceptable. It also helps identify potential risks that should be avoided when performing jobs independently, while the identifiable risks are the specific boundaries that require careful attention to avoid crossing, minimizing the potential risks and ensuring a positive outcome.

By clearly defining acceptable and unacceptable behaviors within an organization. Establishing explicit rules, policies, and limits on actions ensures that agents (employees or managers) act in the best interest of principals (owners or shareholders). This transparency minimizes the knowledge gap between agents and principals, reducing opportunities for agents to engage in self-serving actions that principals cannot easily monitor. The system can be used to promote ethical conduct through compliance with the code of conduct (Srirejeki, 2023). These controls can include segregation of duties, approval hierarchies, and audit trails to ensure accountability and reduce the *opportunity* for corrupt activities. It curtails moral hazard by holding agents accountable for their actions and aligning their behavior more closely to ethical standards. The system may also provide room for penalties in the event of a violation (Srirejeki, 2023), which can serve as a mechanism to deter corruption.

Interactive control systems are used to regularly and personally involve the principal in the activities to stimulate the learning or decision-making of agents or subordinates. This system involves regular and active engagement with critical performance data, strategic discussions, and feedback loops. In the absence of close supervision, focusing on mere output may result in information asymmetry, as some information withheld by superiors may result in loss of control (Snell, 1992; Williamson, 1975). To ensure that agents or subordinates adhere to the procedure, superiors closely monitor and evaluate agents or subordinates' actions over time (Ouchi, 1977), and this can be done interactively. By fostering continuous and dynamic communication between agents (employees or managers) and principals (owners or shareholders), the *information asymmetry* problem can be reduced and limit the *capability* for corrupt activities. By keeping principals well-informed and involved in the decision-making process, it minimizes the knowledge gap and ensures that agents' actions are closely aligned with organizational goals. The ongoing dialogue and mutual monitoring inherent in interactive control systems make it difficult for agents to act in their self-interest without detection, thereby mitigating *moral hazard* and promoting transparency and accountability.

Belief Control Systems are used to define and communicate basic values, purpose, and direction for the organization (Simon, 1994). This can be achieved through formal documents such as a mission statement (Simon, 1994) or an organization's established culture (Haron et al., 2023) that fosters intrinsic motivation to act in the organization's best interest and not for personal benefit. Cultural control is crucial but cannot serve as a standalone principle, as employees must embrace ethical values (Srirejeki, 2023) as part of their belief system. The ethical culture may serve to prevent employees from *rationalizing* the corrupt act as justifiable (Haron et al., 2023) in any circumstances. When employees internalize these values, their actions are more predictable and aligned with organizational objectives, reducing the need for constant oversight. This shared understanding diminishes the *information gap* between principals and agents and mitigates the risk of self-serving behavior that r*ationalizes* corrupt acts as acceptable. Employees are guided by a common ethical framework that discourages actions harmful to the organization, be it corrupt-related activities.

5. Conclusion

A Management Control System (MCS) is crucial for achieving desired behavioral outcomes in an organization. By setting clear goals, establishing performance metrics, and monitoring and reward, MCS aligns employees' conduct with the organization's objectives. It provides structure and accountability, guiding employees toward productive and ethical behavior by establishing an effective *boundary control system* that promotes ethical standards. The *interactive* discussion and feedback enhance efficiency and effectiveness and foster a culture of transparency and responsibility, ensuring that everyone works towards common organizational goals. The ethical *belief control system* encourages employees to adhere to established norms and values.

This paper contributes to the management control system field, particularly on the levers of control in mitigating corruption, and explains from the agency theory perspective. In the context of implementing levers of control, agency theory provides valuable insights into designing controls that align the interests of agents with those of the principals. Arguments are discussed and presented, circulating in the context of information asymmetry and moral hazard that may encourage the *agents (subordinates/managers/individuals)* to pursue their interest at the expense of the *principal (owners/shareholders/organization*).

For instance, a *diagnostic control system* provides clarity and expectation of what should be conducted by the agents. The mechanism helps alignment of the goals between *agents (subordinates/managers/individuals*) and

principals (owners/shareholders/organization). A *boundary control system* is intended to provide limits and guide individuals as they pursue their goals. Without the appropriate boundary control system, clueless *agents (subordinates/managers/individuals)* may need adequate knowledge. In that case, naive individuals might not understand the limitations of pursuing the goals so they might cross certain boundaries for their benefit at the expense of the *organization (principals)*. This pursuit of self-interest at the expense of collective objectives ultimately disrupts organizational coherence, trust, and performance, particularly when they may carry out these actions without facing detection or punishment. While this is happening, the *agents (subordinates/managers/individuals)* probably are not too worried about it because there is no limitation on what the *agents (subordinates/managers/individuals)* can do as long as they can achieve their goals. Despite the greatest efforts of principals to mitigate moral hazard, they may still struggle to appropriately evaluate the talents or intentions of agents throughout the hiring or delegating process.

The conceptual view of this study can be used to strengthen the company's policy. It is suggested that boundary control may be used to enhance compliance policies by establishing explicit protocols on compliance, ethics, and conduct, effectively mitigating behaviors that may threaten the company. The risk policies may also improve by establishing policies that clearly outline acceptable levels of risk, and decision-making procedures can effectively mitigate the tendency to engage in excessive risk-taking while simultaneously fostering responsible innovation. The diagnostic control can enhance performance measurement policies by ensuring that all performances are monitored and aligned with strategic goals. Interactive control and belief control may assist in the process of policy development that can encourage feedback loops through a healthy, ethical culture to ensure the organization can respond to strategic uncertainties.

By comprehending the agency theory and its impact on control systems, organizations are expected to prioritize the development of an efficient control system. The organization must establish effective control measures to enhance its vigilance and safeguard itself from corrupt activities.

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Understanding AI Technology Adoption in Educational Settings: A Review of Theoretical Frameworks and their Applications

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Abstract: Artificial Intelligence (AI) technologies are increasingly integrated into educational environments, promising transformative impacts on learning experiences and administrative efficiencies. This review synthesizes prominent theoretical frameworks used to understand AI technology adoption among students and educators in educational settings. The Value-based Adoption Model (VAM), Theory of Planned Behavior (TPB), Unified Theory of Acceptance and Use of Technology (UTAUT), and Technology Acceptance Model (TAM) are examined for their strengths and limitations in explaining the factors influencing technology adoption. Through a comprehensive analysis of recent literature, this paper highlights the involvement of user acceptance, incorporating cognitive, social, and emotional dimensions. Understanding theoretical frameworks related to AI technology adoption could provide a comprehensive overview of existing theoretical frameworks related to AI technology adoption in educational settings, integrating findings into a cohesive narrative.

Keywords: *Artificial Intelligence, AI adoption, educational technology, technology acceptance models, VAM, TPB, UTAUT, TAM, educational settings*

1. Introduction and Background

Artificial intelligence (AI) technologies are increasingly being used in educational settings, with the potential to significantly improve learning experiences, expedite administrative work, and provide personalized instructional support. Coppin (2004) defines artificial intelligence as a machine's ability to solve issues, answer questions, devise strategies, and execute a variety of other functions that need a level of intelligence generally found in humans. From intelligent tutoring systems and adaptive learning platforms to AI-powered analytics and virtual assistants, these technologies have the potential to disrupt existing educational paradigms (Holmes et al., 2019).

The successful adoption of AI technology by users—students and educators—is dependent on several factors that determine its acceptability and use (Kizilcec, 2024). Understanding the factors that influence or impede the adoption of AI technology in educational contexts is critical to realizing their potential benefits (Radhakrishnan & Chattopadhyay, 2020). Several theoretical frameworks have been established to investigate technology adoption, with each providing unique insights into the process. These frameworks assist in identifying major factors of user acceptance and assist in building and implementing AI technology in more user-friendly ways.

However, only a few studies have thoroughly studied the technology acceptance paradigm in the educational setting (Antonietti, Cattaneo, & Amenduni, 2022). Thus, the goal of this research is to examine various models and theories accessible from the user's viewpoint of technological adoption in educational settings. By synthesizing recent research findings, this study aims to provide insights for future research as well as practical recommendations for improving the uptake and effective use of AI in education.

2. Technology Adoption Related Models

Computer and information communication technologies have evolved, resulting in the creation of artificial intelligence (Zerfass, Hagelstein, and Tench, 2020). The opportunities have connected students, educators, and technologies, generating widespread interest among researchers and practitioners. This is related to the fact that more scholars appear to be interested in how students and teachers use technology. This has resulted in the development of numerous technological acceptance models (Xu et al. 2021). Based on a review of the literature, this study identified a variety of theories and models that are commonly used to understand what

motivates people to accept and use a particular technology in their educational activities. Table 1 illustrates this by providing some well-known underlying theories and models.

Table 1: Prominent Technology-Related Models (Author own compilation, 2024)

Theory / Model	Acronym	Author(s)
Value-based Adoption Model	VAM	Kim et al. (2007)
Theory of Planned Behavior	TPB	Ajzen (1991)
Unified Theory of Acceptance and Use of Technology	UTAUT	Venkatesh et al. (2003)
Technology Acceptance Model	TAM	Davis (1989)

Value-Based Adoption Model (VAM): The Value-based Adoption Model (VAM) is a theoretical framework designed to understand the factors influencing users' adoption of technology by focusing on perceived value. This model posits that adoption decisions are driven by users' overall assessment of the value provided by a technology, which is determined by both the benefits and sacrifices associated with its use (Kim et al., 2007). VAM has been particularly useful in contexts where perceived value is a critical determinant of user acceptance, such as emerging technologies like AI.

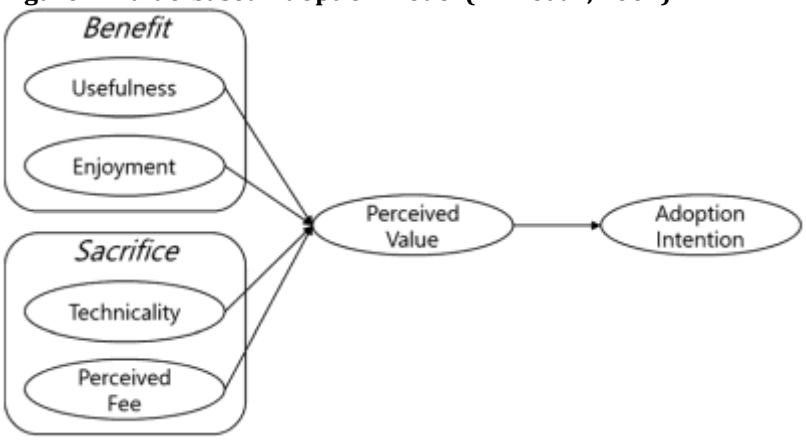
One of the primary strengths of VAM is its emphasis on perceived value as a central construct. This construct encompasses perceived benefits, such as convenience and usefulness, as well as perceived sacrifices, including cost and effort (Kim et al., 2007). By focusing on these aspects, VAM allows researchers to capture a comprehensive view of user motivations and barriers. The model has been successfully applied across various domains, including mobile services, online banking, and social media platforms, providing valuable insights into user adoption behavior in these contexts (Oh et al., 2020). In educational settings, VAM can help understand how students and educators perceive the value of AI technologies, balancing the benefits of enhanced learning experiences against potential drawbacks like data privacy concerns and learning curve challenges.

Furthermore, VAM can inform the design and implementation of technologies. By identifying key value determinants, the model helps designers and policymakers create and implement technologies that align with user expectations and maximize perceived value (Park & Kwon, 2019). For instance, in the adoption of AI in education, understanding the value perceptions of different user groups can inform targeted interventions to enhance acceptance and usage.

Despite its strengths, VAM also has several limitations that need to be considered. One significant limitation is the potential oversimplification of the complex nature of technology adoption. VAM's focus on perceived value may not fully capture the influence of other significant factors, such as social influences, habitual behavior, and emotional responses (Wu & Chen, 2017). While perceived value is crucial, technology adoption often involves a more nuanced interplay of various psychological and contextual factors. Additionally, the determinants of perceived value can vary significantly across different contexts and user groups, limiting the generalizability of VAM. What constitutes value in one setting might not be relevant in another (Huang et al., 2020). This contextual dependency requires researchers to adapt VAM to specific scenarios, potentially complicating its application.

Moreover, VAM typically focuses on the initial adoption decision, providing limited insight into the long-term usage and post-adoption behavior (Choi et al., 2021). Factors influencing continued use or discontinuation of technology might differ from those affecting initial adoption, and VAM's framework does not adequately address these dynamics. Additionally, accurately measuring perceived value and its components can be challenging due to its subjective nature. Differences in individual perceptions and expectations can complicate the operationalization of value constructs (Oh et al., 2020). This measurement difficulty can affect the reliability and validity of research findings using VAM.

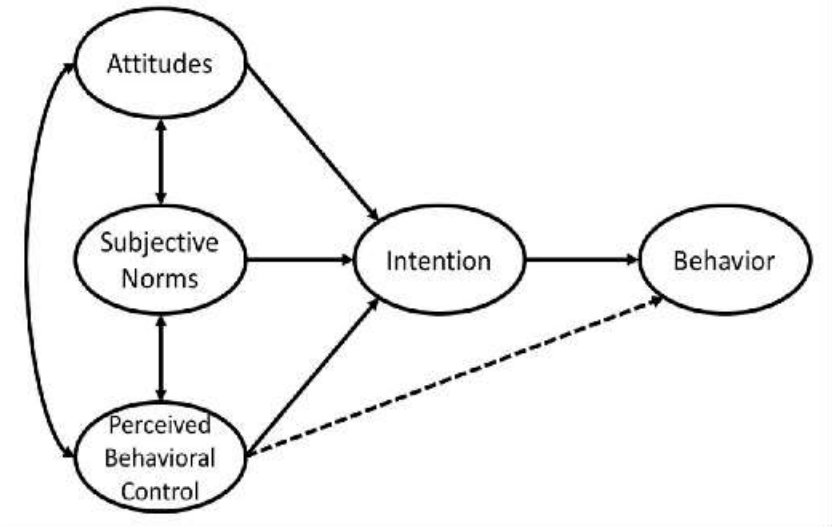
Figure 1: Value-based Adoption Model (Kim et al., 2007)



Theory of Planned Behavior (TPB): The Theory of Planned Behavior (TPB), developed by Ajzen (1991), was designed for predicting and understanding human behavior, including technology adoption. TPB posits that an individual's intention to engage in a behavior is primarily determined by their attitude toward the behavior, subjective norms, and perceived behavioral control.

In educational settings, TPB provides valuable insights into AI adoption. Users' attitudes toward AI, such as their belief in its benefits for enhancing learning and improving efficiency, play a crucial role. Positive attitudes toward AI technologies increase the likelihood of their adoption (Teo et al., 2019). Moreover, subjective norms, or the perceived social pressure to adopt AI from peers, colleagues, and institutional policies, significantly influence users' decisions (Mohammadi, 2015). For example, strong advocacy from school administrations for AI-based learning platforms can motivate educators to integrate these tools into their teaching practices.

Figure 2: Theory of Planned Behavior (TPB), Ajzen (1991)



Perceived behavioral control, which reflects users' confidence in their ability to use AI technologies and access necessary resources, also affects adoption. Comprehensive training and technical support can enhance perceived behavioral control, facilitating the use of AI tools (Cheok & Wong, 2015). When users feel capable and supported, they are more likely to adopt AI technologies.

Despite its strengths, TPB has limitations in this context. The model primarily focuses on intentional behavior, potentially overlooking spontaneous or habitual actions that influence technology adoption (Venkatesh et al., 2020). Additionally, TPB does not account for emotional factors, such as anxiety, which can impact willingness

to adopt new technologies (Teo et al., 2019). The assumption of a linear relationship between intention and behavior may not hold in complex educational environments, where external factors like institutional barriers and technical issues can disrupt this link (Mohammadi, 2015).

Unified Theory of Acceptance and Use of Technology (UTAUT): The Unified Theory of Acceptance and Use of Technology (UTAUT), developed by Venkatesh et al. (2003), provides a comprehensive framework for understanding technology adoption by integrating elements from multiple models (Abbad, 2021). UTAUT identifies four key determinants of technology acceptance: performance expectancy, effort expectancy, social influence, and facilitating conditions.

In educational settings, UTAUT offers valuable insights into AI adoption. Performance expectancy, which refers to users' beliefs that using AI technologies will improve their educational outcomes, is crucial. When students and educators perceive AI tools as enhancing learning efficiency, improving academic performance, and providing personalized learning experiences, they are more likely to adopt these technologies (Huang et al., 2020). For instance, AI-driven adaptive learning platforms that tailor educational content to individual needs can significantly boost performance expectancy.

Effort expectancy, or the perceived ease of using AI technologies, is another vital factor. AI tools in education must be user-friendly and require minimal effort to learn and operate. If students and educators find AI technologies intuitive and easy to integrate into their routines, adoption rates are likely to increase (Teo, 2019). For example, seamless integration of AI-powered learning management systems with existing educational platforms can reduce the perceived effort required, facilitating adoption.

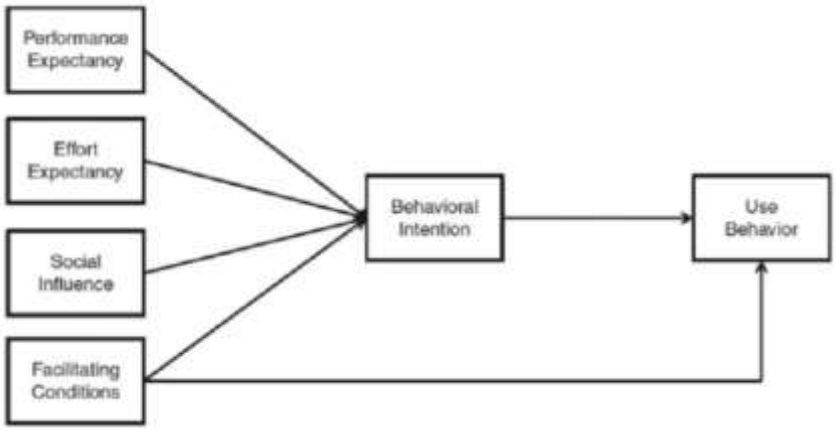
Social influence, defined as the degree to which individuals perceive that important others believe they should use the new technology, also plays a significant role in AI adoption. In educational settings, the endorsements and recommendations from peers, colleagues, and institutional leaders can substantially impact adoption decisions. When influential figures within the educational community advocate for AI technologies, it creates a supportive social environment that encourages their use (Al-Maroof & Al-Emran, 2018). For example, active promotion of AI tools by university administration can motivate both faculty and students to adopt these technologies.

Facilitating conditions, or the availability of resources and support for using AI technologies, are essential for adoption. This includes access to necessary infrastructure, technical support, and training. Ensuring that users have the required resources and assistance can significantly enhance their willingness to adopt AI technologies (Venkatesh et al., 2016). Comprehensive training sessions and ongoing technical support, for instance, can boost educators' and students' confidence in using AI tools, thereby promoting adoption.

Despite its strengths, UTAUT has certain limitations when applied to AI adoption in educational settings. One major limitation is its primary focus on the initial adoption phase, potentially overlooking long-term usage and post-adoption behavior. Factors influencing continued use or discontinuation of AI technologies might differ from those affecting initial adoption, and UTAUT does not fully capture these dynamics (Venkatesh et al., 2016). Additionally, UTAUT's focus on cognitive and social determinants may overlook emotional and psychological factors that can impact technology adoption. Users' anxiety about data privacy or fears of obsolescence due to AI advancements, for example, can influence their decisions to adopt new technologies (Al-Maroof & Al-Emran, 2018).

Furthermore, UTAUT assumes a relatively stable environment, which may not account for the rapidly evolving nature of AI technologies and the educational landscape. The model's applicability may vary across different cultural contexts, necessitating adaptations to fit specific educational environments and user groups. Moreover, UTAUT's linear approach to intention and behavior may not always hold in complex educational settings, where various external factors can intervene (Venkatesh et al., 2016).

Figure 3: Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2003)



Technology Acceptance Model (TAM): The Technology Acceptance Model (TAM), developed by Davis (1989), is a prominent framework for understanding technology adoption, focusing on two primary determinants: perceived usefulness (PU) and perceived ease of use (PEOU). These factors significantly influence users' attitudes toward technology and their subsequent intention to use it.

In educational settings, TAM offers valuable insights into AI adoption. Perceived usefulness (PU) refers to the degree to which students and educators believe that AI technologies will enhance their learning and teaching outcomes. When users perceive AI tools as beneficial for improving academic performance, facilitating personalized learning, and increasing overall educational efficiency, they are more likely to adopt these technologies (Huang et al., 2020). For example, AI-driven tutoring systems that provide real-time feedback and adaptive learning paths can be perceived as highly useful, encouraging their adoption among students.

Perceived ease of use (PEOU) pertains to the extent to which users believe that using AI technologies will be free of effort. In educational contexts, AI tools must be user-friendly and easy to integrate into existing workflows. When students and educators find AI applications intuitive and straightforward to use, their likelihood of adoption increases (Teo, 2019). For instance, an AI-based learning management system with a simple, user-friendly interface can enhance perceived ease of use, thereby facilitating adoption.

TAM also emphasizes the role of external variables, such as individual differences, system characteristics, and situational constraints, which can indirectly affect technology acceptance by influencing PU and PEOU. In educational settings, these external variables can include factors like prior experience with technology, the availability of training and support, and the technological infrastructure of the institution (Cheung & Vogel, 2013). By considering these variables, TAM provides a comprehensive framework for understanding the multifaceted nature of AI adoption in education.

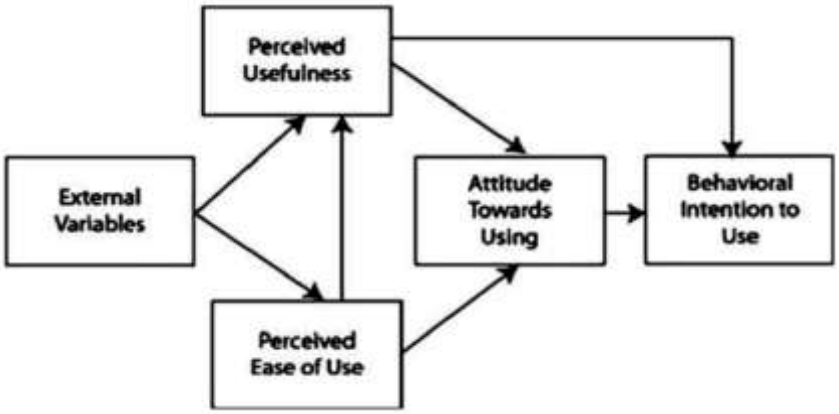
Despite its strengths, TAM has several limitations when applied to AI adoption in educational settings. One significant limitation is its focus on individual perceptions of usefulness and ease of use, potentially overlooking other important factors that can influence technology adoption. For instance, TAM does not explicitly account for social influence and facilitating conditions, which are emphasized in other models like the Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2016). In educational environments, social factors such as peer influence and institutional support can play a crucial role in technology adoption.

Additionally, TAM primarily addresses the initial acceptance of technology and may not fully capture long-term usage behaviors and post-adoption outcomes. The model's focus on cognitive perceptions might not adequately explain the sustained use of AI technologies over time, especially in dynamic educational settings where continuous interaction with technology is essential (Bagozzi, 2007). For example, initial positive perceptions of AI tools may not translate into long-term use if ongoing support and updates are lacking.

Moreover, TAM assumes a relatively linear and rational decision-making process, which may not always reflect

the complex and sometimes irrational nature of technology adoption behaviors. Emotional and psychological factors, such as anxiety about using new technologies or excitement about innovative tools, are not explicitly considered in TAM (Park et al., 2015). These factors can significantly impact users' willingness to adopt AI technologies in educational settings.

Figure 4: Technology Acceptance Model (TAM), Davis (1989)



3. Conclusion and Recommendations

This study synthesizes prominent theoretical frameworks to provide a comprehensive overview of AI technology adoption in educational settings. By examining the Value-based Adoption Model (VAM), Theory of Planned Behavior (TPB), Unified Theory of Acceptance and Use of Technology (UTAUT), and Technology Acceptance Model (TAM), the study highlights the strengths and limitations of these models in elucidating the factors influencing AI adoption among students and educators. By bringing together these diverse frameworks, the study creates a more holistic understanding of how AI technologies are being adopted in educational settings.

Contribution of the study: This comprehensive overview highlights the strengths of the existing frameworks, showing how they have successfully addressed certain aspects of AI adoption, such as technological readiness, user acceptance, and the pedagogical impact of AI tools. By identifying these strengths, the study underscores the effective strategies and principles that can be leveraged in future AI implementations.

Practical Policy Implications: Inclusive Policy Development involving educators, students, and parents in the policy development process will ensure that AI adoption in education is guided by the needs and perspectives of those directly affected. Creating platforms for student feedback on AI tools will ensure that their experiences and insights are considered in the continuous improvement of AI technologies. By addressing these practical policy implications, educational policymakers can create a comprehensive and inclusive framework for the adoption of AI technologies in education. This approach ensures that AI integration is effective, ethical, and equitable, aligning with broader educational goals and societal values.

Recommendations for Future Research: Understanding AI technology adoption in educational settings requires a multifaceted approach that considers the strengths and limitations of various theoretical models. Future research should aim to integrate these models, addressing their limitations and capturing the dynamic, context-dependent nature of technology adoption. By doing so, researchers and practitioners can develop more effective strategies to enhance the adoption and effective use of AI technologies in education.

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The Challenges in Adopting Electric Buses: A Case from Melaka, Malaysia

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Abstract: The Malaysian government has initiated a collaboration with private agencies to expand the green transport ecosystem by introducing electric buses. Despite these efforts, the adoption of electric buses in urban areas remains minimal. This paper addresses two research objectives: (a) to identify the challenges in adopting electric buses, and (b) to recommend improvements for adopting electric buses in Malaysia. Utilizing a qualitative methodology, this study aims to capture the experiences and reflections of interviewees through targeted population or place studies. This approach allows for the collection of detailed information and the development of new concepts and theories. The interviews revealed three main barriers to adopting electric buses in Melaka: battery reliability and durability, a lack of charging infrastructure, and insufficient operational knowledge. The paper suggests that the government and policymakers should take proactive measures to promote green technology and increase the acceptance of electric buses in urban areas through awareness campaigns.

Keywords: *Electric Buses, Battery Electric Bus, Charging Infrastructure, Operational Knowledge.*

1. Introduction

With the rapid increase in urbanization and motorization, Malaysian cities have witnessed a significant rise in the number of vehicles on the roads, leading to heightened levels of air pollution and greenhouse gas emissions. This surge in transportation contributes to the growing greenhouse effect, impacting both the environment and the quality of life in urban areas (Uddin, 2022). To address these challenges, shifting towards sustainable transportation, such as public transit, is essential for creating livable and less polluted cities. Recognizing this need, Malaysia introduced the National Automotive Policy (NAP) in 2014, which aims to establish the country as a regional hub for energy-efficient vehicles (EEVs) by 2022. This initiative is part of a broader strategy to promote a cleaner environment by reducing carbon dioxide emissions and the reliance on petroleum-based fuels. The NAP has encouraged automotive manufacturers to produce a range of EEVs, including fuel-efficient internal combustion engine (ICE) vehicles, hybrid and electric vehicles (EVs), and vehicles powered by alternative fuels such as compressed natural gas (CNG), liquefied petroleum gas (LPG), biodiesel, ethanol, hydrogen, and fuel cells (Ridhuan, Abdul Latif, Ahmad, Asat, & Mohd Noor , 2017) .

The first electric bus in Melaka to operate on the road was in August 2015. This bus route covers the Melaka Heritage Area as an initiative to promote tourism activities in Melaka (Green City Action Plan, 2020). However, due to the lack of incentives for EEVs in Malaysia, public transportation has resulted in the slow adoption of EEVs on the road. Malaysia targets 100,000 electric cars and 2,000 electric buses on the road by 2020 (Shukor, Sulaiman, Ai Chin, & Mas'od, 2018). Unfortunately, until 2018, the number of targeted EEVs on the road was still unachievable, and in 2017, Melaka had only two electric buses on the road and was still waiting for another 38.

A few criteria need to be considered before adopting an electric bus in Melaka, including battery reliability and durability. The battery acts as a power source for the bus; it stores electricity for the bus to operate efficiently (Asian Development Bank, 2014). However, there are some problems encountered with it, such as that it is heavy, expensive, easily affected by atmospheric temperature, needs longer charging time, is sensitive to overcharge or undercharge, contains toxic heavy metals, and requires different ways of disposal (Salehen, Su'Ait, Razali, & Sopian, 2017). The battery requires a large capacity to ensure its long-term performance because almost no electric bus has been proven to operate long enough to reach its estimated decommissioning

date (Asian Development Bank, 2014). Batteries, therefore, require a high investment because they depend on the battery life cycle (Sclar, Gorguinpour, Castellanos, & Li, 2019).

Furthermore, the charging infrastructure plays a crucial role in the adoption of electric buses. A small number of charging stations can cause "distance anxiety" among electric vehicle users and cause them to be afraid of not reaching their destination (Panday & Bansal, 2014). Buses require a large battery capacity, yet they rely on fast charging opportunities to store large amounts of electricity for longer use (Habib, et al., 2023). Fast charging stations can provide 80%–90% battery capacity in a short time by supplying a large current flow, but they involve a higher level of charging technology, safety requirements, and charging costs than slow-charging models (Bird, et al., 2022). This requires a high cost to construct the charging station, which is one of the challenges in adopting electric buses in Melaka.

Besides batteries and charging infrastructure, operational knowledge of managing electric buses can also influence the decision to adopt electric buses in Melaka. This knowledge encompasses the battery storage, technical maintenance, and planning requirements of the electric bus infrastructure (Asian Development Bank, 2014). Before adopting electric buses, we need to equip the manufacturers and engineers with operational knowledge to minimize the current challenges and develop a product that meets the current needs (Habib, et al., 2023).

Three main challenges in adopting electric buses in Malaysia were identified and discussed in this paper, which include battery reliability and durability, a limited number of charging infrastructures, and a lack of operational knowledge. This paper is divided into four sections, beginning with the introduction and followed by the research methodology using the interview method and thematic approach in analyzing the information gathered. In the third section, findings and discussion are presented, and finally, this paper summarises and recommends ways of improvement in adopting electric buses in Malaysia. This paper focuses on two research objectives: (a) to identify the challenges in adopting electric buses, and (b) to recommend ways of improvement in adopting electric buses in Malaysia.

2. Materials and Methods

Sampling Design: In this study, the sampling design comprises both the sample size and purposive sampling. Qualitative methods often require in-depth studies or 'thick description,' which is not feasible with a large number of observations and small samples (Ghauri & Grønhaug, 2010). Furthermore, the population's dispersion or variance and the desired precision of the estimate also influence the sample size under investigation (Cooper & Schindler., 2011). As a result, this study focused on conducting in-depth interviews with a small, targeted sample to achieve the research objectives effectively. The researcher used purposive sampling in this research to conduct in-depth interviews with targeted respondents from Panorama Melaka Sdn Bhd, PTHM, MIGHT, AMDAC Sdn Bhd, and UTHM. This approach aimed to gather rich information on the agencies responsible for implementing the project to adopt electric buses to sustain public transport planning in Melaka Green City State.

In addition, purposive sampling is ideal for interview research, as the researcher requires a few key informants rather than a large sample, as long as it represents the group of respondents (Vogt, Gardner, & Haeffele, 2012). In this study, 30 respondents from five different organizations—Panorama Melaka Sdn Bhd, PTHM, MIGHT, AMDAC Sdn Bhd, and UTHM—were interviewed to validate and gain a deeper understanding of the research topic. Interviewing 30 respondents is considered a practical and acceptable number (Baker, Elsie, Edwards, & Doidge, 2012). The study included 20 to 25 open-ended questions, including probe questions for one-on-one interviews with the 30 targeted respondents. Further, for non-probability sampling techniques, the issue of sample size is ambiguous, and the sample size depends solely on the research questions and objectives (Saunders, Lewis, & Thornhill, 2016). To ensure sufficient data collection, the researcher was recommended to continue conducting interviews until data saturation was reached.

This study's chosen sampling method aimed to effectively gather knowledge and data on the challenges faced by Panorama Melaka Sdn Bhd, PTHM, MIGHT, and AMDAC Sdn Bhd in adopting electric buses, as well as the

strategies to overcome these challenges for sustainable public transport planning. The researcher estimated that she would target 30 respondents before the interview sessions and divide them into two groups:

Top Management Group: This group consists of 15 respondents, including deputy chief executive officers, operation executives, R&D executives, and financial executives who are actively involved in daily supervision, planning, and administrative processes.

Middle Management Group: 15 respondents, including operation managers, technical field managers, electrical and mechanical engineers, and project and development managers.
By gathering data from the appropriate respondents who could offer insights into the challenges and strategies for adopting electric buses in Melaka, this sampling approach ensured the achievement of the research objectives.

3. Results and Discussion

Malaysia developed various incentives to promote the use of electric buses. However, the adoption rate remains below expectations. Some of the challenges found that hinder the adoption of electric buses in Melaka are high battery concerns, some charging infrastructure, and limited technical performance.

High Battery Concern: For the high battery concern, Panorama Executive 1 and Panorama Manager 2 strongly agreed that the high battery concern is one of the major challenges in adopting electric buses. This was supported by UTHM Respondent 2, who also highlighted the high battery concern as a challenge in adopting electric buses because the advancement of battery technology and its use can be further enhanced in the future. In addition, PTHM Executive claimed that *"actually, the battery for this green technology is evolving because it has the biggest impact and has a high cost. Furthermore, this battery poses the highest risk in electrical technology because it has its resistance. So, it also happened in the operations of an electric bus, as it needs well-studied battery technology when fully utilizing it on the road"*.

Besides that, from the point of view of AMDAC Manager 1 high battery concern is related to the specification of the battery itself.

"EV vehicles have three important parts that consist of the engine, motor, and battery. One of these important parts is the battery. To operate the electric bus, it must use a high-voltage battery. The minimum voltage of the battery is 460 volts, and it cannot reach below that. This is because the high-voltage battery plays a role in converting the alternating current (AC) that can operate the motor in an electric bus, as it uses the alternating current (AC) instead of direct current (DC) when operating it. Meanwhile, the voltage of the battery for the electric bus in Melaka is 640V, with a weight of 1.92 tonnes, and it consists of nine packs of the battery in a big size".

Furthermore, based on the explanation above, AMDAC Engineer 1 further explained that *"To make this concept clear, the most important thing in the capacity of the battery is that it does not rely on the size or weight of the battery, but rather on how much it can deliver or travel for each kilowatt hour (kWh) per kilometer in the battery. If the usage of conventional buses was counted on the kilometer per liter, That's how far this bus can travel if it fills up the fuel tank with 4.56 liters, around RM10. On the other hand, an electric bus uses the kilowatt hour per kilometer. This kWh refers to the energy consumption of the electric bus, and it can be influenced by three factors: the technique of driving, the rate of the bus, and traffic conditions. For example, once the electric bus is stuck in jams for three to four hours, it still cannot travel too far, and it does not change anything. Since then, the electric bus in Melaka has used 168 kWh per kilometer because the bus's capacity is too large and heavy. It can be summarised that by adding more energy to this battery technology, it could travel a long distance because the higher the battery storage, the longer the distance it can travel. Not only that, but this battery technology is also evolving from time to time, and until today, some batteries could reach up to 500 kWh per kilometer."*.

Referring to Panday & Bansal., (2014), claimed that "since the battery is one of the power sources of this clean technology on the road, it consists of a few issues, like being heavy, expensive, and generally affected by atmospheric temperature; it needs a long charging time; it is sensitive to overcharge or undercharge; and it also contains toxic heavy metals; hence, the disposal of waste becomes a challenge." Other than that, another study

found that the high battery concern also includes the limited mileage offered by the batteries as well as the inability to charge the batteries with the frequency needed, which hinders the acceptability of EVs (Adnan, Nordin, & Rahman, 2017).

Based on the respondent's opinions from Panorama Melaka, UTHM, and AMDAC, the high battery concern is one of the challenges in adopting electric buses because this battery technology evolves too fast from time to time, and it is still in the development phase, where until today it is so hard to prove finding the best battery in terms of its lifetime, price, and weight. Besides that, this electric bus is fully powered by the battery to operate, and choosing the best battery will significantly affect the travel range that might be earned by the electric bus while it is operated on the road. Therefore, the researcher also concludes that with regards to battery capacity, the energy consumption of an electric bus can be influenced by three factors: the technique of driving, the rate of the bus, and traffic congestion, which relatively perform the electric bus to deliver the longer distance to travel with.

Limited Number of Charging Infrastructure: PTHM Executive agreed that the small number of charging stations led to the challenges of electric bus adoption towards sustainable public transport planning.

"The charging station for electric buses is not like an electric car charging station, where it can be centralized in a certain area. Therefore, we manage the route of the electric bus during its operation on the road. It means that if this electric bus can travel up to 120 km with a full charge, then it will be arranged to travel on a short route that is up to 80 km per trip only so that it can recharge again at Melaka Sentral and avoid traveling to long-distance areas at the same time" (PTHM Executive).

In further analysis, AMDAC Engineer 2 acknowledges that the deficiency of charging stations certainly contributes to the challenges of adopting electric buses because this green fleet used its charging station instead of using the public charging infrastructure. The electric bus is public transportation that uses a dedicated charging station; in fact, it is not a private vehicle. Besides that, the respondent also added that there is a different amount of usage current to plug in the charger, where the public charger for an electric car allocates a maximum current of 30 amps, whereas the electric bus in Melaka uses a maximum current of 250 amps. Hence, the respondent clarifies that this electric bus is not suitable for using the public charger. On the other hand, Panorama Executive 3 admitted that the limited number of charging infrastructures is because of the high cost of building them.

"The problem that we faced when expanding this charging infrastructure was the cost of building it, as it is very expensive. This is because one slot charging station costs around RM50,000. After all, the charger nozzle itself costs up to RM30,000, even though it is a fast charging station. I admit it is so pricey to build one charging station." *(Panorama Executive 3).*

The limited number of charging stations generates "range anxiety" among users of electric vehicles and causes them to fear not reaching their destination (Wu & Niu, 2017). In addition, based on research by Hardinghaus, Blümel, & Seidel, (2016), the deficiency of the public charging infrastructure, in combination with its limited range, is a crucial barrier to electromobility. Moreover, Pelletier, Jabali, & Laporte., (2014) clarify that the number of electric recharging stations is still very small compared with conventional fuel stations; hence, the limited range of EVs becomes a critical constraint in purchasing and operational decisions. The charging infrastructure scheme also generally comprises slow-charging and fast-charging models, as they differ due to the type of electric bus. Correspondingly, Fang, Ke, & Chung., (2017) claimed that the fast-charging model can provide 80%–90% battery capacity in a short time by supplying a substantial amount of current; however, it involves a higher level of charging technology, greater safety requirements, and higher charging costs than the slow charging model does. Thus, Karl, (2021) verified that the public charging infrastructure is rather expensive to install, and major public investments seem required as long as viable business models are absent. The researcher acknowledges that the limited number of charging infrastructures is a critical challenge in adopting electric buses because the PTHM Executive notes that, due to the implication of a lack of charging infrastructure, it encourages the operator of electric buses to be selective in the short route of operation to overcome the range anxiety that might be faced by this electric bus when operated on the road. Moreover, increasing the number of charging infrastructures for electric buses, definitely incurred a high cost. Therefore, the researcher concludes

that since this electric bus is still a new green technology operated on the road with a small quantity of its arrival, the location to install this charging facility is also limited because of its resources and funding factor. Hence, it can be summarised as a concrete reason that Malaysia still has a limited number of charging infrastructures for electric buses.

Limited Technical Performance: In this regard, the MIGHT Vice President strongly agrees that limited technical performance is a challenge in adopting electric buses in Melaka. This is because MIGHT Vice President has been highlighted as:

"This limited technical performance is usually connected with the operation of electric buses. The electric bus in Melaka is imported from China, where, as we know, China is declared a four-season country. This electric bus consists of a compressor that provides the sensor temperature. Since the electric bus was manufactured in China, basically the trial is being done there, but once it arrives in Malaysia, it meets the limited technical performance requirements to operate this electric bus on the road. This is because Malaysia has an equator climate, which consists of high humidity and temperature, and at the beginning of its operation, it affected the compressor of the electric bus. It can be said that the electric bus depends on its air compressor to ensure smooth operation on the road" (MIGHT Vice President).

Apart from that, AMDAC Manager 1 supported the view from the MIGHT Vice President that, along the process of operating an electric bus in Melaka, they need to comprehend the suitability of its operation with the weather and road conditions in Malaysia. Since it has become a challenge to operate an electric bus, AMDAC Sdn Bhd has used a variety of data collection methods to analyze whether this electric bus is compatible with the weather and road conditions in Malaysia or not. The respondent also elaborated that, until now, the requirement to adjust the temperature and air compressor of the electric bus is still in the struggling phase because it is interrelated with the environment and humidity due to the equator climate of Malaysia. In addition, these challenges also led AMDAC Sdn Bhd to create its research team to study the preferences and requirements of customers regarding this electric bus. For example, the Government State of Melaka requested to have an electric bus that can cover its twenty-seven routes in Melaka, including its top routes at Ujong Pasir, Melaka Sentral, and Dataran Pahlawan. Melaka consists of three parts of the route, which are categorized into town, congested, and rural regions. To fulfill the requirement of the Government State of Melaka, the respondent research to select the best bus that can cover all the routes that have been mentioned by the Government State of Melaka. Besides that, in support of the above statement, Panorama Executive 1 has another perspective that remarked that this limited technical performance is being categorized as one of the biggest challenges in adopting electric buses. This is because there are also a limited number of people in Malaysia who have been recognized with approval certificates to be able to handle and solve the technical problems of electric buses. The first one comes from BYD's staff, and the second is the Technical Field Manager from AMDAC Sdn Bhd.

Based on the research by Sakhnevych, et al., (2021), environmental conditions are one of the issues in EV range estimation. When it rains, it has been observed that the rolling resistance of a tire on a wet road is increased by up to 10% when compared to that on a dry road surface. Furthermore, in rainy weather, windscreen wipers and possibly window demisting are required. Moreover, Wang, Lu, Wang, Chenyu, & Wang, (2020) also reveal that the battery temperature can have a significant impact on the effective capacity of a battery cell. In addition, the requirement to maintain the temperature in the vehicle cabin to make it comfortable for the passengers is also being considered. The heating and air conditioning loads can significantly affect the total energy used during a trip. Other than that, it has been observed that the technical issues consist of failing batteries (and limited or late) support, equipment availability issues, quite long charging times, and the necessity to adapt charging infrastructure for fleet needs. Hence, "the maximum power flow between the electric vehicle and the power grid, which depends on the line power capacity of the charging infrastructure, shows that the power level of charging will also affect the duration of charging cycles" (Das, Rahman, Li, & Tan, 2020).

According to the perspective of the respondent's MIGHT and AMDAC, it is mentioned that the limited technical performance is one of the challenges in adopting electric buses. The researcher found that this technical performance led to limitations in environmental conditions, and unstable temperatures certainly affected the range estimation and energy used during the operation of electric buses on the road. Since Malaysia is located in an equatorial climate, the requirement to frequently adjust and overcome technical problems is in high

demand due to the suitability of the weather and road conditions in the Melaka context area. Thus, the researcher concludes that this limited technical performance will be a critical challenge in adopting electric buses because, based on the observations, it will bind towards the technical issue that might shut down the viable electric bus operating system.

4. Conclusion and Recommendations

Despite the various incentives and efforts made to promote the use of electric buses in Malaysia, their adoption remains at an unsatisfactory level. The research conducted on the adoption of electric buses in Melaka has identified several critical challenges that need to be addressed to ensure the successful implementation of this sustainable transportation technology.

One of the primary challenges identified is the concern over battery technology, which includes issues such as battery capacity, cost, and the rate of technological advancement. Respondents from Panorama Melaka, UTHM, and AMDAC emphasized the evolving nature of battery technology, noting that the high costs and risks associated with current battery options present significant barriers to adoption. The Panorama Executive highlighted that the battery's resistance and the need for comprehensive studies on battery technology are critical for the effective operation of electric buses. Additionally, the AMDAC engineer pointed out that the efficiency of the electric bus is dependent on how the battery's capacity is utilized, especially in terms of energy consumption per kilometer. This challenge is exacerbated by the current limitations in battery technology, which impact the operational range and efficiency of electric buses.

Another significant challenge is the limited number of charging stations available for electric buses. Unlike electric cars, electric buses require dedicated charging stations due to their higher voltage and current requirements. The PTHM Executive and AMDAC Engineer noted that the scarcity of charging stations necessitates careful route planning to avoid range anxiety and ensure the buses can complete their routes without interruption. The high cost of building charging infrastructure, as highlighted by Panorama Executive 3, is a considerable obstacle, with each charging slot costing approximately RM50,000. The lack of charging infrastructure not only hinders the expansion of electric bus routes but also affects the overall feasibility of integrating electric buses into the existing public transportation system.

The limited technical performance of electric buses, particularly concerning their adaptation to the local climate and road conditions, is another critical challenge. The Vice President of MIGHT and AMDAC Manager 1 highlighted that the electric buses, mainly imported from China, necessitate substantial modifications to function efficiently in Malaysia's equatorial climate. Barriers to the seamless operation of electric buses include issues like air compressor performance, battery temperature management, and the need for frequent technical adjustments. The technical expertise required to manage and maintain these buses is currently limited, with only a few individuals possessing the necessary certifications to handle technical issues. This limitation poses a significant challenge to ensuring the reliability and efficiency of electric buses in Melaka.

The challenges identified in the adoption of electric buses in Melaka highlight the need for comprehensive strategies to overcome these barriers. To address the high battery concerns, continuous research and development are required to enhance battery technology, focussing on improving capacity, reducing costs, and increasing durability. Investment in charging infrastructure is crucial to support the operation of electric buses and alleviate range anxiety among operators and users. Additionally, adapting the technical specifications of electric buses to suit local environmental conditions and increasing the availability of technical expertise are essential steps towards improving the performance and reliability of electric buses.

In conclusion, while the adoption of electric buses in Melaka presents significant challenges, it also offers opportunities for innovation and sustainable transportation development. By addressing the identified challenges through targeted investments and strategic planning, Melaka can enhance its public transportation system and contribute to the broader goals of sustainable urban development in Malaysia.

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Cinematic Influence: The Role of Film in Shaping Malaysians' Travel Intentions and Destination Choices

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Abstract: Film tourism has emerged as a significant factor in enhancing tourist numbers by drawing visitors to locations depicted in movies and dramas. This study explores films' influence on Malaysians' perceptions and intentions to travel to these destinations. Utilizing the push and pull theory, the research examines how movies affect Malaysians' travel motivations and destination choices. Data were gathered through an online survey involving 267 Malaysian moviegoers, selected via convenience sampling. The findings indicate that several factors, including the reflection of personal values and interests in movies, significantly influence the intention to travel. Respondents expressed a stronger connection and likelihood to visit destinations featured in films that resonate with their interests. The study suggests that future research could employ different methodologies further to explore the impact of movies on tourist perceptions globally. Additionally, the findings underscore the potential for filmmakers, destination marketing organizations (DMOs), and local authorities to leverage films as powerful marketing tools to enhance tourist demand for real-life film locations.

Keywords: *Film tourism, destination awareness, visit motivation, intention to travel*

1. Introduction

Film tourism has experienced significant growth worldwide, offering substantial benefits to destinations by attracting tourists to locations where films are set (Kolasinska, 2020). This phenomenon, where tourists are drawn to visit locations, they have seen in movies, has been observed for decades (Riley et al., 1998; Florido-Benitez, 2023). Defined by Hudson and Ritchie (2006), film tourism results from a destination or attraction being showcased in cinema, influencing individuals to travel based on the particular characteristics and destinations portrayed (Iwashita, 2003). Movies have the unique power to entice travelers to explore diverse locations, cultures, and experiences. Macionis (2004) described film tourism as a postmodern experience where tourists visit sites portrayed through media, highlighting the compelling visuals, cinematic landscapes, and cultural portrayals that serve as potent tools for destination marketing and promotion.

The ability of movies to transport viewers to different destinations and offer immersive visual experiences can motivate them to explore new landscapes, cultures, and attractions in real life. This motivation is often driven by the emotional connections and personal attachments viewers form with the storylines and characters (Ismail et al., 2017). When travelers emotionally connect with a film's narrative, it can create a desire to visit the real-life locations depicted. Over the past decade, there has been growing interest in studying this form of travel motivation (Hudson & Ritchie, 2006; Hamzah et al., 2016; Yen & Croy, 2016; Wen et al., 2018; Vila et al., 2021). The impact of films on travel destination choices has been acknowledged since the 19th century, with Tooke and Baker (1996) exploring the potential for increased visitor numbers to locations featured in films.

In line with the above notion, the film industry significantly contributes to global tourism by drawing travelers to visit real-life locations featured in their favorite movies. According to Future Market Insights (2018), tourists visiting Northern Ireland to see the filming sites of 'Game of Thrones' contributed over $50 million to the local economy in 2018. Similarly, New Zealand has become a popular filming destination for productions such as "The Lord of the Rings," "The Hobbit," "The Chronicles of Narnia," and "The Last Samurai." Films create demand for tourism by enhancing the destination's image and segmentation elements (Vagionis & Loumioti, 2011). When audiences are captivated by movie settings and narratives, they may be motivated to visit those locations in reality. In 2017, 80 million travelers chose their destinations based on movies they had watched, leading to

international visitors' numbers being 2.5 times higher than average in these destination countries (TCI Research, 2018). The influence of movies on tourists' travel motivation is significant, with 13% of tourists choosing to visit a country after seeing it in a film (Vila et al., 2021). Since the first public film screening by the Lumiere brothers in 1895, films have captured the public's imagination (Bolan et al., 2011). Most studies on film-induced travel intention utilize push and pull factors, where push factors are internal motivations to travel and pull factors are destination characteristics (Crompton, 1979).

However, despite the potential benefits, there are concerns about the expectations set by film portrayals of destinations. Cohen (2012) found that social media platforms like Instagram create unrealistic expectations, as curated and filtered photos often differ from reality, leading to disappointment among film tourists. This disparity can create negative push factors, as noted by Itoo and Nagar (2019). Hamzah et al. (2016) found that while Malaysian travelers were motivated by unique experiences and scenery at film locations, many were disappointed when the reality did not match their expectations. Such discrepancies can lead to negative perceptions and push travelers away due to concerns about authenticity and misrepresentation (Bolan et al., 2011).

Despite this, movies set high expectations for destinations, which may lead to disappointment if the real-life experience differs from the cinematic portrayal. The image of a destination is crucial for the tourism industry and can be influenced by word of mouth (Horrigan, 2009). Movies can create positive or negative stereotypes of destinations in terms of hospitality, safety, cultural richness, and cuisine.

Additionally, the intention to travel to destinations seen in movies can be affected by negative genres like crime, horror, and disaster. Itoo and Nagar (2019) suggest that negative portrayals in films can deter tourists due to safety concerns. However, for some, these portrayals may spark curiosity and serve as pull factors. Negative storylines can influence travel decisions by associating destinations with negative emotions (Beeton, 2010). Itoo and Nagar (2019) also noted that negative storylines could influence tourists interested in dark tourism and historical exploration, highlighting individual differences in travel preferences (Azevedo et al., 2023; Dann, 1977).

Moreover, the influence of movies on travel intentions among Malaysians needs further exploration, considering socio-demographic factors such as age, gender, education, and income. Understanding these differences can help tailor tourism marketing and destination offerings. For instance, Buchman et al. (2010) found that female "Lord of the Rings" fans were more likely to visit New Zealand than male fans, and higher education levels correlated with increased interest in film-induced tourism. Ng (2020) highlighted that Korean TV dramas significantly motivated young Malaysian adults, especially females and those with higher education levels, to visit South Korea. These findings underscore the importance of socio-demographic segments in shaping film-induced travel intentions in Malaysia.

Therefore, comprehensive research on the influence of movies on Malaysians' travel intentions is deemed necessary. Understanding this impact can inform targeted marketing strategies that leverage the cinematic appeal of destinations within Malaysia. Furthermore, by highlighting how films can influence domestic tourism, the study underscores the importance of integrating film tourism into the broader tourism development plans of the country. Moreover, with the increasing consumption of global and local films among Malaysians, the study offers a timely exploration of how these cinematic experiences can be harnessed to promote lesser-known destinations within the country, thus contributing to the decentralization of tourism and the promotion of sustainable tourism practices.

2. Literature Review

Push and Pull Factors

The concept of push and pull factors is a well-established framework in tourism studies, initially proposed by Crompton (1979) and further developed by Dann (1977). Push factors are intrinsic motivations that drive individuals to travel, such as the need for escape, adventure, or relaxation. These factors are internal and psychological, motivating tourists to seek experiences away from their routine environment. Conversely, pull factors are external attributes of a destination that attract tourists, such as natural beauty, cultural attractions,

and entertainment options. These factors are destination-specific and influence tourists' decisions on where to travel.

Studies have shown that push and pull factors influence tourists' travel behaviors and decisions. For instance, Uysal and Jurowski (1994) demonstrated that both push and pull factors play a critical role in shaping tourists' motivations and destination choices. Similarly, Yap, Teoh, and Tan (2017) utilized the push and pull framework to understand the travel motivations of tourists visiting Penang, highlighting the interplay between internal desires and external attractions in the decision-making process.

Film Tourism

Film tourism, also known as film-induced tourism, refers to the phenomenon where tourists visit destinations that they have seen in movies or television series. This form of tourism leverages the popularity and emotional connections viewers have with films and TV shows to promote real-world locations featured on screen. Film tourism is a growing niche within the broader tourism industry, driven by the significant impact of visual media on viewers' perceptions and travel intentions.

Research by Riley, Baker, and Van Doren (1998) highlighted the potential of movies to induce tourism by showcasing attractive locations and creating a desire among viewers to visit these places. More recent studies, such as those by Yen and Croy (2016), and Vila, Brea, and de Carlos (2021), have explored the specific mechanisms through which films influence tourists' destination awareness and motivations. These studies emphasize the role of emotional engagement, celebrity involvement, and the portrayal of destinations in shaping tourists' perceptions and travel intentions.

Destination Awareness

Destination awareness refers to the extent to which potential tourists are familiar with and recognize a particular destination. It is a critical factor in the decision-making process, as higher awareness increases the likelihood of a destination being considered and chosen by tourists. Film and television play a significant role in enhancing destination awareness by providing extensive visual exposure and creating strong associative links between the destination and the film.

Studies have shown that film tourism can significantly boost destination awareness. For example, TCI Research (2018) reported that films influence the travel decisions of millions of international tourists annually, highlighting the substantial reach and impact of visual media on destination marketing. Vila et al. (2021) further demonstrated that destinations featured in popular TV series experienced increased tourist visits due to enhanced awareness and interest generated by the shows.

Visit Motivation

Visit motivation encompasses the various reasons and driving forces behind tourists' decisions to visit specific destinations. It is influenced by a combination of push and pull factors, as well as other contextual and personal factors such as past experiences, social influences, and media exposure. In the context of film tourism, visit motivation is particularly driven by the desire to experience locations seen on screen, follow in the footsteps of favorite characters, and engage in unique activities associated with the film.

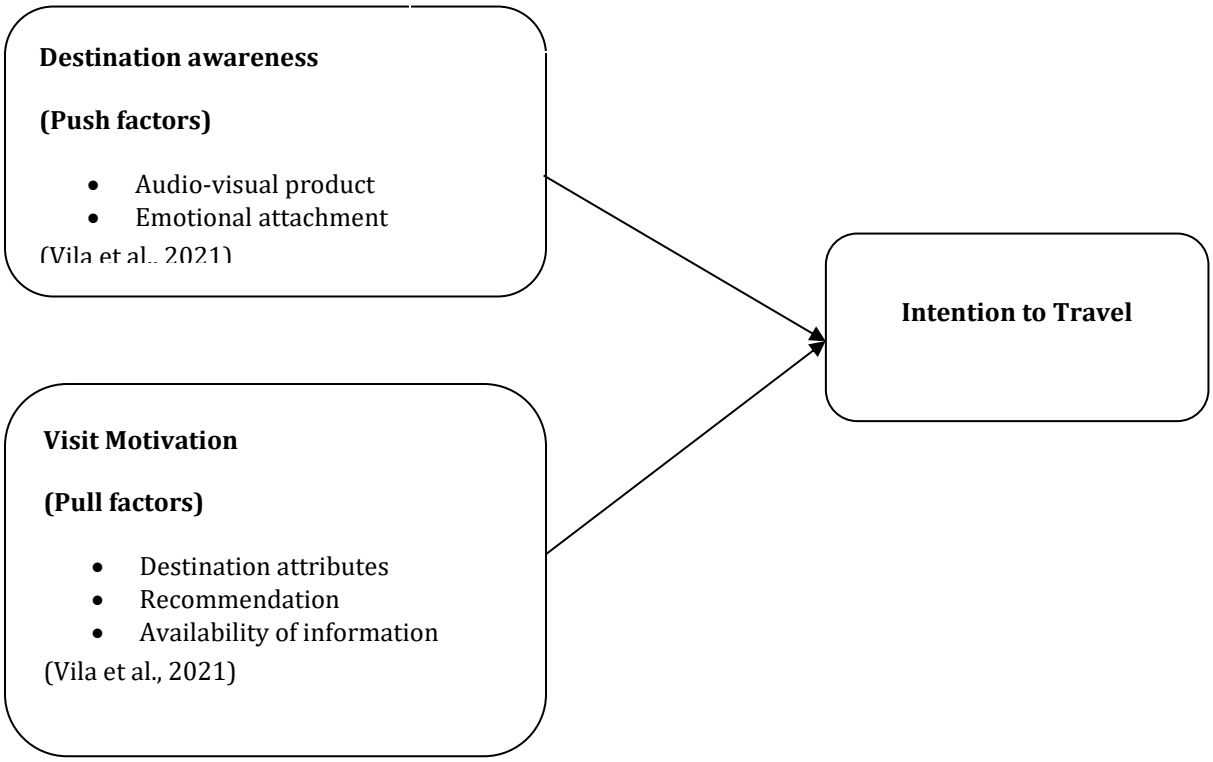
Research by Rittichainuwat and Rattanaphinanchai (2015) explored the travel motivations of film tourists, identifying factors such as nostalgia, novelty, and the search for memorable experiences as key drivers. Similarly, Suni and Komppula (2012) found that the emotional and psychological connections viewers form with films significantly influence their motivations to visit the filmed locations.

Intention to Travel

Intention to travel refers to the likelihood that individuals will visit a specific destination in the future. It is a critical predictor of actual travel behavior and is influenced by various factors, including destination awareness, visit motivation, and the perceived attractiveness of the destination. In the context of film tourism, the intention to travel is significantly shaped by the influence of films on viewers' perceptions and desires.

Studies have shown that films can enhance the intention to travel by creating positive images of destinations and fostering emotional connections with viewers. For example, Wen et al. (2018) found that movies and television significantly influence Chinese tourists' perceptions and intentions to visit international destinations. Tassiello and Tillotson (2020) also demonstrated that subjective knowledge gained from films positively impacts the intention to travel by increasing familiarity and reducing perceived risks associated with the destination.

Movie and Travel Decision



The constructed hypotheses based on the framework are.

H1: There is a relationship between destination awareness and intention to travel.
H2: There is a relationship between visit motivation and intention to travel.

3. Methodology

Research Design

This study employs a comprehensive research design encompassing data collection and analysis, guided by a detailed action plan to address the research objectives. The primary aim is to explore the relationships between destination awareness, visit motivation, and intention to travel among Malaysians, utilizing quantitative data collected through an online survey distributed via Google Forms. This method facilitates efficient data collection from a geographically diverse population. The research methods and survey instruments were reviewed and approved by the university's ethics committee before data collection.

A descriptive research approach was adopted, focusing on analyzing the mean scores of each item related to the first research objective and question. Descriptive analysis effectively captures the demographic characteristics of respondents, as well as their perceptions, motivations, and intentions to travel after watching

movies. Variables such as cultural understanding, historical landmarks, food and beverage preferences, safety, and leisure activities were considered. This approach also evaluates how different movie genres impact perception and interest in travel destinations. Sociodemographic factors like age, gender, education level, and income were examined to provide context and detail, investigating how these variables moderate the relationship between movie influence and tourism destinations. Descriptive analysis is straightforward to implement, user-friendly, and allows for clear articulation of the influence of movies on tourism destination choices among Malaysians.

Sample and procedure

The target population for this study comprised Malaysian movie or drama viewers aged 18 and above. The survey was disseminated through various channels, including social media platforms like Instagram and WhatsApp, utilizing non-probability sampling with convenience sampling methods. Structured questionnaires were used to collect data from respondents motivated to travel based on movies. Participation was voluntary.

Primary data were collected through a quantitative survey. The questionnaire, developed before data collection, featured multiple-choice questions in the first section and a 5-point Likert scale in the second section. This method was chosen for its compatibility with the variables being measured and its prevalence in past related research (Wen et al., 2018; Vila et al., 2021; Hamzah et al., 2016; Rittichainuwat and Rattanaphinanchai, 2015). Data collection included both online surveys and face-to-face interactions with a filtered questionnaire. The online survey approach aimed to achieve a broader and more generalized respondent base across Malaysia at a lower financial cost, as suggested by Evans & Mathur (2018) for its convenience and low administration costs.

A pilot test involving 30 sets of questionnaires was conducted before the final data collection. Feedback from the pilot test informed revisions to the survey instrument, ensuring internal consistency and reliability, measured by Cronbach's alpha. The final revised survey was then distributed in areas with high tourist activity in Malaysia.

Measures

The survey instrument was developed based on extensive literature reviews and previous studies on film-induced tourism (Wen et al., 2018; Vila et al., 2021; Hamzah et al., 2016; Rittichainuwat and Rattanaphinanchai, 2015). The questionnaire comprised two main sections: the first collected respondents' sociodemographic background, including gender, age group, marital status, ethnicity, state of origin, occupation, education level, and monthly income. It also gathered information on respondents' travel experiences, frequency of travel, preferred movie or drama genres, and whether they visited tourist destinations due to movies or dramas. Respondents were asked to specify any tourist destinations influenced by movies or dramas.

Data Analysis

Descriptive statistics were used to summarize key variables from the data set, including measures of central tendency and variability such as range, variance, mean, and standard deviation. Data analysis was performed using SPSS (Version 29.0), chosen for its comprehensive data summarization capabilities and its widespread use in related past studies (Wen et al., 2018; Vila et al., 2021; Hamzah et al., 2016; Rittichainuwat and Rattanaphinanchai, 2015). This software provided the necessary tools to conduct a detailed examination of the variables at hand, supporting the study's objectives to investigate the influence of movies on Malaysians' perceptions and interests in tourism destinations.

4. Results

The primary aim of this study was to investigate the influence of movies on Malaysians' perceptions and interests in tourism destinations. The descriptive analysis section is divided into two main parts: destination awareness and visit motivation. Destination awareness further includes audio-visual products and emotional attachment, while visit motivation encompasses destination attributes, recommendations, and the availability of information.

The sample comprised 267 valid responses collected via Google Forms. The demographic breakdown revealed a higher proportion of male respondents (76%) compared to female respondents (24%). The majority of respondents were aged between 18 to 29 years (80%), and a significant portion were single (65%). The racial composition included 70% Malay, 15% Indian, and 15% Chinese, reflecting the diversity of the Malaysian population. Most respondents had tertiary education and were employed in the private sector (30%) or were students (24%). The household income distribution showed that 51.7% of respondents earned between RM4850 and RM10959 monthly.

The descriptive statistics indicated that younger respondents, those with higher household incomes, and those who were not married were significantly more likely to travel to destinations featured in movies or dramas. This finding aligns with the study by Hamzah et al. (2016), which suggested that young travellers aged 18 to 25 are more inclined to visit film-induced tourist destinations to gain experiences.

Multiple Regression

Table 1: Multiple Regression Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.799[a]	.639	.636	.33520

	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
Variable	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1(Constant)	.701	.159		4.422	<.001		
Destination Awareness	.390	.060	.362	6.548	<.001	.447	2.238
Visit Motivation	.500	.056	.492	8.885	<.001	.447	2.238

a. Dependent Variable: Intention Travel

Based on Table 1, the adjusted R^2 is 0.639 showing that the result of this study is generalizable to other populations. The R^2 value is 0.639, which implies that approximately 63.9% of the variability in the dependent variable is explained by the predictors. Considering the value of R^2 and the adjusted R^2 is close in value, it appears that no overfitting of the model to the sample occurred. The standard error of the estimate is relatively low, indicating that the predictions are, on average, close to the actual observed values.

It was stated by Petchko, (2018) that if the p-value is smaller, the coefficient is interpreted as being statistically significant. However, if it is greater, the coefficient is interpreted as being nonsignificant, or as not being significant. Based on Table 1, both destination awareness and visit motivation variables have a coefficient of less than 0.001 in value. Therefore, the variables are indeed significant.

Pearson Correlation

Table 2: Pearson's Correlation Output

		mA	mIT
mA	Pearson Correlation	1	.710**
	Sig. (2-tailed)		<.001
	N	267	267
mIT	Pearson Correlation	.710**	1
	Sig. (2-tailed)	<.001	
	N	267	267
		mE	mIT
mE	Pearson Correlation	1	.611**
	Sig. (2-tailed)		<.001
	N	267	267
mIT	Pearson Correlation	.611**	1

	Sig. (2-tailed)	<.001	
	N	267	267
		mDA	mIT
mDA	Pearson Correlation	1	.710**
	Sig. (2-tailed)		<.001
	N	267	267
mIT	Pearson Correlation	.710**	1
	Sig. (2-tailed)	<.001	
	N	267	267
		mC	mIT
mC	Pearson Correlation	1	.674**
	Sig. (2-tailed)		<.001
	N	267	267
mIT	Pearson Correlation	.674**	1
	Sig. (2-tailed)	<.001	
	N	267	267
		mI	mIT
mI	Pearson Correlation	1	.612**
	Sig. (2-tailed)		<.001
	N	267	267
mIT	Pearson Correlation	.612**	1
	Sig. (2-tailed)	<.001	
	N	267	267

Table 2 shows the Pearson Correlation output for the relationship between the variables. Most of the relationships between audio-visual, emotional attachment, destination attributes, recommendations, and availability of information are ranked in the range of 0.60 to 0.70. Pearson's for the correlation between emotional attachment and intention to travel has the lowest value of 0.61 which is highly correlated. Next, followed by the relationship between availability of information and intention to travel is 0.612 which is also highly correlated. The relationship between recommendation and intention to travel also is highly correlated with a value of 0.67. The correlation between destination attributes value at 0.71 which is highly correlated. Lastly, the relationship between audio-visual products and intention to travel set the highest correlation value with a value of 0.71.

Discussion & Implications

The present study investigates the influence of movies on Malaysians' travel intentions, examining how cinematic portrayals impact destination awareness, visit motivation, and overall intention to travel. The findings indicate a significant relationship between exposure to movie-induced imagery and the heightened interest in the depicted locations. This aligns with the push and pull theory, suggesting that movies serve as powerful external stimuli (pull factors) that enhance the attractiveness of a destination, while internal motivations (push factors) such as the desire for novel experiences drive the decision to travel.

The descriptive analysis revealed that respondents who frequently watch movies are more likely to develop an interest in visiting the destinations featured in these films. This suggests that movies play a crucial role in shaping perceptions and travel aspirations, acting as a bridge between the viewer and the destination. The multiple regression analysis further supports this, demonstrating that movie-induced awareness significantly predicts travel intention, with motivation serving as a mediator in this relationship.

Additionally, the implications of these findings are profound for destination marketers, film producers, and tourism stakeholders. For destination marketers, leveraging film tourism can be a strategic tool to enhance destination branding and attract a broader audience. By collaborating with filmmakers, tourism boards can ensure that their destinations are portrayed in an appealing light, thereby driving interest and visitation.

Film producers can also benefit from these insights by recognizing the potential impact of their work on tourism. By creating compelling narratives set in real locations, they can indirectly contribute to the economic

development of these areas. Furthermore, tourism stakeholders can develop targeted marketing campaigns that highlight the connections between popular films and travel destinations, thereby tapping into the existing fan base of these movies.

5. Limitations and Suggestions for Future Research

This study, while comprehensive, is not without its limitations. Firstly, the reliance on self-reported data may introduce biases, such as social desirability bias, where respondents might overstate their interest in travel influenced by movies. Secondly, the sample is limited to Malaysian tourists, which may not be representative of other cultural contexts. Lastly, the study primarily focuses on the immediate impact of movies on travel intentions, without considering the long-term effects or the influence of other media forms such as television series and online streaming content.

Therefore, future research should aim to address these limitations by employing a more diverse and international sample to generalize the findings across different cultural contexts. Longitudinal studies could provide deeper insights into the lasting impact of movie-induced tourism and how it evolves. Additionally, examining the influence of other media forms, including television series and online streaming platforms, could offer a more comprehensive understanding of how media content shapes travel behavior. Incorporating qualitative methods, such as interviews or focus groups, could also enrich the findings by providing deeper insights into the motivations and perceptions of tourists influenced by films.

Conclusion

In conclusion, this study highlights the significant role of movies in shaping travel intentions among Malaysian tourists. The findings underscore the importance of film as a powerful tool for destination marketing, capable of enhancing destination awareness and motivating travel. By understanding the dynamics between movie exposure and travel behavior, stakeholders in the tourism and film industries can develop more effective strategies to capitalize on this relationship, ultimately driving economic benefits for the destinations featured in films. The study's limitations provide avenues for future research to further explore and validate these findings in different contexts and through various methodological approaches. Furthermore, by analyzing the influence of movies on Malaysians' travel intentions, the research provides empirical evidence on how cinematic experiences can drive tourism demand. The study advances the application of the push and pull theory in the realm of film tourism, demonstrating how internal motivations (push factors) and external attractions (pull factors) work together to influence destination choices among Malaysian moviegoers.

Additionally, the study expands the existing literature on destination awareness and visit motivation by focusing on the specific sociocultural dynamics of Malaysian tourists. The findings offer a pragmatic understanding of how movies resonate with local audiences and shape their travel behaviors, thereby filling a gap in the literature concerning non-Western perspectives on film tourism. On the other hand, policy-makers and tourism authorities in Malaysia should also strategically incorporate film tourism into national tourism strategies, fostering collaborations between the film and tourism industries. Promoting destinations featured in films through targeted marketing campaigns, particularly for lesser-known locations, enhances destination visibility, attracts a broader range of tourists and ensures that on-screen portrayals align with real-life experiences to boost tourist satisfaction and sustainable tourism growth.

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Predicting Consumer Behavior in E-Commerce Using Decision Tree: A Case Study in Malaysia

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Abstract: Understanding and predicting consumer behavior will help e-commerce businesses improve customer satisfaction and devise better marketing strategies. This study is intended to explore the use of decision tree algorithms in predictions of consumer purchase behavior in the e-commerce platform in Malaysia. Comparing the performances of J48, Random Tree, and REPTree decision tree models using an online shopper dataset collected by surveying 560 Malaysians, on various aspects like accuracy, precision, recall, and F1 score. Results indicate that the highest accuracy has been achieved with the Random Tree algorithm, outperforming J48 and REPTree. The results will, therefore, form the basis upon which e-commerce can restrategize its marketing programs for better customer engagement. This is an important study in that it shows the efficacy of applying a decision tree algorithm to understand customer behavior in the context of Malaysia and adds to the growing body of knowledge in predictive analytics in e-commerce.

Keywords: *Consumer Behaviour, E-Commerce, Decision Trees, Predictive Analytics, Malaysia*

1. Introduction

E-commerce in Malaysia is growing, and this generally means increased digitization and a shift in consumer behavior. To be able to compete in this fast-growing market, companies should be sure to rely on machine learning and AI. The technology will help explain and predict consumer preferences and behavior while shopping. According to Digital Malaysia 2020, half of Malaysians shop online, and 82.9 percent of mobile users use their phones to shop online. It is expected, in turn, that from 2023 to 2027, an additional 2.9 million people will join Malaysia's e-commerce market. Because of the unique cultural diversity represented by the Malay, Chinese, and Indian communities, Malaysia comprises a complex and enriched environment in which research into consumer behavior in e-commerce can be conducted. This diversity influences purchasing patterns, preferences, and motivations that need understanding in the Malaysian context. The takeaway from such studies can be used to inform focused marketing strategies that allow businesses to align operations with what is expected by consumers. This may also assist in helping policymakers develop programs that continue to support growth in e-commerce, particularly in underserved areas.

Even though Malaysia is considered an advanced country in the domains of e-commerce and machine learning, there exist some unique challenges that it faces in adapting to these technologies. Regarding Loh and Teoh (2021) and Vachkova et al. (2023), machine learning in Malaysia is still in its very infant stages. The existing technological facilities need to be used very judiciously so that economic growth can take place along with international expansions, but in this regard also, there exists a lot of disparity. Still, formidable challenges involve heavy investment in building up a strong technology infrastructure, training the workforce, and privacy and security management of users' data. Castillo and Taherdoost (2023) continue to explain that although big global companies such as Amazon, Alibaba, and Rakuten remain on top using AI in big data and chatbots, Malaysian firms lack the latest technology, restrictive regulations, and human resource deficiencies in developing required digital skills. These questions indicate the divide between global developments and local adaptation, hence caveating the fact that an approach tailor-made to fully uncover AI and ML integration into the Malaysian e-commerce market needs to be put into the sling of affairs.

One of which is that many studies (e.g., Kiew et al., 2021; Kuswanto et al., 2020; Alhakim et al., 2023; Pe et al., 2020; Sarangapani et al., 2023) have found several factors that influence consumer behavior online, including attitude, motivation, perceived risk, and demographic variables. Although these studies have been able to shed much valuable insight, they have often relied upon descriptive models of consumer behavior that capture a snapshot at any given time and fail to examine how these factors dynamically interact over time to predict

future behavior. Most research conducted in Malaysia has not taken full advantage of machine learning approaches yet for more accurate results. However, much has been looked upon in terms of the merits and demerits of predicting consumer behavior, a thing that has created a gap in research work targeting Malaysian consumers. This study will specifically set a goal of understanding local consumer behavior in the Malaysian context as a way of addressing this gap and reacting to the fast-rising e-commerce market nature. Previous studies only considered general online consumer behavior without fully considering the unique features of the Malaysian market. This paper applies the machine learning approach in decision tree analysis, targeting the study of analyzing and predicting Malaysian consumer behavior. In turn, decision trees are handled as very effective means to catch other complex non-linear data patterns in large data series and provide an organized and interpretable model for decision-making. With specific reference to the Malaysian online market, uniqueness springs from the cultural diversity in which it operates, the rapid technology adoption, and the steadily growing demographics that are young and tech-savvy. Such characteristics will be brought to light only through a proposed approach. A model specification developed in the light of these unique market characteristics, therefore, shall seek to assist electronic commerce businesses in Malaysia in current marketing, personalization of customer experiences, and operational efficiency improvement.

2. Literature Review

Key Theories of Consumer Behaviour in E-Commerce

E-commerce has significantly changed the means through which customers purchase their products, particularly in Malaysia, where online shopping has rapidly raised its demand after the COVID-19 pandemic. Understanding consumer behavior in the digital era is quite significant for e-commerce-based enterprises, especially when it turns to the habits of the online shopper. As can be seen from the standpoint of increasing income, it can offer an efficient marketing strategy. According to Beck & Ajzen (1991) Theory of Planned Behavior, attitudes, subjective norms, and perceived behavioral control influence online users in terms of their intention to carry out the behaviors online. This theory has been among the widely used theories to explain purchasing behavior, including online shopping. Decision tree algorithms can powerfully model TPB components by analyzing big datasets in search of patterns in attitudes, norms, and control factors that predict online shopping behavior. Opportunity of use, perceived ease of use, and attitude are other variables adopted in using segments of data, and decision trees create assumptions of consumers' decision rules for the final actual prediction of whether consumers are likely to make a purchase, hence; operating TPB in a usable, practical, and empirically testable manner.

Another old framework that this work embarks on is Howard Seth's model. This is a voluminous theoretical framework that claims to cover the consumer decision process. The model developed by John Howard and Jagdish Sheth is applied extensively in marketing and psychology to gain insight into how external variables influence choices that occur in an individual consumer(Howard & Sheth, 1968). It synthesizes different elements that include perceptual and learning constructs, to expand the view on the mechanisms of consumer decision-making. This model upholds the idea that consumer behavior is not only the result of immediate stimuli or overt acts but is an intricate interplay of many variables. It is therefore very significant to first understand this theory of behavior to form a base on which any prediction of consumer behavior stands, which will be necessary for coming up with an optimum e-commerce strategy. It is a high level of complexity that decision trees address by analyzing a group of factors together with the most determinable variable of influence on consumer decisions, such as marketing effort, consumer perception, and past purchase behaviors, when predicting future purchases for offering the best e-commerce optimization strategies.

Predictive Analytics in Modern E-Commerce

Predictive analytics has now become a powerful tool that helps in foreseeing the behaviors of customers in the digital world and provides noteworthy advantages to e-commerce businesses by making decisions based on their past data. The rationale for this has been related to the fact that consumer behavior is becoming increasingly complex in the digital space. Sales forecasting and decision-making based on sales have seen an enhancement in the Egyptian e-commerce industry with the help of predictive analytics, as found by Morsi (2020). This study identified that predictive analytics could reach the uncovered information about sales trends, optimize inventory, and enable better corporate planning. The results of this study indicate the role and

importance of data-driven approaches in the highly competitive world of e-commerce in general but in developing countries like Egypt.

In Malaysia, e-commerce is growing at an unprecedented rate. According to Kathiarayan (2022), the COVID-19 pandemic has significantly increased e-commerce in Malaysia. In addition, data from the Malaysian Communications and Multimedia Commission shows a 48.8 percent increase in online shoppers from 2016 to 2018 (Alomari et al., 2021). A report by Statista (2024) predicts that this trend will continue, with 7.6 million more e-commerce users expected between 2024 and 2028. Due to the increase in online shopping, especially in Malaysia, there is a clear change in consumer behavior, which emphasizes the need to use decision trees for more thorough user data analysis. In the Malaysian context, a study by Choong et al. (2021) who focused on the importance of predictive analytics in predicting vegetable prices on e-commerce platforms, this study accurately addresses the unique challenges faced by farmers and the agricultural sector in Malaysia. Through surveys and experiments, this study identified that using advanced technology, especially in big data or machine learning can help solve the problem of food shortages. The study highlights that implementing an e-commerce platform with price forecasting tools can help SMI farmers better manage their products and avoid losses, emphasizing the need for such a platform in the Malaysian agricultural sector to achieve at least 80% accuracy in predicting vegetable prices, by that improves food supply management and supports government policy.

Furthermore, Bradlow et al. (2017) discuss how big data and predictive analytics are informing the functioning of retail organizations. The mentioned five elements, consisting of customer behavior, product knowledge, time, location, and sales channels, remain the focus of this study. These findings mean that, through the support of data sources, statistical tools, and theoretical concepts, merchants can get more accurate results in predicting customers' behavior, better inventory levels, and greater confidence in decision-making. It further iterates that effective analysis can only be realized through the integration of theory-driven methodologies with big data. It, therefore, calls for addressing ethical and privacy challenges in the business world.

Decision Trees and E-Commerce Behaviour

Among different predictive analytics techniques, decision tree algorithms gained popularity due to their simplicity and interpretability. A decision tree belongs to the class of nonparametric models that split the data into branches based on the values of selected features. Because of this, decision rules become straightforward to understand. Ketipov et al. (2023) made predictions of user behavior based on their personality attributes using decision trees and random forest models. The personality qualities studied here give a smaller picture, and the greater element of consumer behavior is left under-explored. Though this model shows excellent predictive ability, the personality trait focus of the study does present limitations. In this respect, future studies should be directed toward increasing the dimensions of user behavior to broaden the comprehensiveness and applicability of the findings. Overall, decision tree algorithms have shown promise in predicting customer behavior for online shopping, especially in the context of optimization or integrated approaches with other statistical methods. However, more research is necessary to understand their complete strength and weaknesses compared to other machine learning models. It is expected that the research will dwell on their performances when used independently.

This is further followed up by Ansari and Riasi (2019) in their study using the decision tree to find the J48 algorithm preference of shopping centers for higher-income households vis-a-vis the preference of stores for lower-income groups. Although these studies have contributed immensely to the understanding of demographics, their scope has been limited and focused on the site of shopping selection. The findings would be more in-depth and generalizable, furnishing a holistic insight into consumer behavior, by extending the scope of the study to include various acts of consumer behavior. For instance, Kareena and Kumar (2019) designed a hybrid classifier that involves decision trees and KNN utilized for user behavior prediction from Amazon reviews, and it outperformed the Naive Bayes approach. Although the hybrid model shows good predictive accuracy, it is based on a combination of algorithms that do not distinguish the individual performance strengths of each of these approaches. Future research should mainly focus on decision trees regarding independent assessment to establish best practices and gain insight into how effective the models are.

Zhenyu Liu (2019) adopted a stacking approach to combine decision tree models. The result was that he had high predictive performance for future purchases. Enabling this ensemble method to successfully take advantage of various models proves the value of such an approach. Otherwise, this success points out that only limited research effort was placed on investigating the performance of single decision trees. Further studies are therefore recommended to assess how well these decision trees perform separately and thus determine whether they work in isolation to be able to shed additional light on their performance taken on a stand-alone basis.

The research by Gkikas et al. (2022) used a hybrid model, combining decision trees with genetic algorithms to achieve an accuracy of more than 90% in consumer behavior forecasting. This is a strong improvement in the accuracy of the forecast, hence justifying the use of a hybrid model which uses genetic algorithms coupled with a decision tree. However, the emphasis that this study places on hybrid models belies the capabilities of standalone decision trees, and it suggests that future research is required to, in the first instance, investigate core decision tree models before considering enhancements through hybridization. Given this context, there is an apparent lack of understanding regarding how well standalone decision trees are doing, especially in the Malaysian e-commerce landscape. This paper, therefore, tries to fill that gap by assessing the effectiveness of decision trees in predicting consumer behavior based on demographics and psychographics with due regard to the ethical implications of deploying predictive analytics in e-commerce.

3. Methodology

The proposed methodology includes the following steps for the analysis of the consumer behavior data: online survey-based data collection, application of preprocessing techniques in datasets, decision tree machine learning algorithm for predictions after preprocessing, and classification metrics to compare algorithmic performances on all datasets, followed by test data analysis based on the parameters of the dataset. Each of these steps is explained in detail in the subsections describing the methodology.

Data Collection: This research performed data collection as an online survey among Malaysian consumers aged 18 and above who have been active in buying at least one item online using the internet. This approach will ensure comprehensive data is collected, which portrays a diversified range of consumer behaviors and their preferences. This data set consists of 85 features and 560 instances. This shows that this piece of data has a very comprehensive base for analysis. Described in Table 1 is the pre-processed data.

Table 1: Data Description before pre-processing

No	Attribute	Description
1	Gender	Consumer's gender
2	Age	Consumer's age
3	Level of Education	Consumer's level of education
4	Ethnicity	Consumer's ethnicity
5	Annual income	Consumer's annual income
6	Employment status	Consumer's employment status
7	Current residential location	Consumer's current residential location
8	Frequency of online shopping	How frequently the consumer visits online shopping platforms
9	Average time	The average time the consumer spends online shopping
10	Type of products	Products that are usually purchased by the consumer
11	Age	Consumer's age
12	Attitude (BA1, BA2, BA3, BA4, BA5, BA6, BA7)	Attitude factors influence online purchasing behaviour
13	Perceived Risk (BB1, BB2, BB3, BB4, BB5, BB6)	Perceived risk factors influence online purchasing behavior
14	Trust and Security (BC1, BC2, BC3, BC4, BC5, BC6)	Trust and security factors influence online purchasing behavior
15	Psychological	Psychological factors influence online purchasing

	(BD1, BD2, BD3, BD4, BD5, BD6	behavior
16	Hedonic Motivation (BE1, BE2, BE3, BE4, BE5)	Hedonic motivation factors influence online purchasing behavior
17	Promotion (BF1, BF2, BF3, BF4, BF5, BF6)	Promotion factors influence online purchasing behavior
18	Product Price (BG1, BG2, BG3, BG4, BG5, BG6)	Product price factors influence online purchasing behavior
19	Privacy (BH1, BH2, BH3, BH4, BH5, BH6)	Privacy factors influence online purchasing behavior
20	Emotional (BI1, BI2, BI3, BI4, BI5, BI6)	Emotional factors influence online purchasing behavior
21	Perceived Benefits (BJ1, BJ2, BJ3, BJ4, BJ5, BJ6)	Perceived benefit factors influence online purchasing behavior
22	Accessibility (BK1, BK2, BK3, BK4, BK5, BK6)	Accessible factors influence online purchasing behavior
23	Online Purchasing Behaviour (C1, C2, C3, C4, C5, C6, C7, C8, C9, C10)	Will the consumer purchase? (Output variable)

Pre-Processing: Generally, data pre-processing is an essential process for cleaning the data, which then ensures the reliability and consistency of the dataset. It began with data cleaning, by removing missing values and unnecessary columns, followed by a selection of the important attributes based on research needs. It also involved data transformation and application of SMOTE to handle class imbalance, thereby increasing the number of instances in the dataset from 560 to 1,126. The final data set consists of 30 features, and 1,126 instances, out of which there are five class labels: *"definitely wouldn't purchase," "probably wouldn't purchase," "might purchase," "probably would purchase," and "definitely purchase."*

Data Modeling: The pre-processed dataset after the cleaning process was then ready for machine learning algorithms to predict and analyze. Thereafter, 10-fold cross-validation was done to increase accuracy. Training and test samples were randomly selected from the base set for each classification, enabling models to be trained and tested and classification accuracy measures estimated for each classifier. Different methods of data mining were used in this study, but the focus remained on DT classifiers through the implementation of three methods, namely J48, Random Tree, and REPTree.

Decision Tree Algorithms: Decision trees are one of those flexible and interpretable machine learning algorithms that perform classification as well as regression. Examples of important decision tree algorithms in WEKA are J48, Random Tree, and REPTree. J48 can be seen as an implementation of C4.5; the construction of J48 is based on information gain to split the data and then prunes to avoid overfitting for the sake of interpretability. Random Tree constructs multiple unpruned trees using random subsets, which makes it more robust by ensemble learning. REPTree builds trees based on information gain and then prunes these with reduced error pruning, which is employed to guarantee efficiency combined with generalizability. These algorithms balance simplicity, robustness, and efficiency for a variety of data analysis tasks. Here's a bit more detail on each of the methods:

- **J48:** This is the implementation of the C4.5 algorithm that builds a decision tree by computation of information entropy. It is widely used since it is simple, besides being effective in generating understandable rules (Gyimah & Dake, 2019).
- **Random Tree:** Using the concept of several decision trees that consider random subsets of features and instances, this classifier provides stronger robustness, reducing the possibility of overfitting (Obiedat, 2020).
- **REPTree:** A fast decision tree learner. It builds a regression/decision tree using information gain/ variance reduction and prunes it using reduced-error pruning. It efficiently handles large datasets and noisy data (Abana, 2019).

Performance Measurement

The performance of the decision tree algorithms was evaluated in terms of accuracy, precision, recall, and F1 score. A complete analysis of the test data will be done by the different parameters of the dataset to meaningfully assess the performance of the models and point out improvements in the models. This would lead to the later extraction of useful understanding regarding how the performance, merits, and deficiencies of such models can be improved in the future.

- **Accuracy**: Measures the proportion of correct predictions made by a model out of the total number of predictions.
- **Precision**: Measures the proportion of positive class predictions that are correctly identified as positive. A higher precision score indicates that the model is more accurate and reliable in identifying positive samples.
- **Recall:** Measures a model's ability to correctly identify positive instances from the total number of actual positive instances in the dataset. It quantifies the proportion of true positive instances that the model successfully predicted as positive out of all the positive instances present.
- **F-measure:** Known as the F1-score, it combines precision and recall into a single metric, providing a balanced evaluation of the performance of a classification model, especially useful when dealing with imbalanced data sets in which the distribution of classes is irregular, and accuracy alone could be misleading.

5. Results and Discussion

This section presents some comparative experiments using some decision tree models, namely J48, Random Tree, and REPTree. These tests have been conducted on three different datasets. Cross-validation was used in the research investigation to evaluate the model. The metrics of assessment used in evaluating and comparing the classification models included accuracy, precision, recall, and F1 score. Results for each model run on each of the three different datasets are given in Table 2.

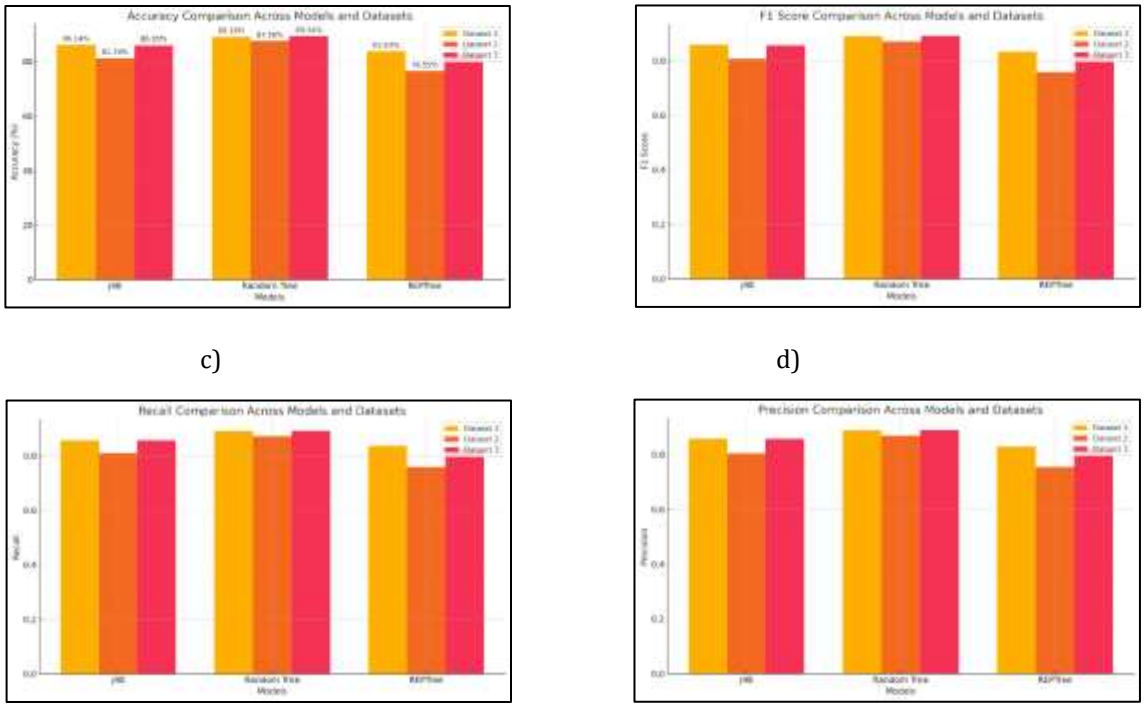
Table 2: Accuracy, Precision, Recall and F-Measure for Three Different Datasets

Dataset	Model	Accuracy	Precision	Recall	F-Measure
1	J48	86.14%	0.859	0.857	0.858
	Random Tree	89.16%	0.888	0.890	0.889
	REPTree	83.83%	0.830	0.836	0.833
2	J48	81.26%	0.805	0.809	0.807
	Random Tree	87.56%	0.870	0.872	0.871
	REPTree	76.55%	0.755	0.759	0.757
3	J48	86.05%	0.857	0.856	0.857
	Random Tree	89.34%	0.889	0.890	0.890
	REPTree	82.86%	0.820	0.825	0.823

All the datasets proved that the Random Tree model outperformed other models, as it had higher values of accuracy, precision, recall, and F1 scores, as observed in Table 2. While the J48 algorithm gave very performing and balanced values across all metrics, a bit more brittle, REPTree showed competitive results even if it came out as the weakest performance model compared to the other two. These findings are lent credence by the fact that the Random Tree model can handle several datasets and also that it is a working model for the classification tasks being investigated in this study. Because of this, the Random Tree model is not only reliable but also has a very high degree of precision; hence, it is suitable for application in further studies of consumer behavior and any other investigations that may be relevant to this area. The results of the study show the requirement in testing several models to come up with the best performance algorithms that could carry out certain data and serve desired goals.

Figure 1: Performance comparison of Decision Tree Model Across Multiple Datasets: (a) Accuracy comparison across models and dataset; (b) F1 score comparison; (c) recall score comparison; (d) precision score comparison

a) b)



c) d)

Figure 1 illustrates the detailed performance comparison across the datasets of the three Decision Tree models: J48, Random Tree, and REPTree based on four prime performance metrics, namely Accuracy, Precision, Recall, and F1 Score. From Figure 1(a), it can be seen that the F1 Score of the Random Tree model is higher across all data sets compared to the other two models, J48 and REPTree, indicating relatively better overall performance. Figure 1(b) illustrates the Recall of the models—their ability to retrieve all relevant instances. Also, like the F1 Score illustrated above, for all the datasets, the highest recall values correspond to the Random Tree model, which is thus more effective at retrieving actual positives.

Figure 1(c) shows the Precision, or in other words, the measure of goodness of models in terms of correct predictions among those forecasted as positive. Once again, the Random Tree model presents higher precision values for most of the datasets tested here, and thus, it is more precise when predicting positive cases. Finally, Figure 1(d) presents the Accuracy of the models, determined by the rate of correctly classified instances. Among the models, the highest accuracy is achieved by the Random Tree model, followed by J48 and then REPTree. The Random Tree model outperforms J48 and REPTree models on all performance measures in F1 Score, Recall, Precision, and Accuracy over the three datasets. That would mean that a Random Tree model would be most effective in terms of overall performance, therefore making it a better choice to predict consumer behavior in context.

5. Conclusion

In this present study, the J48, Random Tree, and REPTree decision tree models were explored in comparison to show a very good prediction of consumer purchasing behavior on e-commerce platforms in Malaysia. Models were evaluated based on accuracy, precision, recall, and F1 score using cross-validation. Surprisingly, the Random Tree model has sent consistent signals of its effectiveness concerning consumer behavior prediction. This model performed significantly better than the J48 and REPTree on all datasets tested. J48 was robust, presenting balanced metrics, but REPTree, though it received the lowest scores, also turned out competitive. The contribution of this research has added to the study and provided relevant information about the

implementation of a decision tree model in e-commerce, specifically in Malaysia. These can serve as a guide for e-commerce firms in optimizing business marketing strategies and improving customer engagement through predictive analytics and machine learning. This provides the policy level of support for the need of businesses and policymakers to invest in advanced tools on data analytics that would drive evidence-based policymaking to enhance market competitiveness. Future research is needed into applying decision trees, as well as other machine learning models, to larger datasets to improve predictive accuracy and generalization. These models of machine learning, if applied appropriately, help the companies increase their operational efficiency enhance customer satisfaction and, in due course, scale up and surge forward in the highly competitive e-commerce domain.

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Serving The Future: Factors Influencing Consumer Acceptance of Robotic Waiters in Restaurants

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Abstract: This research examines the factors influencing consumer acceptance of robotic waiters in restaurants. As the food service industry increasingly adopts robotic systems, it is essential to comprehend consumer approval for their effective integration. In this study, the Technology Acceptance Model (TAM) is utilized to investigate the key factors influencing consumer acceptance of robot waiters. It examines consumers' evaluations of these robots' usefulness and ease of use, as well as their attitudes and intentions. The findings illustrate the correlation between perceived usefulness, perceived ease of use, and attitude. Regression analysis highlights the significant roles of perceived ease of use and perceived usefulness in shaping attitudes toward technology, with the former having a more pronounced positive impact. However, anticipating future research into the complexities of user perception, particularly the negative correlation between perceived usefulness and attitude, is an exciting prospect for further investigation. This research enhances the understanding of consumer acceptance of robot waiters in restaurants and provides valuable insights for restaurant operators, policymakers, and other stakeholders. By addressing concerns related to technological adoption and customer preferences, this study guides the effective implementation of robot waiters in the restaurant industry, to improve operational efficiency and service quality.

Keywords: *Robotic Waiters, Consumer Acceptance, Technology Acceptance Model (TAM), Perceived Usefulness, Operational Efficiency*

1. Introduction

The restaurant industry has undergone significant operational changes and challenges, particularly in service delivery. As the dining landscape continues to evolve, ongoing research is essential for navigating the challenges and opportunities of technological advancements in the hospitality sector. One potential solution that has gained attention is the incorporation of robotic waiters to assist in food and beverage services (Wan et al., 2019). While this technological advancement has the potential to address some of the industry's challenges, it is essential to grasp the various factors that impact consumer adoption of robotic waiters in restaurants (El-Said & Hajri, 2022). A robot is a programmable and automated system capable of independently executing a specific task within its environment or under partial human control (Berezina et al., 2019). Consequently, restaurants have programmable and automated systems that can serve customers. Different forms of robotics are utilized within the restaurant sector. Lu et al. (2019) reported that a culinary robot is tasked with preparing a variety of dishes, while a reception robot greets patrons at the entrance and escorts them to their tables. Additionally, a server robot takes customer orders and serves dishes at their tables (Eksiri & Kimura, 2015). Moreover, robot waiters, also known as robotic waiters or robot servers, are autonomous or semi-autonomous robots designed to perform various tasks typically carried out by human restaurant waitstaff. For instance, an entirely automated hotpot eatery named Haidilao in China employs robotic chefs and waitstaff. This establishment has been operational since 2018, and multiple humanoid robots shuttle between the kitchen and dining area to attend to the patrons.

The rising number of individuals dining outside their homes has led accommodation and restaurant services to seek innovative methods to cater to a larger clientele (Lee et al., 2018). Robotic restaurants are now commercially available and have seamlessly integrated into our everyday experiences (Berezina et al., 2019). The integration of artificial intelligence (AI) and robotic technologies in the restaurant sector is currently in its early stages, yet it is a rapidly evolving field. More and more businesses are embracing these technologies to improve their operational processes and enhance customer experiences (Berezina et al., 2019).

In the context of Malaysia, AI technologies have been gradually implemented to enable service robots to enhance productivity and efficiency in meeting customer demands. As the number of restaurants adopting this technology grows, understanding the factors driving consumer acceptance becomes increasingly important. This study, conducted within the local context, offers valuable insights for both restaurant operators and policymakers. By investigating the key determinants of consumer acceptance, the research aims to inform strategic decision-making regarding the implementation and optimization of robot waiters in Malaysian restaurants. This knowledge is essential for ensuring the successful integration of robot technologies into the hospitality sector and maximizing the potential benefits for both businesses and consumers.

2. Literature Review

Adoption of Robotics in Service Industries

The utilization of service robots in the hospitality sector and service industries is on the rise as they are capable of improving customer experiences by engaging in social interactions and demonstrating adaptability (Lu et al., 2019). These robots can perform tasks with greater productivity and efficiency than traditional technologies like kiosks or tablets, as they can analyze data and adapt to their environments (Wirtz et al., 2018). Robotic restaurants can attract tech-savvy customers and differentiate themselves from competitors (Ivanov et al., 2017). Furthermore, they help address the restaurant industry's high turnover rates by offering continuous service without the problems of human labor, like illness or faults in service delivery.

Technology Acceptance Model (TAM) Framework

The Technology Acceptance Model (TAM), as proposed by Davis et al. (1989), explains the way individuals adopt and utilize new technology. This model emphasizes the significance of attitudes and intentions shaped by perceived benefits. The concept outlined above is frequently employed in the context of human-robot interaction within the hospitality industry (Abou-Shouk et al., 2021). This framework delineates two primary determinants: perceived usefulness, denoting the belief that technology improves outcomes, and perceived ease of use, reflecting the simplicity of mastering the technology (Davis et al., 1989). According to this framework, perceived usefulness and ease of use exert influence over customers' attitudes toward service robots and their inclination to embrace them within the hospitality sector (Hwang et al., 2020).

Perceived ease of use

Customer perceptions of the usefulness and ease of use of robotic waiters are critical factors in shaping their overall attitudes toward the adoption of these technologies. The ease of use, with which a customer perceives the robotic system as straightforward and intuitive to interact with, can significantly influence their willingness to embrace the technology (Lee et al., 2018). Recent research has investigated the elements that impact how customers view robotic waitstaff, such as trust, interaction, and the level of service provided (Lee et al., 2018). These studies suggest that the perceived usefulness and ease of use of robotic waiters are primary factors in customer attitudes toward their adoption (Ivanov & Webster, 2022).

Perceived usefulness

The perceived usefulness of robotic waiters is a critical factor in determining customer acceptance. Incorporating robotic waiters is more appealing to customers when they view them as advantageous, effective, and able to enhance their dining experience (Lee et al., 2018). Prior research has indicated that the perceived advantages of using robotic waitstaff, such as enhanced service quality, quicker order fulfillment, and the potential to mitigate staffing shortages, can have a positive impact on customers' perceptions of the usefulness (Jang & Lee, 2020). In contrast, the perceived risks associated with the use of robotic waiters, such as concerns about safety or reliability, can negatively impact their perceived usefulness (El-Said & Hajri, 2022). Additionally, the quality of interaction between customers and robotic waiters, as well as the level of trust in the technology, can also shape perceptions of usefulness (Seyitoğlu & Ivanov, 2020).

Attitude

Attitudes are defined differently across disciplines. Attitudes are behaviors expressed verbally, influencing prejudice and discrimination. Sociologically, attitudes indicate an intent to act as a mental position or feeling towards a fact or state. The Theory of Planned Behavior characterizes behavior attitudes as an individual's favorable or unfavorable evaluation of behavior, which influences the probability of them engaging in it (Ajzen,

1991). In tourism, attitudes help tourists make decisions psychologically. However, recent research on environmental behavior and green consumption suggests that attitudes have less influence on behavior compared to subjective norms and perceived behavioral control (Manosuthi et al., 2020). Likewise, attitudes may play a limited role in shaping the intention to visit and revisit robotic restaurants.

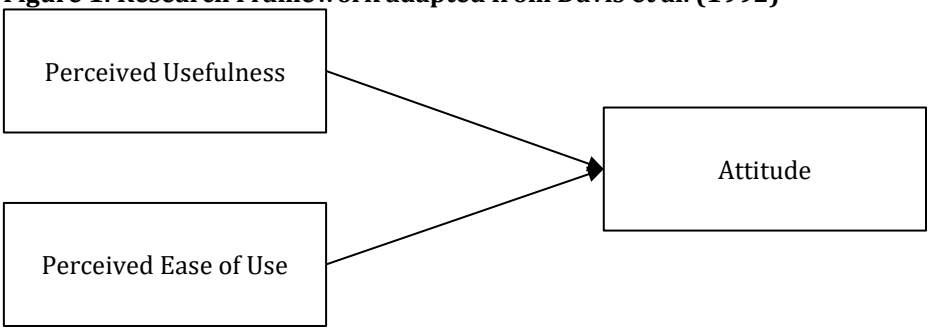
The relationship between perceived ease of use, perceived usefulness, and attitude

The relationship between perceived usefulness, perceived ease of use, and the resulting attitude towards robotic waiters is crucial to discover. The Technology Acceptance Model suggests that both perceived usefulness and perceived ease of use can positively influence an individual's attitude toward the adoption of a new technology (El-Said & Hajri, 2022). Studies have found that perceived usefulness has a stronger influence on customer attitudes toward robotic waiters compared to perceived ease of use (Sung & Jeon, 2020). This indicates that customers may be willing to overlook certain usability challenges if they perceive the robotic waiters as being highly useful in enhancing their dining experience. Additionally, the need for social interaction and the level of innovativeness of customers can also shape their attitudes toward the adoption of robotic waiters (Sung & Jeon, 2020). Additionally, trust and the quality of the robots' output significantly affect customers' perceived usefulness, as does the interaction between the customer and the robot, which has a positive influence on perceived ease of use (Seo & Lee, 2021).

Research Framework (Conceptual/Theoretical)

The conceptual framework has been adapted and refined from previous research, including Davis et al.'s (1989) technology acceptance model, to explicate how individuals utilize and embrace specific technologies. According to the model, an individual's inclinations and motivations to learn and adopt new technology are influenced by the perceived benefits associated with the technology.

Figure 1: Research Framework adapted from Davis et al. (1992)



3. Methodology

The collected data was analyzed using a quantitative research approach in this study. Customers who had previously interacted with humanoid robots in restaurants made up the target population. The research utilized a purposive sampling method. Information was obtained by conducting a survey consisting of queries in Sections A, B, and C. Following data collection, analysis was carried out using the Statistical Package for Social Science software. The main analyses performed involved conducting a descriptive analysis to examine the demographic profile, evaluating reliability, and performing regression analysis to investigate the relationships between the independent and dependent variables.

4. Research Findings

The data regarding the participants' demographics is outlined in Table 1, with a total of 171 individuals included in this study. The breakdown of genders showed that 54.4% of the participants were male, with the remaining 45.6% being female. Among the participants, 21.1% were aged 18–25, most of whom were undergraduate students. The second largest age group was 26-35 years old, accounting for 24.6% of the sample. The age groups of 36-45 years old and 46-55 constituted 28.7% and 25.1% of the participants, respectively. The age group of 55 and above represented only 0.6% of the total respondents. Additionally, 54.4% of the respondents reported being married, while 45.6% reported being single, indicating a relatively balanced

representation of both marital statuses. This balanced distribution provides an opportunity to explore and compare the perspectives or experiences of single and married individuals within the scope of the survey's research questions. The majority of respondents are employed in the private sector, comprising 31.6% of the sample, followed closely by those in public service at 26.3% and business owners at 25.7%. Students make up the smallest category, representing 16.4% of the sample.

Table 1: Demographic Analysis

Category	Demographic	Frequency	Percentage
Gender	Male	93	54.4
	Female	78	45.6
Age	18 - 25	36	21.1
	26 - 35	42	24.6
	36 - 45	49	28.7
	46 - 55	43	25.1
	55 and above	1	0.6
Marital Status	Single	78	45.6
	Married	93	54.4
Occupation	Public Service	45	26.3
	Private Sector	54	31.6
	Own Business	44	25.7
	Student	28	16.4

Correlations Analysis

The analysis presented involved examining the relationships between three variables: Perceived Usefulness, Perceived Ease of Use, and Attitude. These correlations were assessed using Pearson's correlation coefficient, a statistical measure that evaluated the linear relationship between two continuous variables. The strong positive correlation between Perceived Usefulness and Perceived Ease of Use ($r = 0.756$, $p < 0.001$) suggests that an increase in perceived usefulness tends to correspond with an increase in perceived ease of use. The observed significance level ($p < 0.001$) suggests that the examined relationship is statistically significant. Additionally, the correlation between Perceived Usefulness and Attitude ($r = 0.513$, $p < 0.001$) indicates a moderate positive association, signifying that higher perceived usefulness is linked with a more favorable attitude. The correlation is considered to be statistically significant. Additionally, the correlation between Perceived Ease of Use and Attitude ($r = 0.766$, $p < 0.001$) also indicates a strong positive relationship. This suggests a substantial positive correlation, indicating that ease of use is closely linked to a positive attitude. The significance level further validates the strength of this relationship.

Table 2: Correlations Analysis

		Perceived Usefulness	Perceived Ease of Use	Attitude
Perceived Usefulness	Pearson Correlation	1	0.756**	0.513**
	Sig. (2-tailed)		<0.001	<0.001
	N	171	171	171
Perceived Ease of Use	Pearson Correlation	0.756**	1	0.766**
	Sig. (2-tailed)	<0.001		<0.001
	N	171	171	171

Attitude	Pearson Correlation	1	0.756**	0.513**
	Sig. (2-tailed)		<0.001	<0.001
	N	171	171	171

Regression Analysis

The multiple regression analysis investigates the impact of Perceived Usefulness and Perceived Ease of Use on the dependent variable, Attitude. The Model Summary, ANOVA table, and Coefficients collectively offer a thorough comprehension of the relationships among these variables.

Table 3: Regression Analysis

Independent Variables	Unstandardised Coefficients (B)	Standardized Coefficients (Beta)	t-stat	p-value
Constant	1.299	-	6.654	0.000
Perceived Usefulness	-0.138	-0.153	-2.042	0.043
Perceived Ease of Use	0.786	0.067	11.759	0.000
R				0.772
R^2				0.596
Adjusted R^2				0.591
F-test				123.964
Sig.				0.000

Dependent variable: Attitude

The adjusted R^2 value of 0.591 suggests that the findings of this study may apply to other populations. Since the adjusted R^2 is similar to the R^2 value, it can be concluded that there is no evidence of overfitting of the model to the sample (Hair et al., 2006). The regression model demonstrates a high degree of accuracy in fitting the data. The F-test statistic is 123.96, with a p-value of less than 0.001, indicating a strong and statistically significant association between the variables. The positive coefficients of the independent variables indicate a positive relationship between the independent and dependent variables, as shown in the unstandardized coefficients. The effects of the independent variables on the dependent variable are presented in Table 3. The analysis reveals that perceived usefulness (B = -0.153, t = -2.042, p = 0.043) is not a significant predictor of attitude. In contrast, perceived ease of use (B = -0.067, t = -11.76, p = 0.000) significantly predicts attitude toward robot waiters. Overall, the findings underscore the critical roles of perceived ease of use and perceived usefulness in shaping attitudes toward technology, with perceived ease of use having a more substantial positive effect.

Discussion

The findings of this study provide important insights into the determinants shaping consumer attitudes toward robotic waiters in restaurant settings. The correlation analysis reveals a strong interrelationship between perceived usefulness, perceived ease of use, and consumer attitudes, consistent with the Technology Acceptance Model (Lee et al., 2018). The regression analysis further demonstrates that perceived ease of use is a significant predictor of consumer attitudes, whereas perceived usefulness does not show a substantial predictive relationship. This unexpected outcome suggests that consumers may prioritize the ease of use of robotic waiters over their perceived benefits. These findings align with the Technology Acceptance Model, which posits that both perceived ease of use and perceived usefulness influence consumer acceptance and adoption of technology (Taegoo et al., 2008). However, the results challenge the conventional notion that perceived usefulness is the primary factor driving the adoption of new technologies (Brown et al., 2002).

The findings indicate that the design and user interface of robotic waiters should prioritize intuitiveness and simplicity to improve the overall customer experience. This conclusion is consistent with prior research on

service robotics, which emphasizes the critical role of user-friendly interfaces and seamless human-machine interactions in enhancing customer satisfaction (Lee et al., 2018; Kim & Lee, 2014). Additionally, the study underscores the critical role of trust in shaping consumer perceptions of robotic waiters (Seo & Lee, 2021).
This study also highlighted that younger consumers tend to be more receptive to innovative technologies, which may explain the limited impact of perceived usefulness among older respondents. Specifically, the discovery that perceived usefulness does not significantly predict attitudes, especially among respondents aged 36-45 years (Bowen & Morosan, 2018). The comprehensive understanding of how age and individual differences, including innovativeness and technology anxiety, impact perceptions of robotic waiters not only challenges but also expands current theoretical frameworks.

5. Conclusion and Recommendations

This study contributes to the growing literature on technology acceptance in the hospitality sector by examining the factors influencing consumer acceptance of robotic waiters in restaurants. Findings indicate that perceived usefulness, social influence, and trust in technology are key determinants of acceptance, with younger consumers generally more open to robotic innovations. By applying the Technology Acceptance Model (TAM), this research highlights the importance of perceived ease of use and usefulness in shaping consumer attitudes toward robotic waiters. The study offers valuable insights for stakeholders, including restaurant owners, technology developers, and policymakers, emphasizing the need for targeted strategies to enhance consumer trust and satisfaction. In the context of the Malaysian restaurant industry, the findings provide critical guidance for the effective integration of robotic waiters, with potential policy implications for promoting technological advancements while ensuring customer comfort and engagement.

Future research should explore the consumer reception of robotic waiters by analyzing a range of factors, including demographic segments and cultural and socioeconomic variations, to provide a more detailed understanding of consumer behavior. Such investigations will contribute to a deeper comprehension of how diverse factors influence consumer acceptance and inform the development of more effective and tailored robotic technologies. In addition, longitudinal research should be conducted to assess how familiarity and experience with robotic waiters affect acceptance over time. Investigations into service design, particularly the dynamics of human-robot interactions, are also suggested to identify configurations that maximize customer satisfaction. Additionally, future studies should evaluate the impact of technological advancements, such as AI-driven features, on consumer perceptions. Developing robust policy frameworks that address concerns related to safety, data privacy, and employment will be crucial for the seamless integration of robotic waiters. Lastly, economic analyses, including cost-benefit evaluations and labor market assessments, are recommended to inform strategic decision-making in the Malaysian restaurant industry.

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Counterfeit Cosmetics Perception Among Muslim Government Servants in Wisma Persekutuan Kota Bharu, Kelantan

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Abstract: The objective of this study is to determine if there is a notable disparity in the perception among Muslim consumers regarding counterfeit cosmetic items in Wisma Persekutuan Kota Bharu based on their level of religiosity and brand consciousness. A total of 219 questionnaires were gathered from Muslim government servants residing in Wisma Persekutuan, Kota Bharu, Kelantan through the simple random sampling technique, and the data were then subsequently examined using SPSS software. The study's results indicated a notable correlation between brand consciousness and the impression of Muslim government servants in Wisma Persekutuan Kota Bharu regarding counterfeit cosmetics. Additionally, the results indicated that there is no significant correlation between religiosity in relation to the attitude of Muslim government servants in Wisma Persekutuan Kota Bharu regarding counterfeit cosmetics. This study enhances the existing literature pertaining to the research in the field of Halal cosmetics and offers valuable insights to authorities regarding the perception of counterfeit cosmetic products among Muslim consumers. These findings can assist authorities in improving the regulation of the halal cosmetic industry.

Keywords: *Brand consciousness, counterfeit cosmetics, halal, perception, religiosity.*

1. Introduction

Nowadays, the usage and consumption of cosmetics become a main concern for consumers, particularly women, the key market segment, who use them daily. Cosmetic products encompass a wide range of product categories, including skin care, teeth, hair, bath, and fragrance products. Consumers today are more critical in terms of choosing products and they are attentive to the materials used in cosmetics, whereas in the past, choosing cosmetics was mostly based on branding and the impact of advertising. The need for halal cosmetics is growing rapidly. Customers across the world are selecting halal cosmetics made by Muslim entrepreneurs because they trust their honesty and dependability in guaranteeing the safety of the ingredients included in the products. Presently, Muslim consumers allocate a greater amount of their financial resources in terms of purchasing the cosmetics and care products available in the market. The increased purchasing power parallel to the rising number of Muslims has generally contributed widely to the demand growth for halal cosmetics worldwide (Bakar et al., 2021). Although the halal cosmetic sector has great potential, customers must be more familiar with halal brands. Consumers exhibit a limited degree of receptiveness towards halal cosmetic items.

The concerns surrounding Halal issues in the beauty industry are very insignificant in comparison to the concerns surrounding Halal issues in food consumption (Awang et al., 2020). There is a scarcity of research on the impression of counterfeit cosmetics among Muslim customers. The level of religious devotion significantly influences the way an individual's life is shaped. It is a significant factor that has a favorable impact on customers' ethical beliefs. Ng et al. (2021) conducted a study that found that religiosity had both a direct and indirect impact on buyers' desire to purchase counterfeit products. In addition, Pfordten et al. (2020) also clarified that given a religious setting, the purchase of counterfeit goods by consumers is not categorized as unethical based on his study conducted in Kuwait. The consumers in this study were leaning toward the intention to buy counterfeit products. This can also commonly be seen in Malaysia as our Muslim consumers basically continue to purchase and use counterfeit cosmetics although the products contain detrimental substances, disregarding the cautions issued by NPRA (Quah et al., 2022). Furthermore, this highlights the inadequate comprehension of the halal and tayyib principles in cosmetic items among Muslim customers. The problem of counterfeit cosmetics is intricately linked to the notion of halalan tayyiban.

The ultimate aim of this particular research is to examine the correlation that is present between religion and the perception of Muslim customers in Wisma Persekutuan Kota Bharu, Kelantan regarding counterfeit

cosmetics. According to Mussanova (2021), consumers are more likely to buy counterfeit luxury brands when they can fulfill their urge to flaunt and show off, especially if the brand has great prestige and status. Undoubtedly, self-confidence is related to the act of utilizing a branded cosmetic product and generally, those who have a strong awareness of the brand are more likely to be less influenced to purchase counterfeit products. Nevertheless, renowned and branded cosmetics frequently carry a premium price tag, prompting consumers to choose counterfeit cosmetics at a more affordable cost. According to a study, women choose to choose artificial items available in the market since they are associated with well-known brands, even if these products may have negative impacts on their facial skin (Kumar & Kumar, 2022). The statement suggests that the increasing interest in popular cosmetic brands has led Malaysian beauty enthusiasts to use counterfeit cosmetics that are easily accessible and inexpensive. This study aims to investigate the correlation that exists when it comes to brand consciousness about the perception of Muslim customers in Wisma Persekutuan, Kota Bharu regarding counterfeit cosmetics.

2. Literature Review

Halal Cosmetics: Cosmetics, sometimes known as beauty products, are substances that are designed to be applied to the human body such as cleansing, enhancing beauty, boosting attractiveness, or modifying one's look. The definition of cosmetics, as stated in the USA Food, Drug, and Cosmetic Act 2012, includes products ranging from skin moisturizers, lipsticks, makeup preparations, sunscreens, perfumes, shampoos, and any product range that are to be used as and categorized as a cosmetic product. It is a daily obligation for Muslims to exclusively consume halal and tayyib items. In the contemporary and interconnected industry, the term 'halal' extends beyond food goods. Currently, the term 'halal' includes several non-food items like cosmetics, personal care goods, tourism, medications, biotechnology, and more. The word 'halal cosmetics' encompasses all aspects of cosmetic manufacture, including the raw materials used. An individual must first consider the semantics of the word "halal" to comprehend the halal cosmetic. In Arabic, the word halal denotes something that is permitted or allowed (Nur & Sapir, 2021). The production, storage, packaging, and delivery processes are mostly adhering the Shariah criteria (Bakar et al., 2021). Halal cosmetic goods must also exclude components sourced from pigs, blood, human body parts, and any other substances forbidden by Shariah law. To meet the halal requirements, materials sourced from animals that are lawful in Islam must undergo the slaughtering process aligned with Islamic law. It is imperative to maintain hygiene and purity throughout the entire process of preparing, processing, manufacturing, storing, and transporting halal cosmetic items (Hadi et al., 2020).

Issues in the Halal Cosmetic Industry: Despite the potential of the halal cosmetics industry which can be seen today, the exposure towards the brands that promote halal cosmetics is still not significant compared to other cosmetic product ranges in the market. The issues of choosing halal cosmetics are still not as wide as the halal issues when it comes to food consumption (Rosmala et al., 2022). In reference to Bajwa & Singh (2019), non-Muslim countries were the ones monopolizing and dominating the global cosmetics industry. These highlighted issues have become the main challenge in the manufacturing of halal cosmetics products, especially in terms of the choice of ingredients to be used for the production. Nowadays, halal products have been highly competing with other products in the market in reference to different religions and beliefs as well as countries. This is eventually parallel to the choice made by consumers in terms of choosing halal cosmetics as halal products are also competing with other well-established brands available in the market across countries. Muslim consumers can only rely on certification from the authorities in determining whether the cosmetic products they use are halal. This has been proven difficult after porcine DNA was discovered in Cadbury products in 2014

Although the accusation is false, Muslim consumers' confidence that is declining towards the status of halal products remains up until today (Zaidi etal., 2022). Because Islamic law says that every Muslim must only eat halal and healthy foods (Sagban et al., 2023), Muslim customers need to know where the cosmetic ingredients come from and how they are made. Also, closely examining cosmetics can be hard and requires a technical understanding of the ingredients, where they come from, and how they are made. Cosmetics are complicated and are made from a lot of different highly processed chemicals that come from plants or animals. While cosmetics are being used, they can be eaten (like lipstick), breathed in (like perfumes), or absorbed through the skin (like alcohol or ingredients of critical origin (Yunus et al., 2023). Given the problems that already exist, companies that make cosmetics need to make sure that they are carefully made to be halal and to support all

the needs of daily Islamic practices like wudu (cleansing before prayer) and reading the Qur'an. When halal products are being made, several issues need to be thought through.

It is hard to be sure that animal-based chemicals in cosmetics like gelatin, lecithin, glycerol, fatty acids, and collagen are halal. Since some colorings may come from animals, they are considered haram. Adding items that come from cows is also tricky since the cows might be killed in a way that isn't halal. For cosmetics to meet the requirements of Islamic customs, they must not only be made with halal ingredients, but they must also work properly overall. As an example, a nail that has been lacquered must be able to be rinsed off with water, and any makeup that is put on the skin must also be able to be rinsed off totally so that Muslims can follow their rituals. There are ways to find materials that are against Islam, but making kosher cosmetics and testing how well they work are still in their early stages. Non-halal cosmetic manufacturers (Harun et al., 2020) make most of the cosmetics, but their methods do not follow the rules of halal science. This shows how important it is to create guidelines for this reason. Also, there are not many papers that explain how to make fully halal cosmetics or how to test them.

Counterfeiting in Cosmetic Industry: Counterfeiting is the act of replicating a brand's items and unlawfully distributing them in the market. Counterfeit products, commonly referred to as "knockoffs", are fraudulent imitations. As the definition of counterfeit goods is close to being illegal, unauthorized, and involves unethical consumption behavior, there are two conditions exist in reference to purchasing counterfeit goods (Eisend & Schuchert-güler, 2006; Phau et al., 2009a; Staake et al., 2009). Counterfeiting could be categorized into deceptive and non-deceptive which is determined by consumers' level of awareness, knowledge and willingness to commit to this consumption practice (Grossman & Shapiro, 1998). Besides awareness, knowledge, and experiences; consumers' intention is a crucial factor for the intention to purchase counterfeit goods. Basically, deceptive counterfeiting revolves around a scenario where consumers who are lacking in knowledge or unaware of the authenticity of the goods they are going to purchase are deceived while handling the purchase of goods. Meanwhile, non-deceptive counterfeit purchase generally occurs when one is aware of their purchase while at the same time has adequate knowledge in distinguishing between genuine and counterfeit products but in the end still chooses counterfeit goods (Eisend & Schuchert-güler, 2006; Wiedmann & Hennigs, 2017). Hadi et al. (2020) explain that counterfeits establish their identity by imitating genuine and original brands, thereby closely associating the fake with legitimate products or brands to deceive buyers into believing it is an authentic item.

Whatever products that breach trademarks, infringe copyright, and fail to comply with packaging, labeling, and brand requirements are classified as counterfeits. Counterfeiting can manifest in a wide range of branded products available in the market, including but not limited to clothing, handbags, watches, accessories, cosmetics, pharmaceuticals, perfumes, CDs, DVDs, computer software, games, and several other items. The susceptibility of luxury brands to counterfeiting is well-documented, mostly attributed to their accessible marketing strategies and cost-effective manufacturing processes (Harun et al., 2020). Counterfeiting is a widespread problem that impacts multiple businesses and sectors. However, counterfeit cosmetics specifically pose a particularly hazardous threat within the counterfeit market (Kumar & Kumar, 2022). While counterfeit handbags, watches, sneakers, or other devices may lead to forbidden black-market operations as well as global criminal activity, it is rare for customers to experience adverse health effects or physical harm from using these counterfeit products. However, it is important to note that cosmetic and pharmaceutical items have the potential to inflict injury and detriment upon customers. Counterfeit cosmetics pose a significant health and safety hazard to customers if they are not created correctly, like counterfeit drugs that may have insufficient active ingredients or harmful pollutants, leading to severe injury (Awang et al., 2020).

The Dangers of Counterfeit Cosmetics: Counterfeit or phony cosmetics, as defined by the Ministry of Health Malaysia (MKN), are items that include illicit, toxic, or hazardous ingredients that pose a threat to the body and overall health. The indiscriminate utilization of counterfeit cosmetic items might present a significant hazard to the well-being of customers. The National Pharmaceutical Regulatory Agency (NPRA) has confiscated approximately 15 counterfeit cosmetic items from the local market. These products were found to contain illicit and hazardous ingredients, including hydroquinone, mercury, and tretinoin (Zaidi et al., 2022). Substances such as hydroquinone, mercury, and tretinoin are known as pharmaceutical substances that need to be registered with the Drug Control Authority and these substances can only be used under the guidance of

healthcare specialists. In general, hydroquinone is known as a depigmenting chemical commonly being added to products to lighten hyperpigmented areas such as freckles, melasma, age spots as well as acne scars (Sagban et al., 2023).

Improper use of hydroquinone in the production of a cosmetic product to lighten the skin as well as reduce the pigmentation without proper supervision from a healthcare practitioner can result in skin thinning, redness, and itching. Excessive utilization of hydroquinone can result in serious complications including inflammatory responses, persistent skin irritation, and a significant risk of developing skin cancer (Yunus et al., 2023). Using tretinoin without supervision might result in major skin problems such as redness, irritation, stinging, peeling, and increased sensitivity to sunlight. Mercury is not allowed to be used in cosmetic goods since it has harmful effects on human health. Mercury exposure, even in small amounts, can lead to skin rashes, memory impairment, and muscle weakness. On the other hand, significant exposure to mercury can result in harm to the brain, kidneys, and nerves (Bakar et al., 2021).

Theory of Planned Behavior: The Theory of Planned Behavior (TPB) is a rigorously studied conceptual framework that has proven effective in the prediction and explanation of human behavior across several fields. The transition from TPB to TRA occurred due to the realization that human conduct is not always subject to control and is also not entirely considered voluntary. The perceived behavioral control was included in the model where this theory was actually rebranded and called The Theory of Planned Behavior (Zaidi et al., 2022). Ajzen (1991) proposed the Theory of Planned Behavior (TPB), which says that people act based on three things: behavioral beliefs, normative beliefs, and perceived power. Behavioral beliefs are what people think will happen if they do something, and perceived power is how strong these beliefs are. Normative beliefs are what other people expect from you, and why you want to follow their lead. Behavioral beliefs determine whether someone likes or dislikes a behavior; normative beliefs determine how people feel about social forces or subjective norms; and control beliefs determine how people feel about their ability to control their behavior. Attitudes toward behaviors, subjective norms, and how much control someone thinks they have over their behavior all work together to form behavioral purposes. Because of this, a person's intention to do the behavior in question goes up with how positive their mood and subjective norm are, as well as their intention to do the behavior.

Lastly, people are expected to follow through with their plans when the chance comes up if they have enough control over their behavior. Studies on the purchase of counterfeit goods have also considered motivation among consumers in response to the high demand which contributed to the survivability of the counterfeit market (Phau & Teah, 2009; Staake et al., 2009; Teah et al., 2015; Trinh & Phau, 2012; Viet et al., 2018). Eisend and Schuchert-güler (2006) in their study also claimed that understanding the underlying motives or intention of the consumers to be involved in purchasing counterfeit goods, will enable the researcher to understand the reasons why this unethical behavior is practiced. The Theory of Planned Behaviour (Ajzen, 1991) happens to be the main highlight of the research domain of counterfeit goods purchases especially when it comes to the aim of determining consumers' willingness to purchase counterfeit goods as well as their purchase intentions involving this type of goods. There has been a broad range of research which have evaluated the predictors of consumer attitudes based on subjective norms and perceived behavioral control (Augusto de Matos et al., 2007; Teah et al., 2015). The Theory of Planned Behaviour (Ajzen, 1991) has generally outlined the economic, individual, social, and functional values as the initiators that influence the consumers' attitude as well as their intention to purchase counterfeit goods (Farzana et al., 2017; Phau & Teah, 2009; Sharma & Chan, 2016a; Staake et al., 2009; Teah et al., 2015; Teo & Mohd Yusof, 2017; Trinh & Phau, 2012). Purchase intention also revolves around a consumer's awareness about their purchase in reference to a brand or a specific product (Harshini, 2015).

Thus, the predicted consumers' likelihood in their intention of purchasing counterfeit products or goods in the future can illustrate consumers' underlying motives for being involved in counterfeit consumption. Many studies have been conducted to investigate the consumption of counterfeit cosmetics and have employed the Theory of Planned Behavior (TPB) as a theoretical framework to assess consumers' intention to acquire and use counterfeit cosmetic items. These studies include the works of Zaidi et al. (2022), Ng et al. (2021) and Awang et al. (2020). The TPB pertains to the perceptions of numerous consumers. Nevertheless, its capacity to influence Muslim customers' perceptions of counterfeit cosmetics appears to be restricted. Hence, additional

investigation is necessary to evaluate the efficacy of alternative theories in forecasting customers' impressions, thereby enabling their integration into the advancement of the beauty sector. The Theory of Planned Behavior by Azjen (2002) is used in this study but with some changes. Wang et al. (2020) say that the Theory of Planned Behavior is built on how people's thoughts and actions are linked. The main goal of the current study is to determine how brand consciousness and religiosity relate to Muslim consumers' perceptions of counterfeit cosmetics. Muslim consumer perceptions about counterfeit cosmetics could be impacted by outside variables including brand consciousness and religiosity. It was decided to use brand consciousness and religiosity as the independent variables. In the meantime, consumers' perceptions will act as the dependent variable for this study.

The Impact of Religiosity on Consumer Perceptions: Religion is a structured framework of ideas and rituals through which communities interpret and engage with phenomena they perceive as supernatural and holy. Zaidi et al. (2022) conducted a study that revealed that religion has both a direct and indirect impact on buyers' intention to buy counterfeit products. Both religion and the intensity of an individual's religious devotion have a beneficial influence on their moral principles. Conversely, unethical conduct is inversely correlated with the level of severity. Sanctions, such as those imposed in the realm after death. Hence, the apprehension of divine retribution in both earthly existence and the afterlife compels those who adhere to a religious belief system to uphold moral principles and exhibit virtuous behavior. A recent study conducted by Awang et al. (2020) demonstrates that religiosity has a beneficial impact on consumers' sentiments, leading to an increased likelihood of purchasing counterfeit products.

Undoubtedly, the integrity of the consumers is closely related to aspects that involve ethics, religion, morale and one's perception of lawfulness (Augusto de Matos et al., 2007; Sharma & Chan, 2014). A stronghold of these related aspects will help consumers distinguish the negative decisions and positive decisions when it comes to purchasing counterfeit products (Farzana et al., 2017). Integrity is another crucial factor that affects consumers' attitudes and intentions in the purchase of counterfeit goods. Studies have generally observed that Malaysian consumers usually consider the integrity aspects before they decide to get involved in buying counterfeit goods (Farzana et al., 2017; Harun et al., 2012; Mohd Nordin et al., 2013; Teo & Mohd Yusof, 2017; Thurasamy et al., 2003). One's integrity is also considered closely related to personal values, family orientations, and environmental factors (Furnham & Valgeirsson, 2007).

The higher the integrity one possesses, it will be less likely for him or her to be involved in the purchase of counterfeit goods as this kind of act is apparently against their values (Farzana et al., 2017).

In reference to Mohd Noor et al., (2017), it has been found that the intention of consumers basically contributed to their actual purchase behavior in the purchasing of counterfeit products and this is mainly because of their consistency in what they believe or say or their intention together with the action they made. In contrast, as asserted by Phau et al. (2009) even when integrity was a significant predictor of attitudes, it did not necessarily reflect one's decision in making a purchase. On the other hand, it has been found by Pueschel et al. (2016) that although Muslim consumers were concerned with the law of 'haram' issues which does not allow them from acting against their religion, they ended it with a justification that stated that their involvement in counterfeit consumption is categorized as acceptable parallel to their intention in sharing the benefits of resources with others. Nevertheless, a study conducted by Bakar et al. (2021) revealed that there is a negligible correlation between customers' religion and their intention to purchase counterfeit products.

Hadi et al. (2020) conducted a study that revealed that customers did not consider counterfeit products to be ethically reprehensible. The study also argued that individuals do not consider their purchase of counterfeit products as morally wrong, even while in a religious setting. Meanwhile, in the other study conducted by Rahayu et al. (2020), it was found that there is a significant relationship between consumers' religiosity and their intention to counterfeit products purchasing. Arli et al. (2021in a study also highlighted that religiosity, directly and indirectly, affected the intention of customers to purchase counterfeit products. Based on several previous studies that reveal inconsistent findings, hence, this study aims to investigate the correlation that exists between religiosity and the perception of Muslim government servants in Wisma Persekutuan. Kota Bharu towards counterfeit cosmetics. Consequently, the subsequent hypotheses were formulated:

H1: There is no significant relationship between religiosity and perception of counterfeit cosmetics among Muslim government servants in Wisma Persekutuan. Kota Bharu.

Brand Consciousness and Its Influence on Consumer Perceptions: Brand consciousness pertains to the psychological intention towards brand-name products throughout the consumers' pre-purchase process. Brand-conscious consumers prefer to acquire a certain line of products from highly renowned and prestigious brands in the industry. According to a study conducted by Ng et al. (2021), branded items were highly counterfeited due to the strong desire of brand-conscious consumers to maintain the same reputation as the original. By using branded products and counterfeits, they can achieve the goal of retaining their reputation. Quah et al. (2022) conducted a study on the intention of customers to buy counterfeit sporting goods. The study revealed that individuals who prioritize brand awareness are less intentional in acquiring counterfeit goods. It demonstrates that the awareness and preference for specific brands impact the likelihood of purchasing counterfeit items. The finding from another study conducted by Sagban et al. (2023) is that brand consciousness has a detrimental impact on customers' attitudes toward buying counterfeit products. Brands play a crucial role in product purchases, serving as a representation of quality and inspiring customer trust. This trust, in turn, deters brand-conscious consumers from buying counterfeit products.

Nevertheless, Harun et al. (2018) conducted a study that revealed that there are instances when consumers who are cognizant of brand names may be unable to afford authentic branded products and may develop an intention to purchase counterfeit alternatives. The other study conducted by Azzari and Pelissari (2021) shows that positive relationship between brand consciousness and the purchase intention of customers among students. Ilyas et al. (2020) emphasize that there is a strong relationship between brand consciousness and purchase intention among 200 respondents in Indonesia. Due to the contradictory results from earlier research, this study aims to investigate the correlation between religion and the perception of Muslim government servants in Wisma Persekutuan, Kota Bharu towards counterfeit cosmetics. Consequently, the subsequent hypotheses were formulated:
H2: There is a significant relationship between brand consciousnessand the perception of counterfeit cosmetics among Muslim government servants in Wisma Persekutuan. Kota Bharu.

3. Methodology

The study utilizes the quantitative research method to establish the correlation between variables, specifically the correlation between religiosity and Muslim consumers' perceptions of counterfeit cosmetics, as well as the correlation that exists between brand consciousness and Muslim consumers' perceptions of counterfeit cosmetics. The research in this study uses questionnaires as the primary research instrument. The survey was conducted by creating the questionnaire using Google Forms, and the same was sent to the respondents online. Google Forms is chosen as the platform for surveying because the questionnaires can be made compulsory, and respondents cannot submit the survey if mandatory questions are not being answered. The link access to this form will be sent through emails and WhatsApp to reach as many respondents as possible. The questionnaire was administered online to 242 and 219 filled responses were received from Muslim consumers in Wisma Persekutuan Kota Bharu. The participants in this study are chosen by a process called convenience sampling. Convenience sampling is a kind of nonprobability or non-random sampling in which study participants are selected for convenience based on practical factors like geographic proximity, ease of accessibility, availability at a specific time, or willingness to participate. In simpler terms, convenience sampling is inexpensive, simple, and has quick access to the subjects (Etikan et al., 2016).

The target population in this study was government servants in Kelantan. Data collection for government servants took place at the government buildings of Wisma Persekutuan Kota Bharu which involved 16 departments including the National Registration Department, Immigration Department, Department of Statistics, Valuation and Property Services Department, and Kelantan State Health Department. Wisma Persekutuan was chosen because it is the biggest workplace in Kelantan with government agencies and departments inside the buildings. The data obtained from the questionnaires distributed were analyzed by utilizing the use of Statistical Package for Social Science (SPSS) 28.0 software. The data were then analyzed by applying the descriptive analysis. Descriptive statistics were conducted to measure the mean, standard deviation, frequency, and percentage of the data obtained from the data collection. Subsequently, this

investigation employed standard multiple linear regression. Multiple linear regression is a statistical analysis method offered in SPSS that examines the influence of multiple independent factors on the variability of a dependent variable. The study employed multiple linear regression to examine the correlation between religion and brand consciousness in relation to Muslim customers' impression of counterfeit cosmetics. Consequently, these analysis methodologies were employed to determine the acceptance of the hypotheses.

4. Results and Discussion

Survey Return Rate: 219 sets of the questionnaire distributed to the respondents were managed to be collected by the researcher where the results portrayed a yielding response rate of 90.3% as tabulated in Table 1.0. The raw data were then keyed in and examined by utilizing the use of Statistical Package for Social Sciences version 28.0 and the analysis on reliability, correlation and regression was conducted parallel to the purpose of this study.

Table 1: Number of Respondents Involved (n=219)

Number of Questionnaires distributed	The number of Questionnaire returned	Percentage returned (%)	Number of valid Questionnaire	Percentage valid (%)
242	219	90.3	219	100.0

Mean and Standard Deviation: The purpose of conducting the mean and standard deviation analysis was to understand the average value of the factors and the degree of dispersion.

Table 2: Descriptive Statistics for Religiosity, Brand Consciousness and Muslim Consumer Perception

Variables	Mean	SD
Religiosity	4.71	.38
Brand Consciousness	4.65	.34
Muslim Consumer Perception	4.58	.39

Descriptive analysis was performed on the variables in this study. As presented in Table 2.0 above, it shows the results of the analysis which involve mean value and standard deviation of each variable. The mean values are in the range of 4.71 and 4.58. Standard deviation values range from .34 to .39. The highest mean value is for Religiosity with a score of 4.71 and the lowest mean value is for Muslim Consumer Perception with a score of 4.58. Regression analysis is conducted to investigate the correlation between several independent variables and a single dependent variable. The variables investigated in this investigation include religiosity and brand consciousness. The dependent variable in this study refers to the perceptions of Muslim consumers regarding counterfeit cosmetics.

Table 3: Results of Regression Analysis with Muslim Consumer Perception as the Dependent Variable

Independent Variables	Standardized Beta Values
Religiosity	.175
Brand Consciousness	.293*
R	.385
R squared	.148
F values	6.252
Significant F values	.003
Durbin Watson	2.134

From table above shows that the R squared value is 14.8%, indicating that 14.8% of the variance in the regression model has been explained by the independent variables. The significance F value (F= 6.252, p = 0.003) indicates model fit and the Durbin Watson value is 2.134 and still within the acceptance range. Looking at the individual contribution of independent variables in explaining Muslim Consumer Perception as the dependent variable, Brand consciousness (β = .293, p<01) is found to be a significant predictor. Therefore, the hypothesis is supported. This suggests that brand consciousness is positively associated with the perception of

Muslim government servants in Wisma Persekutuan, Kota Bharu regarding counterfeit cosmetics, and this association is statistically significant. This finding is based on a study conducted by Zia et al. (2021) revealed that brand consciousness has a strong effect on the intention to purchase counterfeit goods. Hence, this finding is consistent with a study conducted by Zollo et al. (2020), which demonstrates that being aware of brands has a positive engagement with or intention to purchase counterfeit products.

A previous study conducted by Lee et al. (2019), discovered that consumer's intention toward brand awareness has a beneficial impact on their decision to buy counterfeit goods. In a separate study conducted by Mayasari et al. (2022), it was discovered that brand consciousness has a favorable influence on customers' intention to purchase counterfeit products. The statistical analysis reveals that there is no significant correlation between religiosity and the perception of Muslim government servants in Wisma Persekutuan, Kota Bharu about counterfeit cosmetics. Therefore, the hypothesis was accepted. Consistent with a study conducted by Yaakop et al. (2021), it was discovered that religiosity had a negligible influence on an individual's perspective toward counterfeit fashion items. This phenomenon indicates that the instructions regarding the ban on counterfeiting activities have not been sufficiently put into practice. Conversely, prior research has demonstrated that religiosity exerts a favorable influence on consumers' attitudes toward counterfeit cosmetics. For instance, Abraham et al. (2022) discovered that those who have a stronger religious intention tend to display a more morally upright stance when it comes to counterfeit goods.

Discussion

The study applied the Theory of Planned Behavior to analyze the influence of extrinsic factors namely brand consciousness, on Muslim customers' perceptions of counterfeit cosmetics. Ultimately, the main objective of this study is to examine the impression of counterfeit cosmetics among Muslim consumers in Wisma Persekutuan, Kota Bharu. The results of this study indicate that there is a notable correlation between brand consciousness and the impression of Muslim consumers in Wisma Persekutuan Kota Bharu about counterfeit cosmetics. Studies on counterfeit goods purchases in Malaysia have revealed value consciousness is one of the key factors that promote consumers' attitudes and purchase intention in counterfeit consumption (Ting et al., 2016). This notion contradicts the findings as consumers are fully aware of the perceived risks of using counterfeit cosmetics due to the existing knowledge and beliefs on counterfeits which influence their purchase intention.

Although Malaysian consumers have been exposed to the attitude of looking for bargains in spending every single cent of their money, however, factors such as safety and security become a priority for the cosmetics that the consumers choose which explains the negative attitudes and beliefs toward counterfeit cosmetics. Furthermore, religiosity does not have a significant correlation with the perspective of Muslim consumers in Wisma Persekutuan, Kota Bharu on counterfeit cosmetics. The findings of this study indicate that Muslim consumers in Wisma Persekutuan Kota Bharu had a high level of awareness regarding the presence of counterfeit cosmetic items in the local market. A prior study conducted by Pueschel et al. (2016) highlighted the concern of Muslim consumers regarding the law of 'haram' that does not allow them to practice anything that is against their religion and their justification has been made where it was stated that their involvement in counterfeit consumption is considered acceptable because their intention was sharing benefits of resources with others.

Despite having strong pillars in terms of their religion and personal values, consumers tend to legitimize their misbehavior through various rationalization strategies. Teo and Mohd Yusof (2017) have also found that consumers claimed that the purchase of counterfeit goods they made from a legal and registered store is acceptable and therefore highlighted that they are lacking in self-honesty in relation to their consumption behavior (Ting et al., 2016). The results of this study are anticipated to enhance the awareness of counterfeit cosmetic items among consumers, merchants, manufacturers, and government organizations. It is imperative to educate Muslim customers about the significance of halalan tayyiban in cosmetic products and to alert them to the hazards of counterfeit cosmetics, to prevent their susceptibility to purchasing and using counterfeit items. Cosmetics brands are anticipated to adopt more stringent criteria when selecting components, conducting manufacturing processes, packaging, and distributing cosmetic items to guarantee their quality.

5. Conclusion

Cosmetic products have evolved into indispensable components of the daily lives and routines of individuals, particularly Muslim consumers. The surge in halal cosmetic products production has been influenced by the growing demand for such products among Muslim consumers. Although there has been an increase, Muslim consumers continue to have a relatively limited understanding of the significance of halalan tayyiban in cosmetic products. Despite this, there are still consumers who fall victim to counterfeit cosmetics and endure the repercussions. As a result, governmental entities must increase their vigilance regarding the eradication of counterfeit cosmetics that are sold on the market without proper authorization or licensing. Additionally, government agencies should assist in educating the public about the significance of halalan tayyiban in cosmetic products. Awareness education can be implemented in schools so that pupils may acquire knowledge at a young age. Additionally, awareness regarding counterfeit cosmetics can be disseminated via television channels, columns, and other media outlets. Subsequent investigations may augment and refine the halal cosmetic study through a more comprehensive analysis.

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A Study Examining the Customer Service Experience Using the Partial Least Square (PLS) Approach, with a Particular Focus on Personal Interaction Encounters and Customer Involvement

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Abstract: The relationship between academic achievement, student happiness, and the quality of academic services provided by university staff is a critical issue in Malaysian public higher education. This correlation highlights the importance of understanding the factors that influence the interactions between academic staff and students. Knowledge of the variables affecting how academic staff members and service encounters interact is quite important. This study aims to examine the influence of personal interaction encounters and customer involvement on the level of customer service experience provided by academic staff at Malaysian public universities. To gather data from 454 academic faculty members at Malaysian public universities, a self-administered questionnaire was developed. PLS 4.0 was used in this work and proportionate stratified random sampling was utilized. The results showed significant relationships between consumer involvement and personal interaction encounters with customer service experience. By acknowledging and addressing these variables, Malaysian public universities can foster more positive and productive interactions between staff and students or other stakeholders, ultimately improving the academic experience.

Keywords: *Customer service experience, personal interaction encounters, customer involvement, academic staff, Malaysian public universities*

1. Introduction and Background

Malaysia has become a significant player in the global market for international students pursuing higher education. Realizing that this sector can spur economic growth and provide export income, Malaysia is making a concerted effort to become the region's center for higher learning. The 2015-2025 Malaysia Education Blueprint for Higher Education sets an ambitious goal of attracting 250,000 international students by 2025. Despite challenges such as a fluctuating global economy and shifting geopolitical trends, Malaysia has seen an increasing number of international students choosing it as a destination for higher education. This trend allows Malaysia to leverage its strong higher education system to boost international student enrollment. Currently, international students contribute approximately RM 5.9 billion annually to the Malaysian economy, highlighting the significant economic impact of this sector and underscoring the importance of continuing efforts to attract and support international students in the country.

By 2025, Malaysian public universities hope to become internationally accredited as postsecondary educational establishments. Meeting the requirements set forth by the Malaysian Qualifications Agency (MQA), which functions under the Ministry of Education, is essential to achieving this goal. The quality of the product or service, the degree of service rendered and the total satisfaction of the customer are the three essential elements that cannot be compromised. Meeting customer expectations and delivering an exceptional customer service experience are given top priority in both the Quality Assurance (QA) and International Organization for Standardization (ISO) standards. In marketing studies, customer service experience is rarely prioritized in Malaysian public universities. Hence, the purpose of this study is to evaluate the impact of personal interaction encounters and customer involvement on the standard of customer service experience provided by Malaysian public universities.

The services provided by the Academic Affairs Department (AAD) may have modest differences among various public universities or faculties in Malaysia (Amazt & Idris, 2011). The primary duties of the AAD encompass

establishing the academic regulations and protocols of the university, guaranteeing exemplary standards of quality, and providing support to both domestic and international students. The department is responsible for supervising the evaluation of the academic curriculum and related processes and procedures. Furthermore, the AAD is responsible for overseeing the academic progress of the university and establishing and maintaining intellectual partnerships with prestigious international universities as well as neighboring local institutions. For a university to maintain competitiveness in the education market, it must undergo comprehensive quality assessment techniques. Abbas (2020) states that students are actively seeking prestigious educational institutions that may offer them valuable educational experiences and credentials.

During service delivery, the primary interactions occur between the staff and the customers. Therefore, it is contended that the staff's ability to directly engage with clients is vital for generating remarkable and enduring customer service experiences. Pullman and Gross (2004) argue that the successful implementation of experience design, which fosters a collective identity and emotional connection among service providers, staff, and customers, leads to customer satisfaction and customer loyalty. Therefore, businesses must prioritize comprehensive client experience, encompassing not only the products and services provided but also the aspects of personal interaction encounters (Yuan & Wu, 2008).

Extensive studies have focused on investigating the significance of consumer involvement in both service encounters and face-to-face meetings. What motivates customers to engage in activities that deviate from the usual behavior of users or buyers? Izogo, Elom, and Mpinganjira (2020) argue that customer involvement is influenced by attitudinal factors such as satisfaction, brand loyalty, and trust, as well as consumer-based factors such as goals, resources, and value judgments. Studies conducted in digital platforms indicate that customers participate in nontransactional activities with the anticipation of obtaining various advantages, such as acquiring additional knowledge and enhancing their reputation, enjoying social benefits, and receiving financial rewards, including cost savings (Busser & Shulga, 2019). Companies can encourage consumer involvement by offering efficient means of information exchange and communication, as well as by compensating customers for their efforts (Baron & Warnaby, 2011). Brodie et al. (2013) contended that customer involvement can result in consumer loyalty and happiness with the brand and community, as well as empowerment, trust, and dedication towards service providers. The study's backdrop reveals discrepancies in the level of involvement among academic personnel at public institutions in Malaysia and the wide array of services provided by the AAD. According to Brodie et al. (2013), client involvement, which is a psychological process, directly affects the quality of the customer service experience.

The study's emphasis on improving public services—specifically, the in-person customer service experience and consumer involvement—makes it pertinent to the Malaysian setting. The outcomes of this investigation possess the capacity to improve the caliber of services given by the government and public sector. Improved citizen satisfaction and public trust stem from more effective and citizen-focused services delivered through more consumer involvement and human connections. Furthermore, considering how quickly digital technologies are assimilated, it is imperative to understand how technology-enabled customer involvement and human connection are related. The purpose of this research is to help government agencies and companies in Malaysia use technology to enhance customer experiences while maintaining the human element that is usually valued in face-to-face interactions. The study's emphasis on the customer experience, especially in terms of personal interaction and consumer involvement, has the potential to significantly enhance Malaysia's thriving service sector. Acquiring information can lead to improvements in customer happiness, service quality, and business efficiency, all of which can further the economic and social welfare of the country. Based on a review of the literature, using focused service marketing techniques enhances the customer service experience as a whole.

2. Literature Review

Customer Service Experience: This is relevant to various service providers in the public and private sectors, such as businesses, government organizations, and educational institutions. The goal is to attain and maintain high levels of performance (Zeithaml, Bitner, and Gremler, 2010). Public universities in Malaysia and other service organizations have fierce competition from a wide range of universities globally (Knight, 2011). Calma and Dickson-Deane (2020) state that institutional policies primarily focus on improving the student service

experience to enhance the quality of education. Supplementary programs have been created to engage students in active engagement during the teaching and learning process, in addition to typical evaluation criteria including the quality of educational resources, classroom organization, and achievement of learning objectives. These endeavors entail implementing the most efficient strategies, promoting diversity, and fostering inclusiveness. To successfully attract students, a university must provide an educational curriculum that precisely aligns with their specific requirements and preferences (Zeithaml, Bitner, and Gremler, 2010). According to Ramachandran, Chong, and Ismail (2011), the university has been forced to adopt new and innovative methods to efficiently deal with the challenges of society, growing competitiveness, and fast-changing expectations. The field of service marketing has utilized a range of disciplines, including psychology, sociology, economics, and anthropology, to progress and achieve greater levels of success. Consequently, service marketing has shifted towards a customer-centric approach. To maintain a lasting competitive edge, it is crucial to offer clients a broader range of choices, deliver authentic value, and successfully nurture their emotions and loyalty (Lovelock & Wirtz, 2014). According to Lakhal et al. (2020), students who have a favorable encounter with educational and social institutions are more inclined to achieve success in their courses and programs, as well as effectively assimilate socially and academically.

A consumer demonstrates a remarkable commitment to obtaining and utilizing a product or service when they give priority to their customer service experience in a service setting (Ali and Omar, 2014). Based on feedback from many consumers, the variables that improved their mental and physical well-being during their service experiences were receiving personalized attention and being in a luxurious environment (Cetin and Dince, 2014). Businesses in the entertainment industry, such as theme parks, typically place a high priority on customer experience (Zomerdijk & Voss, 2010). A literary analysis reveals that customers consistently encounter a customer experience that exhibits varying levels of quality, which can range from good, negative, to neutral, depending on the service or product they obtain or receive. In essence, every interaction with a service has the possibility for customers to have distinct experiences, regardless of whether the product or service is considered ordinary (Voss & Zomerdijk, 2007).

Personal Interaction Encounter: Various factors, as previously noted, might influence a customer's experience. However, what influence do human or interpersonal relationships have? The impact of different cues, such as the behavioral patterns displayed by doctors during patient interactions, the mannerisms of lawyers, or the stage presence of performers, can greatly influence the decisions made by clients or observers, as well as their confidence, motivation, effectiveness, and satisfaction.

The topic of interpersonal communication has garnered significant scholarly interest in recent years, as evidenced by the investigations carried out by Ying-Jie and Yang (2014) and Guerreiro (2020). Personal contact is considered justified because it is seen as a way to enhance client connections, strengthen an organization's reputation, and support marketing efforts (Wei and Yuan, 2019). The company is striving to enhance customer satisfaction by addressing their specific needs and offering tailored services. The decision is driven by the recognition of the importance of human engagement in delivering value to customers (Nugroho, 2019). A common belief is that physically being present and actively interacting with consumers can enhance their perceived worth and facilitate the transaction of goods or services. Moreover, direct human communication exerts a substantial impact on shaping clients' favorable opinions. Furthermore, it aids in the development and maintenance of a reliable and committed customer base for the company (Chen et al., 2021; Liu et al., 2021; Bai et al., 2022).

Customer loyalty is crucial in today's fiercely competitive market (Hou, 2021). Customer loyalty is determined by the direct relationships that anchors establish with them (Alharbi and Alhider, 2018). Hence, the transmission of information from businesses to customers promotes the dissemination of word-of-mouth and the continuous expansion of the client base (Cao, 2002). Many companies have chosen to prioritize the interpersonal interaction strategy to maintain their competitive advantage, as it offers several benefits (Ding et al., 2020). Many firms are placing great emphasis on interpersonal communication to preserve their competitive edge, acknowledging the diverse benefits it provides (Wang et al., 2021).

Prior studies have investigated the influence of in-person encounters on customer satisfaction. Keng et al. (2007) conducted a study to examine how face-to-face contacts affect the quality of customer service. The

assessment of the experience was conducted by evaluating its efficiency, service excellence, enjoyment, and beauty. The investigation's findings revealed that direct human contact garners substantial approbation and enhances consumer satisfaction. Service staff who exhibit the ability to deliver fast, cost-effective, accessible, and convenient service to consumers improve good interpersonal connections and increase the entire customer experience. In addition, Backstrom and Johansson (2006) found that service workers can create a positive client experience by providing constructive criticism, offering suitable ideas, and efficiently handling complaints. Moreover, according to Locander et al. (2020), providing thorough or attentive services resulted in favorable experiences as staff members made customers feel esteemed or indulged.

These customer-employee interactions and service exchanges occur within the social service industry. The social atmosphere at public colleges' AAD is shaped by customers' evaluations of the staff members' service quality and their interactions with other customers. Research has shown that contented personnel have a positive impact on customer satisfaction. Therefore, the participation of customer service representatives and support personnel is crucial for the success of any service company (Akter, Upal, & Hani, 2008). Hence, it is possible to establish legal incentives that acknowledge the expansion of highly skilled service workers and exceptional customer service. This recognition has the potential to enhance the satisfaction levels of employees who have direct interactions with clients, especially when considering the service personnel of the AAD in Malaysian public institutions (Akter et al., 2008). Thus, in all service businesses, the interactions among individuals are seen as a crucial element that significantly impacts the client service experience. Therefore, it is recommended that there is a significant association between personal interaction encounters and customer service experience.

Customer Involvement: Busser and Shulga (2019) argue that the relationship between a firm or brand and consumer experiences results in a psychological state referred to as customer engagement. Psychological presence, as defined by Kahn (1992), refers to the state of being fully aware and engaged. This phrase is intricately connected to involvement. Psychological presence, as described by Schaufeli et al. (2002), is a state in which individuals are fully engaged in their tasks, utilizing their energies in physical, cognitive, and emotional dimensions. Psychological presence is not limited to a certain thing or time, unlike engagement. This excerpt highlights the differentiation between psychological engagement and physical presence.

To understand a psychological state or disposition, it is crucial to acknowledge the interconnectedness that surrounds the experience (Chandler & Vargo, 2011). Customer engagement can be encouraged through a gratifying interaction with a rental vehicle service representative. Alternatively, a rental car service can be organized through several methods including making a phone call, having a face-to-face connection with a staff member, utilizing a self-service kiosk, or utilizing an online chat platform. Multiple studies examine the factors that contribute to customers engaging in activities that extend beyond just usage or purchasing. Izogo, Elom, and Mpinganjira (2020) propose that consumer engagement is affected by customer-driven elements such as goals, resources, and value judgments, as well as attitudinal components such as satisfaction, brand loyalty, and trust. A study conducted by Busser and Shulga (2019) in online environments found that customers engage in nontransactional activities with the anticipation of gaining benefits such as enhanced knowledge, enhanced reputation, social advantages, and financial rewards such as cost savings. Businesses can improve consumer involvement by implementing effective communication and interaction channels (Baron & Warnaby, 2011) and providing incentives to clients for their contributions (Busser & Shulga, 2019). Locatander et al. (2020) found that consumer involvement leads to empowerment, trust, and dedication towards service providers.

Furthermore, it possesses the capacity to foster customer allegiance and augment satisfaction with the brand and community. The study's backdrop reveals variations in the level of involvement among academic staff at public universities in Malaysia and the wide array of services provided by the AAD. The quality of the customer service experience is governed by the level of customer participation, which is described in this study as a psychological process (Brodie et al., 2013). This study examines the psychological state of consumer engagement that comes from certain interactions. Consumer participation primarily refers to the psychological state that arises when a consumer interacts with a central agent or object in certain service interactions. Moreover, a dynamic and iterative process of service interaction involving multiple tiers of client involvement culminates in the cooperative creation of value. The phrase "customer involvement" is broad and depends on the context as well as the particular ways in which stakeholders display pertinent emotional, cognitive, and

behavioral traits. Furthermore, it is necessary inside a nomological network of service interactions, as mentioned by Locatander et al. (2020). In the end, this study found that varying degrees of consumer involvement are caused by the various situational contexts in which customer interaction occurs. Validating the significant relationship between customer involvement and customer service experience is the goal of this study.

3. Methodology

This study employed a cross-sectional research design and is characterized by its use of quantitative methods. The data was collected by conducting self-administered surveys using Google Forms. The study focuses especially on the academic faculty at public universities in Malaysia as the object of investigation. The data was collected using self-administered surveys that were completed by the participants. The researcher sought the department director's advice due to their inability to directly engage with the respondents. The research equipment was distributed directly to the department heads of the participating institutions on an individual basis. The department head was instructed to distribute the surveys to the academic staff of the faculty members in a random fashion. Each set of questions was accompanied by a cover letter that clearly stated the goals of the study, guaranteed the privacy of the collected data and provided directions for filling out the surveys. The questionnaire items were designed to elicit responses that were not definite or erroneous, and participants were guaranteed secrecy. A total of 472 questionnaires were completed to collect data. After entering the data into SPSS, a total of 18 surveys were excluded from the study because they had insufficient data. A total of 454 surveys were deemed genuine, indicating a reduction from the initial count of 472. Subsequently, the data underwent encoding before its integration into SPSS for error detection and verification of the absence of any missing or inaccurate ratings. The poll encompassed academic personnel from all publicly funded universities in Malaysia.

Surveys were administered in which respondents personally completed the questionnaires. Wakefield and Blodgett (1999) created a framework for assessment known as the personal interaction encounter concept. This construct includes the qualities of being responsive, professional, reliable, attentive, and fostering connections between guests. The Revised Personal Participation Inventory (RPII), consisting of ten items, was employed to evaluate consumer participation. Zaichkowsky founded the RPII in 1987. The researchers applied the Customer Experience Index (CEI) scale, established by Kim et al. (2011), to evaluate the level of customer service quality. The scale underwent a comprehensive examination and validation process to ensure its reliability and validity. The alpha coefficients for benefits, convenience, accessibility, usefulness, and trust all exceeded the threshold of 0.70 on each of the five scales (alpha = 0.95, alpha = 0.81, alpha = 0.87, and alpha = 0.70). The evaluation of all concerns was performed using seven-point Likert-type scales, where a rating of 1 indicated "strongly disagree" and a rating of 7 indicated "strongly agree."

Subsequently, the next phase was validating the reliability of each component. The primary goal is to examine the interrelationships among the many components of each construct or the internal consistency within the constructs themselves. This is especially fascinating because these formations have not been previously examined inside the framework of a public university. The Cronbach alpha coefficient was employed to evaluate the internal consistency. To enhance the reliability of the structure, it is advisable to eliminate components with an alpha value lower than the acceptable threshold of 0.7. A Cronbach alpha of 0.7 signifies a sufficient degree of internal consistency (Pallant, 2020). All of the study constructs demonstrated a Cronbach alpha level higher than 0.7. The study's assumptions were evaluated using SmartPLS 4.0.

4. Findings

The study's conclusions entailed the classification of the participants into eight distinct categories, utilizing SPSS, according to their demographic characteristics. The factors considered include age, gender, marital status, length of work at the institution, teaching experience, educational achievement, monthly salary, and areas of expertise. The study revealed that out of the total number of respondents, 267 individuals, accounting for 58.8%, were female, while 187 respondents, equivalent to 41.2%, were male. The sample consisted of 323 participants, of which 71.2% were married. Furthermore, a total of 127 individuals, including 28% of the sample, fell between the age ranges of 25 to 30. Meanwhile, there are 273 individuals, making up 60.6% of the

total, who are categorized as lecturers. Additionally, there are 106 individuals, representing 23.3% of the total, who are categorized as senior lecturers. Furthermore, a total of 309 individuals, constituting 68.1% of the overall population, possess master's degrees. Out of the whole group of respondents, only thirty individuals, which accounts for around 6.6% of the sample, reported having a monthly income of over RM8000. Nevertheless, 121 participants, constituting 26.7% of the sample, reported that their wages were in the RM3001 to RM4000 range. Moreover, almost 50% of the participants had been employed by their universities for a period ranging from two to nine years. The poll results indicate that the majority of individuals have a basic comprehension of business and management.

Measurement Model Evaluation: The measurement model was assessed using Structural Equation Modeling-Partial Least Squares (SEM-PLS) with Smart PLS 4.0 software (Ringle, Wende & Becker, 2015). The evaluation criteria encompassed factor loading, composite reliability, average extracted variance (AVE), Cronbach's alpha, and discriminant validity. The Heterotrait-Monotrait (HTMT) measure, introduced by Henseler, Ringle, and Sarstedt (2015), was also taken into account.

Internal Consistency Reliability: The initial criterion in the measurement model is the internal consistency reliability criterion, encompassing Cronbach's Alpha and composite reliability. Hair et al. (2014) contend that to establish a satisfactory level of reliability necessary for the investigation, the composite reliability values must surpass 0.70.

Table 1: Internal consistency reliability

Construct	Item	Loading range (>0.70)	Composite Reliability (>0.70)	Cronbach's Alpha (α) (>0.60)
Personal Interaction Encounter	26	0.743 – 0.886	0.965	0.963
Customer Involvement	10	0.758 – 0.867	0.906	0.899
Customers Service Experience	33	0.701 – 0.827	0.968	0.966

Table 1 displays the dependability of internal consistency for different constructions. The construct must possess a composite reliability exceeding 0.70. The Cronbach's Alpha (α) value must exceed 0.60. The quantity of in-person interactions is 26. The range of values for this construct spans from 0.743 to 0.886, with a specific value of 0.965. The personal interaction encounter construct has a value range of 0.743 to 0.886, with a value of 0.965. While the customer involvement construct has a value range of 0.758 to 0.867, with a value of 0.906. The customer service experience construct has a range of 0.701 to 0.827, and its current value is 0.968. The composite dependability values for customer involvement, customer service experience, and personal contact encounter are 0.965, 0.906, and 0.968, respectively, as stated in Table 1. Values falling between 0.70 and 0.90 are deemed strong and good, as per the findings of Nunnally and Bernstein (1994). Moreover, all of the structures exhibited a substantial level of composite reliability.

Convergent Validity: Table 2 displays the composite reliability ratings, which indicate the degree to which the indicators of the construct align with the underlying notion. The values range from 0.906 to 0.968, indicating a clear difference between them. The outcome exceeds the recommended threshold of 0.70, as stated by Hair et al. (2014). Based on the AVE (Average Variance Extracted) values presented in Table 2 for each construct, it can be inferred that the measurement model has convergent validity. The AVE (Average Variance Extracted) varied between 0.586 and 0.662. Table 2 presents the degree to which the measurement model demonstrates convergent validity. The variable should have loadings that exceed 0.70. The composite reliability must be greater than 0.70. The mean value exceeds 0.50. The value of Cronbach's Alpha (α) should exceed 0.60. The range of values for personal interaction encounters is between 0.743 and 0.886. The variable has a value of 0.965. The value assigned to another variable is 0.662. The third variable has a value of 0.963. The range of values for customer involvement is between 0.758 and 0.867. The value assigned to this variable is 0.906. The value of another variable is 0.628. The third variable has a value of 0.899. The range of values for customer service experience is between 0.701 and 0.827. The variable has a value of 0.968. The value assigned to another variable is 0.586. The third variable has a value of 0.966.

Table 2: Convergent validity of measurement model

Construct	Loading range (>0.70)	Composite Reliability (>0.70)	AVE (>0.50)	Cronbach's Alpha (α) (>0.60)
Personal Interaction Encounter	0.743 – 0.886	0.965	0.662	0.963
Customer Involvement	0.758 – 0.867	0.906	0.628	0.899
Customers Service Experience	0.701 – 0.827	0.968	0.586	0.966

Discriminant Validity: Discriminant validity can be assessed by different techniques, including the Heterotrait-Monotrait (HTMT) Ratio and the Fornell-Larcker (1981) criterion. These methods include evaluating the relationships between many constructs and determining the square root of the Average Variance Extracted (AVE) for each concept. The Heterotrait-Monotrait (HTMT) ratio of correlations, established by Henseler et al. (2015), is a precise and rigorous approach used to assess discriminant validity. It determines if the weight of an item on one structure is larger than the total weight on other structures. HTMT is typically assessed and contrasted against a pre-established threshold as a benchmark for comparison. Gold, Malhotra, and Segars (2001) established that a score of 0.90 is the minimum threshold for indicating a lack of discriminant validity. Consequently, the validity of discrimination has been established and the Heterotrait–Monotrait (HTMT) values as evidenced in Table 3.

Table 3: Heterotrait– Monotrait (HTMT)

	Customer Service Experience	Personal Interaction Encounter	Customer Involvement
Customer Service Experience			
Personal Interaction Encounter	0.830		
Customer Involvement	0.458	0.357	

Table 4: Fornell-Larcker Criterion

	Customer Service Experience	Personal Interaction Encounter	Customer Involvement
Customer Service Experience	0.764		
Personal Interaction Encounter	0.794	0.814	
Customer Involvement	0.441	0.337	0.793

Note: Diagonals (in bold) represent the average variance extracted while the other entries represent the squared correlation.

The Fornell-Larcker criterion evaluation results are presented in Table 4, displaying the square root of the Average Variance Extracted (AVE) on the diagonal and the correlations between the variables in the lower left triangle. The square roots of the average variances extracted (AVEs) for the constructs of customer service experience, customer involvement, and personal interaction encounter are all above 0.50. Therefore, our research fulfills the necessary criteria for the Fornell-Larcker and HTMT ratios, thereby showcasing the distinctiveness of the components. In summary, the assessments conducted in this investigation have shown evidence of both discriminant and convergent validity.

Assessment of Path Coefficients: Path coefficients are employed to assess the empirical soundness of hypotheses and the associations among variables. The significance of the connections between the two courses is illustrated in Table 5. The external determinants of customer involvement and personal interaction encounters significantly impacted the variations in the internal hidden variable of customer service experience, with β values of 0.337 (34%) and 0.441 (44%) correspondingly. The t-values of the parameters reflect the magnitude of the connection they represent; a higher t-value indicates a stronger association. The t-values for each coefficient were derived using the bootstrapping technique, employing a sample size of 5000 (Chin, 2010).

Table 5: Significant Testing Results of the Structural Model Path Coefficients

Structural Path	Path coefficient (β)	t- value	P-value	Decision
Personal Interaction Encounter -> Customer Service Experience	0.337	7.402	0.000	Supported
Customer Involvement -> Customer Service Experience	0.441	10.203	0.000	Supported

* 1.645 - 2.32 ** 2.33 and above ***p<0.01

The crucial findings of the statistical tests done on the path coefficients in the structural model are presented in Table 5. The route coefficient (β) quantifies the correlation between various components inside the model. The word "P-value" denotes the likelihood of obtaining a result that is as extreme as, or more extreme than, the observed data, under the assumption that the null hypothesis is true. In this instance, the customer service experience can be characterized as a personal interaction encounter. The coefficient of the path for this relationship is 0.337, with a t-value of 7.402. The p-value of less than 0.01 indicates that the value of 0.337 is statistically significant. Furthermore, the correlation between customer involvement and customer service experience is highly significant, as indicated by a path coefficient of 0.441 and a t-value of 10.203. The p-value for this association is statistically significant, with a value below 0.01. Both of these hypotheses were accepted and validated with an extremely significant p-value, measuring less than 0.000. To summarize, there is a definite and straightforward connection between how consumers perceive involvement, their interactions including personal contact, and the overall experience of customer service.

Evaluation of the Determination Coefficient (R2): The Determination Coefficient (R2) is calculated by squaring the difference between the actual and predicted values of an endogenous component. This value represents the accuracy of the model in predicting outcomes. Chin (1998) suggested three specific thresholds for evaluating the R2 value: 0.19 for a weak correlation, 0.67 for a strong relationship, and 0.33 for a moderate correlation. The R2 value of the research model, specifically 68.3% or 0.683, represents the proportion of variability in customer service experiences that can be explained by the model. This result suggests that the model's prediction is at an acceptable level. This indicates that the model in question is significant and has a substantial level of predictive efficacy.

Discussion

According to this study, human contacts have a significant and positive impact on the customer service experience. Additional researchers corroborate these results, asserting that customers' positive engagement and satisfaction are contingent upon meaningful and satisfying encounters with human services (Dzama, 2013). The importance of consumer interaction in promoting positive experiences cannot be ignored (Locander et al., 2020). Furthermore, the outcomes of this investigation are consistent with the discoveries made by Puccinelli et al. (2009). They believe that the quality of a service experience depends on the interpersonal interactions between the customer and the service provider. The establishment of beneficial relationships between employees and customers, which cultivate rapport and enhance employee responsiveness, has a direct impact on customer satisfaction (Locander et al., 2020).

Based on this research, the active involvement of consumers has a significant and positive influence on the level of customer service quality. The findings indicated that academic staff members who demonstrated higher levels of involvement were more likely to witness improvements in customer service. The study demonstrates a direct and favorable association between customer service experience and involvement. This discovery is consistent with the results of a recent investigation carried out by Wanying, Zhounan, Xu, Xiuping, & Ziang (2022), which similarly identified a positive association between consumers' level of involvement and experience value. The study aims to examine how individuals' abilities, goals, and levels of participation impact their viewpoints and approaches to information processing (Wanying et al., 2022). It is essential to emphasize the analysis of customers' cognitive experiences in addition to allocating resources to academic staff to properly manage the customer service encounter in AAD. Moreover, the result corresponds with the conclusions of a study carried out in non-commercial online forums by Zhang (2013). The study revealed that customer involvement had a substantial and favorable impact on both word-of-mouth promotion and the likelihood of recurring usage. Consequently, organizations should prioritize consumer participation, since it

will have a direct influence on clients by enhancing their perception of value and fostering customer loyalty.

5. Conclusion and Recommendations

According to this study, for the AAD to offer exceptional services, it is advised that academic staff members who visit the department actively engage in the process of delivering services. For example, if an academic staff wants to know about a student's status, he or she must provide precise personal details on the student, such as their student number, classes, semester, and other pertinent attributes. Otherwise, the AAD administrative personnel are unable to provide the service that was requested. Highlighting the importance of co-creation value is essential for providing an exceptional customer service experience to academic professionals. The AAD provides a service that enhances value by facilitating the exchange between the academic staff and the AAD. Schiavone, Leone, Sorrentino, and Scaletti (2020) argue that this design has an indirect influence on the process of value co-creation.

The study's findings emphasize the importance of in-person interactions and customer involvement in shaping the views of academic staff members on customer service at the AAD of Malaysian public institutions. The findings provide additional validation of the significance of customer service experience when examined from the perspective of the behavioral model and social learning theory. The service experience marketing method is based on a psychologically strong paradigm that regards customers as emotional and hedonistic individuals whose main goal is to receive outstanding service. Furthermore, the report emphasizes the significance of ongoing professional growth for employees. It is necessary for policies to require regular training programs to enhance the AAD management team's capacity to make educated decisions on technology, human resources, marketing, communication, and strategy. Furthermore, these training sessions should equip AAD staff with up-to-date strategies and resources to effectively assist students. In addition, implementing certification programs and standards for AAD staff helps enhance professionalism and competency.

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Factors Influencing the Employability of Students Studying Records Management

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Abstract: Record management is a crucial profession in organizations, responsible for the efficient and orderly control of records. It involves creating, acquiring, maintaining, using, and disposing of these records, which prove an organization's operations and business. Many higher institutions in Malaysia offer courses related to records management. This paper explores factors influencing undergraduate students' employability in the field, investigates the required qualifications and skills, and identifies strategies to increase employability among record management students. The research will use a quantitative approach, including online surveys and questionnaires, with respondents graduating from records management courses. The expected findings will provide insights into the factors influencing undergraduate students' employability and strategies to overcome these issues.

Keywords: *Records management, employability, graduate, UiTM, university*

1. Introduction

Unemployment poses a significant challenge in Malaysia, particularly due to the influx of university graduates. Both public and private institutions are required to generate exceptional undergraduate students who can compete in the job market effectively. According to Fugate et al. (2003), employability is an organizational framework that assists individuals in understanding and making the most of their professional chances. Employability refers to the capacity to secure employment and progress in a career by enhancing marketable skills and qualities through a plan sponsored by an employer or other means. The implementation of lifelong learning is crucial. Employability refers to the ability to be hired and remunerated based on one's talents and experience. Several authors have disputed this notion. The topic of employability is still a subject of controversy, as indicated by Andrews and Higson (2008), Dacre et al. (2014), McQuaid and Lindsay (2005), Rothwell et al. (2008), and Heijde and Heijden (2006).

The Ministry of Higher Education of Malaysia (MOHE) has exerted significant effort to cultivate exceptional pupils by publishing The Malaysia Education Blueprint 2015–2025 (Higher Education) which places a high priority on enhancing the employability of undergraduate students. The MOHE strongly advocates for the importance of this goal to meet the needs of individuals seeking employment, those looking to create jobs, and aspiring well-rounded entrepreneurs. Based on the 2022 statistics provided by the Department of Statistics Malaysia (DOSM), a total of 5.61 million students completed their studies in 2021. 53.6% of Malaysia's 3 million graduates have a degree.

Despite a high graduation rate, 33.9% of graduates were unemployed due to deficiencies in their skills (Department of Statistics Malaysia/DOSM, 2022). This also has been aligned with the collection of data on the employment of undergraduate students conducted before via the Graduate Tracer Study (GTS). GTS compiles data on the extended professional journey of individuals who have completed their education. The online survey is available to all those who have completed their college or university education starting in 2006. According to the 2021 Higher Education Statistics from the Ministry of Higher Education, a total of 326,291 individuals completed their studies at different educational levels and higher education institutions. According to GTS, the percentage of private college graduates who had something in 2021 was 58.5%, whereas the percentage of public university graduates who had something was 61.7%. However, it is important to note that fewer than 20% of college students have never been employed. Several individuals obtained employment, but their education was mainly incongruous, particularly in records administration. According to the Graduates Reference Hub for Employment and Training/GREaT (2021), the percentage of undergraduate students

majoring in recording administration who specialized in social sciences increased from 83.8% in 2020 to 84.4% in 2021. Given the firm's established status and specific focus on records management, the position sought individuals with expertise in records administration. To pursue a successful career in record management, one must possess certain skills.

These factors posed challenges due to several students' insufficient record administration abilities. Only a limited number of Malaysian institutions provide degrees in records administration, including IIUM, UKM, UiTM, and UM. The National Archives of Malaysia oversees the management of documents. The organization's historical background in records administration indicates that individuals with expertise in records administration should be appointed to this role. Numerous companies, particularly those in the public sector, employ specialists in record management.

Recordkeepers need more experience, expertise, and training to produce negligent paperwork (Ipinge and Nengomasha, 2018). There was a discrepancy between the number of filled records management positions and the number of graduating students. Several students have a limited record management background, making these aspects difficult. The fact that students are learning record administration in class but not working in the sector is a significant and questionable problem. According to Zawiyah and Chell (2005), just a few professionals think that records management needs to be given more importance. It is a task that can be accomplished by anyone.

According to Creed and Hughes (2012), making professional concessions, such as enrolling in a degree program that was not the students' top choice, might increase professional anxiety and decrease career opportunities. Undergraduates need to possess substantial talents that are highly valued in the employment market. Nevertheless, the World Economic Forum emphasized enhancing job-related skills to align with evolving market requirements (Wafa, Singh, Singh, Kaur & Singh, 2020). Moreover, scant evidence showed that firms or organizations refrain from hiring undergraduate students due to the low competency and quality of graduates, as asserted by Velasco (2014) and Nilsson (2010), employers found difficulties in finding suitable candidates who possess a variety of skills and competencies that could help to enhance the productivity of the organization.

Organizations must efficiently manage information and records for sustainable development and public responsibility. Record managers play a strategic role in creating procedures and rules for record management, ensuring appropriate and efficient employment. According to Saiful et al. (2016), the study suggests that although there are graduates who have received training in records management, most students from the Faculty of Information Management still require employment after completing their studies. However, there is still a need for these graduates to find employment for example, in the health industry. This is featured in Aniza (2010), where the medical records department is one of the necessary sections in any organization, including a hospital. Thus, undergraduate students from the record management field can be employed and try for a position in which the graduates must be responsible for providing records and medical reports requested by others and managing patients' medical records. The researchers also highlighted the qualifications required to be involved in the medical records department, where the applicants must have either a degree or diploma in records management or any other associated discipline, possess skills in information technology (IT), and know electronic medical records. Aniza (2010) also provided views from the medical record officers, most of whom stated that the competencies come from proper records management knowledge and skills, which Universiti Teknologi MARA has effortlessly provided a related course for.

Throughout this paper, the authors would like to highlight the factors influencing undergraduate students' employability in record management. According to Ipinge and Nengomasha (2018), it's proven that records management is a profession. Record management expertise plays an important role in supporting the efficiency of management practice in an organization. Moreover, record management is an essential part of how organizations operate. It involves the organized control of records from the moment records are created or received through various stages of processing, distribution, maintenance, and retrieval until records are ultimately disposed of. On the other hand, an efficient record administration is crucial for upholding organization, guaranteeing adherence, and bolstering the overall effectiveness and honesty of a company. Records management experts possess the necessary expertise to implement and enforce records policies and

processes, which aid organizations in achieving regulatory compliance (Kautto & Henttonen, 2020). Thus, this paper may highlight the importance of record management professionals in an organization and make records experts visible in the organization. management. Records experts can mitigate the risk that organizations face in terms of non-compliance with records management standards and policies.

2. Literature Review

Employability Among Graduates: for any company or organization, hiring and selecting employees are essential parts of ensuring that the business operation may be run successfully (Ekwoaba et al., 2015). It is also supported by Gamage (2014) where the researchers agreed that both selecting and recruiting employees will be effective factors for the human resources department in an organization. Meanwhile, employability is an exact term to indicate the process of searching for potential employees and the ability to find and maintain the process of fulfilling the work. In other words, employability will be based on a few factors, which are skills, knowledge, and attitudes owned by an individual that are presented and proven to employers or organizations (Gedye & Beaumont, 2018). According to Pitan and Muller (2020), the researchers opined that employability would have these three criteria where undergraduate students possess skills, knowledge, and attitudes with the addition of attributes for them to ensure that the job they can acquire will be fulfilled successfully.

Many elements can help to assess and clarify graduate employability. Most organizations require excellent employability skills before employment. Many skills need to be possessed by the applicants before undergoing the job process. Personal traits and teamwork affect men's and women's employment. Employers examine incoming undergraduates' employability skills (Husain et al., 2010). Disparities between the needs of the industry and graduate employability have also been noted. Technical competence and knowledge are "hard skills," and people skills are "soft skills." soft abilities improve interpersonal relations and professional effectiveness. Soft abilities include professionalism, dependability, stress tolerance, preparation, communication, self-confidence, creativity, personality, and time management (Andrews & Higson, 2010). Hard and soft talents predict work performance. Technology and soft skills for undergraduates will be in high demand. Employers want hard and soft skills, with inventiveness at the top. Undergraduates face hurdles when finding jobs. There are so many skills required to secure placement in the organization. The first skill required is the ability to communicate. Many studies have shown the importance of communication skills and proficiency in certain languages. According to Robles (2012), knowing many languages will aid university students, and communication is a must-have skill. This has also been asserted by Ting, Marzuki and Chuah (2017); Basir, Zubairi, Jani and Wahab (2022): communication skills can increase employability and opportunities for career advancement. Besides, easily getting employed, it can also negotiate for a better salary (Ting, Marzuki & Chuah, 2017). Respondents claimed soft skills were more critical than basic knowledge. Most institutions do not teach soft skills. The employer stated that most undergrads do not examine skill requirements before applying. Employment requires critical thinking skills. Respondents struggle with unexpected job conditions. Based on all discussions, show that undergraduate students are required to learn and master certain skills for better employment opportunities. This is also agreed by Collet, Hine and Du Plessis (2015) that the connections between skills need to be drawn to understand the drivers that create the functional graduate as a whole.

Additionally, Aliu and Aigbavboa (2020) state that undergraduate students' unemployment issues are at a high stake after graduation. The prevalent problem in the current job market is the discrepancy between the student's skills and knowledge and the employer's requirements. The skills employers seek, and graduates' skills do not match (Kassie, 2023; Bindawas, 2024; Shanfari, 2024). This is the challenge the employer faces in finding suitable candidates with the required competencies or graduate skills that match the organizational requirements (Shanfari, 2024). Employers find difficulties in hiring recent graduates due to a mismatch between the specific skills needed and the skills possessed by graduates, which do not align with the demands of the industry. This situation arises from conflicting views on critical and essential skills needed for employment (pauceanu et al., 2020). Thus, both undergraduate students, as well as employers, and educational institutions need to build strategies for increasing employability status among undergraduate students appropriately.

Employability in Records Management: Records management is a vital aspect for organizations, particularly with the constant generation of information leading to the creation of additional records in both physical and electronic formats (Jannah, 2023). In detail, according to the definition in the ISO 15489 standard, record management is the area of management in charge of the effective and systematic control of the creation, acceptance or receipt, maintenance, use, and disposition of records, including procedures for capturing and maintaining evidence and information about business activities and transactions. On the other hand, the International Records Management Trust (2009) defined records management as a field of management responsible for the efficient and systematic control of the creation, receipt, maintenance, use, and disposal of records. Records management includes processes for capturing and maintaining records as evidence of and information about business activities and transactions.

Hiring undergraduate students in the records management field may become essential as it is still relevant. This is due to the challenges when managing public records in archives when everything has transformed into an electronic system, as stated by Kadir (2014). The researcher stated that the organization meets with inefficiency due to the need for more knowledge and expertise in standards, legislation, and policies in electronic record management practice. This is also agreed by Asmadi (2012) in his research, who stated that most of the respondents who responded to the queries were records managers. However, when they were questioned about the responsibilities of managing electronic records, most of them denied the task. Hence, that proves that Malaysian Federal Agencies have not effectively managed electronic records due to insufficient skills and knowledge. This paper is aligned with Johare and Masrek (2011) who mentioned that records managers who were interviewed in their study revealed that they felt as if they had not successfully executed the Records Management Standard MS2229:2009 appropriately. Thus, this shows that undergraduate students in records management studies have the potential to be employed in the field. However, these issues and challenges have arisen due to several factors.

3. Factors Contributing To The Low Employment In Records Management

Undergraduate Students Are Not Interested in Working in the Records Management Field: Even though there is limited specific previous research regarding the lack of undergraduate students who are not interested in working in the records management field, this problem is like another field and industry. According to Ibrahim et al. (2020), higher-educated students in the hospitality sector are no longer interested in working in that area, and the industry needs younger prospects because of issues with attracting and recruiting younger workers in the institution. Nachmias and Walmsley (2015) discovered that the nature of the job and the working conditions are the main reasons why students do not enter the profession. Other than that, according to Carnevale and Cheah (2013), two students who choose a similar major may not have the same job options or expected financial rewards after graduation. Meanwhile, Chen et al. (2011) discussed that students who are experiencing uncertainty due to the economic downturn should re-evaluate their future career paths to fit in with a flexible market. In aspects of the records management field, there are lingering questions among scholars.

As stated by McLeod and Hare (2010), the researchers mentioned that in previous years, researchers believed that undergraduates were not interested in working in the records management fields due to the claims that records management is not a long-term profession. Though this is still the case for individuals in the field, as it is in others like accounting and law, there is little evidence to imply that this is the view of the majority, and quite the opposite is true if advancement into upper-level managerial positions is considered. The uninterested behavior in working in the records management field also happened in Malaysia as well. This is aligned with the research from Aliza and Adnan (2011), The researchers revealed that when asking the public who the records professionals or records managers are, most of them have no idea what kind of occupation it is, and some of the respondents shrugged in response to ignorance. In the reality of the country, younger respondents mentioned that they wanted to be in a well-known profession like doctors and engineers. Thus, this shows that records management as an occupation has been unseen and unknown by the public, leading to uninterested feelings toward working in the industry.

Lack of Qualification and Skills of Undergraduate Students in the Field of Records: The qualifications and skills of undergraduate students are required for employment. Many scholars have their own opinions based

on this issue according to their countries. Based on Wafa et al. (2020), the World Economic Forum stressed that work-related skills need to evolve to keep up with changing market demands. This implies that some skills required ten years ago might not be helpful now. Mokibelo and Seru (2020) also mentioned that several factors contribute to youth unemployment, a global issue. The most frequently stated argument, however, is that young people's unemployment is caused by a lack of skills. Lack of skills is due to insufficient education and training. Those researchers also stated that the employment market condemns students as inexperienced, unskilled, and inadequately educated. As a result, young people in Botswana are stumbling around the streets without jobs. It is also supported by Nthomang and Diraditsile (2016), who described that, among other factors, young unemployment in Botswana is a result of factors such as unemployed and unskilled labor, a lack of work experience, the size of the youth labor force, the state of the unemployment rate, and the lack of job development strategies. Meanwhile, Mohd, Naghavi & Abdul (2020) asserted, that besides skills, job mismatch and unrealistic salary demand, are the crucial factors that cause undergraduate students to remain unemployed in Malaysia.

For undergraduate students in the records management field, according to Duffus (2017), the researchers shared the results of their research, which emphasized that there were insufficient personnel, insufficient training resources, inadequate record-keeping capabilities, a low level of academically competent personnel, and a big presence of temporary personnel. Hiring untrained personnel in record management hindered professional practice and damaged numerous record management-related services in the Jamaican public sector. When accountability mechanisms were weakened due to inefficient record-keeping practices, management could not acquire the information necessary to retain operational control and make intelligent choices, leaving organizations susceptible to collapse. One of the constraints to business sustainability and accountability identified was the need for requisite competencies and specialized skills among practitioners in the Jamaican organizations evaluated to perform record management duties. Thus, this shows that a lack of qualifications and skills may contribute to the failure of record management operations in an organization; instead, the organization should highlight the required qualifications and skills that should be occupied by undergraduate students before hiring them officially.

Lack of a Strategic Plan for Recruiting Undergraduate Students in the Record Management Industry: Few studies indicate firms or organizations need a strategic approach to attracting undergraduate students. Velasco (2014) states employers need help finding undergraduate students with the skills to manage their production. Both researchers noted that health education institutions graduate more each year, making it difficult for companies to recruit competent and competitive staff. Al Nejam et al. (2017) explain that there is a gap between the actual demand for employment skill requirements and what is provided through the university that does not meet the employers' requests, and employers will examine certain criteria during the recruitment process that will be unachievable. Marfunizah et al. (2020) found that undergraduate students are unemployed because their courses need to match what companies and organizations want. Thus, educational institutions and employers need a comprehensive plan to recruit undergraduate students.

Aliza and Adnan (2011) found in their research, that no fitting location for records professionals in the respondents' eyes. The company's records could be better managed. This is based on the example of the Malaysian oil company. They added that sizable Malaysian oil business is under government control and needs more qualified document specialists. Only certain important staff receive records management training, meanwhile, the rest who manage records and electronic records are computer scientists and engineers. The researcher found that these personnel are anxious about their inability to rationalize information and record management. Because businesses have yet to make strategic plans to recruit undergraduate students in the records management industry, these recruited individuals struggled to advise and regulate the organization's records management standards.

4. Discussion

A few strategies exist to overcome lower employment rates among record management undergraduates. One of the strategies is providing industrial training or internships to the students (Mseleku & Nyawo, 2024; Sitompul & Athoillah, 2023). The students will be able to acquire relevant and hands-on experience and skills that meet the demands of the industry. It will help the students be prepared for the job market, leading to higher

employment rates and more job placement in the record management field.

Encourage the students to get professional certificates or digital records management qualifications through skilled training, workshops, seminars, and online courses. Employees usually value professional certificates, increasing employability among record management undergraduates (Martin & Davies, 2022).

Another strategy is developing interdisciplinary skills, such as data analysis, project management, and information technology, and focusing on emerging trends in record management, such as artificial intelligence and blockchain. The graduates can handle diverse roles beyond traditional record management with various skill sets. Graduates with different skill sets will be better able to handle multiple roles beyond traditional record management. Graduates who have these skills can have broader employment opportunities as they can perform different roles as needed in working industries (Sitompul & Athoillah, 2023).

By focusing on graduates' learning development, robust connections and collaboration between industry and educational institutions will provide relevant information for academic institutions to provide appropriate student training (Shuhod & Mat Rashid, 2023). This linkage acts as a pipeline for well-prepared candidates from industry and employers, which fosters ongoing industry-academic partnerships.

5. Conclusion and Recommendations

In conclusion, this paper focuses on the employability of records management students. The primary reason is to understand why graduate records management students face difficulties and employment-related barriers. Several related issues are also related to undergraduate records management students who do not find jobs after graduation, such as a lack of interest in working in the records management field, a lack of qualifications and skills related to records management, and a lack of a strategic plan developed by the universities and government to overcome the issue.

The Malaysian government plays a pivotal role in shaping a supportive environment for record management careers through strategic initiatives and regulations. Establishing national standards for record management practices and encouraging industry-wide adoption can enhance the field's visibility and importance, increasing demand for skilled professionals. Additionally, the government can facilitate continuous professional development by providing grants or funding for advanced training and certifications. By actively promoting these measures, policymakers can help bridge the gap between education and employment, ensuring that record management graduates are well-prepared for long-term career success and contributing to the overall efficiency and growth of various sectors reliant on effective record management.

Several initiatives by policymakers, for example, my next-GEG, Young Employable Students (YES!), National Structured Internship Programme (MySIP), Academia Collaboration (IAC), and Penjana Kerjaya 2.0, will help to enhance graduates' employability; however, these initiatives focus on short-term employment. To improve employability for the long term, especially for record management students and other graduate students, the Graduate Tracer Study (GTS) should involve other parties or stakeholders, such as education sectors, industries, and the community, in having all the information and feedback to help policymakers develop frameworks and create strategies to improve and boost the job market for graduates (Berita Harian, 2020, August 18).

As a result, it might guarantee that records management undergraduates would have a stable career position after graduation and recognize the options on how they might achieve this. From the standpoint of universities or other educational institutions, this paper offers a view of areas for improvement in the institution's programs and courses. In the meantime, policymakers may learn about improvements that should be considered to align the courses with current market demands successfully.

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Enhancing Athletic Well-Being: Unravelling the Impact of Social Support

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Abstract: Enhancing athletic well-being is integral to optimizing sports performance and overall health. Social support serves as a vital component in fostering athletic well-being, offering emotional, tangible, and informational assistance to athletes. This study examines the social support experienced by SUKMA athletes, focusing on support from friends, family, and significant others throughout their sports engagement. The primary objective is to explore the relationship between social support and psychological well-being among SUKMA athletes in Negeri Sembilan. A sample of 298 athletes completed the Multidimensional Scale of Perceived Social Support and Psychological Well-being Scale. Findings reveal family support as the predominant source of social support, followed by significant others and friends. Notably, significant others exhibit a significant relationship with all elements of psychological well-being. Further research should delve into the nuanced dynamics of social support in athletic contexts through longitudinal and qualitative studies. Strategies to bolster social support networks within sports settings are recommended to enhance athletes' mental health and performance. Moreover, the study lays the groundwork for future research to explore the complexities of social support in athletic environments, advocating for longitudinal and qualitative approaches to better understand these dynamics.

Keywords: *Social support, psychological well-being, athletes*

1. Introduction

Athlete well-being is a comprehensive construct that includes physical, psychological, and social aspects, which significantly influence performance outcomes and overall quality of life (Smith & Jones, 2019). In Malaysia, the unique cultural and social dynamics play a critical role in shaping athletes' experiences and well-being, making it essential to explore these factors in depth.

Social support, defined as the assistance or resources provided by others in times of need or during challenging situations, has emerged as a critical determinant of athlete well-being across various sports and competitive levels (Jones & Brown, 2018). The concept of social support, which encompasses emotional, instrumental, informational, and appraisal dimensions, is a well-established determinant of athlete well-being. It refers to the assistance provided by others, especially during times of need or stress, and has been shown to significantly impact various aspects of athletes' lives, including their mental health and performance (House et al., 1988; Jones & Brown, 2018).

In Malaysia, the focus on mental health and well-being in sports has gained traction, particularly considering the increasing pressures faced by athletes at various levels of competition. The International Olympic Committee (IOC) has highlighted the importance of mental health, recognizing that good mental health is crucial for optimal performance and overall well-being (IOC, 2023). This aligns with the global trend of addressing mental health in sports, as seen in the introduction of resources such as mindfulness apps and educational tools designed to support athletes (Olympics.com, 2023).

Furthermore, a study on Malaysian athletes revealed that social factors, such as support from family and the sports environment, significantly influence motivation and performance. These findings underscore the critical role of a supportive network in helping athletes navigate the challenges of competitive sports (Zainuddin et al., 2023). While considerable attention has been given to understanding the relationship between athletic well-being and social support, there exists a notable gap in the current literature regarding the specific mechanisms through which social support influences various dimensions of athletic well-being (Mira, et al.,2023). This study will focus on the relationship between social support and psychological well-being among Negeri Sembilan

SUKMA athletes. The findings are expected to provide valuable insights for developing targeted interventions and strategies to enhance social support systems, ultimately promoting better mental health and well-being among Malaysian athletes.

2. Literature Review

Athlete well-being is a multifaceted construct encompassing physical, psychological, and social dimensions, each intricately interconnected and influential on performance outcomes and overall quality of life (Smith & Jones, 2019). Within sports psychology literature, considerable attention has been dedicated to understanding the factors that contribute to athlete well-being, with a notable emphasis on the role of social support.

Enhancing athletic well-being is a multifaceted process that involves various factors, with social support playing a crucial role. Research has shown that social support can have a significant impact on athletes' mental health, stress levels, and overall well-being (Covassin et al., 2014; Deegan & Dunne, 2022; Sullivan et al., 2014; Yang et al., 2014). Studies have indicated that social support can act as a buffer against stress, anxiety, and depression, particularly in the context of athletic injuries (Covassin et al., 2014; Yang et al., 2014). Moreover, social support has been linked to reducing burnout and enhancing subjective well-being among athletes (DeFreese & Smith, 2014; Ozer, 2023).

The type and source of social support are essential considerations, as they can influence its effectiveness. For instance, studies have highlighted the importance of received support, perceived support, and the provider of support in determining its impact on athletes' psychological well-being (Katagami & Tsuchiya, 2016). Additionally, the satisfaction levels of social support have been associated with reduced stress perceptions and depression in athletic training students (Deegan & Dunne, 2022). Furthermore, social support has been found to mediate the physical and psychological effects of athletic injuries, facilitating the recovery process (Covassin et al., 2014; Yang et al., 2014). It has also been identified as a predictor of athletes' achievement motivation, emphasizing its role in enhancing performance (Pambudi, 2022). Additionally, social support has been linked to improving athletes' self-esteem, self-regulation, and psychological skill use, contributing to their overall well-being (Portela-Pino et al., 2024; Trotter et al., 2021; Wibowo, 2024).

Recent research has emphasized the importance of social support from different sources, including coaches, teammates, and family members, in fostering resilience and coping abilities among athletes. Katagami and Tsuchiya (2016) demonstrated that perceived social support positively correlates with athletes' psychological well-being and overall satisfaction with their sports experience. Similarly, a study by Williams et al. (2020) highlighted the role of social support in promoting athletes' resilience and coping abilities in the face of stressors commonly encountered in competitive sports environments.

Moreover, research has elucidated the mechanisms through which social support influences athlete well-being. Cutrona and Russell (1990) introduced the concept of social support satisfaction, emphasizing the importance of individuals' perceptions of the adequacy and availability of support in determining its impact on well-being outcomes. Additionally, studies by Delfin et al. (2024) and Thompson et al. (2019) have supported the stress-buffering hypothesis, suggesting that social support serves as a protective factor against the detrimental effects of stress on athletes' mental health.

3. Methodology

Study design, sampling and procedure

Young athletes are at a critical developmental stage where physical, psychological, and social changes occur rapidly. As highlighted by Williams et al. (2020), early experiences in sports, including the quality of coaching and support systems, can determine an athlete's future in sports. Identifying and addressing issues during the early stages of an athlete's career can prevent burnout and dropout, ensuring that they have a sustainable and positive relationship with sports. Researchers used a cross-sectional research design to recruit a convenience sample of 298 SUKMA athletes from Negeri Sembilan. These SUKMA athletes were invited to complete a voluntary and anonymous online questionnaire that included demographic items and validated and reliable scales measuring psychological well-being and social support. All respondents presented voluntary informed

consent electronically before disclosing any information used for study purposes. Correlational research was used in the present study to investigate the link between social support and psychological well-being. This research design was chosen to be consistent with the present research's main objective, which is to examine the relationship between social support and psychological well-being among Negeri Sembilan SUKMA athletes.

Survey instrument

The survey comprised questionnaires requested for the respondents' demographic, social support, and psychological well-being information. The survey instrument's first few questions measured demographic factors such as gender, age, race, the highest level of education, type of sports, the highest level of competition, and frequency of involvement at the National level. The Multidimensional Scale of Perceived Social Support (MSPSS) (Zimet et al., 1988) was utilized to measure the respondents' level of social support. The scale items were ranked from 0 to 7, consisting of very strongly disagree to very strongly agree. The 18-item Psychological Well-being Scale (Ryff & Keyes, 1995; Ryff et al., 2010), consists of the following dimensions namely Autonomy, Environmental Mastery, Personal Growth, Positive Relations with Others, Purpose in Life, and Self-Acceptance subscales are used by the researchers to measure the psychological well-being of the athletes. The higher scores mean the higher levels of psychological well-being of the respondents.

Data analyses

All analyses were performed using IBM's Statistical Package for the Social Sciences (SPSS) version 25 (IBM Corp.). Descriptive statistics were calculated to describe the respondent characteristics and the study variables of interest. To investigate the relationships between social support and psychological well-being variables, Spearman's rho correlations were calculated. An alpha level of 0.05 was set a priori to indicate statistical significance.

4. Results

A compilation of 298 SUKMA athletes from Negeri Sembilan has been gathered. Male athletes were the majority (n=177, 59 percent); female athletes comprised just 41 percent (n=121). SUKMA athletes are 16.67 years old on average (SD=1.92), which corresponds to the mean age of the participants. Furthermore, it corresponds to the secondary school level of education held by 69 percent of the sample (n=206). 58% (n=172) of the athletes identified as Malay, followed by 19% (n=58) as Chinese, 21% (n=62) as Indian, and 2% (n=6) as Others. Individual sports were participated in by 56% (n=168) as opposed to team sports by 44% (n=130). A greater proportion of them (n=213, 71 percent) have participated in national competitions as opposed to international competitions (n=85, 29 percent).

Table 1: Demographic profile of the athletes (n=298)

		Frequency (n)	Percentage (%)
Gender	Male	177	59.00
	Female	121	41.00
Age in years	Mean (SD)	16.67 (1.92)	
Race	Malay	172	58.00
	Chinese	58	19.00
	Indian	62	21.00
	Others	6	2.00
Highest Level of Education	Secondary school	206	69.00
	SPM	29	10.00
	STPM	5	2.00
	Diploma	41	14.00
	Bachelor	16	5.00
Type of Sports	Individual	168	56.00
	Team	130	44.00
	National	213	71.00

Highest Level of Competition	International	85	29.00
Frequency of involvement at the national level	No involvement	25	12.00
	1	51	24.00
	2	34	16.00
	3	25	12.00
	4	18	8.00
	5	27	13.00
	More than 5	33	14.00
Frequency of involvement at the	No involvement	4	5.00
	1	17	20.00
	2	19	22.00
	3	15	18.00
	4	12	14.00
	5	2	2.00
	More than 5	16	21.00

The data collection process of this study aimed to address the following research objectives: to examine the psychological well-being factors of Negeri Sembilan SUKMA athletes; to investigate the social support factors among Negeri Sembilan SUKMA athletes; and to examine the relationship between social support and psychological well-being among Negeri Sembilan SUKMA athletes. The initial objective is delineated in Table 1, which presents the three subfactors of social support: support from significant others, and support from family and friends. The findings from the factors reported indicate that a substantial proportion of the athletes consider family support (mean=5.34, SD=1.52) to be the primary source of social support. This is followed by significant others (mean=5.24, SD=1.59) and friends (mean=5.14, SD=1.59).

Table 2: The social support factors among Negeri Sembilan SUKMA athletes.

Social Support	**Mean**	SD
Significant Others	5.24	1.59
Family Support	5.34	1.52
Friends Support	5.14	1.55
Overall Social Support	5.24	1.43

Personal growth accounted for the greatest degree of psychological well-being among the athletes (mean=15.54, SD=3.05), as seen in Table 3 for the second objective. Subsequently, self-acceptance stands at a mean of 15.00 (SD=2.56), followed by environmental mastery at 14.25 (SD=2.53), autonomy at 14.17 (SD=2.30), positive interpersonal relationships at 12.15 (SD=2.91), and a sense of purpose in life at 12.12 (SD=2.92).

Table 3: The psychological well-being factors among Negeri Sembilan SUKMA athletes.

Psychological Well-being	**Mean**	**SD**
Autonomy	14.17	2.30
Environmental Mastery	14.25	2.53
Personal Growth	15.54	3.05
Positive Relations with Others	12.15	2.91
Purpose in Life	12.12	2.92
Self-Acceptance	15.00	2.56

Table 4 reported the relationship between social support factors and psychological well-being factors among Negeri Sembilan SUKMA athletes. Is reported the significant relationship between significant others toward environmental master ($r=0.23$, $p<0.001$), personal growth ($r=0.19$, $p=0.001$), positive relations with others ($r=0.12$, $p=0.041$) and self-acceptance ($r=0.21$, $p<0.001$).

There is a significant relationship between family support and autonomy (r=0.15, p=0.008), environmental mastery (r=0.30, p<0.001), personal growth (r=0.23, p<0.001), and self-acceptance (r=0.28, p<0.001).
There is a significance relationship between friends support and autonomy (r=0.14, p=0.017), environmental mastery (r=0.27, p<0.001), personal growth (r=0.20, p<0.001), and self-acceptance (r=0.22, p<0.001).

There is a significant relationship between overall social support and autonomy (r=0.15, p=0.011), environmental mastery (r=0.29, p<0.001), personal growth (r=0.23, p<0.001), self-acceptance (r=0.26, p<0.001).

Table 4: Relationship between Social Support and Psychological Well-being among Negeri Sembilan SUKMA athletes

		Autonomy	Environmental Mastery	Personal Growth	Positive Relations with Others	Purpose in Life	Self-Acceptance
Significant Others	Spearman's rho	0.11	0.23**	0.19**	0.12**	0.02	0.21**
	p-value	0.066	<.001	0.001	0.041	0.781	<.001
Family Support	Spearman's rho	0.15**	0.30**	0.23**	0.07	-0.01	0.28**
	p-value	0.008	<.001	<.001	0.234	0.920	<.001
Friends Support	Spearman's rho	0.14**	0.27**	0.20**	0.04	-0.02	0.22**
	p-value	0.017	<.001	<.001	0.447	0.678	<.001
Overall Social support	Spearman's rho	0.15**	0.29**	0.23**	0.09	-0.00	0.26**
	p-value	0.011	<.001	<.001	0.108	0.958	<.001

Discussion

The present study offers a comprehensive exploration of the social support dynamics, psychological well-being, and the interrelationship between these two facets among Negeri Sembilan SUKMA athletes. This investigation is pivotal, considering the growing emphasis on the holistic development of athletes, incorporating both physical and psychological dimensions. Our findings, which highlight the critical role of social support and its significant association with various psychological well-being aspects, align with and extend the current literature on adolescent and young athletes.

Our analysis reveals a robust support network for athletes, with family emerging as the primary source, closely followed by significant others and friends, highlighting the multidimensional support system that adolescent and young athletes rely on to navigate the competitive sports landscape. This finding is supported by literature indicating the crucial role of social support in enhancing athletic well-being by moderating stress effects, improving health, and indirectly impacting performance through strategic and motivational advice (Clement & Shannon, 2011; Côté et al., 1999; Smith et al., 1990). The indispensable role of family, as emphasized by Bloom (1985), in the developmental stages of athletes, underscores the broader necessity for a diverse social support network, as corroborated by studies demonstrating the significant impact of coaches, parents, teammates, and significant others on athletes' well-being, satisfaction, and psychological readiness to return to sport after injuries (Forsdyke et al., 2022; Wylleman & Lavallee, 2004). Furthermore, the mediation of social support in both physical and psychological recovery post-injury, alongside its contribution to emotional well-being during challenging times, underscores its importance across the rehabilitation process and overall athlete satisfaction (Burns et al., 2021; Covassin et al., 2014; Yang et al., 2014). Fostering a culture of social support within the athletic community is not only essential for physical recovery but also crucial in promoting emotional well-being and enhancing performance, thereby emphasizing the multifaceted impact of social support on athletes' lives.

The demographic composition of our cohort, primarily adolescent and young athletes, underscores the critical need for a nuanced understanding of their social support and psychological well-being requirements. Adolescence and young adulthood represent pivotal stages for psychological development, where individuals are highly receptive to external influences, including social support, which significantly contributes to their well-being (Steinberg & Morris, 2001). Research supports the notion that social support from teammates, coaches, and significant others not only positively impacts psychological well-being but also helps mitigate stress, anxiety, and negative social interactions, thereby improving mental health outcomes (DeFreese & Smith, 2014; Graupensperger et al., 2020). Furthermore, the quality and perception of social support are linked to enhanced performance, mental toughness, resilience, and life satisfaction, highlighting its importance in the holistic development of young athletes (Cho et al., 2020; Katagami & Tsuchiya, 2016; Yıldırım & Green, 2023). This finding aligns with Fraser-Thomas, et al. (2005), emphasizing the role of social support in fostering positive development and addressing the negative impacts of potential disruptions in athletic participation, such as those experienced during the COVID-19 pandemic (Collins et al., 2022). However, the presence of negative social interactions, authoritarian coaching styles, and adverse childhood experiences can adversely affect athletes' mental health and well-being, necessitating the cultivation of positive social environments and supportive relationships within the athletic community (DeFreese & Smith, 2014; Hagerty & Felizzi, 2023). In conclusion, social support emerges as a cornerstone for the psychological, emotional, and physical well-being of adolescent and young athletes, indicating that fostering robust support networks is crucial for their overall development and success in the sporting arena.

The assessment of psychological well-being among Negeri Sembilan SUKMA athletes, particularly highlighting personal growth and self-acceptance, resonates deeply with Ryff's dimensions of psychological well-being, emphasizing the significance of these factors in fostering overall psychological health. This emphasis on personal growth and self-acceptance may reflect the intrinsic motivation and resilience that are characteristic of athletes achieving competitive success. Furthermore, the robust impact of social support from coaches, parents, peers, and healthcare providers on athletes' psychological well-being and perceptions of health underscores the critical role social support plays across various sports settings (Chan et al., 2011; Clement & Shannon, 2011; DeFreese & Smith, 2014). Notably, the satisfaction derived from specific sources of support, such as athletic trainers, significantly contributes to athletes' overall well-being, underlining the multifaceted nature of social support in mediating both the physical and psychological aftermath of athletic injuries and enhancing rehabilitation processes (Covassin et al., 2014; Yang et al., 2014). Additionally, the importance of parental and peer support in youth sports contexts, influencing factors such as motivation, participation, and dropout rates, further exemplifies the broad spectrum of social support's impact on athletes' lives (O'Brien, 2021; Sheridan et al., 2014). The interdependent relationship between social support and psychological well-being is highlighted through the correlations observed between various dimensions of social support and well-being facets, affirming the theory proposed by Cutrona and Russell (1990) that social support significantly enhances psychological well-being by providing emotional, informational, and instrumental resources. This comprehensive view not only reinforces the pivotal role of social support in athletes' performance, motivation, and mental well-being but also emphasizes its capacity to mitigate negative stress-related consequences, thereby promoting health and facilitating a successful athletic career.

Delving into the interplay between social support and psychological well-being, our findings highlight the significant role of social support, particularly from family, in enhancing various dimensions of psychological well-being among athletes. This pivotal role of family, supported by research indicating its foundational contribution to athletes' psychological resilience and well-being, is further complemented by the positive impact of support from teammates, significant others, and friends on mental health and overall well-being (Graupensperger et al., 2020). However, the adverse effects of negative social interactions on psychological well-being cannot be overlooked, underscoring the complex dynamics between social support, negative interactions, and athletes' mental health (DeFreese & Smith, 2014). The satisfaction of basic psychological needs, such as competence and relatedness, plays a crucial mediating role in this relationship, highlighting the importance of a supportive social environment in fulfilling these needs and thereby contributing to well-being (Felton & Jowett, 2012). Additionally, the distinction between received and perceived support emerges as a critical factor in shaping athletes' psychological landscape, with coping skills and secure relationships among teammates further influencing well-being and performance (Katagami & Tsuchiya, 2016; Oliveira et al., 2022). Our study underscores the indispensable role of a comprehensive support system—encompassing family,

significant others, friends, and coaches—in the holistic development of athletes, potentially enhancing their performance and resilience in competitive sports. This multifaceted support system, essential for navigating the pressures of competitive sports, aligns with Bronfenbrenner's ecological systems theory, which emphasizes the influence of multiple environmental systems on individual development (Bronfenbrenner, 1979). In conclusion, the critical contribution of social support to athletes' psychological well-being highlights its role as a buffer against stress and an enhancer of mental health, underscoring the necessity for coaches to adopt transformational leadership styles that meet athletes' basic psychological needs, thus promoting their well-being and performance. Future research should continue to explore these dynamics, considering the evolving challenges faced by athletes in a rapidly changing sports landscape, to develop effective interventions to support athletes' mental health and holistic development.

5. Conclusion

The present study provides a comprehensive examination of the social support dynamics and psychological well-being among Negeri Sembilan SUKMA athletes, shedding light on their interconnectedness. This investigation is crucial, particularly as there is a growing recognition of the importance of addressing both physical and psychological dimensions for the holistic development of athletes.

Our findings highlight the pivotal role of social support, with family emerging as the primary source, closely followed by significant others and friends. This underscores the multidimensional support system that adolescent and young athletes rely on to navigate the competitive sports landscape. Social support has been shown to moderate stress effects, improve health, and indirectly impact performance through strategic and motivational advice. The study aligns with existing literature emphasizing the significance of social support from various sources in fostering positive development and addressing the negative impacts of disruptions in athletic participation.

Further exploration into the nuanced dynamics of social support within athletic environments is warranted. Longitudinal studies could provide insights into how social support evolves and its impact on athletes' psychological well-being. Additionally, qualitative research methods could offer a deeper understanding of athletes' experiences with social support. Interventions or strategies to enhance social support networks within athletic settings should also be explored to promote athletes' mental health and performance.

Future research should continue to investigate the evolving challenges faced by athletes in a rapidly changing sports landscape. Understanding these dynamics is essential for developing effective interventions to support athletes' mental health and holistic development, ultimately fostering their well-being and success in the sporting arena.

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The Influence of Sustainability Reporting in Enhancing Firm Value

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Abstract: There is a growing concern about sustainability reporting as stakeholders increasingly recognize the importance of sustainable and ethical business practices. Investors, consumers, and regulatory bodies are demanding greater transparency and accountability from firms regarding their sustainability and ethical corporate behavior. Accordingly, the objective of this paper is to examine the significant influence that sustainability reporting can exert on a firm's financial performance and overall worth. By employing three predominant theoretical frameworks: stakeholder theory, legitimacy theory, and signaling theory. The findings mostly show that sustainability reporting increases firm value. Reputational capital, investor confidence, and long-term financial performance improve for firms that report their sustainability performance. However, sustainability reporting affects business value through complicated mechanisms that include regulatory contexts, industry characteristics, and disclosure quality. Although positive associations were found, sustainability reporting's effects on firm value need further studies. Research should uncover the mediating variables and contextual elements that promote this association. Researchers can provide more detailed insights into how sustainability reporting might strategically boost firm value, improving corporate sustainability and financial performance. The findings of this study would provide an important contribution to firms and stakeholders. Firms that prioritize sustainability contribute to the well-being of communities and the environment. Further, with greater transparency, the public can hold companies accountable for their actions, and support firms that demonstrate genuine commitment to sustainability.

Keywords: *Firm value, Legitimacy theory, Signaling theory, Stakeholder theory, Sustainability Reporting*

1. Introduction

In today's rapidly evolving business landscape, sustainability has become an essential component for long-term success and competitive advantage (Buallay, 2020; Sołoducho-Pelc & Sulich, 2020). Companies are increasingly recognising the importance of incorporating environmental, social, and governance (ESG) factors into their strategic blueprint. Sustainability reporting, which involves disclosing a firm's ESG practices and impacts, has become a key tool for communicating these efforts to stakeholders (Mohammad & Wasiuzzaman, 2021).

The adoption of sustainability reporting provides numerous benefits, including bolstering corporate reputation, enhancing risk management, and increasing access to financing (Petrescu et al, 2020). Investors, consumers, and regulatory agencies are increasingly requesting enhanced transparency and accountability, compelling corporations to embrace more sustainable practices (Christensen et al., 2021).

A comprehensive survey conducted by KPMG in 2022 examined global sustainability reporting trends, encompassing 5,800 companies across 58 countries, territories, and jurisdictions. The survey reveals that regulators and non-profit standard-setters worldwide have recently intensified efforts around non-financial disclosure (KPMG, 2022). Notably, in April 2021, the European Commission adopted the Corporate Sustainability Reporting Directive (CSRD) proposal, mandating large companies to report on social and environmental impacts starting in 2024. According to KPMG's 2022 report, 96% of G250 companies now disclose information on sustainability or ESG matters.

This high level of disclosure demonstrates a strong commitment to transparency and accountability among the top global firms, potentially driving better sustainability practices. Furthermore, such widespread reporting can enhance investor confidence, attract sustainability-focused investments, and encourage other companies to adopt similar practices. This would in turn promote greater positive impacts on environmental and social issues globally.

Additionally, the Asia-Pacific region has experienced the most significant increase in sustainability reporting, with the proportion of companies participating rising from approximately 50 percent to nearly 90 percent (Statista, 2024). This remarkable growth highlights the region's commitment to transparency and sustainable business practices.

While sustainability disclosure is becoming more common, there are still uncertainties regarding its actual impact on firm value. Does comprehensive sustainability reporting genuinely enhance long-term financial performance, or are firms primarily engaging in these practices to meet regulatory requirements and satisfy stakeholders?

Sustainability reporting involves sharing non-financial information about a firm's ESG performance. This allows stakeholders to understand the firm's sustainability initiatives and how they align with global sustainability objectives (Abeysekera, 2022). This form of reporting extends beyond conventional financial statements to encompass information on a firm's environmental management, social initiatives, and adherence to governance norms (Stocker, et al., 2020). A corporation can showcase its dedication to sustainable development and ethical business practices by providing a thorough overview of its operations.

Sustainability reporting has become a focal point in recent years, as firms are increasingly acknowledging the significance of incorporating ESG concerns into their operational strategies (Uyar, 2016). The acknowledgment of sustainable business practices is influenced by a combination of legislative demands, stakeholder expectations, and the strategic advantages they offer. Investors, consumers, and regulatory agencies are increasingly requesting corporations to provide more openness and responsibility in disclosing their sustainability practices (Oncioiu, 2020). This expectation is grounded in the recognition that sustainability is not just a moral obligation but also a crucial element in guaranteeing the long-term profitability of a business.

The increasing focus on sustainability reporting arises from the accumulating evidence that sustainable business practices have a beneficial effect on the value of a firm and its long-term financial success (Mohammad & Wasiuzzaman, 2021). Companies that actively and strategically manage their sustainability risks and opportunities generally achieve superior financial performance, attract greater investment, and benefit from improved reputations (Nguyen, 2020; Aksan & Gantyowati, 2020). Studies suggest that companies that have good sustainability policies tend to have reduced capital expenses, enhanced operational efficiencies, and increased customer loyalty (Loh & Tan, 2020). These benefits result in a competitive advantage in the market, emphasizing the essential role of sustainability reporting in promoting firm success.

According to Nguyen (2020), while sustainability reporting has gained importance in recent decades, the accuracy and comprehensiveness of research on the relationship between sustainability reporting and market value are still questionable. In other words, the specific mechanisms through which sustainability reporting influences financial performance and firm value are not yet completely understood. Buallay (2020) highlights the lack of cross-sectoral research between sustainability reporting and firm performance. Accordingly, the objective of this paper is to examine the significant influence that sustainability reporting can exert on a firm's financial performance and overall worth.

Analyzing sustainability reporting through a theoretical framework involves understanding the complex relationship between sustainability reporting and its impact on firm value. One major issue is the lack of a universally accepted model, leading to inconsistencies in how sustainability metrics are measured and interpreted. Additionally, the complexity of integrating sustainability into traditional financial frameworks can obscure the true impact of sustainability practices on firm performance. How can existing theories be adapted to better capture the multidimensional nature of sustainability to provide a more comprehensive understanding? This paper investigates the theoretical foundation to understand this relationship.

This paper is organized as follows. The next section reviews the literature on sustainability reporting and its influence on firm value. The third section describes the various models available for the analysis of sustainability reporting and firm value. Following that, the theoretical foundation for the sustainability reporting framework is also presented. Finally, discussions and conclusions are elaborated in the final section. Recommendations are also made on the way forward for sustainability reporting study.

2. Literature Review

The second section reviews existing literature on sustainability reporting. It reviews previous studies, research findings, and conceptual models related to the topic. This section helps establish the knowledge base, identify gaps in the literature, and provide a foundation for proposing a new model or approach.

Mechanisms through Which Sustainability Reporting Influences Firm Value: Studies on sustainability reporting and firm value have continuously shown a favorable correlation between the two, emphasizing various important processes by which sustainability reporting can improve a firm's financial performance and overall worth (Bachoo et al., 2022; Van Linh et al., 2022). The increasing number of studies highlights the crucial significance of sustainability reporting in the current business landscape.

Enhanced corporate reputation is one of the main ways in which sustainability reporting increases the value of a firm. Arora and Gahangopadhyay (1995) assert that one of the motivations for companies to comply with legal requirements is to build and uphold a positive reputation. These laws mandate that companies disclose information to monitor their performance and mitigate information asymmetry (Kim and Kim, 2017).

Companies that openly reveal their sustainability activities are frequently regarded more positively by consumers, investors, and other interested parties (Flammer, 2013). Having a positive perception can result in enhanced consumer loyalty, better revenue, and a more secure investment base (Peloza & Shang, 2011; Bhattacharya et al., 2009). An organization's strong reputation for sustainability can also appeal to highly skilled individuals, as employees are more inclined to seek employment with companies that exhibit a dedication to social and environmental responsibility (Uusi-Rauva & Nurkka, 2010; Staniškienė & Stankevičiūtė, 2018).

Staniškienė & Stankevičiūtė, (2018) conducted a case study for A Lithuanian organisation provided. The study emphasizes the significance of including employees' viewpoints in assessing social sustainability. It emphasizes the crucial importance of employees in assessing an organization's social sustainability and argues for their involvement as they are seen as the organization's main asset. The proposed framework prioritizes six fundamental aspects: employee involvement, employee collaboration, equal chances, employee growth, health and safety, and external alliances. These findings indicate that the viewpoints of employees are crucial in corporate social responsibility (CSR) reporting, as they contribute to a thorough and precise evaluation of social sustainability initiatives.

Derived from a subset of 59 American firms who released their initial independent sustainability report within the time frame of 2001 to 2007, the study conducted by Brown et al. (2009) suggests that, on average, there were no significant alterations in reputational scores. Nevertheless, their research on cross-sectional analysis demonstrates that firms operating in socially vulnerable sectors encountered a decrease in their rankings. In addition, sustainability reporting enhances risk management by aiding organizations in identifying and mitigating potential hazards related to environmental and social factors (Shad et al., 2019). These risks encompass potential penalties imposed by regulatory bodies, liabilities related to the environment, and conflicts arising from social factors that have the potential to disrupt the smooth functioning of commercial operations (Fitriana & Wardhani, 2020).

Hogan and Lodhia (2011) propose that the utilization of reputation risk management helps to explain the underlying incentives for engaging in sustainability reporting. In addition, Hogan and Lodhia (2011) further indicate that the proposed requirements have the potential to decrease the number of sustainability reports while improving their overall quality. In addition, firms can proactively detect new hazards and take advantage of possibilities for continuous improvement and innovation by implementing comprehensive risk management frameworks that are informed by sustainability data. Finally, it can lead to enhanced financial performance and long-term sustainability (Ardiana, 2019).

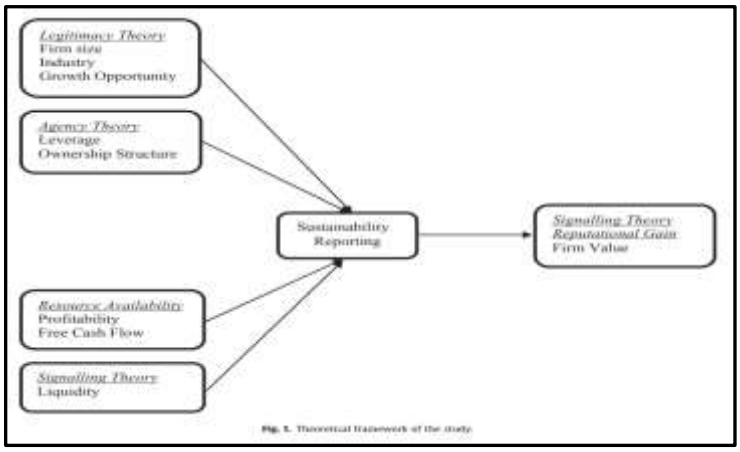
Studies also indicate that companies that participate in sustainability reporting generally have enhanced access to funding (Asogwa et al., 2021; Bellringer et al., 2011). The study of Nwobu (2015) also discovered a positive correlation between sustainability reporting and shareholders' funds. Investors are progressively employing

ESG factors to steer their investment choices, showing a preference for companies that exhibit robust sustainability performance (Berthelot et al., 2012; Martínez-Ferrero & García-Sánchez, 2017). Investors are generally drawn to sustainable firms due to their perceived resilience and advantageous positioning for future growth, which enhances their attractiveness (Permatasari & Narsa, 2022). This can result in a reduction in the cost of capital and an increase in investment inflows, further improving the value of the firm (Shad et al., 2020; Buallay, 2020; Carvalho & Murcia, 2016).

Sustainability reporting also leads to operational efficiencies (Arena & Azzone, 2012). Companies can find opportunities to decrease waste, save resources, and optimize supply chains by prioritizing sustainable practices (Osazefua, 2019). These enhancements not only decrease expenses but also increase the overall effectiveness and durability of operations. Research has indicated that organizations that implement strong sustainability practices tend to have greater profitability and operational performance in comparison to companies that do not prioritize sustainability (Egan, 2019; Kwon & Lee, 2019; Nigri & Del Baldo, 2018).
Moreover, the practice of sustainability reporting has the potential to foster innovation and create fresh avenues for market expansion (Moore & Manring, 2009). Companies that place a high value on sustainability are frequently leading the way in creating innovative products and services that cater to the increasing need for environmentally and socially conscious options (Van Der Waal, et al., 2021). This has the potential to create additional sources of income and stimulate expansion in developing markets that prioritize sustainability.

Models for Analyzing Sustainability Reporting and Firm Value

Figure 1: Model for explaining factors affecting sustainability reporting and its relationship to firm value

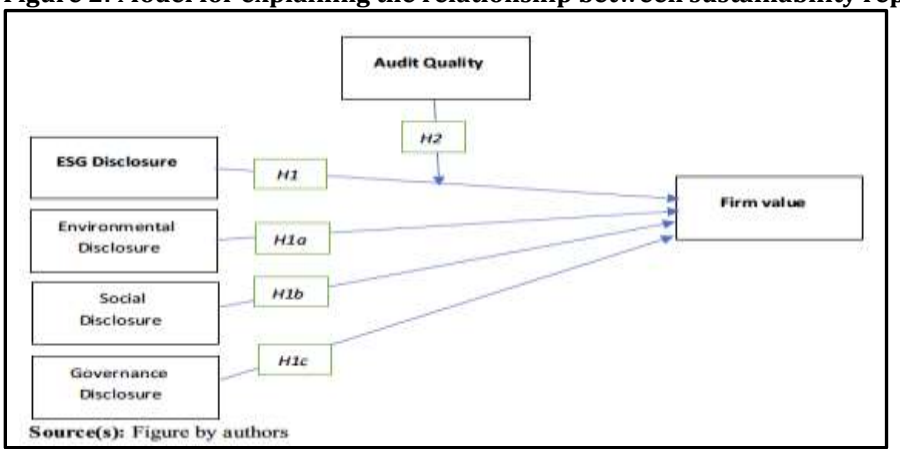


Source: Kuzey and Uyar (2017)

Kuzey and Uyar (2017) examine the factors that influence sustainability reporting and its effect on the firm value in the emerging market of Turkey. The study incorporates many theoretical frameworks, including legitimacy theory, agency theory, resource availability, and signaling theory, to investigate the connections between firm-specific variables, financial resources, and ownership structure in sustainability reporting. The study delves deeper into the impact of sustainability reporting on the firm value, offering valuable information on how transparent sustainability practices can improve a firm's market performance and the trust of its stakeholders. This method emphasizes the various factors and outcomes of sustainability reporting in a developing market.

Through the examination of a representative sample of 297 publicly traded firms on the Borsa Istanbul, Kuzey and Uyar's (2017) findings demonstrated that sustainability reporting has a considerable impact on the firm value. Based on the results, it appears that investors and other stakeholders consider sustainability disclosures to be significant and indicative of a firm's long-term prospects. As a result, they include these reports in their decision-making processes. Hence, it is clear that transparent sustainability policies are extremely important for increasing the market valuation of a firm and boosting investor confidence.

Figure 2: Model for explaining the relationship between sustainability reporting and firm value

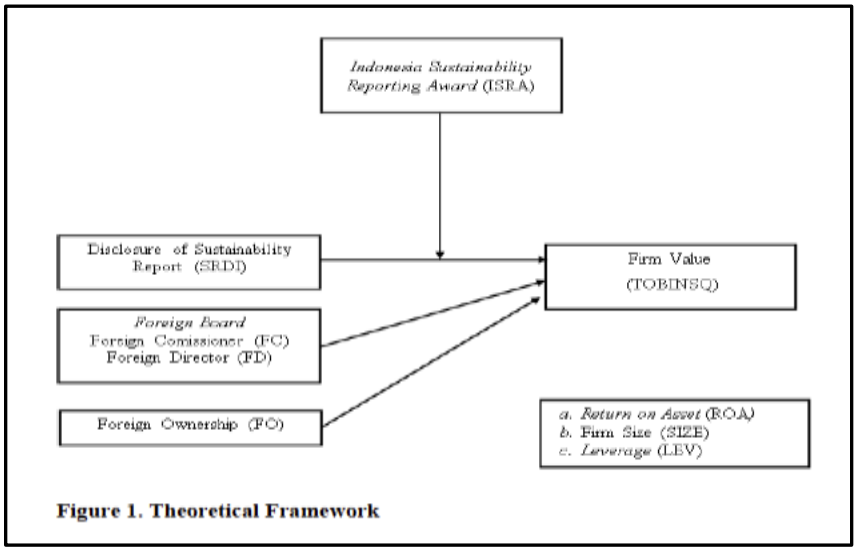


Source: El-Deeb et al. (2023)

El-Deeb et al. (2023) examine the ESG disclosure and firm value with the moderating impact of audit quality. The results suggest that ESG variables have a significantly positive impact on firm value. This highlights the increasing acknowledgment that organizations dedicated to sustainable practices are not only satisfying their social and environmental obligations but also improving their financial success. Companies that actively oversee and disclose information about ESG factors are more likely to draw in additional investors. This is because such activities are increasingly regarded as signs of enduring stability and effective risk control. As a result, organizations that have strong ESG initiatives often have higher market valuations, increased investor trust, and better access to finance.

Moreover, the study highlights the critical role of audit quality as a moderating variable in this relationship. High-quality audits improve the dependability and precision of ESG disclosures, guaranteeing that the information supplied is reliable and thorough. This added layer of assurance enhances investor trust in the firm's disclosed ESG practices, hence strengthening the favorable influence on the firm's worth. Companies can enhance the credibility of their ESG initiatives by adhering to strict audit standards. This allows them to optimize the advantages of sustainability reporting and gain a competitive edge in the market.

Figure 3: Model for explaining the relationship between sustainability reporting and governance towards firm value



Source: Aksan and Gantyowati (2020)

Utilizing stakeholder theory, Aksan and Gantyowati (2020) examine the impact of sustainability report disclosures, the presence of foreign board members, and foreign ownership on firm value. Stakeholder theory posits that firms have a responsibility to fulfill and safeguard the interests of stakeholders in all their commercial endeavors. Stakeholders greatly rely on non-financial information, such as sustainability reports, for making informed decisions. Revealing these reports improves clarity, responsibility, and the trust of those involved (Li et al., 2018).

The study employs the Indonesia Sustainability Reporting Award (ISRA) as a moderating variable to assess the influence of sustainability report disclosures on firm value. Their research suggests that the presence of foreign board members and foreign ownership typically does not have a significant impact on the overall firm value. However, further examination indicates that foreign commissioners in the service and finance industries have a beneficial effect on firm value, and foreign ownership in State-Owned Enterprises (SOEs) also contributes positively to firm value.

3. Theoretical Foundations Used To Examine Sustainability Reporting and Firm Value

According to Nguyen (2020), stakeholder theory and legitimacy theory are the two primary frameworks addressing the importance of sustainability reporting for firm value. Stakeholder theory asserts that the actions of a firm affect the advantages experienced by both the firm itself and the individuals or groups with a vested interest in the firm (Halid et al., 2023). Hence, it is imperative for a firm to consider the interests and requirements of all stakeholders while making choices and taking action (Fuadah et al., 2022). By attending to these interests, companies can enhance their ability to estimate risks, thereby increasing value for both investors and stakeholders.

Sustainability reporting requires a firm to publish information about its economic, environmental, social, and governance aspects, as well as the risks associated with them and the measures to manage those risks (Ballou et al., 2006). This form of reporting provides substantial advantages to both a firm's internal processes and its external stakeholders (Kim et al., 2021). Incorporating social responsibility measures can help a board of directors gain enduring support from stakeholders, thus enhancing the long-term worth of the organization (Rabaya & Saleh, 2022).

Legitimacy theory, on the other hand, posits that corporations possess inherent obligations and implicit responsibilities to society. Companies are frequently involved in sustainability reporting to demonstrate their compliance with society's expectations and adherence to social norms. Cho and Patten (2007) argue that sustainability disclosure functions as a mechanism to validate a firm's actions. Companies engage in this process by selecting crucial indicators, whether from statutory requirements or established standards, to assess their environmental and social performance. By doing this, individuals can efficiently convey their adherence status to society (Deegan & Blomquist, 2006).

Legitimacy is achieved when an organization meets or exceeds existing social values and norms (Long & Driscoll, 2008). Through the creation of clear and comprehensive sustainability reports, companies may showcase their dedication to corporate social responsibility and adherence to ethical business principles (Ali et al., 2021). This level of transparency enhances stakeholders' perceptions of the firm's social responsibility initiatives and overall transparency. Positive perceptions and greater support from stakeholders can greatly enhance a firm's worth.

According to this theory, firms make an effort to synchronize their operations with public norms and expectations to obtain their social license to operate. By actively participating in and transparently reporting on sustainability initiatives, firms exhibit their dedication to ethical conduct, social accountability, and environmental stewardship. This alignment with societal values not only helps in mitigating potential criticisms and regulatory pressures but also enhances the firm’s reputation and credibility among stakeholders. Sustainability practices, therefore, serve as a strategic response to societal demands and expectations. This would allow firms to reinforce their legitimacy, foster trust, and ultimately ensure their long-term viability and success.

Some studies look into the relationship between sustainability reports and firm value from the perspective of signaling theory. Based on 9,077 firm-year observations from 2011 to 2022, Friske et al. (2023) investigate the relationship between voluntary sustainability reporting and firm value, drawing hypotheses from signaling theory. The study finds that sustainability reporting is initially negatively related to Tobin's q. However, over time, this relationship becomes increasingly positive. Friske et al. (2023) conclude that while sustainability reporting may initially serve as a costly signal, it ultimately enhances firm value. This improvement occurs when firms become more proficient at communicating their sustainability initiatives and as investors improve their ability to assess these reports. Signaling theory suggests that the information shared by corporations can sufficiently enlighten investors and guide their investment decisions (Rokhayati et al., 2019; Brown-Liburd et al., 2018; Chen et al., 2021).

Signaling theory offers a valuable framework for assessing the correlation between sustainability reporting and firm value. Signaling theory suggests that firms utilize sustainability reports to communicate their dedication to sustainable practices and corporate social responsibility to stakeholders (Friske et al., 2023). First, the expenses related to creating and distributing these reports may be more than the apparent advantages, resulting in a detrimental effect on metrics such as Tobin's q. Nevertheless, as companies refine their reporting processes and improve the quality and transparency of their disclosures, the market begins to acknowledge and reward these efforts. Over time, investors and other stakeholders gain confidence in the firm's long-term sustainability commitments, leading to an increased firm value (Rokhayati et al., 2019). Therefore, when sustainability reporting is properly conveyed, it serves as a strategic instrument that demonstrates a firm's commitment to ethical standards and its capacity for long-term prosperity, ultimately promoting a favorable influence on the firm's worth. Studies that use corporate governance variables like ownership structure and dividend payout normally employ the signaling theory (Dihardjo & Hersugondo, 2023).

Analyzing the theoretical framework presented in prior studies, it can be summarized that stakeholder theory is normally utilized when analyzing the motives behind sustainability reports. Firms disclose their ESG initiatives as a response to stakeholders' expectations, beyond that of the shareholders. While legitimacy theory provides a compelling explanation for the reasons firms engage in sustainability initiatives, positing that these actions are driven by a desire to legitimize their operations in the eyes of society.

Signaling theory, on the other hand, suggests that corporations who voluntarily reveal their social responsibility efforts strive to communicate to investors that they are adopting long-term initiatives connected to the economy, environment, and social aspects to get long-term benefits.

4. Discussion, Conclusion and Suggestions For Future Research

Overall, the connection between sustainability reporting and the value of a firm is dynamic and influenced by several theoretical perspectives, including stakeholder theory, legitimacy theory and signaling theory. Sustainability reporting has gained significance for firms aiming to improve transparency, accountability, and stakeholder confidence by publishing non-financial information regarding their sustainability practices.

In general, the incorporation of sustainability reporting into corporate operations is motivated by the necessity to fulfill stakeholder expectations for openness and responsibility, as well as the strategic advantages linked to signaling and credibility. Although there may be substantial upfront expenses associated with establishing comprehensive sustainability reporting, the long-term advantages, such as increased investor trust, improved risk control, and enhanced firm worth, highlight the significance of this approach. Both signaling and legitimacy theories offer useful insights into the reasons why companies participate in sustainability reporting and how it eventually enhances their market performance and long-term profitability.

The degree to which sustainability reporting affects the firm value can be affected by several different factors, including the quality of the reports, the environment in which the firm operates, and the particular sustainability concerns that are being addressed Buallay, 2020; Schreck & Raithel, 2018). Ultimately, even though sustainability reporting is widely regarded as an essential component of modern corporate governance, additional research is required to acquire a thorough understanding of the impact that it has on the value of a

firm. It is recommended that future studies concentrate on the development of standardized methods and procedures to evaluate the effectiveness of sustainability reporting and provide a more accurate understanding of the financial repercussions of this methodology. Consequently, this will make it possible for businesses and investors to acquire a more profound comprehension of the strategic significance of sustainability practices and the contribution that these practices make to the achievement of long-term commercial success.

Further investigation is needed to examine the dynamic relationship between sustainability reporting and firm value in different geographical regions to account for contextual differences. An analysis of the enduring effects of comprehensive sustainability disclosures on firm valuation would be beneficial, with special emphasis on the reactions of various stakeholders such as investors, customers, and regulators. Additionally, the incorporation of sophisticated analytical methodologies, such as machine learning and big data analytics, has the potential to improve the understanding of the important impacts of sustainability reporting. Additional research might also explore the influence of increasing rules and global standards on the quality and uniformity of sustainability reporting, and how this subsequently affects the value of companies. Finally, conducting comparative studies on firms with varying ownership structures, governance procedures, and market maturity levels would offer a more profound understanding of how sustainability reporting affects firm value and stakeholder perceptions.

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Impact of Self-Efficacy and Self-Regulated Learning on Satisfaction and Academic Performance in Online Learning

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Abstract: During the COVID-19 pandemic, universities widely adopted online and blended learning highlighting the need to investigate students' self-efficacy and self-regulation in such an environment. This study examines the impact of self-efficacy and self-regulated learning on students' satisfaction and academic performance in online learning contexts. Data were collected from 442 university students across various disciplines focusing on six dimensions of online learning self-efficacy and self-regulated learning. The findings reveal that both online learning self-efficacy and online self-regulated learning are at high levels for students in general, with no significant gender differences. Younger students, those in lower semesters and those with reliable internet connectivity exhibited higher levels of these attributes. Non-graduates demonstrated greater self-efficacy in social and academic interaction while management science social science and humanities students exhibited higher levels of online self-regulated learning. Further analysis shows that total online learning platforms used and online learning quality significantly predicted both self-efficacy and self-regulated learning. However, the total semesters using online learning and total online courses taken had no significant effect on these factors. Online self-regulated learning was strongly determined by self-efficacy. Self-efficacy in computer or internet, in the online learning environment, and in time management were significant predictors of online learning self-efficacy. In contrast, environment structuring, time management, goal setting and help-seeking were significant predictors in online self-regulated learning. Self-efficacy in time management and environment structuring were the highest contributing factors for online learning self-efficacy and online self-regulated learning respectively. However, only online self-regulated learning significantly influenced academic performance.

Keywords: *Online self-regulated learning, online learning self-efficacy, academic achievement, online learning satisfaction, online learning environment.*

1. Introduction

Self-efficacy and self-regulated learning have garnered significant attention in various research studies, with a substantial literature body dedicated to these areas. According to Bandura (1994), perceived self-efficacy is described as an individual believing in his or her capabilities to achieve a specific performance level, which influences things or their life circumstances. Such beliefs, according to Bandura (1994), will then shape the way of thinking people, their feeling, behavior and their motivation. It is a must for teachers to employ creative strategies when establishing effective learning environments that are useful for cognitive skill development, thereby motivating and also enhancing the cognitive self-efficacy of students (Bandura, 1994).

Zimmerman (2000) discovered the responsiveness of self-efficacy beliefs toward indefinite changes in the context of students' performance, that it interacts with self-regulated learning processes and mediates academic achievement. High self-efficacy levels are linked to an increased likelihood of task success with greater effort invested. Learner's self-efficacy beliefs, as Hodges (2008) suggests, may be influenced by learning mode changes, such as transitioning to sessions that are conducted online instead of physically. Researchers argue that self-efficacy plays a pivotal role in academic success within online learning's self-directed nature (Hodges, 2008), necessitating an exploration of its impact on online learning satisfaction along with academic performance.

The strategies for self-regulated learning involve measures and operations that are aimed at acquiring information or capabilities, characterized by learners' agency, purpose, and insight into instrumentality

(Zimmerman, 1990). From Chumbley et al. (2018), varying levels of self-regulation were identified in an online agriculture course, with environmental structuring and goal setting exhibiting the highest levels, while task strategies demonstrated the lowest. Stephen and Rockinson-Szapkiw (2021) established positive correlations of online learning self-efficacy, self-direction, and self-regulation, emphasizing the potential for successful online learning when these factors are present.

Based on Edisherashvili et al. (2022), education level is a factor that is critical in the study of self-regulated learning, with diverse learning approaches exhibited by learners of differing ages. Teachers play pivotal roles in children's self-regulated learning success, while instructional design is a driving factor for adult learners (Kellenberg et al., 2019). Demographic variables like the study semester, discipline, status of students, and connectivity of the internet must be put into consideration to understand how online learning self-efficacy and self-regulated learning are different through various groups.

The focus of past research was mainly on the technological aspect of self-efficacy about online learning, with limited exploration of its multi-dimensions (Alqurashi, 2016; Shen et al., 2013). Additionally, few studies have investigated the correlation between self-efficacy and self-regulated learning in an online learning context, particularly the post-COVID-19 phase. This study aimed to address these gaps by examining several three aspects of online learning self-efficacy (technology, learning, and interaction) along with their influence on the satisfaction towards online learning, and academic performance. Furthermore, exploring how the demographic variables impact online learning self-efficacy and self-regulated learning of students, as well as the correlations of experiences in online learning, and each dimension of self-efficacy and self-regulated learning. It is expected that the research outcomes will make a contribution to ongoing research on online learning, emphasizing how important self-efficacy and self-regulated learning are for continuous improvement involving online and blended learning activities. This study is essential since it examines the significance of online learning self-efficacy and online self-regulated learning in determining students' satisfaction and academic performance in online settings. This is an area that has become increasingly important in modern education.

Background of study: Self-efficacy and self-regulated learning' significances hold considerable importance for online learning settings, particularly during post- Covid-19 phase. As numerous universities have urged instructors to adopt online or blended learning approaches, addressing these factors becomes increasingly crucial.

Significance of study: These research results aim to offer valuable understanding for the future establishment of self-efficacy and self-regulated learning skills of students in learning virtually. Additionally, it is anticipated that the research will contribute to the understanding of enhancing the facilities and infrastructure that belong to universities in Malaysia, thereby improving the quality of learning delivery for both online and face-to-face deliveries of learning.

Research questions

The research questions below were formulated for the study:

- How do online learning experiences (total online courses taken, total semesters using online learning, online learning quality and total online learning platforms used) predict each online self-regulated learning and online learning self-efficacy?
- What online learning self-efficacy dimensions significantly predict overall online self-regulated learning?
- To what extent do online self-regulated learning and online learning self-efficacy predict online learning satisfaction?
- To what extent do online self-regulated learning and online learning self-efficacy predict academic performance?

2. Literature Review

The exploration of self-efficacy has been made by various research in online learning, with a predominant focus on its technological aspects (Shen et al., 2013; Alqurashi, 2016; Ithriah et al., 2020). Shen et al. (2013), the emphasis was made considering technology, learning, and social interaction as online learning's integral

features. Alqurashi (2016) highlighted the importance of learning, interaction, and collaborative skills in addition to computer and internet skills. This study focused on three key features that belong to self-efficacy in online learning. Online learning self-efficacy has five dimensions as outlined by Shen et al. (2013): completing courses, social interaction, handling tools, interaction with instructors, and collaborating with classmates. Ithriah et al. (2020) discovered a positive correlation between online learning self-efficacy and e-learning success, while Peechapol et al. (2018) identified various causes that influence online learning self-efficacy. Jan (2015) highlighted significant associations between academic self-efficacy, computer self-efficacy, and past online learning experiences. Ulfatun et al. (2021) and Santoso et al. (2022) discovered a strong positive correlation between online learning self-efficacy and self-regulated learning among 18-23-year-old students. Cho and Kim (2013) emphasized the significance of mastery goal orientation and instructor scaffolding for student self-regulation. Santoso et al. (2022) noted areas for improvement in students' confidence, help-seeking abilities, strategies for performing tasks, and allocation of time in online learning.

This study explored several 10 variables that affect the self-efficacy of students and self-regulated learning in online settings: gender, age group, semester of study, student status, discipline, internet connectivity, online learning experience, total courses taken, platforms used, and online learning quality. Shen et al. (2013) discovered gender differences among the various aspects of online learning self-efficacy, with female students generally exhibiting higher self-efficacy. Limiansi and Hadi (2022) reported variations based on gender, entry year, and discipline. Yavuzalp and Bahcivan (2020) found no significant gender or school-type differences. It was proposed by Shen et al. (2013) that students taking a higher number of online courses demonstrated higher self-efficacy. Liu et al. (2021) identified gender differences in self-regulated learning across three stages, while Mayda et al. (2020) observed gender differences but no variation across education departments. Nivenitha (2017) found no gender difference but noted age-related variations in self-regulated learning. Kamali and Bagheri-Nesami (2022) identified predictors of online self-regulated learning, including age, marital status, gender, the state of being a medical student, possession of another job, and acceptance of online learning. Zhao et al. (2014) highlighted male superiority in self-regulated learning dimensions among Chinese distance learners. Yot-Domínguez and Marcelo (2017) revealed that students continued using the Internet information search and communication instruments. This study contributes to exploring the disparities and correlations among demographic variables, self-efficacy, and self-regulated learning in online environments to existing literature, offering unique insights into this dynamic field.

Self-efficacy and self-regulated learning have both been identified as variables that are crucial in the prediction of students' learning satisfaction in online learning settings. (Aldhahi et al., 2022) found a positive correlation between high online learning satisfaction and online learning self-efficacy domains; time management, technology, and learning. Moreover, the conclusion made was online learning self-efficacy influences the satisfaction of students with online learning experience. Research by (Ithriah et al., 2020) investigated the impact of online learning self-efficacy on online learning success and a positive and significant influence on online learning usage was shown, but no significant correlation was found between online learning self-efficacy and user satisfaction, indicating that online learning site usage would increase if the level of self-efficacy was high. (Jan, 2015) showed a positive and significant correlation between prior experience in online learning and student satisfaction, but no significant correlation between computer self-efficacy and student satisfaction. From (Kamali & Bagheri-Nesami, 2022), a significant positive correlation between the variables was found when the correlation between e-learning acceptance and online self-regulated learning was investigated in 234 medical sciences students. Another study (Dinh & Nguyen, 2022) suggests positive impacts of internet self-efficacy, goal setting, help-seeking, and self-evaluation on academic achievement.

In a study (Young, 2006), effective online teaching practices are viewed by students in that the lecturer must show his visibility, participate actively in learning, demonstrate an effort to develop trust with students and assist in students' learning. (Gopal et al., 2021) suggest four factors for high satisfaction level and performance for online courses, to educational management which are the lecturers' quality, course design, prompt feedback by lecturers, and expectation from the students. According to (Nivenitha, 2017), a positive link was found between self-regulated learning and academic performance. (Keskin & Korkutata, 2018) who studied self-efficacy, self-regulated learning strategies use and biology achievement among ninth and tenth-grade high school students in Turkey found that greater self-efficacy level had a direct relationship with cognitive self-regulated learning, metacognitive self-regulated learning, time and study environmental management

strategies, and effort regulation strategies. (Koosha, 2020) studied the correlation of self-efficacy, self-regulated learning, and academic motivation on academic achievement and found that self-regulated learning was related significantly and directly with academic achievement and better predicted academic achievement. In another study (Dinh & Nguyen, 2022), internet self-efficacy, goal setting, and help-seeking were found to influence academic achievement directly and positively. However, (Dinh & Nguyen, 2022) found that elaboration, environment structuring, task strategies, and self-evaluation had no impacts on students' academic achievement. (Alegre, 2014) showed the positivity and significance of academic self-efficacy, self-regulated learning, and academic performance but had low correlations, while academic self-efficacy and self-regulated learning had a positive, significant and moderate relationship. In their systematic review study, (Honicke & Broadbent, 2016) reported that effort regulation, deep processing strategies, as well as goal orientation had a moderating effect on the correlation between academic self-efficacy and academic performance. In contrast, (Santoso et al., 2022) no significant link was found for online self-regulated learning and learning performance, as well as for online learning self-efficacy and learning performance.

3. Research Methodology

Participants: 442 public university students in Melaka, Malaysia, from eight faculties, were involved in the research. Information was gathered from students representing these faculties (refer to Table 1). To facilitate the analysis, three disciplines were used to categorize the faculties: social sciences and humanities, science and technology and management sciences.

Contexts of Learning: At the university, every course used the methods of online learning, with online classes held in various locations, including family homes in both urban and rural regions, rented houses and residential colleges. Asynchronous communication tools were used for student-lecturer and student-student interactions, which took place through social media (such as WhatsApp or Telegram), emails and discussion boards. Such communication could also be through in-person meetings, particularly for those residing in rented houses or residential colleges. Various learning activities involved the students which comprised discussions, individual projects with peer evaluation, final projects, final examinations, quizzes, group projects and also self-reporting.

Demographic variables: The researcher requested for the participants to provide the demographic details, for instance, online learning location, internet connectivity, semester of study, faculty, age group, gender and household monthly income.

Academic performance: In this current study, the measurement of student's academic performance was made by utilizing the actual grade point average (GPA) for the current semester.

Online learning experiences: The participants were also questioned about their online learning experiences including their total semesters experiencing learning through online medium, total online courses taken in the current semester, total online learning platforms used, and online learning quality.

Measures: This study employed three instruments. The first was utilized to measure online learning self-efficacy dimensions, while the second was employed to measure dimensions of online self-regulated learning and the third was to measure online learning satisfaction.

Online learning self-efficacy: Previous works by Shen et al. (2013) and W. A. Zimmerman & Kulikowich (2016) were used to derive the self-efficacy scales of online learning used in this study. The scale developed by W. A. Zimmerman & Kulikowich (2016) was adopted in the study into the dimensions of self-efficacy in computer/internet (9 items) and self-efficacy in the online environment (7 items) as well as self-efficacy in time management (6 items). Additionally, the scale introduced by Shen et al. (2013) was adopted in the study in self-efficacy to interact with online course lecturers (6 items), self-efficacy for social interactions with classmates (4 items), and self-efficacy for academic interactions with classmates (6 items). The assessment of these items used a 5-point Likert scale (1 – no confidence, 2 – low confidence, 3 – neutral, 4 – confidence, 5 – high confidence), which allowed the participants to express their confidence levels in various online course activities. Higher scores indicated elevated levels of online learning self-efficacies. The dimensions exhibited

from good to very good internal consistencies, while the range of Cronbach's alpha values was from 0.870 to 0.917. Finally, across all 38 items, the overall consistency was indicated as 0.972.

Online self-regulated learning: In this study, the use of online self-regulated learning scales was based on the work of Barnard et al. (2009). There were 22 items across several six dimensions: goal setting (4 items), environment structuring (3 items), task strategies (4 items), time management (3 items), help-seeking (4 items), and self-evaluation (4 items) in which the items were rated by the respondents using 5-point Likert scale (1 – strongly disagree, 2 – disagree, 3 – neutral, 4 – agree, 5 – strongly agree), indicating their agreement levels regarding their online learning behaviors. Higher scores indicated greater levels of online self-regulated learning. The dimensions exhibited acceptable to very good internal consistencies, with 0.725 to 0.842 Cronbach's alpha value range. It was found that the overall consistency that belongs to the 22 items was 0.948.

Online learning satisfaction: In this study, the online learning satisfaction scales used were based on (Gopal et al., 2021). 7 items were measured using a 5-point Likert scale (1 – strongly disagree, 2 – disagree, 3 – neutral, 4 – agree, 5 – strongly agree). Using the scale, enabled the students to report how satisfied they are in using online learning. High scores equal higher satisfaction in online learning. Online learning satisfaction factors depicted very good internal consistency with Cronbach's alpha value of 0.960.

Online learning quality: Online learning quality was adapted from (Bismala, 2022) which consisted of 5 items. The measurement of the items was made by using a 5-point Likert scale (1 – strongly disagree, 2 – disagree, 3 – neutral, 4 – agree, 5 – strongly agree). The Cronbach's alpha value was 0.860 which indicates a good internal consistency.

Data analysis: IBM SPSS Version 26.0 was utilized in this research to conduct an independent samples t-test, one-way analysis of variance (ANOVA), simple linear regression analysis, and multiple regression analysis.

Procedure: Initially, educators' leading online courses were purposefully chosen through researchers' judgments. Subsequently, these selected instructors were approached via email to seek approval for administering a survey within their online courses. Following their consent, a concise overview of the research's objectives and a link to the online survey were shared through WhatsApp with the selected instructors. They, in turn, disseminated the survey link to their respective online class WhatsApp groups. Student participation in the study was entirely voluntary. The survey spanned from September 12, 2022, to October 8, 2022.

4. Results

Demographic characteristics of participants: The demographic characteristics of the 442 participants are shown in Table 1. The respondents were majority female (72.6%), with around 63.8% falling into the age group below 20 years old. About 74.3% of the participants preferred to stay home for online learning, regardless of whether it was an urban or rural area. Additionally, 62.7% belonged to the household income group below or equivalent to RM4850 (B40), 52.3% were affiliated with the Business and Management faculty (FPP), and 92.1% were diploma students. Semester 2 accounted for 38.7% of the participants, and 48% reported having a good to very good internet connection at their residence. In terms of performance, academically, the majority (67.4%) achieved a grade point average (GPA) within the 3.00 to 3.74 range, indicating good results. Another 15.4% obtained a GPA of 3.75 to 4.00, signifying very good to excellent performance, while 14.7% received a 3.00 to 3.74 GPA, denoting average results. Only a small percentage (1.6%) had low-achieving results, as illustrated in Table 1.

Information on online learning: The majority of the students (60%) attended online learning sessions from the residences of their family in urban or suburban areas, while 20.8% attended classes at residential colleges on campus. Additionally, 14.3% participated in online learning from homes of their family located in rural areas, and 5% attended sessions from rented houses out of the campus (refer to Table 1). The majority of them also had two semesters of online learning (45.5%), took online courses of six or more (71.3%), and utilized three online learning platforms (74.2%). Notably, Google Meet was the preferred platform for "live" online learning (78.1%), while Google Classroom was widely used for notes, tutorials, and discussions (76.9%).

Students also expressed a preference for Google Classroom and Google Forms for assessments, with percentages of 45.2% each. Regarding the quality of online learning, 65.4% of students deemed it good, 32.1% thought it was average, and 2.5% deemed it as poor. Detailed outcomes on experiences of online learning can be found in Table 1.

Table 1: Online learning experiences of participants

Online learning experience	Category	Frequency	Percent
Number of semesters (including the current semester) taking online learning	1	87	19.7
	2	201	45.5
	3	64	14.5
	4	58	13.1
	5	32	7.2
Number of online courses taken in the current semester	1	38	8.6
	2	14	3.2
	3	23	5.2
	4	20	4.5
	5	31	7.0
	6	59	13.3
	7	115	26.0
	8	131	29.6
	9	9	2.0
Number of online learning platforms used	1	25	5.7
	2	89	20.1
	3	177	40.0
	4	98	22.2
	5	51	11.5
	6	2	0.5

Online learning experiences were measured using total semesters of online learning use, total online courses that they are taking in the current semester, total online learning platforms utilized, and online learning quality. These variables were all continuous quantitative and acted as predictors. In answering research question 1, two multiple regression analyses were conducted. The first analysis was made using a dependent variable of online learning self-efficacy while the second analysis was made using the dependent variable of online self-regulated learning. For the first multiple regression model, total semesters of online learning, total online courses in the current semester, total online learning platforms involved, and online learning quality together significantly predicted ($F(4, 437) = 112.101$, $p < 0.0005$) and 50.6% of the variance was explained in overall online learning self-efficacy. Number of online learning platform used ($t = 2.102$, $p < 0.05$) and online learning quality ($t = 20.873$, $p < 0.0005$) were significant predictors of online learning self-efficacy. The most contributing predictor of online learning self-efficacy was the quality of online learning. It was discovered from the results that as a 1 unit increase in the number of online learning platforms used and a 1 point increase in online learning quality score, it was estimated for students' online learning self-efficacy to increase by 0.04 points and 0.67 respectively. The outcomes are displayed in Table 2.

Table 2: Multiple regression analyses results of online learning experiences versus overall online learning self-efficacy and online self-regulated learning

Model summary		**ANOVA**		**Coefficients**				
R	R square	F (4, 437)	Sig	Variable	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
					B	Std. Error	Beta		
				Overall online learning self-efficacy					
				(Constant)	1.023	0.164		**6.244****	**0.000**
				Number of semesters using online learning	0.009	0.019	0.018	0.490	0.625
				Number of online courses taken in the current semester	0.010	0.009	0.039	1.085	0.279
0.712	0.506	**112.101****	**0.000**	Number of online learning platforms used	0.040	0.019	0.071	**2.102***	**0.036**
				Online learning quality	0.669	0.032	0.703	**20.873****	**0.000**
				Overall online self-regulated learning					
				(Constant)	1.063	0.174		**6.099****	**0.000**
				Number of semesters using online learning	-0.010	0.020	-0.019	-0.501	0.617
				Number of online courses taken in the current semester	0.002	0.010	0.008	0.203	0.839
0.685	0.469	**96.372****	**0.000**	Number of online learning platforms used	0.053	0.020	0.093	**2.629****	**0.009**
				Online learning quality	0.658	0.034	0.675	**19.301****	**0.000**

**p < 0.05 **p < 0.01 ****p < 0.0005*

For the second multiple regression model, total semesters of online learning use, total online courses in the current semester, total online learning platforms used, and online learning quality together significantly predicted ($F(4, 437) = 96.372$, $p < 0.0005$) and explained 46.9% of the variance in overall online self-regulated learning. Number of online learning platforms used ($t = 2.629$, $p < 0.01$) and online learning quality ($t = 19.301$, $p < 0.0005$) were significant predictors of online self-regulated learning. Online learning quality was also the most contributing predictor for online self-regulated learning. From the result, it was shown that as a 1 unit increase in the number of online learning platforms used and a 1 point increase in online learning quality score, students' online self-regulated learning was estimated to increase by 0.05 points and 0.66 respectively. Table 2 details the results. Therefore, total online learning platforms utilized and online learning quality significantly influenced both students' online learning self-efficacy and online self-regulated learning. Moreover, online learning quality was the most contributing predictor followed by several online learning platforms used for both students' online learning self-efficacy along online self-regulated learning while other online learning

experiences like the total semesters of online learning involved and total online courses taken were not significant predictors for both online learning self-efficacy and online self-regulated learning.

In answering research question 2, multiple regression analysis was performed using six online learning self-efficacy factors as independent variables and overall, online self-regulated learning as an outcome variable in determining the six online learning self-efficacy belief factors and whether they predict online self-regulated learning. The total of six online learning self-efficacy dimensions significantly accounted for 69.9% of the variance in online self-regulated learning ($F(6, 435) = 168.477$, $p < 0.0005$). Self-efficacy in time management was the highest contributing significant predictor of online self-regulated learning ($t = 5.487$, $p < 0.0005$, Beta = 0.238), followed by self-efficacy to interact academically with classmates ($t = 3.827$, $p < 0.0005$, Beta = 0.231), self-efficacy in online learning environment ($t = 4.164$, $p < 0.0005$, Beta = 0.188), and self-efficacy in computer/internet ($t = 2.485$, $p < 0.05$, Beta = 0.117).

Table 3: Multiple regression analysis results of online learning self-efficacy dimensions versus overall online self-regulated learning.

Model summary		**ANOVA**		**Coefficients**				
R	R square	F (6, 435)	Sig	Variable	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
					B	Std. Error	Beta		
0.836	0.699	**168.477****	**0.000**	(Constant)	0.485	0.112		**4.311****	**0.000**
				Self-efficacy in computer/internet	0.116	0.047	0.117	**2.485***	**0.013**
				Self-efficacy in an online learning environment	0.173	0.041	0.188	**4.164****	**0.000**
				Self-efficacy in time management	0.213	0.039	0.238	**5.487****	**0.000**
				Self-efficacy to interact with lecturers for online courses	0.059	0.036	0.071	1.639	0.102
				Self-efficacy to interact socially with classmates	0.092	0.047	0.109	1.952	0.052
				Self-efficacy to interact academically with classmates	0.210	0.055	0.231	**3.827****	**0.000**

**p < 0.05 ****p < 0.0005 Dependent variable – Overall online self-regulated learning*

Self-efficacy to interact with lecturers for online courses ($t = 1.639$, $p > 0.05$) and self-efficacy to interact socially with classmates ($t = 1.952$, $p > 0.05$) did not predict online self-regulated learning significantly. Results also indicated that as self-efficacy in computer/internet, self-efficacy in the online learning environment, self-efficacy in time management, and self-efficacy to interact academically with classmates each showed an increase by 1 point, the estimation of increase for online self-regulated learning was by 0.116 points, 0.173 points, 0.213 points, and 0.210 points respectively. Table 3 shows the results. Additionally, the study also examined the correlation between overall online learning self-efficacy and online self-regulated learning by utilizing simple linear regression analysis. On regressing overall online learning self-efficacy and overall online self-regulated learning, the result revealed that 69.2% of the variance in overall self-regulated learning total score was significant ($F (1, 440) = 987.019$, $p < 0.0005$) and explained by overall online learning self-efficacy. About each 1-point increase in overall online learning self-efficacy, an increase of 0.853 points in overall online self-regulated learning was found. Table 4 details the result.

Table 4: Simple linear regression analysis result of overall online learning self-efficacy versus overall online self-regulated learning

Model summary		**ANOVA**		**Coefficients**					
R	R square	F(6, 435)	Sig	Variable	Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
				(Constant)	0.526	0.109		**4.837****	**0.000**
0.832	0.692	**987.019****	**0.000**	Overall online learning self-efficacy	0.853	0.027	0.832	**31.417****	**0.000**

*****p < 0.0005 Dependent variable – Overall online self-regulated learning*

To investigate how online learning self-efficacy and online self-regulated learning correlate to online learning satisfaction, three separate multiple regression analyses were carried out the first one was conducted for online learning self-efficacy dimensions on online learning satisfaction; the second was for online self-regulated learning dimensions on online learning satisfaction, while the third was for overall online learning self-efficacy and overall online self-regulated learning on online learning satisfaction. In these three multiple regression analyses, the dependent variable was online learning satisfaction. In the first and second multiple regression analyses, the independent variables were online learning self-efficacy and online self-regulated learning dimensions while for the third multiple regression analysis, the independent variables were overall online learning self-efficacy and online self-regulated learning.

The six online learning self-efficacy factors together significantly accounted for 52.9% of the variance in learning satisfaction ($F(6, 435) = 81.539$, $p < 0.0005$). Self-efficacy in computer/internet ($t = 2.636$, $p < 0.01$), self-efficacy in the online learning environment ($t = 4.382$, $p < 0.0005$), and self-efficacy in time management ($t = 5.140$, $p < 0.0005$) predicted online learning satisfaction significantly. Out of all significant predictors, self-efficacy in time management was the most contributing predictor (Beta = 0.279) of online learning satisfaction, followed by self-efficacy in the online learning environment (Beta = 0.247), and self-efficacy in computer/internet (Beta = 0.156). For every 1-point increase in self-efficacy in computer/internet, self-efficacy in the online learning environment, and self-efficacy in time management, the estimation was that online learning satisfaction would increase by 0.165 points, 0.243 points, and 0.268 points respectively. Table 5 presents the results.

Table 5: Multiple regression analysis results of online learning self-efficacy and online self-regulated learning dimensions versus online learning satisfaction

Model summary		ANOVA		Coefficients					
R	R square	F(6, 435)	Sig	Variable	Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
				Online learning self-efficacy					
				(Constant)	0.801	0.151		5.321****	0.000
				Self-efficacy in computer/internet	0.165	0.063	0.156	2.636****	0.009
				Self-efficacy in an online learning environment	0.243	0.056	0.247	4.382****	0.000
				Self-efficacy in time management	0.268	0.052	0.279	5.140****	0.000
0.728	0.529	81.539****	0.000	Self-efficacy to interact with lecturers for online courses	0.050	0.048	0.057	1.043	0.298
				Self-efficacy to interact socially with classmates	0.034	0.063	0.038	0.544	0.587
				Self-efficacy to interact academically with classmates	0.044	0.074	0.046	0.603	0.547
				Online self-regulated learning					
0.723	0.522	79.219****	0.000	(Constant)	0.957	0.143		6.700****	0.000
				Goal setting	0.173	0.055	0.181	3.157**	0.002
				Environment structuring	0.216	0.045	0.248	4.838****	0.000

	Task strategies	0.096	0.050	0.107	1.943	0.053
	Time management	0.114	0.053	0.128	2.127*	0.034
	Help-seeking	0.132	0.047	0.144	2.803**	0.005
	Self-evaluation	0.038	0.057	0.041	0.674	0.501

**p < 0.05 ****p < 0.0005 Dependent variable – Online learning satisfaction*

The six online self-regulated learning factors together significantly accounted for 52.2% of the variance in learning satisfaction ($F(6, 435) = 79.219$, $p < 0.0005$). Goal setting ($t = 3.157$, $p < 0.01$), environment structuring ($t = 4.838$, $p < 0.0005$), time management ($t = 2.127$, $p < 0.05$), and help-seeking ($t = 2.803$, $p < 0.01$) predicted online learning satisfaction significantly. From these significant predictors, environment structuring was the most contributing predictor (Beta = 0.248) of online learning satisfaction, followed by goal setting (Beta = 0.181), help-seeking (Beta = 0.144), and time management (Beta = 0.128). For every 1-point increase in goal setting, environment structuring, time management, and help-seeking, online learning satisfaction was estimated to increase by 0.173 points, 0.216 points, 0.114, and 0.132 points respectively. Table 5 shows the detailed results.

Online learning self-efficacy and online self-regulated learning together significantly accounted for 55.3% of the variance in learning satisfaction ($F(2, 439) = 271.427$, $p < 0.0005$). Overall online learning self-efficacy ($t = 6.307$, $p < 0.0005$) and overall online self-regulated learning ($t = 7.209$, $p < 0.0005$) were both significant predictors of online learning satisfaction. Overall online self-regulated learning (Beta = 0.414) was the most contributing predictor of online learning satisfaction compared to online learning self-efficacy (Beta = 0.362). Results are detailed in Table 6.

Table 6: Multiple regression analysis results of overall online learning self-efficacy, overall online self-regulated learning versus online learning satisfaction

Model summary		**ANOVA**		**Coefficients**					
R	R square	F(2, 439)	Sig	Variable	Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
0.744	0.553	**271.427******	**0.000**	(Constant)	0.669	0.144		4.646****	0.000
				Overall online learning self-efficacy	0.398	0.063	0.362	6.307****	0.000
				Overall online self-regulated learning	0.444	0.062	0.414	7.209****	0.000

*****p < 0.0005 Dependent variable – Online learning satisfaction*

To investigate the way online learning self-efficacy and online self-regulated learning correlate to academic performance, three separate multiple regression analyses were carried out the first multiple regression analysis was conducted for online learning self-efficacy dimensions on academic performance; the second was for online self-regulated learning dimensions on academic performance; while the third was for overall online learning self-efficacy and overall online self-regulated learning on academic performance. In these three multiple regression analyses, the dependent variable was academic performance. While, in the first and second multiple regression analyses, the independent variables were online learning self-efficacy and online self-regulated learning dimensions. Lastly, in the third multiple regression analysis, the independent variables were overall online learning self-efficacy and overall online self-regulated learning. In the first multiple regression analysis, all six dimensions that belong to online learning self-efficacy did not significantly predict academic performance ($F(6, 428) = 0.950$, $p > 0.05$). For the second multiple regression, online self-regulated learning dimensions together significantly accounted for 3.9% of the variance in academic performance ($F(6, 428) = 2.926$, $p < 0.01$). Goal setting ($t = 2.274$, $p < 0.05$) and self-evaluation ($t = 2.074$, $p < 0.05$) were significant predictors of academic performance. Goal setting (Beta = 0.185) was the most contributing predictor to predict academic performance compared to self-evaluation (Beta = 0.178). For the third multiple regression analysis, the result showed that overall online learning self-efficacy and overall online self-regulated learning together significantly explained 2.2% of the variability in academic performance ($F(2, 432) = 4.751$, $p < 0.01$). The sole significant predictor of academic performance was online self-regulated learning. Table 7 shows the outcomes.

Table 7: Multiple regression analysis results of online learning self-efficacy and online self-regulated learning dimensions versus academic performance

Model summary		**ANOVA**		**Coefficients**				
R	R square	F	Sig	Variable	Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
				Online learning self-efficacy					
				(Constant)	3.086	0.146		21.122****	0.000
				Self-efficacy in computer/internet	0.040	0.062	0.057	0.652	0.515
				Self-efficacy in an online learning environment	-0.019	0.053	-0.029	-0.350	0.726
0.115	0.013	**F(6, 428) = 0.950**	**0.459**	Self-efficacy in time management	-0.017	0.051	-0.026	-0.328	0.743
				Self-efficacy to interact with lecturers for online courses	0.003	0.047	0.005	0.061	0.952
				Self-efficacy to interact socially with classmates	0.072	0.061	0.121	1.184	0.237
				Self-efficacy to interact academically with classmates	-0.015	0.072	-0.023	-0.208	0.835
				Online self-regulated learning					
				(Constant)	2.903	0.136		**21.283**** **	**0.000**
				Goal setting	0.118	0.052	0.185	**2.274***	**0.023**
				Environment structuring	-0.003	0.042	-0.006	-0.079	0.937
0.199	0.039	**F(6, 428) = 2.926****	**0.008**	Task strategies	-0.045	0.047	-0.075	-0.964	0.336
				Time management	-0.063	0.050	-0.105	-1.240	0.216
				Help-seeking	-0.009	0.045	-0.015	-0.201	0.841
				Self-evaluation	0.111	0.054	0.178	**2.074***	**0.039**
				(Constant)	3.004	0.143		**20.977**** **	**0.000**
0.147	0.022	**F (2, 432) = 4.751****	**0.009**	Online learning self-efficacy	-0.055	0.062	-0.075	-0.881	0.379
				Online self-regulated learning	0.145	0.061	0.203	**2.378***	**0.018**

**p < 0.05 ****p < 0.0005 Dependent variable – Academic performance*

Discussion

Regarding online learning experiences, it was found that total online learning platforms utilized and online learning quality significantly predicted online learning self-efficacy and online self-regulated learning. Online learning self-efficacy and online self-regulated learning were most influenced by online learning quality. This suggests that online learning quality is crucial for determining online learning self-efficacy and online self-regulated learning. Such a result is in line with (Shen et al., 2013) which concludes that learning experience influences online learning self-efficacy of students as opposed to demographic information, which includes gender and status of academic or total online courses taken by students. Another study (Cho & Kim, 2013) discovered that the scaffolding method used by instructors to interact most significantly explained the self-regulation of students when interacting with other people while gender and total online courses taken were unrelated to the self-regulation of students when interacting with others in online learning contexts. Moreover, the present study also reveals the significant predictor of both online learning self-efficacy and online self-regulated learning, which is the total online learning platforms used, supporting the research outcomes from (Yot-Domínguez & Marcelo, 2017) who reported that there was a limitation in the use of self-regulated learning strategies by the students with the presence of technology. According to the study, students used more digital technologies for basic activities to search, store or share information which are deemed as limited when there is no complementary with others that support understanding, monitoring or self-assessment throughout the learning process. However, it was revealed from the present study that the total semesters of online learning use and total online courses taken were not significant predictors of online learning self-efficacy and online self-regulated learning. This is not in line with (Altun & Erden, 2013) in which previous online learning,

instructor-acquired skill, instructor feedback, and online learning system anxiety were reported to influence the self-efficacy of students in an online learning context.

It was revealed from the present study that online learning self-efficacy dimensions explained almost 70% of the variance in online self-regulated learning. This shows that online learning self-efficacy dimensions are crucial in self-regulated learning development in online environments. Self-efficacy in time management was the most contributing predictor of online learning self-efficacy for online self-regulated learning, followed by self-efficacy in the online learning environment, self-efficacy to interact academically with classmates, and self-efficacy in computer/internet. However, self-efficacy in the interaction with lecturers for online courses and self-efficacy in social interaction with classmates were not significantly related to online self-regulated learning. In contrast, the findings of (Y. C. Kuo et al., 2014) found that self-efficacy in internet and self-regulated learning were insignificant predictors of online learning satisfaction. Results also showed that 69.2% of the variance in overall online self-regulated learning was explained by online learning self-efficacy indicating that students who have high online learning self-efficacy also showed high online self-regulated learning. This result is consistent with the study by (Stephen & Rockinson-Szapkiw, 2021) and (Ulfatun et al., 2021).

From six online learning self-efficacy dimensions, only three dimensions were found to significantly predict the online learning satisfaction of students. Out of the three significant self-efficacy dimensions, self-efficacy in time management had the most significant correlation with learning satisfaction, followed by self-efficacy in computer/internet and self-efficacy in online learning environments. From the outcomes, their self-efficacy in online course completion was perceived by the students as having more importance than other self-efficacies when it comes to online learning satisfaction. Self-efficacy in time management about online learning satisfaction is more important than other self-efficacies which is consistent with the findings by (Shen et al., 2013) and (Jan, 2015). Regarding online self-regulated learning, environment structuring was more important than goal setting, help-seeking, and time management in explaining students' online learning satisfaction. It was also found that both online learning self-efficacy and online self-regulated learning significantly influenced online learning satisfaction and online self-regulated learning was found as more predictive compared to online learning self-efficacy to online learning satisfaction. This finding concurred with the studies by (Aldhahi et al., 2022) and (Lim et al., 2020) which conclude that e-learning self-efficacy and online self-regulated learning influence the satisfaction of students with e-learning experience.

Regarding academic performance, no online learning self-efficacy dimensions showed significant predictors of academic performance. However, goal setting and self-evaluation of online self-regulated learning showed a significant relationship with academic performance. The result suggests that goal setting is the utmost contributing predictor to students' academic performance followed by students' capabilities to self-evaluate themselves. When considering overall online learning self-efficacy and overall online self-regulated learning together, overall online self-regulated learning was found as significantly most predictive for academic performance.

5. Conclusion

Self-efficacy in technology has been the focus of much research but little research has focused on self-efficacy in other factors apart from technological factors (Alqurashi, 2016) and he suggested developing research that includes not only the technology but also the rest of the dimensions like learning, interaction and collaborative skills since these aspects together are crucial to be put into consideration when self-efficacy is measured in online learning contexts. Nevertheless, in this study, the exploration only concerned online learning self-efficacy dimensions in the number of three online learning contexts aspects which were technology, learning and interaction.

From the outcomes of the study, the differences in age and internet connectivity in online learning self-efficacy along with online self-regulated learning were found, and this will contribute to the existing study that is relevant to online learning that involves self-regulated learning. It is also demonstrated from the present research that self-efficacy in time management and environment structuring most significantly explain variances in online learning satisfaction. From the follow-up analysis, self-efficacy in time management was shown to have a significant and strong positive correlation with the environment structuring (Pearson's

correlation coefficient, r = 0.612, p < 0.0005). These outcomes signify the crucialness of students' self-judgment on what they are capable of in completing an online course and environment structuring in their satisfaction with online courses. Additionally, lecturers must take a proactive approach when monitoring and giving encouragement for social interactions with classmates or lecturers, as well as in task strategy development, and self-evaluation establishment so that students can develop both online learning self-efficacy and online self-regulated learning.

This study provides findings that are evident to enhance the online learning self-efficacy of students, their online self-regulated learning and success academically. Since it was shown by the study that digital technology is significant in self-regulated learning, therefore university lecturers must ensure that digital technology is incorporated into learning. About improving online learning quality, it provides insights for future studies particularly in relevant areas regarding developing the online learning self-efficacy and online self-regulated learning abilities of students, along with improving the facilities and infrastructures in online and face-to-face learning contexts.

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Money Laundering: A Review of Literature and Future Research

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Abstract: Money laundering is one of the financial crimes that has become a major concern in most countries worldwide. The rising number of reported instances of money laundering could be driven by several reasons. With this growth, there is a growing academic interest in money laundering research; therefore, opportunities should be created for interested academics to evaluate the evolution of research in this field. This study was intended to evaluate published studies in this field from the origin of the idea of money laundering to the present to identify major trends or issues in money laundering research and to propose a research agenda for the future. A qualitative research design was adopted using a content analysis approach. It was found that most of the research focuses more on the relationship of money laundering with other offenses and the detection methods but lacking in the understanding of money laundering and the rules and regulations related to money laundering. This study is intended to be useful to current and future scholars in the field of financial crimes who are interested in the evolution of the literature and in identifying areas for future research.

Keywords: *Money Laundering, Tax haven, Detection Method*

1. Introduction

Academics, practitioners, and other stakeholders have acknowledged money laundering as one of the financial crimes that has become a major concern in the majority of countries throughout the world. Money laundering is frequently regarded as an exotic activity, whose name suggests some kind of sinister financial crime. It is, however, one of the most popular financial activities associated with illegal financial schemes, such as fraud, corruption, and terrorism financing. Money laundering is widely believed to have originated during the reign of Al Capone, who, although the most notorious criminal of his day, was only convicted of basic tax evasion (Bridges, 1997). This prompts the creation of laws against money laundering that concentrate on the source, accounting, and distribution of monies.

Money laundering is a serious crime that involves using financial transactions to hide the source and ownership of money that has been obtained illegally. Money laundering has many effects on society and the global economy. Firstly, by enabling criminals to conceal their unlawful funds in legitimate financial institutions, money laundering compromises the integrity of the financial system (Simser, 2020; Tran & De Koker, 2019). This might cause people to lose faith in banks and the economy as a whole. Secondly, money laundering gives criminals the tools to fund other illicit activities including terrorism, human trafficking, and drug trafficking (Whisker & Lokanan, 2019). It may also make it possible for dishonest authorities to steal public funds and utilize them for their benefit. Thirdly, money laundering can hinder economic growth by diverting funds from legal enterprises and placing them in the hands of criminals. This may result in less investment, slower economic expansion, and more poverty. Finally, money laundering can be used to destabilize democratic institutions and influence political systems. This might lead to a weakening of the rule of law, increasing corruption, and political instability (Paradise, 1998).

Ultimately, money laundering has a wide-ranging effect and has the potential to negatively affect society and the global economy. Therefore, initiatives must be taken to combat this crime through strong legal frameworks and effective international cooperation.

Due to the great impact of money laundering on every aspect of our lives, the issues surrounding money laundering need to be comprehended thoroughly. However, the lack of such studies hinders our awareness of the existing conditions, difficulties, and future direction of money laundering. Consequently, the main purpose of this study is to review the development of money laundering. To investigate this new development, a

research literature survey on money laundering was carried out. The paper includes a chronological overview of the literature (Neely 2016) on the topic of money laundering and its connected domains. The review is drawn from a broad analysis of the spectrum of money-related literature without limits as to a particular time range or limited journal list.

2. Methodology

For this research, a qualitative research design was adopted using a content analysis approach. Since the main objective of this paper is to look at how money laundering has changed over time, the following steps were taken. The first step was to select a group of journals likely to contain a study on money laundering and financial crime, with the search limited to journal articles. This investigation relied heavily on the library and other academic archives. The second step was to find articles on primary topics related to money laundering. The paper's current emphasis is on English-language articles that discuss money laundering from theoretical or practical angles. Using the keywords "money laundering" and "financial crime," a bibliographic search was done to carry out this identification.

Each article was then carefully read and analyzed to make sure that it did indeed discuss money laundering entirely or in part. Thus, even though money laundering was not specifically mentioned in the title, keywords, or abstract, the articles related to money laundering were then selected. The analysis of the money laundering development focuses primarily on the number of articles, research themes, research methodologies, and research instruments as well as the research context.

3. Results and Discussion

Number of articles

The search resulted in the discovery of a total of 54 papers, which were distributed among 29 different journals. The most recent paper to be added to the database was published in 2023, while the earliest one in the dataset was published in 2001. Out of these 54 articles, six papers are conceptual, and their authors conducted library archiving. The remaining part of the paper (48) is devoted to empirical studies, which collected data from a wide variety of sources including surveys, interviews, court cases, and mutual investigation reports.

Table 1 offers a graphical representation illustrating the distribution of research articles over three distinct periods: 1968-2002, 2003-2012, and 2013-2023. Each period is broken down to show the total number of articles published, alongside data detailing the geographical origin of each article. The table highlights a significant trend: there has been a marked increase in the number of research articles on money laundering in the most recent period (2013-2023). This sharp rise contrasts with the more modest numbers seen in the earlier periods, indicating a growing scholarly interest and focus on the topic. The data suggests a heightened awareness and investigation into money laundering issues over time, particularly in the last decade.

In conclusion, researchers from the United States exhibit a notable interest in the topic of money laundering. Although no articles were published on this subject during the earliest period (1968-2002), there is a significant increase in the number of publications from the United States in both the second period (2003-2012) and the most recent period (2013-2023). Over the entire span from 1968 to 2023, a total of ten articles originating from the United States stand out as the highest number of publications from any single country. Notably, seven of these ten articles were published in the final period (2013-2023), underscoring the United States' leading position in this field of research during this recent decade. This trend indicates a growing emphasis and expertise in money laundering research within the U.S. academic community, particularly in recent years.

Table 1: Number of money laundering articles in the period 1986-2023

Period		1986-2002	2003-2012	2013-2023	Total
No of article		**1**	**12**	**41**	**54**
Geographical Origin	Australia			3	3
	Bahrain			1	1
	Belgium		1	1	2
	China		2	1	3
	Colombia			1	1
	Estonia			1	1
	Ethiopia			1	1
	Germany		1		1
	Greece		1		1
	Guatemala			1	1
	India			1	1
	Italy			5	5
	Kazakhstan			1	1
	Malaysia		2	1	3
	Netherland			1	1
	Pakistan		1		1
	Poland			1	1
	Russia			3	3
	Singapore			2	2
	Somalia			1	1
	Spain			3	3
	Sweden			1	1
	Ukraine			1	1
	United Kingdom	1	1	3	5
	United States of America		3	7	10

In the final period (2013-2023), there is a clear trend indicating that researchers from a wide range of countries have increasingly recognized the importance of money laundering as a critical issue. This growing awareness reflects a broader understanding of the substantial impact money laundering has on societies globally. Researchers from various nations have begun to address the complexities of this issue, highlighting its far-reaching consequences and the need for comprehensive research and solutions.

The rise in international scholarly interest suggests that money laundering is now seen as a pressing concern that extends beyond national borders, affecting economies, financial systems, and social structures worldwide. This shift underscores a collective acknowledgment of the need for global cooperation and deeper investigation into the mechanisms and repercussions of money laundering. As a result, the final period is marked by a significant increase in the volume and diversity of research dedicated to unraveling and mitigating the effects of money laundering.

Results by themes

This article breaks the period down into three sections to analyze the progression of money laundering: 1986–2002, 2003–2012, and 2013–2023. There are a total of 54 articles, 17 of which are concerned with matters about rules and regulations. Other themes include the interrelationship between money laundering and other offenses or crimes, as well as detection methods for money laundering as can be seen in Table 1. On the other hand, the concentration of the research theme is graphically represented in Table 2. It would appear that the issue of money laundering detection methods has become the topic that the vast majority of researchers are most interested in studying.

According to the information presented in Table 2, the second period (2003-2013) broadened the topics by having a greater number of researchers investigate the laws and regulations about money laundering, as well as the connections between money laundering and other crimes, such as fraud, tax evasion, corruption, and terrorism. Compared to the first period, which consisted of a single study by Alldridge (2001), the increase in

the number of articles indicates a growing interest in the topic of money laundering. Both Rhodes and Palastrand (2004) and Kwok (2008) focused their attention on the understanding of money laundering and its legislation in the United Kingdom and Hong Kong, respectively. In the meantime, researchers, such as Dolar and Shughart (2011) and Betron, (2012) discussed the level of compliance that professional service providers such as financial institutions have with enforced anti-money laundering provisions. On the other hand, Picard and Pieretti (2011) discuss the effects of force policies on offshore financial centers as well as their capability to enforce the compliance of such centers with anti-money laundering regulations. In their research, the authors focus on the ability of pressure policies to affect compliance.

On a different theme, several researchers who study the practice of money laundering have offered their thoughts on the interconnections that exist between money laundering and other types of illegal activity. The market peso Exchange is the specific example that Jurith (2003) uses to elaborate on how money laundering is intimately associated with terrorism and drug dealing in Colombia. In the meantime, from the Malaysian perspective, the connection between the flow of money laundering and terrorist financing within its borders has always been the continuous focus of broad and sustained efforts of combating strategies and these efforts have been ongoing for quite some time (Shanmugam & Thanasegaran, 2008). It was discovered that there is a connection between the activities of money laundering and the establishment of tax havens (Schwarz, 2011), as well as the practice of illegally accepting deposits (Muhammaddun Mohamed & Ahmad, 2012).

During this period, there was a notable increase in interest concerning the methods employed to detect money laundering. Ngai et al. (2011) observed that while data mining techniques have been extensively applied to detect insurance fraud, there remains a significant gap in research regarding their application to other forms of financial crime. Specifically, there is a dearth of studies focusing on mortgage fraud, money laundering, and fraud in commodities and securities. This gap highlights an opportunity for further investigation into how data mining could be adapted and optimized to identify and combat these other types of financial misconduct. Addressing this gap could enhance the effectiveness of fraud detection systems across a broader range of financial activities and improve overall regulatory and enforcement strategies. These methods might offer primary answers to the challenges that are inherent in the classification and detection of fraudulent data. Larik and Haider (2011) introduced a hybrid anomaly detection method that utilizes clustering to construct customers' usual behavior and statistical approaches to identify transactions that deviate from the matching group behavior. Christou et al. (2011) offer an innovative hybrid approach for identifying fraud in the rapidly expanding area of lotteries and online gambling.

In the final period (2013 to 2023), there was an increase of number of research conducted on all three themes. Based on the review, most of the researchers focused on money laundering detection methods as their research theme. These studies were undertaken by Drężewski et al. (2015); Klimova (2016); Colladon and Remondi (2017); Jayasree and Balan (2017); Badal-Valero et al. (2018); Norton (2018); Passas (2018); Eifrem (2019); Demetis (2018); Ravenda et al. (2019); Singh and Best (2019); Turki, et al. (2020); Canhoto (2021); Domashova and Makilina (2021); Eulaiwi (2021); Rocha-Salazar et al. (2022); Tertychnyi et al. (2022) and Zhang et al. (2022) respectively.

Drężewski et al. (2015) research focuses on criminal analysis, a big data processing system that processes data from various sources that is useful to an investigator. The researchers subsequently suggested a piece of software called the Money Laundering Detection System (MLDS). After successfully analyzing the central database of a factoring company, primarily active in Italy, over 19 months, Colladon and Remondi (2017) focused on the potential for the implementation of network analytic techniques to prevent money laundering. In the UK, banks use the structural coupling concept as part of an expanded money laundering behavioral profiling program to combat money laundering (Demetis, 2018). Badal-Valero et al. (2018) have also highlighted the invention of a new money laundering detection tool that integrates data mining and supervising machine learning tools. At the same time, new transaction management (TRM) proxies could be used by authorities as warning signs of money laundering activities, according to a study conducted by Ravenda et al. (2018) on a sample of 355 Italian Mafia-controlled businesses.

Singh and Best (2019) investigate the application of visualization techniques that show how link analysis may be applied in spotting erroneous bank transactions may help in effectively identifying patterns of money

laundering activities. Meanwhile, an empirical case study conducted by Turki et al. 2020) found that there was a highly significant impact of implementing regulatory technology (RegTech) innovations in banks on the effectiveness of money laundering prevention in Bahrain.

Numerous studies have focused on improving money laundering detection systems. Jayasree and Siva Balan (2017) found that a bitmap index within a Bitmap Index-based Decision Tree is effective for efficiently accessing large financial databases. Research by Canhoto (2020), Domashova and Mikhailina (2021), Tertychnyi et al. (2022), and Zhang et al. (2022) explored the application of machine learning in developing detection tools. Canhoto (2020) investigated the potential of reinforced machine learning for identifying unusual financial activities and money laundering. Domashova and Mikhailina (2021) used machine learning methods to pinpoint organizations at risk of money laundering, while Zhang et al. (2022) proposed a methodology for creating a national anti-money laundering (AML) index based on Mutual Evaluation reports and machine learning models. In their latest study, Tertychnyi et al. (2022) examined detection techniques for an AML monitoring system designed to meet three key requirements: delivering accurate and non-redundant alerts, providing timely notifications, and associating discussions and risk forecasts with each alert.

Some researchers have highlighted the significance of Suspicious Activity Reports (SARs). For instance, Norton (2018) explored this legislation from the perspective of the evolving relationship between auditors and the state, as well as the broader surveillance framework within which SARs are situated. Auditors are tasked with submitting SARs into ELMER, an online database, but they often lack clear guidance on how to determine suspicion. Klimova (2016) found that commercial banks frequently delay reporting suspicious transactions to the monitoring system, making such information less effective for prosecuting illegal activities. In another approach, Rocha-Salazar et al. (2022) utilized the characteristics of legal entities and self- and group comparisons within dynamic social networks to identify transactions involving shell companies in financial systems. Additionally, Eulaiwi et al. (2021) investigated whether the presence of Suspicious Matters Reports (SMRs) and whistle-blower hotlines within financial organizations influences the relationship between tax haven usage and the pricing of audit and non-audit services.

In a different terrain, Eifrem (2019) examined how graph technology can mine the truth from data and rapidly identify potential areas of concern. Earlier on, Passas (2018) discovered that cash payment limitations (CPLs), which were established to aid in the management of terrorism financing and money laundering, are nowhere near a panacea that can solve all of these problems and cannot make any of them disappear. Yet, even when each of these criminal issues is studied separately, there is no empirical link between CPLs and effective measures. Didimo et al. (2019) introduced TeFNet as a new approach for the visual evaluation of temporal networks in the fiscal domain, designed to differentiate tax evasion, fiscal fraud, and money laundering.

In this period, the researchers also focus on the relationships of money laundering with criminal activities. Stack (2015) conferred the use of conversion centers by money laundering organizations to facilitate tax evasion by the private sector and embezzlement by the state sector. This is supported by Ardizzi et al. (2018) who used an econometric model in their study and found that financial deepening of Italian municipalities is positively affected by the local intensity of criminal activity and money laundering. Some researchers study the relationships between money laundering and drug trafficking activities, such as research conducted by McCarthy-Jones et al. (2020), Devine et al. (2020), Caulkins and Reuter (2022) and Loayza et al. (2019).

Table 2: Summary of previous studies by year and themes on money laundering

Themes		Years 1986-2002	2003-2012	2013-2023
Rules and Regulation	General			Gobena (2021); Bartolozziet al. (2022); Niyetullayev and Almond (2014)
	Understanding		Rhodes and Palastrand (2004); Kwok (2008)	
	Compliance		Dolar and Shughart (2011); Betron (2012)	Omar and Johari (2015); Poon (2021)

Effect		Picard and Pieretti (2011)	McCarthy et al. (2015); Balakina et al. (2017); Verhage (2017); Tan (2018); Gowin et al. (2021); Premti et al. (2021)
Relationship of Money laundering and other offences	Alldridge (2001)	Jurith (2003); Shanmugam and Thanasegaran (2008); Schwarz (2011); Muhammaddun Mohamed and Ahmad (2012);	Stack (2015); Ardizzi et al. (2018); Gikonyo (2018); Loayza et al. (2019); Devine et al. (2020); McCarthy-Jones et al. (2020); Fletcher et al. (2021); Rusanov and Pudovochkin(2021), Shen et al. (2021); Kemsley et al. (2022); Caulkins and Reuter(2022)
Money laundering detection method		Ngai, Hu, Wong, Chen & Sun (2011); Larik and Haider (2011); Christou et.al. (2011)	Dreżewski et al. (2015);Klimova (2016); Colladon and Remondi (2017); Jayasree and Siva Balan (2017); Badal-Valero et al. (2018); Demetis (2018); Norton (2018); Passas (2018); Didimo et al. (2019); Eifrem (2019); Ravenda et al. (2019); Singh and Best (2019); Turki et al. (2020); Canhoto (2021); Domashova and Makilina (2021); Eulaiwi (2021); Rocha-Salazar et al. (2022); Tertychnyi et al. (2022); Zhang et al. (2022)

Other researches relate money laundering with illicit proceeds from piracy ventures (Gikonyo, 2018), bitcoin (Fletcher et al., 2021), terrorism financing (Rusanov and Pudovochkin, 2021), illegal cattle ranching and deforestation activities (Devine et al., 2020), contraband smuggling (Shen et al., 2021) and also tax evasion (Kemsley et al., 2022).

On the other hand, several researchers have concentrated on the regulatory and legislative aspects of combating money laundering. Overall, these studies collectively underscore the importance of robust regulatory frameworks, effective institutional oversight, and rigorous compliance mechanisms in the fight against money laundering. Noteworthy studies in this area include those by Gobena (2021), Bartolozzi et al. (2022), Omar and Johari (2015), Niyetullayev and Almond (2014), McCarthy et al. (2015), Balakina et al. (2017), Verhage (2017), Tan (2018), Gowin et al. (2021), and Premti et al. (2021). Gobena (2021) attributes the rise in money laundering in Ethiopia to the country's economic and political systems, arguing that the growth of money laundering is deeply intertwined with these systemic factors. The research suggests that systemic weaknesses and political instability create an environment where money laundering can thrive. In contrast, Bartolozzi et al. (2022) emphasize the role of national Financial Intelligence Units (FIUs) in strengthening anti-money laundering (AML) frameworks. They argue that the establishment of FIUs as central authorities responsible for overseeing AML compliance and enforcement was anticipated to significantly bolster deterrence strategies. This expectation is based on the premise that FIUs can enhance the effectiveness of AML measures through improved coordination and information sharing. Omar and Johari (2015) focus on the compliance of professional service providers with AML regulations, similar to the work of Dolar and Sugart (2011). Their research explores how well these providers adhere to AML rules and the challenges they face in maintaining compliance. This area of study highlights the importance of ensuring that professionals in the financial and legal sectors follow AML regulations effectively to prevent money laundering.

Niyetullayev and Almond (2014) examined Kazakhstan's approach to legalizing illicit money laundering, particularly the role of amnesty. The study showed that the shadow economy in post-Soviet transition states can make broad criminalization of money laundering self-defeating unless supplemented with "market-constituting" policies. Meanwhile, Verhage (2017) observed that the global anti-money laundering system impacts privacy and due process yet remains largely unexamined due to the difficulty in measuring its preventative effects.

McCarthy et al. (2015) concluded that when the budget is set, less money should be allocated for financial oversight and more money should go towards specialist police units to combat money laundering. Instead of

preventing money launderers from serving the market, current strategies that emphasize financial monitoring merely boost the industry's profitability. Balakina et al. (2017) examined the stigma effect by analyzing cross-border capital flows to verify the presence and direction of the impact of soft regulations advocated by international organizations against banking secrecy, particularly concerning alleged tax havens and financial centers. However, Singapore's anti-money laundering (AML) regulations have proven insufficient as a deterrent against money laundering activities in financial institutions. This inadequacy is attributed to regulators' excessive reliance on deterrence-based reasoning, the absence of an "enforcement pyramid," and economic incentives that lead regulators to be lenient towards financial institutions (Tan, 2018). Subsequently, Poon (2021) showed that the regulatory capacity of US sanctions has increased by delegating compliance and enforcement responsibilities to Singaporean state authorities and advanced business services (ABS) intermediaries. Additionally, two studies investigated the valuation impacts of anti-money laundering (AML) enforcement actions. Gowin et al. (2021) analyzed the effects of AML enforcement and Office of Foreign Assets Control (OFAC) economic sanction violations on U.S. financial institutions (FIs), while Premti et al. (2021) focused on their impact on European banks.

4. Conclusion, Future Research and Limitations

In summary, previous research did not place a significant amount of emphasis on the topic of money laundering. In later years, there was a rise in the amount of research conducted on the practice of money laundering. Earlier studies consisted primarily of discussions on the laws and guidelines governing money laundering. Subsequently, some researchers began to shift their focus to more expansive issues in money laundering, such as the connections between money laundering and other types of crimes. In addition, research on various methods of detection started to become the primary area of focus for many scholars.

In subsequent research, it may be possible to do a comparison examination of the detection methods utilized by nations all over the world. In addition, a comparison analysis of the methods that various service providers follow when reporting suspicious transactions to promote uniformity and effective preventative measures. Research into the effects of having a high level of spiritual intelligence might also be a topic of interest to look into.

The evaluation of studies that are offered here is not comprehensive; rather, it is only an initial attempt to inspire more research in the field so that the topic of money laundering can remain at the center of attention. The fact that just a small number of empirical research were used is one of the limitations of the study. Even though there are certain limitations to this study, it nonetheless provides scholars working in the field and beginner researchers with useful information and assistance in a practical setting by developing a research agenda for further investigation. This study shows that most of the research focuses more on the relationship of money laundering with other offenses and detection methods while lacking an understanding of the intricacies of money laundering itself and the relevant rules and regulations. Therefore, future research should delve deeper into the foundational aspects of money laundering, including the legal frameworks, regulatory measures, and the practical challenges faced in enforcing these regulations. Addressing this gap will provide a more comprehensive understanding of money laundering, aiding in the development of more effective prevention and intervention strategies. In conclusion, this article is a great resource for individuals working in the field of money laundering who are interested in gaining a deeper comprehension of the present scenario.

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The Determinants of Supply Chain Performance in Manufacturing Industries: A Case Study of Proton Malaysia

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Abstract: This study examines the key elements that significantly impact supply chain performance in Proton Malaysia, a prominent participant in the automotive sector in Southeast Asia. The objective is to understand the impact of crucial factors on Proton's supply chain's performance, including information quality, information technology, information sharing, big data analytics capacity, supply chain integration, traceability, and agility. The study used a qualitative research methodology to examine Proton's supply chain dynamics, focussing on its strategic collaboration with Geely and the incorporation of new technology. Both primary and secondary data are utilized for analysis. The results demonstrate that Proton's focus on up-to-date information, sophisticated analysis, and robust supplier connections has greatly improved its ability to respond quickly and effectively to operational challenges and maintain its ability to recover from disruptions. Furthermore, the research emphasizes the significance of supply chain agility and integration in effectively responding to market fluctuations and reducing risks. The findings indicate that Proton must consistently engage in technology and supply chain innovation to retain its competitive advantage and successfully traverse the intricate nature of the global automobile market. These lessons apply to Proton and other manufacturing enterprises aiming to optimize their supply networks in a progressively dynamic and linked environment.

Keywords: *Supply chain performance, information technology, information sharing, supply chain traceability, supply chain agility.*

1. Introduction

In the dynamic and ever-changing world of international business, the effectiveness and ability to recover a manufacturing industry's supply chain have become crucial factors in gaining a competitive edge and ensuring long-term sustainability. This is particularly apparent in the automobile sector, distinguished by complex supply chains, intense rivalry, and continuous advancement. An organization's capacity to efficiently oversee its supply chain can substantially influence its operational efficiency, market flexibility, and overall achievement. Automotive manufacturers working in dynamic and turbulent marketplaces face the constant challenges of globalization, technical innovation, and regulatory changes (Christopher, 2016).

Proton Malaysia, founded in 1983 as the first car maker in the country, provides a fascinating example for analyzing the intricacies and difficulties of supply chain management (SCM) in the manufacturing industry. At first, Proton received substantial assistance from the government, such as imposing tariffs and implementing policies that aimed to safeguard the young firm from global competition. Nevertheless, the landscape was significantly transformed during the late 1990s due to the relaxation of trade rules and Malaysia's inclusion in the ASEAN Free Trade Area. Proton faced significant competitive challenges from global automotive companies due to these changes, which required a strategic restructuring of its supply chain activities (Wad & Govindaraju, 2011).

To overcome these issues, Proton began a process of adaptation and transformation. The corporation recognized the need to adopt advanced technologies to compete, integrate novel methodologies, and reorganize supplier relationships. Industry 4.0 technologies such as automation, data in real-time analysis, and lean production systems highlighted improved flexibility and responsiveness of Proton's supply chain and its efficiency technologies (Büyüközkan & Göçer, 2018). These technologies helped better demand forecasting, inventory control, and cost management, which in turn affected the supply chain in general (Christopher, 2016). The most significant event that emerged in the company's journey toward growth was in 2017 when it formed a strategic alliance with Geely Automobiles, a prominent Chinese company. This partnership provided necessary fundraising and brought important experience in managing the supply chain as well as new opportunities to enter new global markets for Proton (Wad & Govindaraju, 2011). The collaboration also

presents how this change in ownership affected Proton's supply chain management (SCM) since it began to integrate more international-oriented strategies and procedures. They ensured that this highlighted the fact that strategic partnerships are very crucial in enhancing the ability of supply chains particularly given the aggressive and global nature of the automotive industry. The changing legislation that surrounds the industry in which Proton operates has affected this organization's supply chain, in addition to technologies and strategic factors. Trade policies, tariffs, and FDI have shaped firms in the automotive industry, including Proton's operations and strategies (Srivastava, 2007). However, other than cooperation, the complementary conflicts in the political and economic system of Southeast Asia, such as trade agreements and market volatility, have posed huge competition and challenges for Proton to be extremely flexible and strategic in the management of its supply chain. The importance of analyzing and identifying the factors that affect supply chain performance (SCP) is underlined by an even greater number of factors within the external environment that have called the reliability and flexibility of global supply chains into question and their capability to learn and respond to the disturbances.

Major events like the Asian financial crisis of 1997, the global economic recession of 2008, and the COVID-19 pandemic have also highlighted the need for a supply chain that has not only efficiency but also agility (Flynn et al., 2010). Proton has leveraged these disturbances to design its strategies toward building a stronger and more flexible supply chain to survive external and internal pressures. This research aims to conduct an extensive analysis of factors that affect the performance of the supply chain in the manufacturing firm, especially in Proton Malaysia. The objective of this study is to examine the elements that influence the supply chain performance The research offers a systematic understanding of the development of Proton. It aims to deepen the understanding of the strategies that can enhance supply chain performance in a world that is increasingly connected and volatile.

Problem Statement

Proton, the national car manufacturer in Malaysia, has faced severe challenges in maintaining an efficient and well-competitive supply chain that affects the company's performance with significant and long-term effects on its enterprise firm's performance (Tong et al., 2012). Government support and advantages have proved to be a problem for Proton as it has limited the ability to develop a competitive and independent supply chain. Proton's major problem is that it has not successfully integrated into the global automotive supply chain even though it has been operating for more than two decades and has followed many industrial policies. This is mainly because it lacks access to the necessary technology and experience from its Japanese counterpart (Natsuda et al., 2013). Although Hudin et al. (2017) did not focus on the Proton company, the findings highlight the numerous weaknesses of the supply chain system to the automotive sector in Malaysia that could have an impact on Proton.

Suhaidi (2022) emphasizes that DRB-Hicom and its subsidiary Proton Holdings Bhd faced notable difficulties with its supply chain during the initial quarter of 2022. The main problem was the lack of microchips, a vital element in contemporary automobiles. The shortages, probably caused by disruptions in the global supply chain, immediately affected Proton's ability to produce, resulting in a decrease in income despite the continuous exemption of sales tax for new vehicles. The article also cites the extensive floods in the Klang Valley in late 2021 as a significant cause of the supply chain difficulties. Although not expressly mentioned, the floods probably caused disruptions in logistics and potentially inflicted damage on infrastructure, further affecting Proton's supply chain. Anazawa (2021) discusses the overall situation of vehicle manufacturing in Malaysia, for example, but does not explicitly identify specific issues related to Proton's supply management. However, it does point to many factors that can threaten the automotive businesses in Malaysia. It may be declared that the situation in Proton Malaysia is rather critical, as it imports most of the components from other countries. This can be a problem if there are conflicts in global transportation or international trade. Furthermore, there is a lack of efficiency in the development of new technologies. This could limit the company's capacity to learn and adapt to modern manufacturing and supply chain processes. The other issue of concern emitted from the government regulations is that as much as they may have good intentions to help in the progress of the business, they may delay this progress. Their ability to acquire the latest innovations or practices from foreign counterparts may be limited by the existing policies that include import prohibitions or restrictions on local content. In addition, the current supply chain plans used by Proton must be changed to enhance the company's capacity for handling the issues related to technological advancement and the reliance

on foreign parts. This will help Proton to be able to adjust to market needs and prevent itself from lagging in the competitive car manufacturing industry.

However, Zulkepli et al. (2015) oppose this by stating that to accomplish this, Proton should attempt to establish stronger partnerships with domestic and international suppliers as well as invest in technologies that can lead to optimization in manufacturing and supply chain management activities. Due to strengthened global competition as well as advancement in fast-paced technologies in the modern world, all manufacturing sectors must upscale their supply chain functions to maintain market competitiveness and optimize performance. In these sectors, supply chain performance, or SCP, is a measure of profit, customer satisfaction, or efficiency. Although the concept of supply chain optimization is highly regarded in the 21st-century business environment, many manufacturing organizations like Proton Malaysia in the automobile industry face many problems in the optimization of their supply chain. A few antecedents are known to affect supply chain performance (SCP) in manufacturing industries. But how these determinants affect or moderate each other, in particular information quality (IQ), information technology (IT), information system (IS), big data analytics capabilities (BDAC), supply chain integration (SCI), supply chain traceability (SCT), and supply chain agility (SCA) remain ambiguous. Relatively, Proton Malaysia, which is among the leading automobile companies in Malaysia, provides a good example. The company has developed several supply chain management initiatives; nevertheless, it suggests that the performance of such measures has not been consistent and standardized. This difference draws attention to a crucial knowledge gap regarding the precise roles that each of these elements plays either alone or in combination with supply chain performance, specifically in the highly competitive environment and rapidly evolving changing automotive industry.

According to research, enhancing coordination and flexibility within supply chain networks depends critically on the quality and exchange of information (Lee & Whang, 2000). Similarly, it is well known that supply chain process integration improves operational effectiveness (Flynn et al., 2010). Improvements in technology, such as the use of big data analytics and sophisticated information technology systems, are becoming more widely acknowledged for their ability to completely transform supply chain management by facilitating improved decision-making and predictive capacities (Hudin, 2017). But there is also more to learn about applying and effectively using these technologies to improve supply chain traceability and competence, especially in industrial contexts such as Proton Malaysia. To determine how these factors, which are information quality, supply chain integration, information technology, information sharing, supply chain traceability, supply chain ability, and big data analytics capability, affect the performance of Proton Malaysia's supply chain, this study aims to close these important gaps. It is anticipated that the results will provide focused insights that could direct the development of strategic decisions and policies meant to improve the responsiveness and efficiency of the supply chain. By examining these relationships in the context of Proton Malaysia, the research will add to the growing body of knowledge on supply chain management in the manufacturing sector and provide other businesses with comparable difficulties with a more sophisticated understanding.

3. Research Methodology

This study involves a literature review investigating the factors influencing supply chain performance (SCP) in the manufacturing sector. To achieve this purpose, a thorough review of pertinent literature and past research is carried out, gathering information from credible scholarly journals, books, conference proceedings, reports, websites, and numerous commentaries.

4. Literature Review

This section explores several variables proposed by researchers, including supply chain performance, information quality, information technology, information sharing, big data analytics capability, supply chain integration, supply chain traceability, and supply chain agility.

Supply Chain Performance (SCP): SCP is a complicated concept that has been carefully studied in numerous contexts in academic works. Fawcett and Magnan (2002) discovered the theory and practice of supply chain integration and pointed out the significance of strategic alignment in improving SCP results. Miocevic and Crnjak-Karanovic (2012) stated that SCP depends on management's capability to integrate strategic goals

among supply chain parties. Peng et al. (2020) stated that the degree to which the organization uses its resources can be utilized to measure the SCP level, thereby increasing the efficiency of its processes. Li et al. (2006) study the influence of supply chain management practices, precisely the implementation of technology, on competitive edge and organizational performance. Carter and Rogers (2008) offer an all-encompassing sustainable supply chain management model, highlighting the need to integrate environmental, social, and economic aspects in SCP assessment. (Flynn et al., 2010) evaluate the conditional outcomes of supply chain integration on operational performance, highlighting its complex effect. Prior studies have characterized SCP as the capacity of the supply chain to 1) provide quality products and services in exact quantities and at specific times and 2) reduce the overall costs of products and services for the end consumers of the supply chain (Green & Inman, 2005). Furthermore, Chen, Sohal, and Prajogo (2013) investigate the contribution of innovation in reducing operational risks in the supply chain, advocating for cooperative strategies to stimulate innovation and enhance SCP results. SCP is an essential element of manufacturing industries' competitiveness since efficient and effective management directly impacts successful supply chain operations (Lee & Whang, 2001).

Information Quality (IQ): Information quality (IQ) is a fundamental cause of supply chain performance (SCP), influencing decision-making processes and operational efficiency within the supply chain. High-quality information decreases uncertainties and enhances cooperation among supply chain participants, improving overall SCP (Zhou et al. (2007). Gunasekaran et al. (2004) discovered that timely and accurate information greatly improves overall performance by assisting organizations in anticipating market demands and modifying supply chain activities accordingly. Trkman et al. (2010) highlighted the strategic importance of information quality in building a strong supply chain capable of quickly adjusting to disturbances and preserving uninterrupted operations. (Chen et al., 2015) in their research on how the strategic use of information impacts supply chain capabilities, found that IQ positively affects both the strategic and operational aspects of SCP.

Information Technology (IT): IT is a significant factor in improving SCP so that the supply chain network can better cooperate and operationalize itself to function effectively and effectively. The massive literature review focusing only on the integration of IT in supply chain management pointed out various advantages such as Improved operational performance, cost reduction, and improved consumer satisfaction. The use of IT in the supply chain has been well studied and explored. It has been shown to offer different values, including operational values, cost efficiencies, and positive customer value. Carr and Smeltzer (2002) explain further that IT also acts as a business platform for making relations with suppliers, creating computer-to-computer connections and relations with information systems, and integrating suppliers through the exchange of electronic data. It refers to the physical and conceptual components of computer organizations that facilitate sustainable business internal operations, management, and strategy (Thong & Yap, 1995). According to Prajogo & Olhager (2012), another key area discussed was the enhancement of the strategic alignment between IT and business goals as essential to increase the value of IT to enhance SCP.

Information Sharing (IS): Kwon et al. (2017) described IS as essential for developing connections that stimulate communication and increase trust and mutually shared goals. Mathu (2019) examined the impact of information technology (IT) on information sharing in the supply chain management practices of small and medium-sized enterprises (SMEs) in South Africa. The study revealed that IT deployment in these SMEs significantly boosted information sharing by facilitating better communication between suppliers and customers. Dominguez et al. (2018) developed a strategy for adopting partial IS among supply chain retailers to enhance performance. Chen & Huan (2021) highlighted the importance of IS in the re-manufacturing sector for tracking end-of-life products. Moreover, Wijewickrama et al. (2021) discovered that IS is crucial in reverse logistics, presenting more complexity and uncertainty than forward logistics. Additionally, Chen et al. (2024) analyze the interplay between IS and risk management in supply chains disrupted by pandemics, suggesting that practical IS is necessary for managing risks associated with supply chain interruptions.

Big Data Analytics Capability (BDAC): Recent scholarly research has focused on integrating BDAC with SCP, demonstrating a growing awareness of its strategic significance. After studying how BDAC influences operational effectiveness, Saggi and Jain (2020) concluded that enhanced analytics capabilities can greatly improve supply chain decision-making. In the same way, Zhang et al. (2021) discovered that BDAC improves supply chains' agility and reactivity, enabling quick changes to shift consumer needs and market conditions. Li

et al. (2022) claim that using predictive analytics in supply chain management enables the optimization of inventory management and anticipating demand changes, which lowers costs and increases customer satisfaction. The significance of BDAC for enhancing supply chain traceability and transparency has been studied by Kumar and Singh (2023). This is important for sectors like food and pharmaceuticals, where safety and compliance are critical. They emphasized that following a product's life span from production to distribution requires real-time data analytics. Ramesh & Raj (2024) stated that BDAC provides for improved risk management by giving tools for anticipating and mitigating supply chain interruptions. Johnson & Marquis (2024) discussed how load balancing and logistics route optimization might be achieved by integrating machine learning algorithms with big data technologies, enhancing supply chain operations' general effectiveness and sustainability.

Supply Chain Integration (SCI): SCI is the degree of integration between the internal business operations and a supply chain's partners, suppliers, and customers (Flynn et al., 2010). Prior studies have extensively shown the crucial function of SCI in augmenting SCP. According to Thompson and Frazier (2020), the implementation of integrated supply chains leads to enhanced coordination and information exchange, hence resulting in a notable improvement in operational efficiency and adaptability to market fluctuations. Wu et al. (2021), by reducing reliance on outside suppliers, vertical integration of supply chains helps businesses reduce costs and enhance service standards. Similarly, Park and Patel (2022) concluded that better SCP is achieved through more synchronized activities made possible by integration across logistics, information systems, and human resources. Companies with higher levels of integration are more successful in implementing sustainable practices because they have more visibility and control over the supply chain (Lim & Carter, 2023). Harper & Green's (2024) study points out that supply chains need integration to be resilient and agile, especially in unstable markets. Khan et al. (2024) studied how technology integration, such as ERP systems, can improve SCP. They observed that these systems increase process efficiency, demand forecasting, and inventory management accuracy.

Supply Chain Traceability (SCT): The importance of SCT in improving existing supply chains' efficiency, compliance, and transparency is becoming more broadly recognized. Moe (2014) emphasizes the importance of boosting product safety and lowering the dangers of fake goods. SCT is as significant in appropriately supporting a firm in managing the total development of assistance. As stated by Cousins et al. (2019), this function entails the continuous observation and monitoring of a product from its sources to the time it gets to the final consumer. Companies that have enhanced their SCM practices often leverage technology for information interchange at multiple levels to ensure their supply chain managers can monitor their partners' offerings in the long term (Núñez-Merino et al., 2020). Donnelly et al. (2018) explain how one can learn about the technical enhancements to the traceability systems that can enhance the data security and the transparency of the supply Chain. Blockchain implies a trustworthy record-keeping method that accurately registers procedural activities in a centralized and irreversible way. This makes it possible for all the stakeholders involved in supplying a product to have an accurate and detailed understanding of the supply process to enhance traceability (Casino et al., 2021). According to Aung and Chang (2014), traceability systems support decision-making since they provide a detailed history and origin of items.

Supply Chain Agility (SCA): SCA acknowledges the outside information on the change and distraction of end-user preferences as well as competitive activities to modify decisions and actions (Tarafdar & Qrunfleh, 2017). Sangari et al. (2015) mentioned that supply chain agility (SCA) should be considered critical for achieving competitiveness, given that the current business environment is unpredictable. According to Aslam et al. (2018), SCA can be described as the capability of reacting to unusual shifts in the supply and demand forces. McGaughey (1999) defined agility as the capability that an organization possesses compared to its capability to transform as quickly as possible in reaction to extrinsic conditions. From the perspective of Swafford et al. (2006), it can be argued that an SCA enhances performance because it reacts promptly to fluctuations within the market and customers' needs. Lee (2004) cited that supply excellence operations must have the capability of being sensitive and responsive for the achievement of flexibility in addressing uncertainties in the supply environment. Christopher and Towill (2001) particularly point out the variability management issue that necessitates integrated implementation of both lean and agile paradigms.

Underpinning Theory

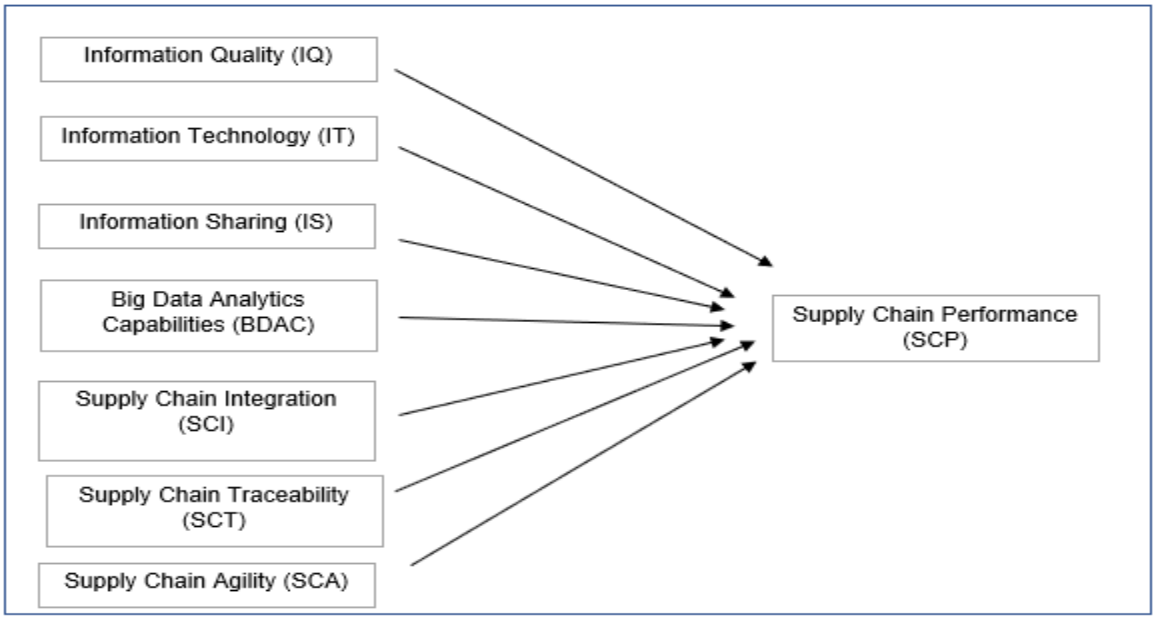
Based on the study, a theory has been applied to the factors underpinning SCP. This theory has been employed in this investigation. Consequently, this study aims to evaluate the proposed theoretical framework by utilizing this theory.

Resource-Based View (RBV): The resource-based view (RBV) is a fundamental concept for understanding how a company's distinct resources, such as information technology and big data analytics skills, contribute to its competitive advantage and performance results. According to RBV, companies with valued, uncommon, hard-to-duplicate and non-substitutable resources will have a sustained competitive advantage (Barney, 1991). This theory can effectively be used to analyze how Proton Malaysia utilizes technologies to enhance its SCP.

Information Processing Theory (IPT): IPT is a framework for assessing how businesses handle data and information flow throughout their supply chains. According to IPT, the ability of an organization to meet information processing demands with its available resources determines how effective the organization will be (Galbraith, 1973). This idea can be especially helpful when examining how Proton Malaysia's supply chain's responsiveness and efficiency are impacted by information sharing, information quality, and general information flow, all made possible by IT systems.

Theory of Supply Chain Integration: To achieve greater efficiency and effectiveness, the Theory of Supply Chain Integration emphasizes the strategic alignment and interlinking of processes and activities across the supply chain (Flynn et al., 2010). It makes the case that integrated supply chains are more suited to manage resources and react to market needs effectively. The study of how supply chain traceability and integration affect the overall effectiveness of Proton Malaysia's supply chain can be guided by this idea.

Figure 1: Proposed Research Framework:



The research framework of this study proposes that Supply Chain Performance (SCP) can be enhanced synergistically by the interaction of the following independent variables: Information Quality (IQ), Information Technology (IT), Information Sharing (IS), Big Data Analytics Capabilities (BDAC), Supply Chain Integration (SCI), Supply Chain Traceability (SCT), and Supply Chain Agility (SCA). This interaction suggests that when these components are successfully coupled, the influence on SCP is a product rather than merely a simple sum. For instance, the accuracy and accessibility of data can be enhanced by combining high-quality data with complex IT systems. The distribution of this data across a single supply chain can significantly increase operational effectiveness and agility. Furthermore, using big data analytics to interpret this high-quality,

seamlessly connected information can result in better predictive insights and strategic decision-making. Therefore, the model suggests that the interplay of these factors creates a robust setting in which every component reinforces the others, resulting in a total improvement in SCP, thereby representing a system in which the total exceeds the sum of its parts.

Discussion

Proton Malaysia had faced some issues and challenges through supply chain management that reduced their performance. The major concerns of the company were forming a strong base of suppliers and the issue of trade-off between quality and price. Additionally, with a clear social policy of targeting specific suppliers while at the same time disregarding the merit of suppliers, its supply chain also became complex. Consequently, the company was left wide open to issues to do with international competitiveness (Tong et al., 2012). Furthermore, there is a high tendency to have domestic suppliers who are even technologically less capable than some of their global counterparts. This hinders Proton's ability to optimize its supply chain procurement and flexibility in responding to the rapidly changing market demands in the automotive industry. This shows the need to have a better competitive supplier in the industry to foster innovation and to have more resilience. Supply chain performance in Proton is highly dependent on the degree of information technology, information exchange, and information quality. These components enable the fast and continuous flow of accurate and timely information between people or teams, enhance decision-making processes, and enhance organizational performance (Tong et al., 2012). The tremendous importance of the information quality for the supply chain of Proton cannot be overemphasized here because it involves the decision that directly impacts the chain supply network. Therefore, demand forecasting, inventory management, and overall supplier coordination should be done optimally to maintain a competitive advantage in the long run. These processes are aided by high-quality information. Moreover, sharing information across the SCM and with suppliers and partners requires them to endorse Proton's strategic direction. More transparency ensures very low chances of misunderstanding, hence cooperation, improving the supply chain (Christopher, 2016).

The implementation of big data analytics helps Proton to incorporate useful information from large data sets. It also allows the firm to forecast market trends and adjust its supply chain processes to meet this new competitive landscape, which is important due to the dynamic nature of the industry (Mohamad & Kari, 2008). Further, there should be a better-aligned supply chain system that can effectively reduce the gap between local and overseas suppliers. Several studies have established that foreign suppliers often possess better technologies and capabilities than local suppliers, thus making worse competitiveness issues that affect Proton. The incorporation of complex digital solutions has greatly improved the supply chain management and the overall operations of Proton. The company has managed to attain real-time visibility in the supply chain activities through the adoption of ERP systems and digital supply chain platforms. This has enabled them to counter any interruption that might have occurred without so much delay. Furthermore, through its increased big data analytics capability, Proton's corporation has been able to review large volumes of data to discover new patterns, improve its operations, and predict future supply chain challenges. There are recommendations that overall supply chain efficiency can be increased by using big data in decision-making by Proton (Büyüközkan & Göçer, 2018).

Both supply chain integration and supply chain traceability have similar importance in increasing the ability of Proton's supply chain to become more resilient. Proton needs to enhance its capability to compose disruptions and make new opportunities as the company may facilitate effective interaction between suppliers, manufacturers, and distributors of its products. This will also assist in guaranteeing that it conducts its affairs meaningfully and that its products reach the consumers satisfactorily. In addition, the flexibility of the supply chain of Proton needs to be enhanced to quickly react to the changes in consumers' requirements and the general conditions of the market. It must fill this gap, especially given the current situation where the free trade rules are a sore issue, and there is stiff competition from the automakers in the region. The case of Proton provides a good lesson on the importance of being not only a passive consumer who relies on local suppliers but also an active partner in the global value chains and networks. These alliances can help to introduce innovations and the world's experience and, therefore, decrease the differences between local and overseas suppliers' performance. Finally, it contributes to the development of an enhanced supply chain environment. Supply chain flexibility is another area where Proton needs to adapt to market trends and other issues affecting the organization, including the shift in customer preference or the effects of the COVID-19 pandemic. Such

changes are opaque and complex and, therefore, result in Proton's adaptable supply chain that allows it to respond to these changes efficiently while still satisfying its clients and avoiding operational hiccups. This flexibility of Proton is a result of social capital in the form of investments in information technology and supply chain integration, thus allowing the company to apply dynamic capability and counter-adjust to match the changing of its supply chain strategy in real-time, as suggested by Christopher (2016).

5. Implication of Study

The study's implications relate to how the findings can be applied in practice, particularly for Proton Malaysia and other similar manufacturing companies.

Theoretical Implication: This study emphasizes the essential role of integrating technological advancements and strategic management in supply chains. This research broadens the scope of the firm's Resource-Based View (RBV), arguing that unique capabilities like information quality, technology, and big data analytics are key drivers of competitive advantage (Barney, 1991). Supported by the Information Processing Theory, which contends that efficiently managing information flow is essential to reduce uncertainty and increase responsiveness in volatile markets, it further emphasizes the significance of capabilities for information sharing and integration (Galbraith, 1973). The research also incorporates elements of the Dynamic Capabilities Framework, proposing that to improve performance, the supply chain's traceability and agility should dynamically interact with both internal and external uncertainty (Teece et al., 1997). Analyzing these interactions in a real-world setting adds to the theoretical discourse by showing how multi-dimensional integration affects manufacturing supply chains' operational efficiency while supporting pre-existing theoretical frameworks.

Managerial Implication: This research offers numerous actionable insights for managers in the manufacturing industry, especially those aiming to boost supply chain efficiency and adaptability. The results indicate that enhancing information quality and technological infrastructure through strategic investments can significantly elevate performance by facilitating precise forecasting and efficient resource distribution (Li & Lin, 2006). In addition, enterprises should anticipate changes in the market and take proactive measures by cultivating a robust culture of information sharing and developing big data analytics competencies (Wang et al., 2016). Furthermore, supply chain processes are strategically consolidated, and traceability is improved. These developments improve operational transparency and promote agility, enabling businesses to swiftly adapt to demand or supply chain disruptions (Christopher & Peck, 2004). It is recommended that managers consider these components essential to their operational and strategic planning to guarantee a sustained competitive advantage and improved supply chain efficiency.

Policy Implication: The present study underscores the necessity of enacting policies that facilitate manufacturing enterprises' use of advanced technology and optimal supply chain management strategies. Policies that provide incentives for developing and applying advanced information systems, enhanced capabilities in data analytics, and comprehensive supply chain integration can significantly increase the manufacturing sector's overall productivity and competitiveness. It is recommended that policymakers focus on creating frameworks that facilitate information sharing and technological integration throughout supply chains. These frameworks may be created by tax breaks, grants for new technology, or more robust intellectual property protections to drive innovation (Chen et al., 2007; Fawcett et al., 2008). Moreover, legislative support for supply chain traceability system standardization can help improve transparency, lower risks, and increase market responsiveness to changes, ultimately leading to more robust supply chains.

Conclusion

In conclusion, the supply chain performance in Proton is positively influenced by the organization's capability in information quality, information technology, information sharing, big data analytics capability, supply chain integration, supply chain traceability, and supply chain agility. The mutual integration of these areas emphasizes the constant development to achieve sustainable efficiency and competitive advantage, especially in a context of great change, as is automotive; observing the relationship in the supply chain affects organizational performance and customer satisfaction. In addition, more focus should be put on the acquisition of a local network of suppliers capable of using high standards of quality and technologies. Therefore, Proton

is not only improving its efficiency and effectiveness of operations but also strengthening its capability to adapt to new conditions and sustain and compete more effectively in the future (Simpson et al., 1998) (Tong et al., 2012) (Mohamad & Kari, 2008). In addition, agility has also been seen to be adopted by Proton, especially through the organization's efforts to adopt just-in-time inventory management practices. One benefit of that approach is the reduction of various losses and the increase in the level of product turnover; as a result, the company can efficiently distribute resources according to customer needs (Simpson et al., 1998). Concerning such strategies, there is the need for Proton to conduct periodic assessments of its supply chain skills and ensure that they align with the current international standards to be sure that all forms of resistance are well handled through comprehensive engagement with the suppliers and customers. This will not only increase efficiency but also would make the improvement permanent and sustainable in the future. Critical factors that are vital for the success and performance of Proton Malaysia's supply chain are quality information, advanced information technology, sound information sharing and use of big data, supply chain linking, end-to-end traceability, and operation agility. Proton has enhanced its efficiency, durability, as well as competitiveness within the worldwide automotive market through a tactical focus on these elements. That way, through the implementation of technology and data analysis, Proton has benefited from operation efficiencies and predictions of disruptions. Also, the supply chain and integration that the company possesses make it nimble and able to respond to changes. It is, therefore, important for Proton to sustain its investment in these areas due to the complexity that is being observed in the global market.

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Issues and Challenges of Online Counseling Services During Covid-19 Pandemic

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Abstract: The COVID-19 pandemic has dramatically impacted the quality of counseling services. During the pandemic, e-counseling emerged as a vital and transformative approach to mental health support. With social distancing measures and lockdowns restricting in-person interactions, traditional counseling services faced significant challenges in maintaining accessibility and continuity of care. A significant effect can be seen in counselors' online counseling services through technology. The study aims to investigate the issues and challenges that arise in online counseling services and identify the advantages and disadvantages of these services. A quantitative approach was carried out when a questionnaire was sent to 100 registered counselors across the country, asking two (2) main questions, namely the experience of issues and challenges they experienced in conducting online counseling sessions and their opinions on the advantages and disadvantages of online counseling. These answers are collected and then analyzed with the support of previous studies. The study findings found that confidentiality issues and managing disabled clients are among the main challenges.

Keywords: *Efficiency, disabled people, technology, advantages, disadvantages, Madani, Penang Vision 2030*

1. Introduction and Background

Yusof, et al (2022) believes that the COVID-19 pandemic significantly impacts the quality of counseling services in Malaysia and worldwide. Even though the Malaysian Counseling Board has set guidelines to ensure the quality of counseling services is implemented perfectly for all registered counselors, the COVID-19 pandemic forced a change in counseling sessions due to the Movement Restriction Order imposed on all Malaysian citizens (Ab Latif et al., 2021). The relevant way includes the use of technology by counselors, and the challenge can be seen as to whether the use of technology, such as online counseling, can meet counseling ethics, therapeutic atmosphere, and service medium.

The British Association for Counseling and Psychotherapy has defined online counseling services as an alternative counseling process in the text-based virtual world on the Internet, either through email or chat rooms (Richards & Vigano, 2012). Zainudin et al (2022) on the other hand, thinks that online counseling services are a process of interaction between counselors and clients who are in different locations and use internet facilities to communicate. American Psychiatric Association (2022) highlighted the current definition of online counseling as providing psychological support and mental health services through digital platforms, utilizing various communication tools like video calls, phone calls, emails, and text messaging.

This method allows clients to engage in therapy sessions from remote or convenient locations, offering greater accessibility and flexibility compared to traditional in-person counseling. Novella & Samuolis (2022) also detailed that online counseling services are a new method of helping relationships because they use the Internet's advantages to connect counselors and clients synchronously and asynchronously. The mediums used to run this virtual counseling session are written (text), voice (audio), audiovisual, and website.

Although the Counsellors Act 1998 defines counseling as a systematic helping relationship process that must involve the counselor and the client in the same physical space, this concept began to change when counselors began to see the therapeutic potential in the internet space as an opportunity to expand their services (Geller, 2023). In other words, the counseling process is no longer limited to a face-to-face meeting between the counselor and the client in a room; instead, it is enough to be in front of the screen.

Among the benefits that can be offered in this online counseling service is access to counseling for clients who live in remote and remote areas, disabled clients who have difficulty moving (Chester & Glass, 2006), clients who have responsibilities at home such as taking care of small children or parents (Suranata et al, 2020), clients who are always on the move due to tasks and work factors, clients who care about anonymity or do not want to know their identity, and clients who want to choose a counselor according to specific expertise.

However, previous research has shown that this service has caused some issues and challenges. These include a lack of face-to-face interaction, technical issues, privacy invasion concerns, customer comfort, digital fatigue, and a limited scope of practice. In Malaysia, the COVID-19 pandemic prompted a shift from in-person to online counseling services. For example, the Ministry of Women, Family, and Community Development launched the Talian Kasih 15999 online counseling service. This service, which addresses issues such as abuse, protection, and welfare, received positive feedback, with over 1,000 counseling cases reported from March to August 2020, highlighting the demand and effectiveness of online counseling in ensuring continued mental health support during the pandemic (Ab Latif, et al, 2021)

The national and state governments are very concerned about the mental health of Malaysians, especially during and post-pandemic period. Economic and social problems are proven to worsen existing mental issues at all levels of society. If not taken care of, the number of those who have this mental illness will increase from time to time, affecting the productivity of the individual, family, and society. Therefore, the researcher lists two (2) significant efforts by the national and state governments of Penang to ensure the mental health of Malaysians is stable. The two (2) efforts are the celebration of National Counseling Month 2023 and the Penang Vision 2023.

National Counseling Month 2023

In October 2023, the national government, through the Ministry of Women, Family, and Community, inaugurated the celebration of National Counseling Month 2023 with the theme "Civilised Mind of Harmonious Society." The main objective of the implementation of National Counseling Month is to give recognition to registered counselors for their efforts to provide professional counseling services, in addition to focusing on the role of counselors in dealing with current issues, gutturalizing counseling services for the community, increasing the accessibility of counseling services for the community, and promoting counseling services and the counselor profession as pillars of community well-being.

This aligns with the government's desire to increase public awareness of the benefits of professional counseling services that lead to a harmonious life. Another objective is to provide the community with an understanding of counseling services and hope that Malaysians' well-being and mental health will always be stable.

Penang Vision 2030

Penang Vision 2030 is a state structure plan that aims to prosper the state of Penang as an intelligent, harmonious, and international state. To achieve this goal, the state government is working to improve human capital development through psychological services by empowering individuals, groups, tele-counselors, and e-counselors. Based on this vision, it is clear that the state government is now turning to technology to provide counseling services.

Problem Statement

The rapid adoption of online counseling, accelerated by the COVID-19 pandemic, has brought both opportunities and challenges to the field of mental health services. While online counseling offers increased accessibility to clients in remote areas and those with mobility issues, it also presents significant problems that impact the effectiveness and quality of these services. Among the primary challenges are concerns about confidentiality, as the digital environment may not fully guarantee the privacy of client information, leading to potential breaches of trust between clients and counselors.

Furthermore, the lack of face-to-face interaction can hinder the development of a therapeutic relationship, which is crucial for successful counseling outcomes. Counselors also face difficulties in managing clients with disabilities, as traditional online platforms may not be adequately equipped to meet their unique communication needs. Additionally, the digital divide, technical issues, and the varying levels of counselors'

competence in using online platforms further complicate the delivery of effective online counseling. These challenges necessitate a reevaluation of counseling practices and the development of robust guidelines to ensure that online counseling can meet the ethical and professional standards required in the field.

Research Objectives

The study aims to comprehensively investigate the issues and challenges that arise in the provision of online counseling services while also identifying the advantages and disadvantages of these services. Firstly, it seeks to identify key issues related to confidentiality, data security, and privacy, which are critical concerns in an online setting. Additionally, the study will explore the technological barriers that may hinder effective counseling, such as limited access to devices and unreliable internet connections. The challenges faced by counselors in building rapport and maintaining therapeutic relationships through digital platforms will also be examined.

Furthermore, the study aims to evaluate the competence of counselors in utilizing online platforms, assessing their level of preparedness and the need for additional training or guidelines. On the other hand, the study will identify the advantages of online counseling, such as increased accessibility for clients in remote areas and the flexibility it offers in scheduling sessions. It will also consider the potential for online counseling to reach a broader demographic, including those who may be reluctant to seek in-person counseling.

However, the study will not overlook the disadvantages, such as the absence of non-verbal cues, which are essential for understanding client emotions, and the risks posed by the digital divide, which may disadvantage clients with limited technological resources. Finally, the study will develop recommendations to address these challenges, proposing strategies to enhance the effectiveness and accessibility of online counseling services and suggesting improvements to ensure that ethical and professional standards are upheld in the online environment.

2. Research Methodology

In this research, the methodology is centered on understanding the issues and challenges associated with online counseling services through a quantitative approach. The study involved the distribution of a structured questionnaire to 100 registered counselors from various regions across the country. The selection of participants aimed to capture a diverse range of experiences and perspectives on the subject matter.

The questionnaire comprised two main sections. The first section focused on identifying the specific issues and challenges the counselors faced during online counseling sessions. This could include concerns such as maintaining confidentiality, navigating technical difficulties, or challenges in building rapport with clients in a virtual environment. The second section sought to gather the counselors' opinions on the overall advantages and disadvantages of online counseling. This part of the questionnaire aimed to understand the benefits, such as increased accessibility for clients, and the drawbacks, like the potential loss of non-verbal communication cues.

After collecting the responses, the data was systematically analyzed using statistical tools to identify common trends and themes. The analysis was not conducted in isolation; rather, it was supported by a review of previous studies on online counseling, which provided a contextual background and helped validate the findings. This combination of quantitative data and literature review enabled a comprehensive understanding of the current landscape of online counseling services, the issues faced by practitioners, and the perceived benefits and challenges.

3. Research Findings

Based on the 100 questionnaires that were sent, the researcher received a variety of responses. However, for this study, these responses have been categorized into five (5) main issues and challenges of online counseling services, including:

a) Confidentiality

Confidentiality is a critical concern in e-counseling, as it forms the foundation for trust between counselors and clients. As Chester and Glass (2006) emphasize, maintaining confidentiality is a fundamental ethical practice in e-counseling, and without it, the counseling process cannot proceed effectively. Corey (2013) further highlights that confidentiality is essential for building the necessary trust for successful counseling outcomes. However, the nature of online counseling, where face-to-face meetings are absent and the counselor and client may not even know each other, raises significant ethical concerns. This lack of direct interaction can create uncertainty about the ability to guarantee confidentiality, leading to intense debate within the field (Zainudin & Rong, 2020).

To address these concerns, it is imperative that counselors clearly state their privacy and confidentiality practices on their websites. Clients should be informed about the confidentiality of their discussions by completing a notification form, ensuring that they understand the terms under which their information is protected. Moreover, the code of ethics concerning critical issues must be transparently explained to the client. In cases where the counselor perceives that the client might pose a risk to themselves or others, it is crucial to encourage the client to seek face-to-face sessions to better manage such risks. By doing so, counselors can uphold ethical standards and protect the well-being of their clients in the online counseling environment.

b) Counselor and client introduction

The introduction phase in e-counseling, where the client and counselor first meet and establish rapport, presents several unique challenges and weaknesses compared to traditional in-person counseling. One of the primary issues is the difficulty in creating an immediate and strong connection due to the lack of physical presence. Non-verbal cues, such as body language, eye contact, and even the subtleties of tone and pace, are often diminished or lost in virtual settings, which can hinder the initial bond between the client and counselor.

Another weakness is the potential for technical difficulties, such as poor internet connection, audio or video lags, or unfamiliarity with the digital platform, which can disrupt the flow of the conversation and create an uncomfortable or frustrating start to the session. These disruptions can make it harder for the client to feel comfortable and for the counselor to accurately gauge the client's emotional state.
Additionally, the absence of a physical space dedicated to counseling, like an office designed to be welcoming and private, can impact the client's sense of safety and confidentiality, making it harder for them to open up during the introduction phase. This can delay the process of building trust, which is crucial for effective counseling.

Lastly, clients may feel more detached or less committed to the counseling process when it begins online, as the virtual environment can feel less formal or serious than a traditional face-to-face meeting. This perception might reduce their willingness to engage fully, which can be a significant obstacle to establishing a productive therapeutic relationship from the outset.

c) Handling clients with disabilities

Some counseling services may not be suitable for an online environment, particularly when working with individuals with disabilities. Unlike the general population, people with disabilities such as blindness, deafness, or speech impairments face unique communication challenges that require specialized approaches. Counselors must be adept in the alternative communication methods used by these individuals, such as sign language or braille, to effectively provide support. This necessity for specialized communication can make online counseling less effective or appropriate for these clients.

In an online setting, the impersonal nature of digital communication can exacerbate the challenges these individuals already face. Counselors must approach these sessions with sensitivity, ensuring they listen carefully to the client's expressions and avoid actions that might unintentionally cause harm. Refusing to accommodate their specific needs or failing to provide the necessary support can lead to feelings of rejection or further marginalization.

Counselors must be prepared to accept and address the unique constraints and possibilities that arise when working with disabled clients. This includes choosing appropriate therapeutic theories, such as humanistic or

reality therapy, which are well-suited to addressing the personal experiences and realities of individuals with disabilities. Given the need for such tailored approaches, traditional in-person counseling may often be more suitable for these clients than online alternatives, where the nuances of their needs might not be fully met.

d) Efficiency

Some counselors have expertise in various fields, while others are more inclined to solve specific problems. From the perspective of cultural bias, many counselors do not master cross-cultural counseling techniques. E-counseling challenges the abilities of counselors. This happens when clients of different nationalities from all over the world with a variety of specific problems meet with counselors online. This is where a counselor's ability will be tested (Sue et al., 2022).

This problem can be overcome by setting the conditions and scope of counseling. However, it seems to show a counselor's incompetence. Because of that, some counselors only carry out their professional work within the boundaries of their competence. These boundaries are based on education, training, supervised experience, professional accreditation, and appropriate professional experience. Counselors should acquire knowledge, personal awareness, sensitivity, and skills related to their services when dealing with different types of clients.

Katsopoulou (2015) emphasizes that e-counseling is not confined to websites alone; it encompasses all forms of communication tools, including telephone and social media applications, under the broader definition of e-counseling. This perspective broadens the scope of online counseling, highlighting the importance of various digital platforms in delivering mental health services. Meanwhile, Shaw & Shaw (2006) conducted a review of 166 websites that advertised online counseling services. Their findings revealed that only 88 of these sites met the criteria for genuine online counseling, with the remaining sites being either inactive or merely using online counseling as an advertising tactic. This discrepancy underscores the variability in the quality and authenticity of online counseling platforms, further emphasizing the need for clear definitions and ethical guidelines in this rapidly evolving field.

The development of technology leads to the existence of various types of knowledge in the counseling field. In other cases, uncertified counselors abuse technology by learning counseling without a proper foundation, and hackers may impersonate counselors and obtain confidential information about their clients for profit. Therefore, to ensure that online counseling services are genuinely transparent, a counselor must demonstrate his understanding of this code of ethics by introducing himself by stating their qualifications, licenses, and specializations on the website.

4. Conclusion

The Malaysian Ministry of Health reported in 2019 that 29.2% of Malaysians experienced depression in 2017, highlighting a significant mental health crisis in the country. Among those most affected were teenagers aged 13 to 17, with 10% of this age group expressing suicidal thoughts within the same year. This alarming statistic underscores the urgent need for accessible and effective mental health services, particularly for vulnerable populations such as adolescents.

In response to this pressing need, the Board of Counselors in Malaysia holds a critical responsibility in leveraging available opportunities to provide high-quality counseling services. The integration of online counseling has become increasingly important as it offers a flexible and accessible means to reach individuals in need, particularly in times when in-person services may be limited or inaccessible. This initiative is in line with the broader goals of Malaysia Madani and the Penang Vision 2030, both of which prioritize the physical and mental well-being of all Malaysians. By ensuring that quality counseling services are available and accessible through online platforms, the Board of Counselors can contribute significantly to the mental health and overall well-being of the population, aligning with the nation’s vision for a healthier, more resilient society.

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Formulating A Competency Framework for Accountants on Environment, Social and Governance (ESG) Standards and Finance Digitalization

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Abstract: Accountants are one of the most important professions nowadays because, with their education and experience, they can assist the government in building the nation. However, the recent trend shows that the demand for competent accountants is increasing due to the importance of Environment, Social, and Governance (ESG) standards, coupled with the explosion of financial technology. Unfortunately, current working accountants and recent accounting graduates are struggling to meet these international demands, as employers are finding it difficult to find competent accountants who are knowledgeable about ESG and experts in financial technology. Thus, this paper intends to discuss and propose an accounting competencies framework that meets the needs of industries, supports government aspirations to develop via technological advancement, and balances social and economic development based on ESG principles. It is expected that this competency framework related to ESG and financial technology will benefit the accounting profession and higher learning institutions by allowing them to design more industrial-relevant training and educational qualifications. This paper is significant because it ensures there is no shortage of accountants with ESG skills and knowledge, and it can support a government plan to achieve net zero by 2050.

Keywords: *ESG, accountant, accounting, accounting education, sustainability*

1. Introduction

Due to many natural disasters, extreme weather, swift climate change, environmental pollution, severe corporate fraud, high-profile corruption (Salin et al., 2024), low quality of employment, and unfair trade practices, ESG has become a more important issue in Malaysia. Numerous entities have introduced numerous international and local ESG guidelines, including the Global Reporting Initiative (GRI), Bursa Malaysia Sustainability Reporting Guide, Task Force on Climate-related Financial Disclosure (TFCD), SASB Standard, CDC Investment Works ESG, IFC Performance Standard, United Nations Sustainable Development Goals, Bank Negara Malaysia Climate Change and Principle-based Taxonomy, Paris Climate Agreement, and RAMSus' Sustainability Rating Report. However, complying with and meeting the guidelines' recommendations is difficult for the company and requires specific knowledge. Currently, an accountant is the best and most qualified person to assist companies and governments in meeting ESG standards internationally and locally. This is because the accountant currently oversees the company's financial affairs and annual report, which includes both monetary and narrative reporting that is disclosed alongside the financial statement.

Coupled with the explosion in financial technology (Fintech), including the emergence of artificial intelligence, machine learning, big data analytics, blockchain, cyber security, virtual banking, and digital currencies, the recent trend highlights the critical need for higher skills and competencies among accountants to meet this national agenda. Coincidentally, there is a convergence of ESG and digital finance skills, as technology adoption is also part of the ESG requirements. For example, to reduce paper and hence deforestation, accountants need to execute electronic transactions, which will eliminate the use of paper-based financial records. Additionally, the implementation of integrated accounting and virtual meetings can prevent transportation movement, thereby contributing to a reduction in carbon emissions. The combination of ESG and Fintech competencies is crucial for the industry as a whole, and for the government in particular, as it aids in the development of the country through various policies and guidelines. In Malaysia, for example, ESG and Fintech skills are required to achieve national aspirations of the Malaysia Madani Concept, United National Sustainability Goals (UN SDGs) Number Eight (8) of Decent Work and Economic Growth, 10-10 Malaysia Science, Technology, Innovation, and Economy (MySTIE) of Business and Financial Services, Key Economic Activities (KEGA) of Green Economy (under Malaysia Shared Prosperity Vision 2030), and also related to Malaysia Economy Plan 12 (RMK12) of resetting the economy and advancing sustainability.

Regrettably, many employers struggle to find competent accountants and entry-level accounting graduates to meet the demand for ESG and Fintech knowledge. A recent survey by the ACCA CA ANZ (2022) reveals that 50 percent of accountants do not have the necessary skills to participate in financial technology, while a report by Financial Executive International (2021) reveals that 57 percent of chief accounting officers do not have competencies to integrate ESG reporting with their financial reporting. Another survey among accounting educators in the United States of America also found that only a few departments have formally integrated ESG components into the accounting curriculum, while numerous faculty members have taught ESG topics through their initiative (Simmons, 2024).

This is a worrying phenomenon, as accountants are the backbone of the business's survival due to their presence at all levels of the organization hierarchy (lower, middle, and top management). In addition, the role of the accountant in the business is so crucial, including financial performance analysis, risk management, cash flow budgeting, and assurance. Lack of ESG and Fintech skills among accountants poses a significant risk to the business, as regulators may penalize the company for non-compliance with laws and potentially eliminate it from the market. This is because customers and workers today prefer to engage with companies that prioritize environmental sustainability, social inclusion, and the adoption of green technologies. Moreover, raising capital becomes challenging as companies lacking ESG activities face rejection from shareholders and banking institutions.

Therefore, regulatory bodies such as the Malaysian Institute of Accountants, professional bodies such as ACCA, CIMA, and CPA Malaysia, and higher education institutions must make a significant effort to align their professional accounting training, courses, and qualifications with the requirements set by private and government agencies. This research aims to explore and examine the ESG and Fintech competencies required in the business and government sectors, ensuring that accountants remain relevant and capable of integrating their knowledge and competencies into planning, strategies, processes, operations, decisions, and ultimately, information disclosure. In summary, this paper aims to identify the gaps in the accountant competencies needed for the implementation of ESG and digital finance and to develop a fundamental framework of accountant competencies that aligns with these areas. If we fail to address these issues, it could lead to a rise in unemployment, jeopardize the country's prosperity, and attract foreign investment from nations that are more competitive and have advanced in ESG adoption and the Fintech revolution.

There are several contributions to this study. First, this study will contribute to a better government policy. This research is related to the national priority agenda which is ESG is one of the major themes in the Malaysian government's plan which is on advance sustainability and becoming a carbon neutral country. In addition, this research will help the Malaysian government fulfill its aspiration to transform the country into a high-tech nation and leverage the transformation of technology for the socioeconomic development of the people and the nation. In this context, the role of the accountant is crucial in leading the role of both private and public sectors to fulfill the government's aspirations.

Second, this study involves the development of a new model and framework that outlines the competencies of accountants, taking into account the latest ESG and digital requirements of both practitioners and industries, particularly in the Malaysian business environment. This model can be used by regulatory and professional bodies like the Malaysian Institute of Accountants (MIA), Association of Chartered Certified Accountants (ACCA), Chartered Institute of Management Accountants (CIMA), Bursa Malaysia, Securities Commission, and Bank Negara Malaysia to design their training based on ESG and digital technology requirements. In addition, Malaysian higher learning institutions such as universities, colleges, polytechnics, and education ministries can also use this model to establish more innovative and industry-relevant accounting courses.

Third, an assessment instrument based on the framework can be developed to assess the accountants' competencies required by the industry. This instrument can also be used to create a matrix that illustrates the relative importance of each competency's characteristics. Qualification Agency (MQA)institutions, such as universities and the Malaysian Qualification Agency (MQA), can also use the same tools to measure the relevance of accounting graduates to industry ESG requirements.

2. Literature Review

Overview of ESG

Future sustainability is not the only element garnering emphasis; others include co-prosperity, ethical management, and environmental conservation. As a result, the importance of a company's non-financial performance has increased. Hence, several institutions are adopting ESG indices to assess the nonfinancial operations of firms. ESG is a framework that considers the requirements and potential means of generating value for each organizational stakeholder, and it is intended to be integrated into a company's strategy. ESG is an acronym developed in a 2004 report by 20 financial institutions in response to a call from Kofi Anan, United Nations Secretary-General. As it implies, ESG refers to how corporations and investors integrate environmental, social, and governance concerns into their business models (Gillan et al., 2021). ESG is also a non-financial approach for evaluating a company's performance that encourages corporations to shift from a single aim of profit maximization to several goals of environmental preservation and social responsibility (Yuan et al., 2022).

People are starting to pay more attention to the company's social and environmental performance due to the growing urgency of the threat posed by global climate change, and ESG has inevitably grown to be a significant business activity (Salin et al., 2023). Its goal is to direct investors and businesses toward sustainable development by adopting investment decisions that take environmental, social, and governance (ESG) considerations into account (Renneboog et al., 2008). The European Union (EU) is leading the world in ESG practices and institutionalization of policies, and since 2018, the Non-Financial Reporting Directive (European Parliament, 2014) has made it mandatory for companies with 500 or more employees to disclose important ESG-related information and expanded its application by issuing the revised Corporate Sustainability Reporting Directive (E.U. Commission et al., 2021) in April 2021. Since President Biden's inauguration in 2021, the United States has declared ''2050 Net-Zero'' and is actively enhancing its system to promote ESG practices, strengthen human rights, respond to climate change, and enhance ESG disclosure mechanisms. In addition, the UK enacted a company law that would make it mandatory to disclose all corporate ESG information step by step by 2025 and CSR has been made mandatory in India. Furthermore, Korea requires all KOSPI-listed companies to disclose ESG data by 2030 (Lee and Kim, 2023). As a result, as of June 2021, 137 countries had signed the carbon neutrality statement, and organizations and nations around the world continue to work towards ESG in various ways (Chowdhury, 2012).

ESG has also become a crucial activity for businesses. As for ESG performance, it has become a key criterion for measuring corporate sustainability levels, especially among investors, corporations, and governments. Additionally, over the past few decades, the worldwide financial markets have experienced exponential growth in sustainable investment. For example, by 2021, a total of 3,826 person responsible investor (PRI) signatories had signed on to the United Nations Principles for Responsible Investment, representing an approximate 20-fold increase in total assets in 15 years. ESG not only increases stakeholders' trust in the company but also lowers the cost of financing, improving corporate financial performance (Friede et al., 2015).

The relationship between technology or digital and ESG

The integration of technology and digitalization into ESG practices has the potential to create positive impacts on society and the environment. Several studies have found that technology and digitalization can play a significant role in promoting ESG practices. Fang et al. (2023) found that digitization (using digital technology) improves the ESG performance of Chinese companies that are not politically connected and located in regions with high-quality institutions. This is because digitization lowers agency costs and enhances goodwill. However, the study did not find a significant improvement in environmental performance. The results remain consistent even after using different measures of digitization, ESG scores, and estimation methods.

According to the OECD's case study report (2019), blockchain can be a digital enabler across the infrastructure value chain to achieve sustainable infrastructure services. However, blockchain technology is not typically associated with being environmentally friendly because the first and most well-known application, Bitcoin, requires a lot of energy and produces a lot of carbon emissions. However, this is not always the case, as blockchain can be designed in a way that uses less energy and is more environmentally sustainable (OECD, 2019). Kar et al. (2022) identify in their study that artificial intelligence (AI) can help organizations manage

resources better, share data more effectively, and provide better customer services. In the financial sector, AI can provide personalized services for clients and improve customer care. AI can also predict weather-related power outages and prevent environmental damage by responding quickly.

Furthermore, technology and digitalization can help companies reduce their environmental footprint. Chen and Lee's (2020) study reveals that technological innovation in high-income and high-technology countries can significantly reduce their carbon emissions. Interestingly, this innovation also contributes to the reduction of carbon emissions in neighboring countries that share similar characteristics. Similarly, Xu et al. (2023) investigated 210 Chinese manufacturing companies and discovered that digital transformation, including digital capability and strategy, can promote eco-innovation, such as eco-process, eco-product, and eco-management innovation. This, in turn, enhances sustainable performance. The study also found that eco-innovation partially mediates the relationship between digital transformation and sustainable performance. Furthermore, many ESG initiatives currently rely on technological innovation. This includes the use of electric vehicles, solar energy, hydrogen energy, renewable energy, bioenergy, carbon capture, utilization, and storage. All these initiatives and efforts serve to support the ESG aspiration.

However, some studies have also pointed out the potential risks and challenges associated with the integration of technology and digitalization into ESG practices. Kar et al. (2022) expressed their concern about the environmental, social, and economic impacts of technology use. For instance, they raised concerns about the ethical implications of AI technologies, the limited human capacity to understand machine language and apply this understanding to problem-solving, the lack of legislation or regulation, and the threat of cyber-attacks. The integration of technology and digitalization into ESG practices has the potential to create significant benefits for companies and society at large. However, careful consideration of the potential risks and challenges is also necessary.

The role of the accountant in ESG

Generally, accountants play an important role in supporting their company, both in management and operation. Based on the International Federation of Accountants (IFAC) and Malaysian Institute of Accountants (MIA), an accountant is responsible for managing the finances, costs, and cash of the company, providing assurance and audit services, performing taxes, and any other advisory services. Besides, accountants also sit at many top levels of organizations, such as CEO, Board of Directors, and Chief Financial Officers, and hold ministerial positions. However, like other professions, professional accountants are increasingly challenged to demonstrate their relevance in the capital market, as well as their ability to evolve and face new challenges.

With the evolution of ESG, which will eventually integrate and be embedded in company operations, the accountant also needs to be ready and equipped with all the necessary knowledge and skills. Accountants, for example, play an important role in promoting ESG considerations in corporate reporting, particularly in terms of the development and implementation of ESG reporting frameworks and strategies. Providing accurate and reliable information to stakeholders is a vital role of accounting in the context of a company's governance (Haniffa and Cooke, 2005). In terms of ESG reporting, accountants combine non-financial information such as green initiatives, social impact, and corporate governance practices with financial information, which is referred to as integrated reporting (IR). Reporting on ESG risks has been a somewhat complicated process due to the demand for different types of ESG information from various types of users (ICAEW Insights, 2021). However, accountants have the right expertise to measure ESG and offer businesses advice on risks and opportunities (Stylianou, 2021).

For example, Manoj (2022) stated that managerial accountants can contribute by enhancing corporate valuation and image by leveraging more voluntary ESG disclosures, as well as playing a key role in the internal audit process in an IR-based ESG setting. Accountants can work closely with sustainability experts, investors, and regulators to develop more comprehensive and effective ESG reporting frameworks. By developing standards and guidelines and promoting ethical and sustainable business practices, accountants can help ensure that ESG reporting is accurate, reliable, and useful for decision-making. To support these efforts, in November 2021, the International Sustainability Standards Board (ISSB) was established and subsequently published IFRS S1 General Requirements for Disclosure of Sustainability-related Financial Information and IFRS S2 Climate-related Disclosures.

3. Impact of ESG To the Accountant

There are several impacts of ESG on the job and responsibility of the accountants, as discussed below.

Expanded Reporting Obligations
The integration of ESG factors into financial reporting has broadened accountants' responsibilities. Accountants are now tasked with not only ensuring accurate and transparent financial reporting but also incorporating non-financial metrics related to environmental impact, social responsibility, and corporate governance. This expanded reporting landscape necessitates a deep understanding of sustainability reporting frameworks and the ability to communicate complex ESG information effectively.

Risk assessment and mitigation
ESG factors are increasingly recognized as critical determinants of an organization's long-term viability. Accountants play a pivotal role in identifying, assessing, and mitigating ESG-related risks. This involves evaluating the financial implications of environmental risks, assessing social and reputational risks, and ensuring robust governance structures. Integrating ESG risk management into financial analysis requires accountants to adopt a holistic perspective that considers both traditional and emerging ESG risks.

Strategic Decision-Making Support
Accountants are now essential to strategic decision-making processes because they provide insights into the financial implications of ESG strategies. They must assist organizations in aligning financial goals with sustainability objectives, considering the impact of ESG initiatives on shareholder value, and navigating the trade-offs between short-term financial gains and long-term sustainability. This strategic role requires accountants to possess a nuanced understanding of ESG dynamics and their implications for business operations.

Enhanced Stakeholder Engagement
The ESG landscape emphasizes the importance of stakeholder engagement and transparency. Accountants are instrumental in fostering meaningful dialogues with stakeholders by providing accurate and reliable ESG disclosures. They must facilitate communication with investors, regulators, customers, and the broader community, addressing inquiries related to sustainability performance, social impact, and governance practices. This necessitates effective communication skills and the ability to convey financial and non-financial information comprehensively.

Integration of ESG into Auditing Processes
ESG considerations have become integral to auditing processes, requiring accountants to assess the reliability and completeness of ESG disclosures. This involves evaluating the design and effectiveness of internal controls related to ESG data, verifying the accuracy of reported information, and assuring the organization's adherence to sustainability reporting frameworks. The integration of ESG into auditing processes underscores the need for accountants to be well-versed in both financial and non-financial auditing standards.

Theoretical Framework
A theory that can be related to an accountant's skills and knowledge in the context of ESG is Transformative Learning Theory by Mezirow (1991). This theory focuses on the process by which individuals critically reflect on their assumptions, beliefs, and values, leading to a profound change in their worldview. This theory comprises several key concepts. Firstly, there are disorienting dilemmas. This refers to events or experiences that challenge the existing assumptions of an individual and prompt his or her critical reflection. Secondly, is critical reflection. This is the process by which individuals examine and question their existing beliefs and assumptions. Thirdly, is perspective transformation. This is the outcome of critical reflection, where an individual’s worldview or frame of reference is fundamentally altered.

In the context of ESG, accountants traditionally focus on financial data and compliance. However, they are facing a dilemma, as ESG issues require them to broaden their perspective and critically assess the impact of corporate activities on society and the environment. The integration of ESG into accounting practices often requires a fundamental shift in how accountants view their role within an organization. Thus, accountants may need to critically reflect and challenge their existing assumptions about what constitutes value and success in business.

This involves moving beyond purely financial metrics to consider social and environmental impacts. Through transformative learning, accountants can develop a more holistic understanding of their role, incorporating ESG factors into their professional practices As accountants engage with ESG issues, they may transform how they perceive their responsibilities. For example, they might shift from a focus on short-term financial gains to a commitment to long-term sustainability and ethical practices. This transformation can lead to more meaningful and impactful contributions to their organizations' ESG strategies.

4. Technical Skills Required for Accountants

Due to the evolution, employers look for accountants who can help them advance their business and meet their stakeholders' needs. Below are some potential outcomes and top technical skills that relate to ESG needed for accountants.

Sustainability Reporting and Assurance
Accountants operating in the ESG realm must possess a comprehensive understanding of sustainability reporting frameworks such as the Global Reporting Initiative (GRI), the Sustainability Accounting Standards Board (SASB), and the Task Force on Climate-related Financial Disclosures (TCFD). Proficiency in interpreting and applying these frameworks is essential for accurately capturing and disclosing a company's environmental, social, and governance performance. Additionally, expertise in assuring sustainability disclosures is crucial for ensuring the reliability and credibility of such information.

Data Analytics and Technology Proficiency
The ESG landscape is characterized by an abundance of data, ranging from carbon emissions and social impact metrics to diversity and inclusion indicators. Accountants need to be adept at leveraging data analytics tools and technologies to process, analyze, and interpret this voluminous and diverse dataset. Skills in data visualization and interpretation are particularly vital for transforming raw ESG data into meaningful insights that inform decision-making processes.

Integrated Reporting and Materiality Assessment
Accountants in the ESG field should be proficient in integrated reporting, which involves synthesizing financial and non-financial information to provide a holistic view of an organization's value creation. Conducting materiality assessments is a key component, requiring accountants to identify and prioritize ESG issues that are most relevant to a company and its stakeholders. This skill ensures that reporting efforts are focused on the issues that truly impact the organization's long-term sustainability.

Climate Accounting and Carbon Footprint
Given the escalating concerns related to climate change, accountants in the ESG domain need to possess specialized knowledge in climate accounting. This includes understanding methodologies for calculating and reporting a company's carbon footprint, assessing climate-related risks and opportunities, and navigating the evolving landscape of climate-related financial disclosure requirements. In this regard, familiarity with greenhouse gas accounting standards and protocols is crucial.

Regulatory Compliance and Evolving Standards
Staying abreast of the ever-evolving regulatory landscape about ESG reporting is a critical skill for accountants. This involves not only an understanding of existing ESG reporting requirements but also an ability to anticipate and adapt to forthcoming regulatory changes. Accountants must be proactive in ensuring that their organizations comply with relevant standards and disclosure mandates, while also advocating for responsible and transparent ESG practices within the broader regulatory environment.

Soft Skills Required for Accountants
Successful accountants not only have technical expertise but also possess a robust set of soft skills that enhance their effectiveness and professional development. These interpersonal abilities empower accountants to thrive in their positions, establish robust client connections, and negotiate the ever-changing terrain of the accounting industry. Here are some potential outcomes and recommended soft skills that are crucial for accountants to handle ESG problems.

Communication Skills
The ability to communicate complex financial and non-financial information clearly and concisely is paramount for accountants in the ESG field. As ESG reporting often involves conveying intricate sustainability metrics to diverse stakeholders, including investors, regulators, and the broader public, effective communication fosters transparency and enhances the credibility of the reported information. Articulating the impact of ESG initiatives on financial performance and disclosing relevant information with clarity are integral components of this skill set.

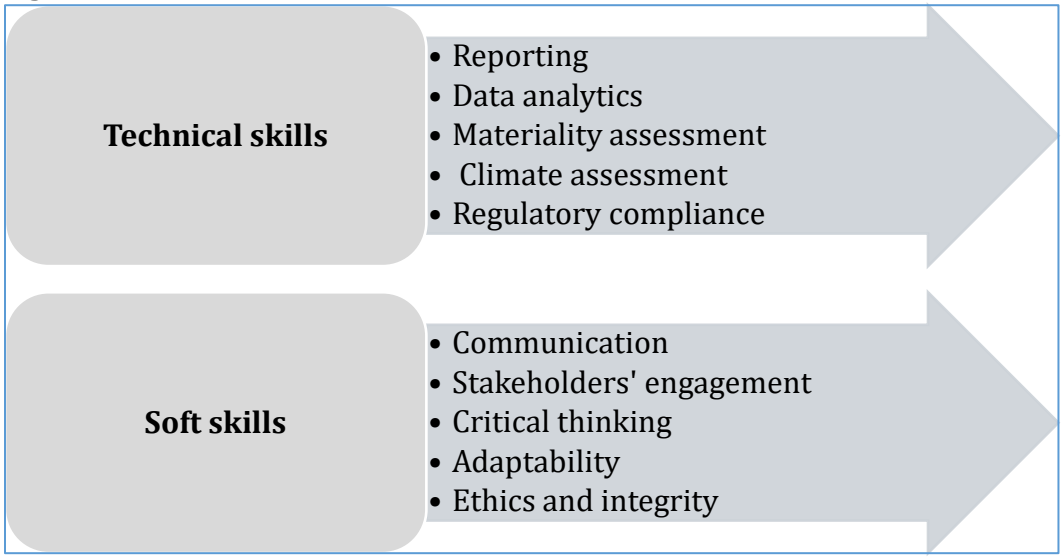
Stakeholder Engagement and Relationship Management
Given the multifaceted nature of ESG considerations, accountants must be adept at engaging with a diverse array of stakeholders, ranging from internal teams to external partners and regulatory bodies. Building and maintaining relationships with these stakeholders is vital for ensuring the integration of ESG principles into the fabric of organizational decision-making. Accountants should be proficient in addressing concerns, soliciting feedback, and fostering collaboration to advance sustainability objectives.

Critical Thinking and Analytical Skills
In the ESG realm, where data points are often non-financial and qualitative, accountants need robust critical thinking and analytical skills to interpret, assess, and report on a wide range of ESG metrics. This involves evaluating the materiality of sustainability factors, identifying risks and opportunities, and synthesizing information to provide a comprehensive view of the organization's performance in the ESG domain.

Adaptability and Continuous Learning
The ESG landscape is characterized by rapid evolution, with shifting regulatory frameworks, emerging sustainability standards, and evolving best practices. Accountants in this field must demonstrate adaptability and a commitment to continuous learning to stay abreast of changes. A proactive approach to staying informed about the latest developments in ESG reporting, disclosure requirements, and emerging trends is essential for maintaining the relevance and effectiveness of accounting practices in this dynamic environment.

Ethical Judgment and Integrity
ESG reporting is closely tied to ethical considerations, and accountants must exercise sound ethical judgment in navigating the nuances of sustainability disclosures. Upholding integrity in the reporting process, ensuring accuracy in data representation, and adhering to ethical principles contribute to the credibility of the organization's ESG disclosures. Accountants must be vigilant in identifying potential greenwashing practices and uphold a commitment to transparency and authenticity.

Figure 1: ESG Technical and Soft Skills for Accountant



4. Conclusion and Recommendations

The purpose of this study is to explore and examine the ESG and Fintech competencies that are required by accountants both in the public and private sectors. Reporting, data analytics, materiality assessment, climate assessment and regulatory compliance are the most important skills sought for technical skills, while communication, stakeholders' engagement, critical thinking, adaptability and ethics and integrity are required for soft skills.

This paper is significant as it demonstrates the impact of the framework and contributes to how accountants can enhance and create values for a different group of stakeholders. For the industry, competent accountants who can support multiple need-based ESG and technological services of the company for sustainable growth can be produced. Based on their competencies, invaluable advice can be given to the company so that the company can make huge profits, which are distributed back to the investor via dividends and the government via tax revenue. For the government, industry-relevant accountants are much needed for financial and budgetary policies. Their expertise is also critical to safeguarding the nation from the severe impact of a financial crisis and helping the country to realize its national agenda, e.g., to adopt an economic model that leverages technology and balances social-economic development with ESG principles. In terms of policy, this framework contributes as it will assist the policymakers and regulatory bodies, such as accountants' professional bodies and associations, in guiding the future accountants' skills, knowledge and competencies. For environmental, accountants will ensure their company embeds ESG as an important factor for corporate decision-making, like using natural resources and green technology without harming the environment. For society, a guided framework will be able to reduce unemployment as fresh graduates can fulfill their employer expectations. For academia, universities can adopt the framework for accountant competencies that can be used by universities to develop futuristic accounting courses that meet industry ESG requirements.

Future research can be conducted to collect the actual data using various methodologies. First, content analysis from job advertisements can be employed to review and map ESG requirements with the competencies required for the accountant that are needed by the government and industries to implement ESG activities. Secondly, we can conduct focus group interviews with practitioners, professional bodies, and consultants to gather their perspectives on the competencies that current and future accountants require to spearhead national ESG implementation. Finally, a survey can also be conducted to reach a wider and higher number of accountants to understand their current competencies and gaps for future ESG-related activities.

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The Factors Affecting Foreign Direct Investment Intentions of Investors: A Case of Malaysia

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Abstract: Foreign direct investments (FDI) are regarded as one of the most important sources of external financing for all countries in this globalisation era. In recent years, Malaysia has only been successful in attracting a small number of foreign investors. As a result, the primary goal of this paper is to examine the factors that have attracted FDI into Malaysia from 1990 to 2020. The study investigates the relationships between FDI and the proposed explanatory variables, namely market size (GDP), trade openness (OPN), inflation rate (INF), and infrastructure (INFRA). Multiple Linear Regression (OLS) is used to examine the relationships between the variables. The Variance Inflation Factor and the Breusch Pagan Godfrey test are also analysed to discover the data collected from the World Bank Data. Findings indicate GDP and INF have a significant impact on FDI. This study has not brought any evidence of INFRA and OPN influencing FDI inflows in Malaysia. Understanding these factors is crucial for policymakers and investors to promote sustainable economic growth and attract foreign investments.

Keywords: *FDI Inflows, Trade Openness, Inflation Rate, Market Size, Infrastructure*

1. Introduction

Foreign Direct Investment (FDI) has been a vital source of economic development for Malaysia, bringing in the required capital, technology, and knowledge to propel the country's development. According to Yol & Teng (2009), FDI also is seen as a key indicator of a country's economic globalisation and integration into the global economy and is essential for both home and host nations. They claim FDI flows provide substantial opportunities for businesses to avoid increasing domestic production costs and find attractive foreign markets. By fostering innovation, foreign direct investment also lowers the cost of research and development (R & D) in the host country. Besides, it has a positive impact on domestic employment and human capital accumulation, signifying the likelihood of future growth development and faster knowledge transfer over time. As a result, it might be a substantial avenue for knowledge transfer and integration into global production chains, which are critical components of successful export strategies for emerging economies.

According to Manokaran Mottain, chief economist at Alliance Bank Malaysia Bhd., the country is expected to rise from a middle-income economy to a high-income economy between 2024 and 2028. Currently, Malaysia's gross national income (GNI) per capita is expected to reach $11,200 in 2020, falling short of the $12,535 benchmark required to be classified as a high-income economy. Malaysia is predicted to acquire high-income status as a result of the rise of multinational corporations and foreign investments. Given the existing facts, Malaysia's prospects of becoming a high-income country that is heavily reliant on foreign direct FDI may be called into question. Moreover, the Malaysian Investment Development Authority, MIDA (2021), stated that the COVID-19 pandemic has moved investor preferences even further in terms of picking which nations to invest in, making market size a key criterion when choosing where to invest. As a result, in the current globalisation period, the ability to attract FDI is becoming increasingly reliant on the ability to provide a favourable FDI regime as well as competitive factors of production, given that today's investors have a wide choice of developing nations to invest in. For example, investors favour countries that can regulate competition, have stable and clear frameworks or rules for business, and have a high level of local labour quality (Nassor & Ranjanee, 2015). Consequently, the focus of this study will be on figuring out what influences FDI in Malaysia and what steps the government can take to make the climate more favourable to draw in more FDI. In conclusion, the study on the factors affecting FDI intention in Malaysia provides valuable insights for policymakers and investors seeking to enhance the country's attractiveness for foreign investment. By addressing these factors effectively, Malaysia can foster sustainable economic growth, promote good governance practices, and create a conducive environment for FDI inflows.

The next section of the paper includes a literature review and the formulation of the conceptual framework. The method utilised is then discussed, with a discussion of data analysis accompanying it. The conclusion and recommendations are presented in the final section.

Theoretical Background: Eclectic Theory

Foreign direct investment (FDI) has emerged as one of the most essential ways for a country's economy to be integrated. FDI allows an investment firm to use its distinct advantages, such as technology and management knowledge, in a foreign market (Sulong & Agus, 2005). As a result, FDI reaps several benefits, including increased capital stock, employment, and revenue, as well as enhanced skills and technological capabilities (Aziz & Mishra, 2016). Furthermore, Malaysia's economy is growing at a rapid pace, with FDI serving as one of the key drivers of this expansion. Some of the characteristics that have made Malaysia an appealing destination for foreign investors, according to Abdulqader & Hamood (2019), are well-developed infrastructure, sustainable and sound macroeconomic management, and a robust financial framework. However, the rate of growth in FDI in the country remains modest when compared to its counterpart. There has been an enormous quantity of literature published on foreign direct investment to understand why firms engage in FDI, why a particular country is desired as a place for foreign investment, or why a particular location of the entrance is chosen by MNCs (Ta et al., 2021).

According to Nassor & Ranjanee (2015), past research has explored the factors that encourage FDI using a variety of samples and scholars have developed a diverse range of theories on FDI. Dunning's eclectic theory has evolved into a standard analytical framework because it successfully absorbed knowledge of the elements that drive foreign direct investment (Tri et al., 2019). According to Tran et al. (2020), the concept of eclectic theory is referred to as the OLI framework, as it discusses the benefits of ownership (O), geographic location (L), and internalisation (I), as presented by Dunning in 1979. The purpose of this hypothesis was to investigate why, where, and how foreign direct investment occurred in the host country. Three motives can be used to explain the expansion of the theory: market-seeking, resource-seeking, and efficiency-seeking.

The OLI framework, which posits that FDI will be directed to host nations with big market size, rapid market growth, and a high per capita income, may provide insight into the FDI-seeking market (Nassor & Ranjanee, 2015). They claim that resource-seeking FDI, on the other hand, is concerned with the availability of natural resources. This is because the fundamental purpose of resource-seeking FDI is to cut manufacturing costs by utilising the host country's more affordable resources, and as a result, investors may shift their enterprises to take advantage of cheaper labour, raw materials, and energy. According to Ta et al. (2021), efficiency-seeking brings in technology know-how that is well-matched to the host country's level of development, allowing local suppliers and competitors to gain from adaptation and replication. Dunning integrated the microeconomic and macroeconomic perspectives in 1988 to develop the OLI framework, which stipulates that three requirements must be met for FDI to take place in a country (Tri et al., 2019). However, in an eclectic theory introduced in 1993, Dunning claims that taking advantage of the geographical advantages of the host nation, such as market size, infrastructure, and macroeconomic stability, has an impact on the pattern of FDI flows (Yol & Teng, 2009).

2. Literature Review

In general, most of the previous studies have found that the size of a country plays a significant role in attracting foreign investors to invest in that particular country. Abdulqader & Hamood (2019) investigate the factors that influence FDI inflows into Malaysia using annual time series data from 1985 to 2014. They discovered that the volume of FDI flowing into Malaysia is significantly influenced by the size of the country's market. Besides, Nassor & Ranjanee (2015) also discovered the same outcomes in their study. Using panel data from 1990 to 2010, they investigated the determinants of FDI in the Southern African Customs Union (SACU). According to the results, the market size has a positive and considerable impact on FDI in SACU member nations. The findings indicate that a larger market would lead to an increase in foreign investment in the area. As a result, the findings were consistent with Dunning's OLI framework, which asserts that the size of a market draws FDI from MNCs to a specific region or country. These findings are corroborated by the findings of Sasana & Fathoni (2019) that discovered FDI in the ASEAN-6 countries has a favourable and significant impact on market size, which in turn increases FDI.

The openness of the country's trade markets is critical in attracting foreign investment and attracting new investors to the country. A study by Nassor & Ranjanee (2015) looked at the factors affecting FDI in SACU countries. The study revealed that FDI and trade openness have a positive and statistically significant relationship for the time series 1990 to 2010. In other words, the expansion of trade or the adoption of more liberal trade policies would result in an increase in FDI inflows into the SACU countries. That is to say, an expansion of trade or the adoption of more liberal trade policies would result in an increase in FDI inflows into the SACU member states. They claim that trade liberalisation measures as well as a favourable environment for FDI played a role in the upward trend. Moreover, a study conducted by Yol & Teng (2009), which used annual data from 1975 to 2006, revealed similar results. They discovered that a country's trade openness had a short-term impact on attracting FDI. Mudiyanselage et al. (2021) discovered, on the other hand, that trade openness has a negative and statistically significant relationship with both long-run and short-run FDI inflows in Romania for the period 1997 to 2019. They argue that the openness of the country's economy when compared to other countries, may be ineffectual in attracting foreign investment. Because of this, they contend that the greater the degree of openness, the less probable it is that foreign direct investment will be attracted in the long run.

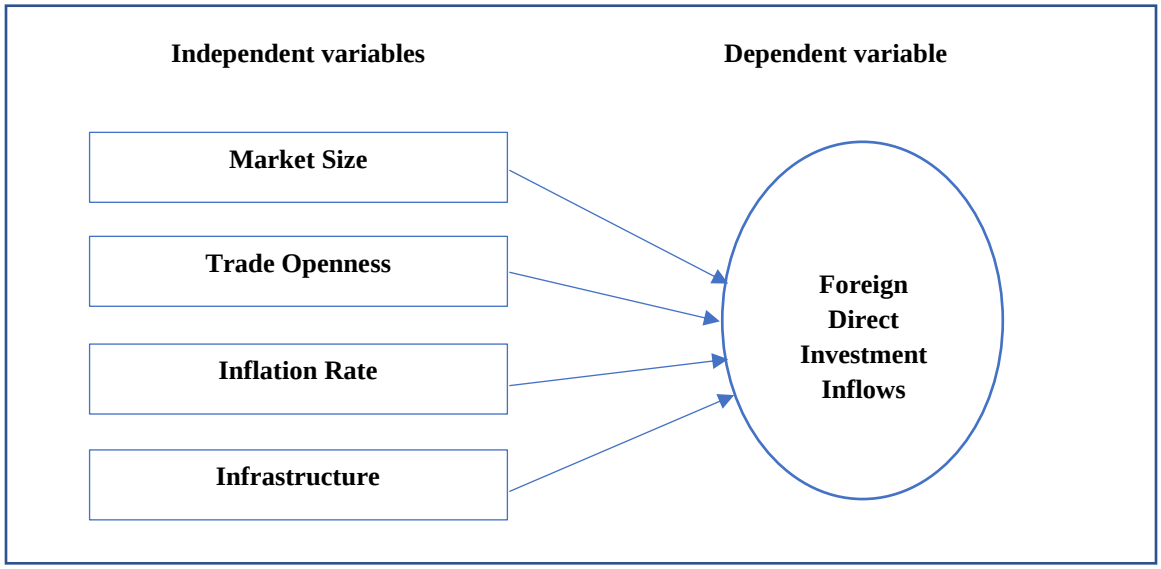
The rate of inflation is one of the macroeconomic elements that influence a country's FDI inflows. Macroeconomic mismanagement has been linked to inflation, which hurts the country's overall financial performance. Aziz & Mishra (2016) conducted a study on the factors that influence foreign direct investment (FDI) in 16 Arab economies from 1984 to 2012, which covered the period from 1984 to 2012. They found that inflation has a positive and significant influence on FDI flows into Arab economies. They assert that random effects can be attributed to their results because a successful and speedy disinflation generally occurs before governments open up the external sector. It should be noted that the findings are consistent with Mudiyanselage et al. (2021) and Abdulqader & Hamood (2019), who discovered the inflation rate was statistically significant and had a positive correlation with FDI inflows. According to Addison & Heshmati (2003), who found a similar pattern in their research, when the host country's inflation rate is high, the price of goods and services will rise as well. As a result, more international investors will be drawn to that particular country as a result of an increase in manufacturing operations.

Infrastructure development is another important variable for a country to expand the country’s economy. According to Abdulqader & Hamood (2019) infrastructure development is not a determinable factor for FDI as there is no substantial correlation between infrastructure and FDI inflows in Malaysia. However, to get an accurate picture of how infrastructure impacts FDI, they argued that different metrics should be utilised to reach an acceptable conclusion. Previous study by Yol & Teng (2009) identified that FDI flows in Malaysia are significant and positively influenced by infrastructure in the long run. The findings are also consistent with the study conducted by Tran et al. (2020) which revealed that infrastructure has an impact on FDI flows in the region. This is because infrastructure serves as the foundation for both manufacturing and business operations. In this regard, infrastructure development is important since it displays how convenient the operational environment is with well-equipped infrastructure, which in turn attracts more foreign direct investment.

Conceptual Framework

Figure 1 illustrates the relationship between FDI inflows and the independent variables namely, market size, trade openness, inflation rate and infrastructure.

Figure 1: Conceptual framework



3. Methodology

This research article relies on secondary data, which has been gathered from several websites and portals and has been analysed. However, the majority of the data is collected from the World Bank, with a few more recent data sets obtained from the Department of Statistics Malaysia (DSM). The relevant annual data gathered from the websites and portal is a time series data set, with sample periods ranging from 1990 to 2020 and a total of 31 observations. This study's dependent variable is the inflow of foreign direct investment, while the independent factors are the size of the market, trade openness, inflation rate, and infrastructure.

Multicollinearity

The multicollinearity analysis is utilised in this study to examine how well each independent variable may be used to predict the dependent variable with the greatest degree of effectiveness. As a result, when there is a significant intercorrelation between two or more independent variables in a multiple regression model, this is known as multicollinearity. Therefore, this study uses the variance of inflation factor (VIF) to define the degree of the multicollinearity in the model. When the centred VIF number is greater than 10, there is a major multicollinearity problem. There is no major collinearity concern when the centred VIF value is less than 10.

Heteroskedasticity

The purpose of this test is to determine whether there is any correlation between the variances and the error term. The Breusch-Pagan-Godfrey method is employed in this investigation and the null hypothesis can be rejected if the p-value is less than 5% significant. To assess whether or not heteroscedasticity occurs, the following hypotheses will be examined:

H_0 = Error term is Homoscedastic (Homo)

H_1 = Error term is Heteroscedastic (Hetero)

Multiple Linear Regression (OLS)

Regression analysis is a statistical technique that seeks to understand the relationship between a dependent variable with one or more independent variables by analysing the quantitative expression of the variables. The key reason for using multiple linear regression is that the researcher is testing more than one independent variable in this model. It is also being used since it ensures that the estimated findings do not deviate from the actual outcomes (Abdulqader & Hamood, 2019). Four independent variables have been selected for testing to provide more accurate estimates which are market size (GDP) trade openness (OPN), inflation rate (INF) and infrastructure (INFRA). The researcher develops the estimation model by employing foreign direct investment inflows as the dependent variable. The following is the multiple linear regression model that was developed:

$$\mathbf{Y = \beta_0 + \beta_1 X_{1i} + \beta_2 X_2 i + \beta_3 X_{3i} + \beta_4 X_{4i} + \epsilon i}$$

As in a regression model, the partial regression $\beta_0, \beta_1 \ldots \beta_4$ represents the proportion of the regression coefficient that measures the extent to which the independent variables have an impact on the dependent variable while ϵ is the error term. Hence, Y denotes foreign direct investment inflows, X_1= market size, X_2=trade openness, X_3=inflation rate, and X_4= infrastructure.

Explanation for Chosen Independent Variables

Market Size: Market size is the one of crucial determinants that are extensively employed in most empirical investigations. The size of the market is typically measured in terms of Gross Domestic Product (GDP) per capita in the majority of cases (Nassor & Ranjanee, 2015). The GDP can be determined by adding together the amounts of private consumption and government spending, as well as national investment and total net exports. When deciding whether or not to invest in a particular country or region, multinational corporations look at factors such as the size of the market (Tri et al., 2019). In other words, the greater the total income and development potential of the host country, the greater the volume of FDI in that particular nation (Akin, 2010).

Trade Openness: A country's level of openness is measured by its ability to trade with the rest of the world, as well as its ability to integrate with the global economy (Tri et al., 2019). Trade openness, also known as trade freeing, is the degree to which countries open their borders to foreign trade. As a result, it is calculated as OPN = (EXP + IMP)/GDP, where OPN indicates openness, EXP and IMP represent export and import, respectively, and GDP represents gross domestic product. According to Soo & Kueh (2020), the openness of the country's trade markets is critical in attracting foreign investment and attracting new businesses to the country. FDI inflows are directly affected by trade barriers established by a country. Therefore, they argue that a low import barrier should be created to restrict tariff-jumping by foreign direct investment.

Inflation rate: Inflation is a phenomenon in which prices rise regularly, but the level of income in the population remains relatively constant (Wijaya et al., 2020). Microeconomic stability is crucial when it comes to attracting investment, and this is especially true when it comes to attracting international investors. High inflation is a sign that the country's economy is unstable, reduces the value of the local currency and indicates that the country's leadership has not been able to stabilise it (Wijaya et al., 2020). According to Abdulqader & Hamood (2019), investors are drawn to countries with low inflation rates because of the government's and economy's dependability and stability. A negative indication indicates a weak economy; hence the inflation rate serves as an indicator of macroeconomic stability. In this study, the annual percentage change in the consumer price index (CPI) is used as a proxy for inflation (Ho, 2013).

Infrastructure: Infrastructure is defined as a physical form that enables users to gain access to services and facilities in a short period. Besides, the most important factor in making an investment decision is whether or not the investment environment supports the activities of foreign-invested businesses. The investment decision can be seen as a country that has well-developed infrastructure to support foreign economic activities such as airports, water and power supplies, roads, telephones, and the internet (Nassor & Ranjanee, 2015). According to Haudi et. al, (2020) A well-equipped infrastructure can help ensure that communication is smooth and quick. Generally, the proxy for infrastructure may vary. However, this study chose fixed telephone subscriptions (per 100 people) as a proxy for infrastructure.

4. Data Analysis And Findings

Variance Inflation Factor (VIF)

Table 1: Results of Variance Inflation Factor (VIF) using EViews software.

Variable	Coefficient variable	Uncentered VIF	Centred VIF
GDP	0.003892	3.102420	1.099420
OPN	2.153990	987.6624	1.306029
INF	0.034782	5.190652	1.265538
INFRA	0.074169	987.7724	1.306029

The centred VIF value is used to diagnose whether there is an existing multicollinearity problem. The result from Table 1 shows that all independent variable values are less than 10, including market size (1.099420), trade openness (1.265538), inflation rate (1.247183) and infrastructure (1.306029). A value of less than 10 indicates that there is no multicollinearity present in the regression models. Hence, as the VIF values are below the 10 range, the likelihood of a multicollinearity problem between independent variables is extremely low.

Breusch Pagan Godfrey

Table 2: Results of Breusch Pagan Godfrey using EViews software.

Variable	Coefficient variable	Std error	t-Statistic	Prob
GDP	-0.13944	0.08603	-1.62081	0.1171
OPN	-4.62011	2.02396	-2.28270	0.0309
INF	0.44626	0.25719	1.73512	0.0946
INFRA	-0.03258	0.37551	-0.08867	0.9315
R^2= 0.279816		Prob. F-Statistic= 0.0650		
Adjusted R2= 0.169018		Prob. Chi-Squared= 0.0698		

The Breusch-Pagan test checks for heteroscedasticity in the error term by looking at the squared residuals. Based on the results in Table 2, there is no existence of a heteroskedasticity problem since the chi-squared value is higher than the 0.05 confidence interval. It concludes that there is no heteroskedasticity problem since the NR^2 (8.674296) is greater than chi-squared, thus the null hypothesis of homoskedasticity is rejected.

Multiple Linear Regression

Table 3: Summary of regression analyses

Variable	Coefficient	Std. Error	t-Statistic	p-value	Significant
GDP	0.24124	0.0623	3.8668	0.0007	√
INF	0.56783	0.1864	3.0447	0.0053	√
INFRA	0.03503	0.2723	0.1286	0.8986	
OPN	1.55181	1.467	-1.0573	0.3001	
R^2= 0.667782			F-statistic= 8.5387		
Adjusted R^2= 0.501287			Prob (F-statistic) = 0.0002		

The ratio of the explained sum of squares to the total sum of squares is denoted by the R^2. As the R^2 value rises, the more accurate it is that the model's predicted regression equation is suited to the data. Table 3 shows that the R^2 value of 0.667782 (66.78%) indicates that the variability of the dependent variable, which is the inflows of foreign direct investment, is explained by the variability of the independent variables; market size, trade openness, inflation rate, and infrastructure, while the remaining 33.22% is explained by other factors that were not taken into consideration in the investigation. It also contains a P-value of 0.0.000154 that may be used to examine the overall significance of the regression model, allowing researchers to reject null hypotheses. To put it another way, the corrected R2 is 0.501287, which is smaller than the R^2 itself. This demonstrates that the regression model's variables are well-fitting and can be used to forecast FDI.

Table 3 shows that the computed coefficient of the market size has the predicted positive sign and is statistically significant at a 95% confidence level. The p-value is 0.0007, and the beta coefficient is 0.241247. In other words, if Malaysia's GDP rises by one per cent, FDI in the country will climb by about 0.241247 points. According to the findings, GDP has a positive and significant link with FDI, which is consistent with previous studies in Malaysia (Abdulqader & Hamood, 2019; Sasana & Fathoni, 2019). Yol & Teng (2009) revealed similar results and argued that larger or rising economies offer better profit opportunities than smaller economies.

Furthermore, the size of the market has also been found to have a positive link with FDI by Nassor & Ranjanee (2015), showing that larger markets attract more FDI. As a result, their findings support Dunning's OLI framework, which states that corporations invest abroad to get access to the host countries and neighbouring nations' markets more effectively (Nassor & Ranjanee, 2015).

In addition, the inflation rate indicates a positive and significant relationship with FDI inflows in Malaysia. It demonstrates that a 1% rise in the inflation rate increases FDI inflows by a factor of 0.567834. Contrary to past research, the results of this study do not support the conclusions of others. Scholars have shown a negative correlation between inflation and FDI (Awad, 2020; Saqib et al., 2013; Sulong & Agus, 2005; Tran et al., 2020). According to Awad (2020), low inflation encourages FDI inflows but high inflation deters FDI from entering the host country since higher prices diminish the real return on investment. Nonetheless, this finding is consistent with the findings of prior studies by Wijaya, Dewi, Zeplin & Natasya (2020) and Soo & Kueh (2020), which revealed that FDI is favourably influenced by the level of inflation. This shows that when inflation rises, so does FDI. Therefore, inflation is positively associated with FDI due to the occurrence of a stimulus in the economy, such as rising interest rates, which has a favourable impact on FDI (Wijaya et. al., 2020). This finding is further corroborated by Abdulqader & Hamood (2019), who discovered that inflation had a beneficial impact on FDI in Malaysia.

The findings also reveal that infrastructure has a positive but insignificant impact on FDI in Malaysia. The results reveal a p-value of 0.8986 and a beta coefficient of 0.035038 with a 95% confidence interval. As a result, this research concludes that infrastructure improvement in Malaysia will have little impact on FDI inflows over the period from 1990 to 2020. This result is consistent with the results of Yol & Teng (2009), who found infrastructure to be lacking support for inclusion in attracting FDI. According to Sin et al. (2017), infrastructural assets include everything from roads, seaports, railroads, and telephones to institutional growth. They emphasised the significance of taking into account the availability and dependability of infrastructure while assessing infrastructure. Many underdeveloped countries, like Malaysia, lack reliable infrastructure data, hence this analysis relies simply on the availability of infrastructure (the number of telephones per 1,000 inhabitants). As a result, the lack of quantitative data for both the availability and dependability of infrastructure development could be a contributing factor to the inability to detect a statistically significant relationship between the variables.

Lastly, the result shows that trade openness has a negative and insignificant relationship with FDI in Malaysia, as the results show that the p-value is 0.3001 and a negative 1.5518 beta coefficient. As a result of the study's finding that Malaysia's economy's trade openness does not affect FDI inflows, the findings are consistent with the findings of Sasana & Fathoni (2019) and Wickramarachchi (2019). Furthermore, the negative correlations discovered in this research are consistent with the findings of the earlier study by Awad (2020). According to the conclusions of his research, the more open a country is to the rest of the world, the less foreign direct investment will flow into that country. He also claims that other countries prefer to export to Malaysia rather than invest in the country because of the country's high openness to trade. On the other hand, increased trade openness, which is generally connected with governments' efforts to maintain economies open to international commerce while fostering competition and innovation, might stifle efficiency-seeking investors' efforts to maximise profits (Hintosova et al., 2018).

5. Conclusion

In conclusion, this study attempts to determine the relationship between market size (GDP), trade openness (OPN), inflation rate (INF), and infrastructure (INFRA) with foreign direct investment inflows towards economic growth in Malaysia using annual data spanning 1990 to 2020. The data used in this study covers 1990 to 2020. It was determined by the study's findings that the size of the market, the inflation rate, and the availability of infrastructure all have a positive link with FDI inflows in Malaysia, but trade openness has a negative relationship.

In addition, the results of this research show that market size and inflation rate played a significant role in attracting FDI flow into the country. In line with past research (Abdulqader & Hamood, 2019; Addison & Heshmati, 2003; Aziz & Mishra, 2016; Nassor & Ranjanee, 2015), has indicated that GDP and INF have a positive

and statistically significant association with FDI inflows, which suggests that a larger market would lead to an increase in foreign investment in the area. As a result, the findings were consistent with Dunning's OLI framework, which asserts that the size of a market draws FDI from multinational corporations to a given country (Nassor & Ranjanee, 2015). Contrary to the widely held assumption that investors prefer to invest in a lower-risk economic environment or a lower inflation rate (Sin et al., 2017), according to Addison & Heshmati (2003), a country's currency or interest rate will rise when its inflation rate is greater than its GDP. The presence of higher interest rates attracts foreign investment, which in turn stimulates demand and elevates the value of the host country's currency. This is because international investors will be drawn to a higher interest rate because they will be able to get a better return on their money than they would in their own country (Wijaya et al., 2020). For example, they could take advantage of rising interest rates by borrowing money locally at a cheaper rate and investing it in overseas markets at a higher rate, thus increasing their profits.

Infrastructural development, on the other hand, does not affect FDI inflows toward economic growth in Malaysia for the period from 1990 to 2020. The result was the finding of Abdulqader & Hamood (2019), who found there was no significant correlation between INFRA and FDI inflows in Malaysia for the period 1995 to 2014. To get a satisfying result, they argued that several indicators should be used because different indications could have an impact on the results of assessing the link between the variables. Moreover, according to Firdaos Rosli (2020), senior economist and head of research at Malaysian Rating Corp Bhd, Malaysia's INFRA has not been able to catch up with economic growth. He argues that Malaysia's mobile Internet speed is lagging behind neighbouring countries such as Laos, Myanmar, and Thailand, which have Internet speeds that are more than three times faster than Malaysia's. Even though Malaysia is ranked higher than those countries in the IMD World Competitiveness Ranking 2020, the lags in infrastructure development may make those countries more appealing than Malaysia. This is because, 5G adoption is important in Industry 4.0 as it improves the efficiency and productivity of the manufacturing industry (ASEAN Investment Report, 2021).

Lastly, the findings of the study revealed that trade openness has a negative insignificant relationship with FDI. Preliminary studies indicate that the vast majority of investigations have revealed a significant positive correlation between factors such as (Bakar et al., 2012; Nassor & Ranjanee, 2015; Soo & Kueh, 2020; Yol & Teng, 2009). However, this research paper uses a much smaller sample size and a different style of analysis than the previous studies. For example, (Nassor & Ranjanee, 2015; Soo & Kueh, 2020) adopted a panel analysis, whereas Bakar et al. (2012) covered a sample size of 40 years. Because this research study relied on a time series analysis that spanned 31 years, the results were insufficient to address the hypothesis that was being investigated. Nonetheless, there have been a few studies that have found a negative non-significant association between the two variables. This result follows the prior study by Mudiyanselage et al. (2021) that found a negative link between the variables. It was discovered that the greater the degree of an economy's trade openness, the less likely it is that FDI will be attracted in the long run. Furthermore, (Ho, 2013; Sasana & Fathoni, 2019; Wickramarachchi, 2019) discovered that a country's trade openness has little effect on the amount of FDI that flows into the country. According to Wickramarachchi (2019), when making investment decisions, foreign investors pay more attention to the size of the market and the cost of production than they do to the country's trade openness or trade policy as a significant issue.

Recommendations

Malaysia's macroeconomic performance must first be improved to attract additional FDI flows. As reported by Juita Ahmad (2020), Head of the Economics, Trade and Regional Integration Program at the Institute of Strategic and International Studies (ISIS) Malaysia, the country has seen a decline over the past five years in its competitiveness in attracting FDI. Moreover, she asserted that, as compared to our neighbouring countries, Malaysia's market size is rather modest, and investors prefer a larger market since it is more tempting to contemplate investing in. In light of the findings that market size has a major impact on foreign direct investment (FDI) flows into the country, the government should make additional efforts to increase the size of the country's local and international markets (Sulong & Agus, 2005). Additionally, the relationship between FDI and economic growth is well-documented. Studies indicate that FDI not only contributes to capital formation but also enhances employment opportunities and technological transfer.

According to Nassor & Ranjanee (2015), the quickest way to expand its market size is to open up the country. They asserted that it is possible to achieve this by expanding trade agreements (at the moment, Malaysia has

seven bilateral free trade agreements (FTAs), with the following countries: Australia, Chile, India, Japan, New Zealand, Pakistan, and Turkey), allowing commodities and services to freely flow. As a result, transportation costs would be reduced, and the free movement of goods and services would be permitted, making the country more attractive to foreign investors.

Furthermore, strengthening infrastructure development in Malaysia should be prioritised as a means of increasing economic output in the country. According to Bakar et al. (2012), a country's physical infrastructure is a significant determinant in determining FDI inflows. They claim that a high-quality physical infrastructure would improve the investment climate for FDI by subsidising the total investment cost, hence boosting the return on investment. Specifically, the adoption of digital infrastructure, such as 5G networks and data centres, serves as the foundation for the Fourth Industrial Revolution (IR 4.0), according to the ASEAN Investment Report 2021. To address this issue, the government must upgrade the country's infrastructure (telecommunications) because IR4.0 would open up new digital capabilities and opportunities, as well as make Malaysia a more attractive destination for foreign investors and businesses.

In addition, other types of infrastructure indicators may be incorporated in future research because this study largely focused on telecommunications infrastructure. Past literature has mentioned that infrastructure encompasses a wide range of measures, ranging from physical assets such as roads, seaports, trains, and telephones to institutional development (Sin et al., 2017). According to Abdulqader & Hamood (2019), the majority of estimations indicate that institutions (as a proxy for education) are extremely essential and must be taken into consideration when evaluating these variables. Since there is a good chance that institutions will affect FDI, future research should look at the subject from many angles, including the development of infrastructure institutions and other types of infrastructure, to determine the reliability of a significant link between infrastructure and FDI.

To conclude, to gain a more comprehensive understanding of FDI determinants and their effects, researchers should incorporate more independent factors into the study, such as political risk, business facilities, government incentives, regional integration, exchange rate, interest rate, and natural resources (Tocar, 2018). Furthermore, according to Haudi et al. (2020), researchers should widen the scope of their analysis to include other ASEAN countries to acquire a better understanding of the disparities in competitiveness between Malaysia and other ASEAN nations. If researchers want to investigate this further, they should concentrate on the proportion of FDI inflows rather than the total amount of FDI to obtain interesting and effective results in future research (Matderus, 2000).

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The Influence of Perceived Risk on the Performance of the Entrepreneur

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Abstract: The perception of risk has a substantial impact on the decision-making process and allocation of resources in entrepreneurship, which in turn affects business performance and the identification of strategic growth possibilities. Entrepreneurs frequently encounter situations characterized by uncertainty and ambiguity. Their perception of risk plays a crucial role in determining whether they adopt a cautious or proactive approach to decision-making. Perceiving a high level of risk might result in the adoption of conservative measures, which may restrict the allocation of funds toward growth projects. On the other hand, when entrepreneurs perceive a low level of risk, they are more likely to allocate resources aggressively, which allows them to pursue growth-oriented strategies. This study examines the impact of perceived risk on entrepreneurial performance by analyzing how risk perception influences decision-making and resource allocation. The results emphasize the significance of understanding perceived risk levels to improve business performance and boost employee motivation. Future research should conduct empirical investigations to examine the correlation between perceived risk and motivation, taking into account both inner and extrinsic elements to gain a thorough understanding of how they interact.

Keywords: *Firm performance, entrepreneur, perceived risk, decision-making, perception of risk.*

1. Introduction

Enterprises encounter diverse risks in their operations, and a crucial factor lies in the perception of these risks. How risk is perceived can have a substantial impact on a company's decision-making procedures and approaches to risk management (Sreedevi et al., 2023). The perception of risk can indeed exert a substantial influence on the performance of a company in different situations. Studies have demonstrated that effectively handling the perceived risk of supply chain managers can result in improved company performance. This suggests that the measures taken by top executives to address perceived risk can have a favorable impact on overall organizational outcomes (Villena et al., 2018). Furthermore, within the realm of small and medium-sized firms (SMEs), the act of establishing stronger connections inside the organization to address a greater sense of uncertainty has been associated with enhanced company performance (Sawyerr et al., 2003). These findings indicate that companies that proactively acknowledge and adjust to perceived risks and uncertainties are likely to achieve more favorable performance results.

Additionally, the management and perception of risks can significantly influence the expected outcomes and business strategies of organizations (Stocker & Abib, 2019). Organizations must address perceived risk to establish risk management strategies that are consistent with their objectives and goals. In the context of supply chain management, the performance of a firm can be positively impacted by the implementation of strategies such as monitoring-based mitigation, avoidance, and collaboration-based mitigation to address supplier sustainability risk (Hajmohammad et al., 2024).

Thus, it is essential to identify perceived risk within firm performance to ensure long-term success, cultivate trust with stakeholders, and maintain a competitive edge. Firms can improve customer satisfaction, enhance decision-making, and establish resilience against prospective challenges by acknowledging and mitigating these risks (Dvorský et al., 2020; Qalati et al., 2021a). Ultimately, via a comprehensive understanding of perceived risk, companies may effectively maneuver around uncertainties, resulting in consistent expansion and enhanced performance in a perpetually changing market landscape.

Perceived Risk

Firm performance and perceived risk are closely interconnected. The productivity and success of a firm can be significantly impacted by perceived risk management. Making decisions that balance potential benefits and drawbacks can be aided by a workplace culture that encourages open communication and supports employees'

worries about perceived risks. The term "perceived risk" describes how people evaluate the likelihood of unfavorable consequences after a choice or action. This can be about the dangers of introducing new products to markets or using new technologies. It is essential for preserving business performance to practice effective risk management. Companies are better positioned to avoid disruptions and financial losses when analyzing and reducing risks effectively. However, being unduly risk-averse could hinder prospects for innovation and prosperity.

Perceived risk is a complex term that has a major impact on different parts of consumer behavior and decision-making processes and extends beyond that. It includes several aspects such as functional risk, financial risk, physical danger, psychological risk, social risk, and time risk (Basari et al., 2024). The perception of risk encompasses cognitive elements associated with the acquisition and comprehension of risk, as well as emotional factors connected to one's sentiments toward the risk (Marijana et al., 2021). Research has demonstrated that the way consumers perceive risk can significantly decrease their intention to make a purchase. Factors such as time risk and financial risk play a crucial role in driving this effect (Hao et al., 2022). Furthermore, the perception of risk has a broader impact that goes beyond consumer behavior, affecting areas such as investment intentions and the adoption of new technology. Perceived risk has been observed to have a detrimental impact on the investment intentions of individual investors. Perceived risk and perceived value are two factors that influence users' decisions when adopting technology, as observed in the case of FinTech platforms (Xie et al., 2021).

Ultimately, the interaction between the firm performance and the perceived risk is vital for the overall achievement of an organization. Efficiently handling perceived risk, which includes functional, financial, and psychological concerns, is crucial for sustaining organizational performance and promoting innovation. An organizational environment that promotes transparent communication and acknowledges employees' apprehensions over perceived hazards might facilitate the process of making well-informed choices that effectively weigh the prospective advantages and disadvantages. Effectively managing perceived risks enables firms to mitigate disruptions and financial losses.

2. The Relationship Between Perceived Risk and Entrepreneur's Performance

Perceived risks may impact an entrepreneur's decision-making process. Entrepreneurs may become more cautious and hesitant to take chances or implement novel ideas if they view their risks to be higher. They might choose to employ safer, more conventional methods, which could restrict their ability to advance and succeed. On the other hand, low perceived risks may encourage risk-taking, and aggressive decision-making while encouraging an entrepreneur to investigate and seize opportunities, improving performance. Second, recognition of business possibilities where perceived risks may limit an entrepreneur's capacity to identify and seize business opportunities. Entrepreneurs who are more risk-averse due to higher perceived dangers may ignore or avoid potentially lucrative opportunities. Third, allocation of resources, an entrepreneur's resource allocation may be influenced by perceived risks. A more cautious attitude to resource allocation may result from higher perceived risks, with business owners being less willing to commit sizable sums of money or resources to new projects or expansion. This cautious approach could make it more difficult for the entrepreneur to develop and perform at their best. Therefore, entrepreneurial passion and risk appetite could remarkably promote financial performance (Alexandru, 2017).

Other than that, an entrepreneur's level of resilience and persistence in the face of adversity can be influenced by perceived risk. Perceived risk can have both a positive and a negative effect on an entrepreneur's success overall (Tzavlopoulos et al., 2019). Higher perceived risks can erode an entrepreneur's confidence and motivation, potentially leading to discouragement or quitting their business. Lower perceived risks, on the other hand, can contribute to higher levels of persistence and resilience since entrepreneurs are more confident and determined to overcome hurdles and continue. Çera et al., 2019 study indicated that the entrepreneur's attitude and additional factors from the political and competitive settings influence owner-managers' perception of risk. However, neither the business relationship nor the legal environment was identified as an indicator of company risk. Risk perception has an impact on how people act, think, and make decisions (Yi et al., 2020a). Boermans & Willebrands, (2017) used data on 611 Tanzanian entrepreneurs and demonstrated that risk perception is positively correlated with business performance and risk attitudes of entrepreneurs are well-

established drivers of business performance. While Shahzad et al., (2021) investigate the mediating function of risk management between the organization and the perceived business risk. The study's findings show that internal controls, risk management formalization, and organizational performance are all significantly and favorably impacted by perceived business risk. Thus, entrepreneurs must manage and solve perceived risks effectively. Conducting extensive risk assessments, acquiring correct information, and implementing risk mitigation plans are all part of this process. Entrepreneurs can increase their chances of success in their entrepreneurial enterprises by analyzing and mitigating perceived risks.

Dimension Of Perceived Risk

The "perceived risk theory of decision making," also known as the "perceived risk theory," or the Concept of Perceived Risk is a psychological and consumer behavior theory that explains how people evaluate and make decisions when confronted with risky or uncertain situations, particularly when it comes to making decisions or buying products. Donald Cox and Robert Rich first proposed this hypothesis in the 1960s, and several scholars have since modified and improved upon it. Perceived risk is the subjective appraisal or evaluation of any potential bad outcomes or uncertainties involved (Zhang & Yu, 2020). It includes a decision, action, or circumstance in which the individual assesses the possibility and seriousness of potential dangers or negative outcomes (Yıldırım & Güler, 2022).

Perceived risk is a complex concept that includes multiple factors that affect how humans make decisions and behave in different situations. Research has revealed multiple crucial aspects of perceived risk, providing insight into the intricate nature of this notion and its consequences across various fields. Financial risk is a prominent aspect of perceived risk that pertains to the possibility of incurring monetary losses or experiencing unfavorable financial consequences as a result of a choice or action. Financial risk has a substantial influence on individuals' risk perceptions and can affect their willingness to participate in specific activities, such as online shopping or investment intentions (Andrian & Selamat, 2022; Chen et al., 2020). Gaining a comprehensive comprehension of and effectively handling financial risk is of utmost importance for firms and regulators to tackle consumer apprehensions and bolster confidence in financial transactions.

Another crucial aspect of perceived risk is psychological risk, which relates to individuals' apprehensions over the psychological or emotional outcomes of their choices. Psychological risk refers to the presence of dread, uncertainty, or worry that arises about a specific choice or scenario. Research has emphasized the influence of psychological risk on consumer behaviors, specifically about online purchase intentions and technology adoption (Pai et al., 2024; Sim et al., 2023). Managing psychological risk is addressing individuals' emotional reactions and perceptions to minimize adverse consequences. Social risk refers to the aspect of perceived risk that centers on individuals' apprehensions about how their choices or behaviors might be regarded by others or affect their social connections. Social risk can exert an impact on behaviors across different domains, including tourism, online shopping, and healthcare. Research has indicated that social risk influences trust, purchase intentions, and decision-making processes (An et al., 2024; Jiang et al., 2022). To effectively address social risk, it is necessary to comprehend the intricacies of social dynamics and perceptions to establish trust and credibility among individuals.

Physical risk is an essential aspect of perceived risk that pertains to persons' worries about potential harm, injury, or safety dangers linked to a decision or action. Physical hazards have the potential to impact behaviors in various areas, including outdoor activities, healthcare, and product consumption. Research has emphasized the influence of physical danger on individuals' perceptions of risk and their efforts to mitigate risk (Berlianto et al., 2020; She et al., 2019). Effective management of physical risk entails implementing safety protocols, disseminating precise information, and resolving individuals' apprehensions about safety. Time risk refers to individuals' concerns about the time-related components of a choice or activity and is considered as another dimension of perceived risk. Time risk refers to the potential negative consequences, such as delays, annoyance, or opportunity costs, that may arise from making a particular choice. Research has demonstrated that the level of uncertainty associated with time might impact individuals' inclination to make purchases, their willingness to accept services, and their decision-making processes (Ardiansah et al., 2024). To mitigate time risk, it is necessary to streamline operations, minimize waiting periods, and improve convenience for individuals.

In the context of entrepreneurship, performance risk can be a major source of stress for entrepreneurs dealing with unpredictability and obstacles in their ventures (Yi et al., 2020b). Fear of failure, failure to fulfill financial targets or market underperformance can all have an impact on their decision-making, resource allocation, and overall performance. While performance risk is a subset of perceived risk, it is critical to evaluate it with other aspects of perceived risk when assessing and managing risks in decision-making processes. Evaluating and tackling performance risk can assist entrepreneurs and individuals in developing strategies, acquiring critical skills, and developing resilience to enhance their performance outcomes. Understanding and managing performance risk, as well as other aspects of perceived risk, is critical for individuals and businesses looking to maximize their performance while minimizing any negative outcomes. Entrepreneurs and their decision-making processes are heavily influenced by a perceived risk which impairs an entrepreneur's ability to recognize and capitalize on business possibilities (Sawang et al., 2023a). Higher perceived risks may cause entrepreneurs to be more risk-averse, making them cautious and unwilling to pursue new enterprises or innovative ideas. As a result, they may be more likely to pass up potentially lucrative chances or refrain from taking measured risks that could lead to corporate success. Depending on their perspectives and prejudices, people frequently have varying perceptions of risk (Zhang & Yu, 2020). The way danger is perceived affects decision-making greatly. People may be more cautious, hesitant, or unwilling to engage in a particular behavior or execute a particular action when they perceive a higher level of risk. Thus, Qalati et al. (2021) suggest a study on psychological risk and performance risk would be an interesting field to explore to understand the perceived risk of the entrepreneur‘s performance. Besides, because entrepreneurs behave in the face of uncertainty during the entrepreneurial process, their capacity for taking risks is another motivating factor of interest.

3. Research Methodology

This study employed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) standards. There are several phases or processes involved. This is to ensure that all the conclusions are led by the adjustment of limitations for the investigation. The Systematic Literature Review (SLR) is a method used to verbally express the identification, analysis, and interpretation of all the evidence available that is relevant to a certain research issue. To achieve our research goals and investigate the research inquiries, we conducted a Systematic Literature Review (SLR) to examine the adaptive behavior in response to the risks associated with digital payment methods. SLR has been found to enhance the probability of producing a more lucid and unbiased response to the study inquiries. Systematic literature reviews (SLR) are useful in assessing the strength of evidence by evaluating the study design (including sampling strategy and data collection methods), data, and analytical methods employed.

The focus of this study is to determine the dimension of perceived risk and its constructs as identified in previous research. The primary objective of this study is to investigate the domains of previous research within the framework of perceived risk and entrepreneur performance. This study conducted a literature search using the databases or digital libraries of Scopus. The article selection in this study involves two distinct approaches. The initial step is identifying the database based on the perceived risk. The second aspect involves conducting database screening and assessing the eligibility of an item based on its firm performance.

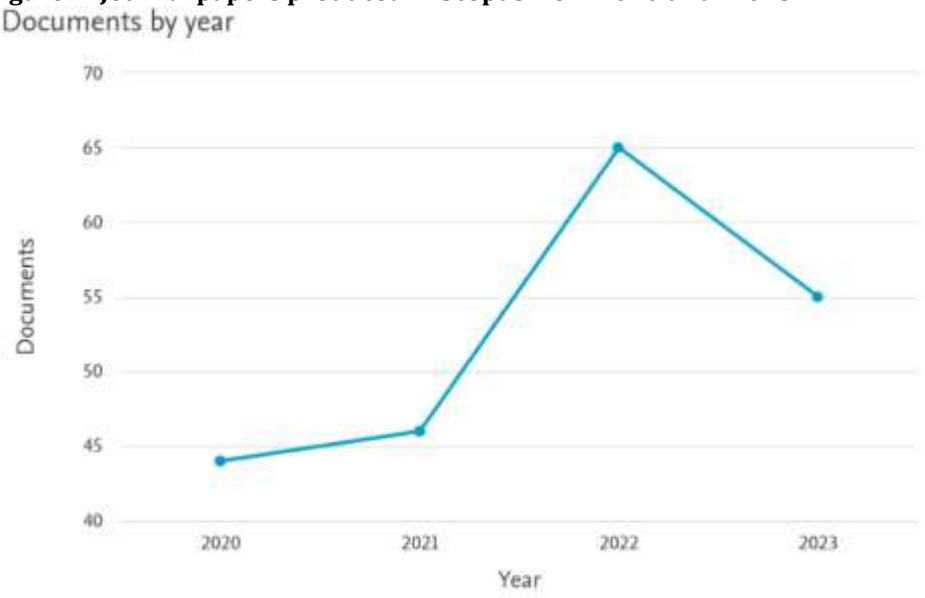
The concept of perceived risk is widely used in various studies including consumer perception (Cao et al., 2023; Guo et al., 2023; Hu et al., 2023; Najar & Rather, 2023), customer intention (Baba et al., 2023; Guo et al., 2021; Nguyen et al., 2023), consumer behavior (Bakkeli, 2022; Sawang et al., 2023b), and business performance (Okręglicka et al., 2023; Wangyanwen et al., 2023). Based on the data searching in Scopus, there are 215 documents found related to the keywords ‘perceived risk’ and ‘performance’ which are limited to the year 2020 until 2023. The documents found were also limited to the fields of business, management and accounting, and social sciences with a focus on journal-related papers only. This paper has summarized the documents based on the following results:

TITLE-ABS-
KEY (‘perceived AND risk’ AND ‘performance’) AND PUBYEAR > 2019 AND PUBYEAR < 202 4 AND (LIMIT-TO (SUBJAREA , "SOCI") OR LIMIT-TO (SUBJAREA , "BUSI")) AND (LIMIT-TO (DOCTYPE , "ar")) AND (LIMIT-TO (LANGUAGE , "English")) AND (LIMIT-TO (EXACTKEYWORD , "Perceived Risk") OR LIMIT-TO (EXACTKEYWORD , "Risk Perception") OR LIMIT-TO (EXACTKEYWORD , "Decision Making") OR LIMIT-TO (EXACTKEYWORD , "Performance") OR LIMIT-TO (EXACTKEYWORD , "Job Performance") OR LIMIT-TO (EXACTKEYWORD , "Firm Performance"))

4. Results

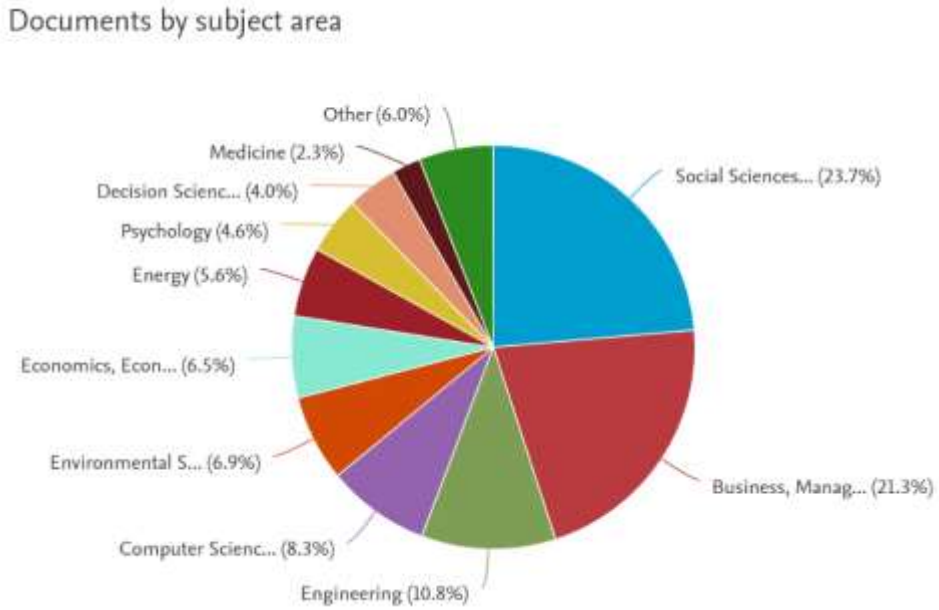
The graphs show the journals produced by year starting 2020 until 2023 (Figure 1). This paper also shows the documents by subject area and authors to identify the trend for this issue (Figure 2). Besides, this paper includes a matrix on the selected paper to investigate the important key variable used as a construct of perceived risk study towards the motivation and performance of the business (Table 1).

Figure 1: Journal papers produced in Scopus from 2020 until 2023



Based on Figure 1, the graph depicts a moderate upward trend from 2020 to 2021, followed by a strong surge in 2022. Nevertheless, in 2023, there is a discernible decline, albeit with a higher quantity of papers compared to previous years.

Figure 2: Journal papers produced by subject area

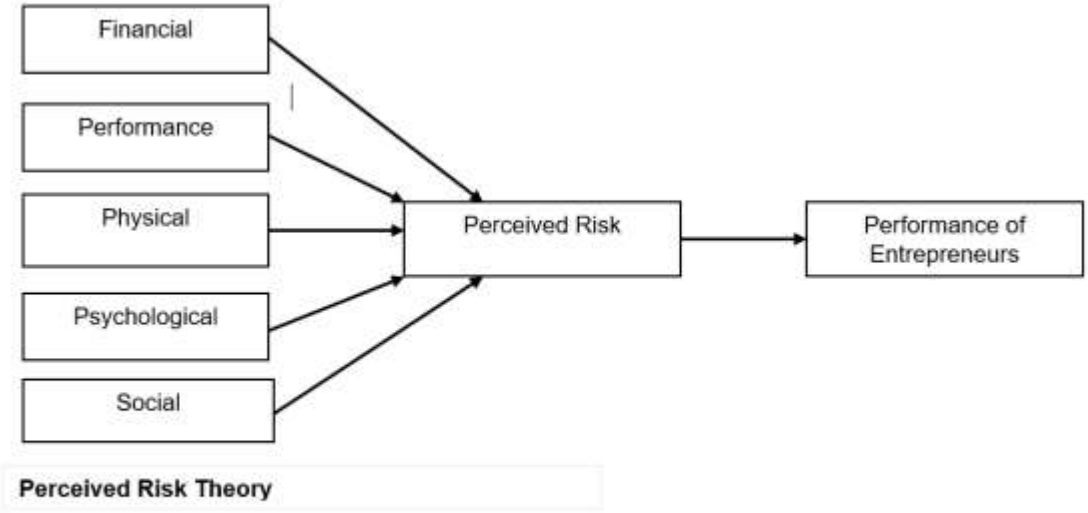


The data illustrates that Social Sciences and Business Management are the predominant subject areas, collectively representing almost 50% of the total texts. Engineering, Computer Science, and Environmental Science also make substantial contributions. The "Other" category encompasses a wide array of underrepresented topics that constitute the remaining portion.

	Authors/ Years	Title	DV	IV	Mediating	Moderating
1	(Haq et al., 2023)	The danger of feeling sorry for oneself: How coworker incivility diminishes job performance through perceived organizational isolation among self-pitying employees.	Job performance	Coworker incivility,	Perceived organizational isolation	Susceptibility to self-pity
2	(De Clercq et al., 2022)	You're draining me! When politically inept employees view organization-linked emotional exhaustion and unforgiveness as reasons for diminished job performance	Job performance	Employee political ineptness	Organizational-induced emotional exhaustion	Perceived organizational unforgiveness
3	(De Clercq et al., 2021)	But they promised! How psychological contracts influence	Job performance	Violation of organizatio	Job-related anxiety	Psychological contract type

		the impact of felt violations on job-related anxiety and performance		nal promises		
4	(Dash, 2020)	Exploring visit intention to India for medical tourism using an extended theory of planned behavior	Visit intention of medical tourists to India	Perceived risk (financial, physical, psychological, time and performance) and facilitating condition		
5	(Sahoo et al., 2023)	Exploring patients' intention toward e-health consultation using an extended UTAT model	Behavioral intention on e-health consultation	Perceived risk, trust		
6	(Sahoo et al., 2023)	Perceived risk and benefits of e-health consultation and their influence on user's intention to use	Behavioral intention on continuous usage of e-health consultation	Convenience, perceived risk, facilitating condition and social influence		
7	(Vu et al., 2022)	The role of perceived workplace safety practices and mindfulness in maintaining calm in employees during times of crisis	Job performance	Perceived health risk and perceived workplace safety practices	Burnout	
8	(Lee et al., 2021)	Motivating collaborative consumption in Fashion: Consumer benefits, perceived risk, service trust and usage Intention of online fashion rentals service	Consumer intention on online fashion rental services	Usage intention	Perceived risk, and service trust	
9	(Kim et al., 2021)	Consumer value and risk perception of circular fashion: Comparison between Second Hand, Upcycled and Recycle Clothing	Circular fashion consumption	Consumer's perceived value and consumer's perceived risk	Product attitude	Individualism

The Conceptual Framework of Perceived Risk And Performance of Entrepreneur



Adapted from: Boermans & Willebrands, (2017), Qalati et al. (2021), (Subedi, 2021), and Yi et al., (2020).

5. Conclusion

The interplay between perceived risk and company performance is a multifaceted phenomenon that has a substantial impact on organizational outcomes and decision-making processes. A company's approach to risk management can be influenced by the perception of risk, which can influence a variety of factors, including entrepreneurial decisions and supply chain strategies. Performance and resilience can be enhanced by effectively managing perceived risks, whether through proactive communication, comprehensive risk management strategies, or informed decision-making, according to research.

An entrepreneur's capacity to seize opportunities, allocate resources, and maintain persistence is influenced by their perception of risk in the context of entrepreneurship. The performance of an entrepreneur can be either impeded or improved by their perception of risk, contingent upon their approach to managing these risks. Each of the dimensions of perceived risk—financial, psychological, social, physical, and time-related—plays a critical role in both consumer behavior and business strategies.

In addition, research highlights the significance of comprehending these dimensions within the broader context of perceived risk, as they influence not only individual decision-making but also organizational performance. Entrepreneurs and organizations can more effectively navigate uncertainties by acknowledging and addressing perceived risks, thereby fostering innovation, sustaining performance, and attaining long-term success. In an ever-evolving market landscape, the necessity of continuous exploration and adaptation of risk management practices to ensure robust and informed decision-making is highlighted by the systematic review of the literature in this paper.

This paper concentrates on the theoretical part of the studies only. Therefore, future research consists of empirical data, and analysis is required to determine their relationship. Besides, motivation also involves intrinsic and extrinsic which the paper should consider to study.

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The Share Price Behavior of the IPO Surrounding the Expiration of the Lockup Period. Evidence from IPOs with No Analyst Positive Recommendations

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Abstract: This study investigates-the share price performance of the IPOs surrounding the expiration of the lockup period in the Malaysian stock market. The study explores whether the IPOs without analysts' positive recommendations give a significant positive share price performance in situations of the negative effect of the expiration of the lockup period. The IPOs sample of 281 companies was taken from the period of January 2000 to December 2014. The study applied event study methodology to investigate the performance of the IPO share price. The study found that the IPOs without analysts' positive recommendations gave an insignificant positive share price performance in the event window of (-10, +10) surrounding the expiration of the lockup period. Whilst, the longer event window (-30, +30) shows a significant positive share price performance surrounding the expiration of the lock-up period.

Keywords: *Analysts' positive recommendations, lockup period, IPOs*

1. Introduction

Initial public offerings (IPOs) are a venue for the founder and investors to create paper wealth that can be converted into cash at a future date (Bessler & Thies, 2007; Ritter & Welch, 2002). While, analysts' recommendation exerts a tremendous impact on today's stock market by reducing investors' uncertainty over public listed firms' fair value as well as promoting market efficiency (Beyer, Cohen, Lys & Walther, 2010). As such, the analysts' recommendations can influence the price of a company especially pertaining to that of an IPO (Loh & Stulz, 2011; Fang & Yasuda, 2014; Mathew & Yildrim, 2015). Consequently, positive analysts' recommendations will lead to a positive market reaction (Micheally & Womack, 1999; McKnight et al., 2010; Fang & Yasuda, 2014). Therefore, IPOs and analysts' recommendations are becoming increasingly important in the modern financial market.

There are many studies on IPOs and analysts' recommendations. The literature on IPOs is mainly on these four problems: a) the underpricing of the IPOs – a situation where the share price of the newly listed company is higher than the offering price on the listing day (Loughran & Ritter, 2004; Abdul Rahim & Yong, 2010; Ahmad-Zaluki & Kect, 2012); b) the long run underperformance of the IPO (Corhay, Teo, & Rad, 2002; Goergen, Khurshed, & Mudambi, 2007; Su & Bangassa, 2011); c) the 'hot- issue' IPO market - a period where the stock market is very bullish and positive with unusually high initial return for new listing companies, thus the potential new listing company would take this opportune time to go public for the benefit of a higher initial return (Bradley, Clarke, & Jr; 2012; Chang, Kim & Shim, 2013); and d) the IPO market reaction surrounding the expiration of the lockup period (Bradley, Jordan, Roten, & Yi, 2001; Brav & Gompers, 2003; Rashid, Abdul-Rahim, & Yong, 2014).

There are many empirical studies on IPOs and analysts' recommendations. Rajan & Sarvaes (1997) were among the first to study analyst behavior with respect to IPO performance. They attempt to explain IPO anomalies (optimism, under-pricing and long-run share price underperformance) by investigating the reliability of the analyst following. They assert that an optimistic earnings forecast leads to IPO under-pricing; and that the under-pricing is positively related to analysts following the IPOs. In addition, they recorded that the most optimistic analyst underperformed the NYSE/AMEX index, while the least optimistic analyst outperformed the indices in the long run. The finding is consistent with studies done by Cliff & Denis (2004). However, there are limited studies that combined the studies of IPOs and IPOs with no analysts' positive recommendations. The need to study a combination of IPO and IPOs with no analysts 'positive recommendations is critical. This study will explore the share price performance of the IPOs with no analyst's positive recommendation surrounding

the lock-up period.

Malaysian IPOs are subject to many of the Bursa Listing requirements. One of the requirements is the lockup period. The lockup period in the developed market like the U.S. or the U.K. is voluntary. The lockup period is where all of the insiders (usually the underwriters of the IPO and the founder of the company) cannot sell their shareholding for a given period of time. Once the lockup period expires, the insiders are free to sell their stock holdings in the newly listed firm. The expiration of the lockup period presents the first opportunity for the insiders to sell their shares on the stock markets. As the insiders are the major shareholders and hold more stocks than the public, the sales of the insiders may increase the supply of the shares and may have a major impact on the IPO shares. According to (Aggarwal et al., 2002) the expiration of the lockup period will lead to the supply curve shifting outward due to the over-supply of shares from the insiders, which eventually will lead to a share price decline.

The expiration of the lockup period creates a huge amount of supply in the IPO shares which are ready to be sold. The selling of the IPO shares upon expiration of the lockup period will lead to an indiscriminate selling by the insiders which will transmit a negative signal to the market (investors assume a no-confidence issue towards the firm) which will subsequently lead to a negative market reaction; vice versa (Brau & Fawcett, 2011; Liu & Ritter, 2011). Empirical evidence has shown that there were negative abnormal returns surrounding the end of the expiration of the lockup period (Ofek & Richardson, 2000; Field & Hanka, 2001; Brav & Gompers; 2003; Wan-Husin, 2005).

Problem Statement

The study investigates the IPOs without the analysts' positive recommendations during the period of the expiration of the IPO lockup duration in Malaysia. The lockup period has a negative effect on share price performance (Ofek & Richardson, 2000; Field & Hanka, 2001; Brav & Gompers, 2003; Wan-Hussin, 2005; Mohamed-Arshad, Taufil, & Ahmad Zaluki 2016) but the analysts positive recommendations should positively influence the price of a company's stock (Beyers et al., 2010; Kaplanski & Levy, 2017; Barniv, Chen & Li., 2020). Therefore, it is interesting to study whether the IPOs without the analysts' positive recommendations could compound or exaggerate the negative effects of the expiration of the lockup period. Can the IPOs without analysts' positive recommendations give a significant negative share price performance surrounding the expiration of the lockup period? As such, this study is to investigate the effect and impact of the IPOs with no analysts' positive recommendations on the share price performance of the Malaysian IPOs around the expiration of the lockup period.

However, according to the efficient market hypothesis (EMH) of the semi-strong, the share prices reflect all available information making an abnormal return on share price is not possible. In other words, the stock market always trades at its fair value due to the same level of information distribution. As the expiration of the lockup period is known information in the IPOs, the nature of the business and the analyst recommendation is publicly available information, the market should ignore this information. Hence, the IPO firms should not experience any significant abnormal return during the expiration of the lockup period. Nonetheless, empirical evidence has shown significant abnormal returns on riskier assets (Brau & Fawcett, 2011; Brav & Gompers, 2003; Bradley et al., 2012).

Therefore, the research question is developed as follows:

- Is there any significant share price performance in Malaysian IPOs without analyst recommendations surrounding the expiration of the lockup period?

Research Objective

The general objective of this study is to examine the performance of the IPOs share price surrounding the expiration of the lockup period in response to the IPOs without analysts' positive recommendations. Hence, the research objective is:

- To examine whether there are significant IPOs share price performances in the IPOs without the analyst recommendation surrounding the expiration of the lockup period.

Significance of Study

According to Busse & Clifton Green, (2002); Chan & Hameed, (2006) and Jia et al., (2017), the information that the analysts provide seems to promote market efficiency by helping investors to accurately value companies, especially in picking an undervalued mispriced stock. Therefore, theoretically, analysts' recommendations could reduce the pooling equilibrium effect of information asymmetry as the analysts' recommendation could help investors allocate their capital Stiglitz & Grossman, (1982). The absence of analyst recommendations can worsen the information asymmetry thus leading to price distortion. Consequently, it is important to-investigate the non-analysts positive recommendation on the Malaysian IPO share price performances. This means the study could distinguish the impact and effect of the non-analysts' positive recommendations on the Malaysian IPOs share price behavior surrounding the expiration of the lockup period. Hence, the study could establish how the non-analyst's recommendation has a contributing effect on the share performance of the IPOs during the expiration of the lockup period.

The regulators of the financial market will benefit from the findings of these studies. The findings on the analysts' and non-analysts' behavior surrounding the expiration of the lockup period will help the policymaker to have some effective policies to control especially the analysts' behavior in the stock market.

2. Research Methodology

This study covers the period from January 2000 to December 2014 of the Malaysian stock market. This period covers all the phases of the market. They are the bearish market phase, the consolidation market phase and the bull market phase. The study will take the daily closing of the IPO share price for its event study calculations. The sample taken is the IPOs listed from the year of January 2000 till December 2014. The sample of the IPO companies in this study is taken from the ones participating in the incentive scheme arranged by the Bursa Malaysian Stock Exchange joint effort with the Capital Market Development Fund program (CBRS) and from the DataStream compilation from the investment banks, stockbroking companies or the independent research house. All the samples are examined surrounding the expiration of the lockup period.

The main focus is the effect of the IPOs without positive analyst recommendations on the share price performance of the IPOs during the expiration of the lockup. As such, the study focuses on the available IPOs without analysts' positive recommendation of Malaysian IPOs before the expiration of the lockup period. To this end, the study needs to take the IPOs without analysts' positive recommendation before the expiration of the lockup period to know the impact it has on the share price before, on and after the expiration day of the lockup period. A similar method was done by Bradley et al., (2003). However, their study was during the expiration of the IPOs quiet period.

To test the study research objective, the study methodology is employed. The event study methodology uses the adjusted risk market model (Seiler, 2007), based on the sample of Malaysian IPOs which has an analysts' coverage following within the stipulated period. The share price performances of the Malaysian IPOs are not covered by the analysts and is analyzed surrounding the expiration of the lockup period in two different event windows period. which is over the short-term event window period and the long-term event window period. The short-term period is 21 trading days surrounding the expiration of the lockup period (Aggarwal et al., 2002), while the long-term period is 61 trading days' event window during the expiration of the lockup period. The FBM Kuala Lumpur Composite Index (FBMKLCI) and the daily closing share price are used. The proxy for the market return is FBMKLCI.

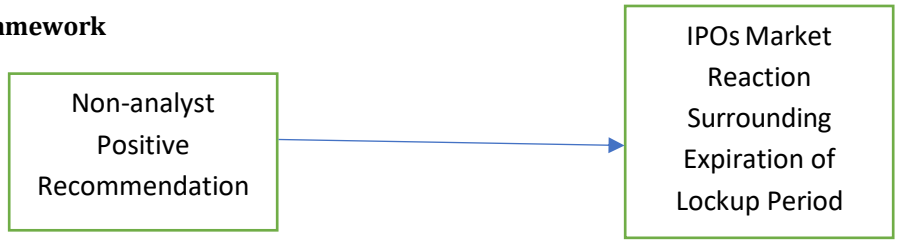
The Lock-Up Period

The expiration of the IPOs lockup period is a compulsory matter in the Malaysian stock market. The lockup period is empirically found to act as a commitment device to manage the moral hazard problem among investors and a signalling device for quality IPOs (Arthurs et al., 2009). Simply put, a lockup period is supposed to give investors a chance to evaluate the value of the firm. Hence, investors could differentiate between fundamentally good IPOs and not (Yung & Zender, 2010). However, the lockup period is also a time when substantial shareholders can sell their holding of shares for the first time. Evidently, the IPOs stock price is found to underperform during the expiration of the lockup period (Brav & Gomper, 2003; Goergen et al., 2006). Hence, due to the selling pressure from the major shareholders, it is expected that the stock price to decline during the

expiration of the lockup period. Having discussed the benefit, the analysts' recommendation has towards the public listed companies' stock price, the study tries to answer whether the analysts' positive recommendation can reduce the selling pressure surrounding the expiration of the IPOs lockup period where selling pressure is at its height.

As the study aims to examine the effect of the share price performance of the IPOs without analysts' positive recommendations surrounding the expiration of the IPOs lockup period, the study has established the theoretical framework on the impact of the IPOs surrounding the expiration of the lockup period.

Research Framework



As the expiration of the lockup period is known information in the IPOs, there should be no substantial price fluctuation because the share price's abnormal reaction on the expiration of the lockup period will be absorbed during the market listing (till the expiration of the lockup period). As such, there should be no significant share price impact surrounding the expiration of the lockup period.

Companies may announce important corporate exercises or analysts may issue positive coverage surrounding the expiration of the lockup period to influence the share price. However, the market participants will most probably discount the prospect of this announcement according to the theory of EMH of the semi-strong form. Hence, the study should not experience any significant abnormal return on its share price. This observation leads to the common hypothesis of the study, that is, there should not be any significant share price reaction surrounding the expiration of the lockup period. Therefore, the study hypothesizes that:

Hypothesis 1: There is no significant share price performance of the Malaysian IPOs without analysts' recommendations surrounding the expiration of the lockup period

The study's null hypothesis states that on average, firms should not experience any abnormal return on their share price due to any publicly available information surrounding the expiration of the lockup period. However, empirical evidence shows mixed results regarding the IPOs share price reaction surrounding the expiration of the lockup period. Studies on this were done in the U.S. market by Ofek & Richardson (2000), Bradley et al., (2001), Brav & Gompers (2003); Brau et al., (2004). These studies registered a significant negative share price reaction on the day of the expiration of the lockup period and surrounding the expiration of the lockup period. However, studies in European countries show insignificantly negative results of share price reactions surrounding the expiration of the lockup period. For example, Espenlaub, Goergen & Khurshed (2001) found an insignificant negative share price return surrounding the expiration of the lockup period for UK companies. While, studies by Goergen et al., (2006), Boreiko & Lombardo (2013) found an insignificant share price reaction surrounding the expiration of the lockup period for the market in France, Germany and Italy market.

In the Malaysian market, the market reaction to the IPOs surrounding the expiration of the lockup period was mixed. While, Zameni & Yong, (2017) found an insignificant positive share price reaction in IPOs surrounding the expiration of the lockup period, Mohamed-Arshad, et al., (2016) found a significant negative market reaction in the IPOs. Nevertheless, the study posits according to the EMH that if the market participants' anticipation is rational and unbiased, the market reaction of the firm, on average should not be significantly different from zero. Hence, the study should produce or exhibit no significant share price reaction of the Malaysian IPOs surrounding the expiration of the lockup period.

3. Findings

In the following Table 1, the cumulative abnormal return (CAR) of the IPOs–without the analyst's positive recommendation registered a significant positive figure. The event window for (-30, +30) gives a significant positive CAR of 4.2303% (z- stats=5.4944; p<0.01). However, the event window for (-10,+10) registered an insignificant positive CAR of 0.6490% (z-stats=0.8268 ;p>0.05). Supporting studies that show significant positive analysts' recommendations were by (Bradley et al., 2003;)-on the U.S. IPO market; Boissin & Sentis (2012) – on the French IPO market, Song et al., (2012) – on the Korean IPO market; Mohshirian et al., (2009) – the emerging market. The emerging market Mohshirian et al., (2009) study consists of 11 emerging markets which are Argentina, Brazil, China, Chile, Hungary, India, Indonesia, Israel, Korea, Mexico and South Africa.

Table 1: Event Study Results for the Analysts' Positive Recommendation and Non-Analysts' Positive Recommendation Firms

Window(s)		**Cumulative Abnormal Return**		
Non-analyst recommendation	**N**	**CAR**	**Z-stat**	**p-value**
(-30,+30)	281	4.2303	5.4944	3.92E-08***
(-10,+10)	281	0.6490	0.8268	0.4084

* significant at p<0.1, ** significant at p<0.05, significant at p<0.01

Boissin & Sentis (2012) found that the IPOs in the French market with analysts' positive recommendations outperformed the IPO without the analysts' positive recommendations by 15.7%. In a one-year period, the IPOs with analysts' positive recommendations exhibited a significant positive abnormal return of +4.29%, whilst the IPO without the analyst's positive recommendation gave a significant abnormal return of negative -11.41%. The abnormal return in Boissin & Sentis (2012) was calculated under the Buy and Hold Abnormal Return method.

Dechow et al. (2000), found that the CAR of five-year IPOs without the analysts' positive recommendation for the event window (-30,+30) showed a significant positive CAR surrounding the expiration of the lockup period. This indicates that the IPOs without analysts' positive recommendations have a significant impact on the share price performance of the IPOs surrounding the expiration of the lockup period. However, this is not the case for the event window (-10+10). Although the CAR is positive it is not significant.

The finding of the studies above shows that IPOs without analysts' positive recommendations do give a positive abnormal return. In a way, the findings of Rajan & Sarveas (1997); Dechow et al., (2000) on the performance of the IPOs with positive analysts' recommendations explain the underperformance of the IPOs with analyst positive recommendations surrounding the expiration of the lockup period.

4. Conclusion & Recommendations

In conclusion, the study finds that 1) the share price of the IPOs without analysts' positive recommendations outperformed the surrounding the expiration of the lockup period. This is evidently shown in the event window (-30,+30), where the IPOs without analysts' positive recommendations showed a significant positive CAR. The shorter period of the event window also shows a positive abnormal return in its share price, albeit not significant.

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Exploring The Influence of Short Travel Reels and Video Reviews on Travel Inspiration: A Study of Island Reviews

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Abstract: This study investigates the impact of short travel video reels on travel inspiration and intention, focusing on how presenter attractiveness, destination attractiveness, and video design influence viewers' motivation to travel. Despite extensive research on traditional travel marketing methods, there is a notable gap in exploring the role of short-form video content in influencing travel-related decisions. The primary objective of this research is to examine how various elements of short travel video reels affect travel inspiration and intention. The study employs a systematic sampling technique with an intercept method, utilising survey data from participants who watched short travel videos showcasing different presenters, destinations, and video designs. The methodology includes mediation and moderation analyses to assess the relationships between the attractiveness factors and travel intention mediated by travel inspiration. The findings reveal that presenter attractiveness, destination attractiveness, and video design significantly influence travel intention, with travel inspiration as a critical mediator. The study confirms that engaging and visually appealing travel videos can effectively stimulate viewers' desire to travel. However, the expected moderating effect of openness to experience on these relationships was not supported, suggesting that other factors may play a more significant role in shaping travel inspiration. For marketers and content creators, the findings highlight the importance of investing in high-quality, visually compelling travel content and selecting charismatic presenters to maximise viewer engagement. Additionally, the research underscores the need for future studies to explore emerging media formats and cultural variations in travel inspirations.

Keywords: *Short travel reels, travel reviews, travel inspiration, island destinations, social media*

1. Introduction

Travel has always been a source of inspiration, allowing individuals to explore new cultures, landscapes, and experiences. Travel inspiration is the internal drive that motivates people to pursue their travel ideas. It is a topic studied by researchers such as Dai et al. (2022) and Khoi et al. (2020). In the digital age, how people seek travel inspiration has evolved significantly, with social media and online platforms playing a pivotal role in shaping travellers' preferences and choices (Xiang & Gretzel, 2010). One of the most prominent mediums in this transformation is the rise of short travel videos. Short videos, usually lasting a few seconds to a few minutes, have become incredibly popular on social media sites such as YouTube, TikTok, Instagram, and Snapchat. Recently, social media has become the primary source for tourists to gather information about their destination before travelling (Cheng et al., 2020; Liu et al., 2020). Travel enthusiasts, content creators, and influencers utilise these platforms to share their captivating travel experiences through engaging videos. These videos offer viewers a delightful and brief look into different destinations, activities, and cultural aspects of various places (Peralta, 2019).

Furthermore, it is essential to acknowledge that visual content significantly influences travellers' choices. Recent research has demonstrated that captivating visuals, like photos and videos, have a profound impact on the choices people make when it comes to selecting a travel destination, planning their trips, and even the kind of experiences they desire (Wang et al., 2022). Short travel video review possesses a unique talent for capturing the charm of a place in a brief yet captivating way. This study explores the impact of short travel videos on travel inspiration, with a particular focus on island reviews. Islands are captivating with their beauty, unique cultures, and laid-back vibes, always enchanting travellers globally. Short travel videos are the perfect backdrop for our exploration. They capture the essence of these paradise destinations.

Islands are unique travel spots with diverse experiences, from beautiful beaches to culturally significant sites. Our diverse options cater to all travel preferences, ensuring there is something for every type of traveller. Studying brief travel videos' impact on inspiring island travel is crucial. This content helps us grasp its influence

and broader travel trends. This study is a valuable contribution to understanding modern travel dynamics. Tourism plays a vital role in the economy of Malaysia and is a rapidly growing industry (Tang & Tan, 2015). However, there is a lack of understanding about the impact of short travel videos, especially those highlighting island destinations. The gap is crucial because Malaysia is a diverse and culturally rich nation with captivating islands, each with its charm (Zainuddin et al., 2018). It is crucial to comprehend the influence of short travel videos on travel inspiration in Malaysia.

Background of Study

In Malaysia, there has been a rise in local content creators and influencers who make travel content for audiences at home and abroad (Taslaud, 2023). It has significantly influenced the tourism sector, with its engaging content promoting brand exposure and inspiring travel among its audience. Their understanding of local culture and trends allows them to create content that resonates with Malaysians, fostering a deeper connection and trust with their followers. This phenomenon has increased international tourist arrivals and has become a prominent marketing channel for brands and businesses. This research could help creators engage viewers better and promote Malaysia's travel offerings more effectively. Promoting Malaysian islands effectively requires responsible tourism practices (Kasim, 2004). Studying the influence of travel videos on visitor behaviour is crucial, as it promotes sustainable tourism and educates tourists about respecting local cultures and environments. This understanding can encourage responsible travel behaviours, support local economies, and minimise harm to local cultures and environments (Hysa et al., 2022). Understanding the impact of travel videos on visitor choices can help direct investments and efforts towards maximising the economic advantages of tourism (Puah et al., 2018).

Given these factors, it is imperative to address the lack of understanding regarding the impact of short travel videos on travel inspiration in Malaysia. The study's value lies in its contribution to expanding our understanding of short travel videos' influence on inspiring travel, specifically in the context of island reviews. This study investigates the impact of short travel videos on travel inspiration and intention. It will utilise the "stimuli organism-response" (S-O-R) framework to analyse the appeal of these videos. This study holds great importance as it delves into the realm of travel inspiration in Malaysia, a nation brimming with cultural diversity and enchanting islands. Exploring the impact of short travel videos aims to shed light on a largely unexplored topic. The study is vital in understanding how to develop successful marketing strategies and allocate resources to promote the Malaysian islands effectively. This knowledge is vital for Malaysia's thriving tourism industry, generating employment opportunities and driving economic growth. This study can serve as a valuable resource for future research in various countries with unique tourism attractions, contributing to our knowledge of the worldwide influence of short travel videos.

The rise of short travel videos has revolutionised the tourism industry, providing a novel way to inspire and influence travel intentions. However, the extent of this influence and the factors that moderate it, such as an individual's openness to experience, are not fully understood (He et al., 2021). Furthermore, while these videos are increasingly used in destination marketing, the specific implications of this strategy, including its effectiveness and impact on the perception of tourist destinations, are yet to be comprehensively explored (Chen et al., 2023). This study addresses these gaps by investigating the impact of short travel videos on travel inspiration and intention, the moderating role of openness to experience, and the marketing implications of using short travel videos for promoting tourist destinations (Dong et al., 2024).

Limited research exists on the impact of travel content in digital media, particularly in Malaysia's unique travel landscape. The allure of Malaysian islands like Langkawi, Penang, and Borneo's exotic destinations is well-known among tourists. However, the impact of short travel video travellers in this region is still not fully understood. The Malaysian government and tourism authorities consistently invest in promoting and developing their tourism industry (Tourism Malaysia, 2021). Understanding how short travel videos drive interest and visitors to island destinations is crucial for creating effective marketing strategies and allocating resources.

Significance of study

The increasing prominence of short travel video reels in shaping travel intentions necessitates a deeper understanding of the factors driving their effectiveness. In an era where visual content heavily influences

consumer behaviour, there is a growing need to investigate how various components of short travel videos—such as presenter attractiveness, destination appeal, and video design—impact travel inspiration and intention. This study addresses this gap by systematically examining how these elements inspire travel, particularly within a specific destination like Melaka. By focusing on the interplay between visual and aesthetic factors, the study provides valuable insights into how travel videos can effectively engage viewers and stimulate their desire to explore new destinations.

Melaka, with its rich cultural heritage and status as a UNESCO World Heritage Site, presents a unique case for examining travel inspiration. The city's historical and visual appeal makes it an ideal setting for testing the hypotheses related to destination attractiveness and video design. Understanding how Melaka's distinct characteristics influence travel inspiration can offer targeted insights for destination marketing and content creation strategies. This research is crucial for enhancing the effectiveness of travel videos, guiding content creators, and optimising marketing strategies to capture better and engage audiences. This study aims to contribute to the broader field of tourism marketing and consumer behaviour by bridging the gap between theoretical understanding and practical application.

2. Literature Review

Consumer Inspiration and Travel Inspiration

Consumer inspiration has received much attention in academics due to its significance in marketing. Numerous research has demonstrated that consumer inspiration may occur before, during, and after consumption, resulting in consumers' good intentions (Chuah, 2019; W. Liu et al., 2017). Consumer inspiration is defined as a customer's ephemeral motivational state that enables them to move from receiving an idea from marketing to actively pursuing a goal associated with consumption (Bottger et al., 2017, p. 122).

Consumer inspiration before, during, and after consumption enables customers to have an excellent experience with a prominent level of satisfaction, which protects client relationships and encourages client loyalty (Tarabashkina et al., 2022). Likewise, consumer inspiration before consumption can forecast marketing results, assist in bringing in new customers, and favourably influence consumers' choices (Bottger et al., 2017; Zanger et al., 2022). External stimuli with high intrinsic value ignite consumer inspiration, which is not naturally occurring (Thrash & Elliot, 2004).

In other words, current ideas are likely displayed in an event, product, or information that inspires consumers (Thrash & Elliot, 2004). According to Hinsch et al., (2020), the inspiration source and the customer characteristics also impacted the inspiration. The internet's omnipresent presence in consumers' lives has made the online world a significant source of inspiration for customers (Dutta & Segev, 1999). It was essential to research consumer inspiration in online environments. Studying consumer inspiration helped researchers and businesses gain insights into how consumers behave online. This understanding is vital for creating effective marketing strategies, personalised user experiences, and tailored products or services (Frasquet et al., 2015). There has been substantial research on consumer inspiration's causes, effects, and underlying mechanisms. It is vital to research consumer inspiration in tourist contexts since Oltra et al. (2022) discovered noticeable variations in the causes and results of consumer inspiration in various consuming contexts.

Although consumer inspiration was more often recognised and used in marketing strategies, its relevance in the context of tourism had not yet been fully established (Fang et al., 2023). According to the current literature, "travel inspiration" refers to the memorable aspects of a vacation sparked by excellent accommodations or other travel-related experiences (He et al., 2023; Liu et al., 2022). According to Khoi et al. (2021), tourist inspiration influences a traveller's intention to return to a location by inducing the positive emotions of joy and transcendence. Kwon & Boger (2021) discovered that consumer inspiration influenced the links between customers' pro-environmental intentions and their experiences with green hotels.

Other than that, it was found that tourist inspiration varied depending on both the inspiration's source and the traveller's characteristics, such as their openness to new experiences, attachment to their destination, frequency of travel, and familiarity with the area (Khoi et al., 2021; Liu et al., 2022) In a recent wave of research on travel inspiration, (Cheng et al., 2020) focused on pre-trip travel inspiration and emphasised that travel

inspiration from social media content, like short travel videos, significantly influenced tourists' decision-making and, as a result, should receive more research attention. Thus, the current study built on the work of (Cheng et al., 2020) and investigated how short travel videos used as social media material inspired travel.

Travel Inspiration

According to the theory of consumer inspiration, inspired-by and inspired-to are two parts of consumer inspiration (Fang et al., 2023). Consumers who were inspired by were open to novel and transcendent concepts and were further motivated to go into the state of inspired-to by intense closeness (Bottger et al., 2017). Short travel video reels give viewers many ideas for future travel, such as an attractive host, stunning and unique locations, or creative video production (Fang et al., 2023). The short travel video reels might have inspired the viewers, motivating them to act on the novel ideas presented (Liu et al., 2022).

According to the theory put forward by Fang et al. (2023), travel inspiration, in both of its successive forms, acted as a chain mediator between travel intention and the allure of short travel video reels. Short travel video reels excited viewers with appealing presenters, popular tourist spots, and creative design. These elements triggered transcendence and evocation, encouraging appreciation of and adjustment to the stimuli's source (Fang et al., 2023) As a result of these favourable impressions of novel stimuli and concepts, viewers entered a state of intrinsic drive to articulate and carry out novel ideas (Fang et al., 2023) Additionally, this proximity incentive elicited positive feelings from viewers toward the inspiring item, such as a desire to visit the location that the presenter had highlighted and suggested (Fang et al., 2023).

Inspired consumers were highly motivated to implement the new concepts they learned (Thrash & Elliot, 2003). Positive outcomes, including purchasing behaviour (intention), satisfaction, and loyalty, could be attained by consumer inspiration (Bottger et al., 2017). Previous research indicated that inspiring tourists during their travels might enhance their desire to revisit and engage in behaviours (He et al., 2023; Khoi et al., 2021). Inspiration could rearrange and shift a destination before a journey, moving it from an unconscious to a conscious, induced, and decided choice. Put in another phrase, viewers were more likely to be inspired to visit the location seen in the film when they were exposed to high-quality travel content (Fang et al., 2023).

Inspired-by refers to the stage in which consumers were exposed to unusual and stimulating travel-related stimuli (Wu & Ding, 2023). During this phase, they were willing to stray from well-known ideas and consider fresh viewpoints. Bottger et al. (2017) highlighted that this initial inspiration was a critical step before the inspired-to stage, laying the groundwork for a consumer's motivational journey towards a more profound and action-oriented state.

Travel Intention

Inspired consumers were highly motivated to implement the new concepts they learned (Thrash & Elliot, 2003). Positive outcomes, including purchasing behaviour (intention), satisfaction, and loyalty, could be attained by customer inspiration (Bottger et al., 2017) Previous research has indicated that inspiring tourists during their travels might have enhanced their desire to revisit and engage in behaviours (He et al., 2023; Khoi et al., 2021) Inspiration could rearrange a destination before a journey, moving it from an unconscious to a conscious, induced, and decided choice (Fang et al., 2023) Put in another phrase, viewers were more likely to have been inspired to visit the location seen in the film when they were exposed to high-quality travel content (Fang et al., 2023).

Personal Characteristic

In addition to the source of inspiration, personal characteristics also play a significant role in consumer inspiration (Bottger et al., 2017). One of the Big Five trait variables, openness to experience, defines a person's willingness to learn new things and adjust to changes (He et al., 2023). This study's openness to experience related to the audience's acceptance of the presenter, destination, and video style of the short travel reels. According to psychological research, those who were very open to new experiences were more likely to be inspired since they were more receptive to novel concepts and opportunities (Thrash & Elliot, 2003). According to Boettg's (2019) theory of consumer inspiration, personal attributes impact the production and intensity of inspiration by modulating the influence of inspiration sources on consumer inspiration. Customers who actively sought out and were open to new ideas might have been inspired by external stimuli ((Bottger et

al., 2017). Those with a high degree of openness to new experiences were likelier to have embraced the concepts presented in short travel video reels and were inspired to travel (Fang et al., 2023).

Presenter Attractiveness

Presenter attractiveness is the capacity of a presenter to captivate an audience or elicit favourable reactions through charismatic personal interactions (Fang et al., 2023). Presenters, who comprised most of the travel information disseminated in short travel video reels, frequently used self-dubbed video content to demonstrate to the audience the tourist places they had visited (Masuda et al., 2022). According to Fang et al. (2023), three essential characteristics of a presenter's appeal were their physical appearance, voice and skill level. Physical attractiveness was a term used to describe how well-liked a presenter's look was by audiences (Fang et al., 2023). This evaluation considered appearances, demeanour, and attire (Fang et al., 2023). Research from the past demonstrated that consumers found attractive presenters to be likeable, and this attention and liking may have been carried over to the items they endorsed (Praxmarer, 2011). The attractive appearance, integrity, and expertise (such as problem-solving skills) of presenters could have encouraged viewers to stick around for more live streaming, promote para-social interactions, and develop viewers' emotional attachment and behavioural changes (Choi et al., 2019; Guo et al., 2022; I. Kim & Kim, 2021).

Furthermore, customers frequently viewed attractive presenters as role models and took inspiration from their actions (Algoe & Haidt, 2009; Boettger, 2019). Customers may have felt more inspired when they saw the suggestions made by alluring social media influencers and marketers (Bottger et al., 2017). The presenters' physical appeal may have elicited solid feelings and motivation from the audience, which could have increased customer engagement ((Dang-Van et al., 2023). Lovely presenters could have had a more significant influence as role models in short travel reels. The more attractive the audience viewed the presentation, the more inspired they were by the trip video that was being shown (Fang et al., 2023).

Next, the extent to which a presenter's voice affected others positively and left a positive impression was known as vocal attractiveness (Fang et al., 2023). A presenter's voice, intonation, and ability to connect with the audience may have all added to the overall attractiveness of the content (Holtel, 2019). An engaging and appealing voice would have improved the audience's experience and made the presentation more memorable (Fang et al., 2023).

The professional knowledge, skills, and talents that a presenter exhibited to influence the audience were referred to as expertise (Fang et al., 2023). It was demonstrated by how audiences assessed presenters' expertise, experience, and credentials concerning their choice, promotion, and understanding of travel locations (Fang et al., 2023). Viewers were more likely to have been swayed by recommendations and information when a presenter had experience and a reputation in the field. Because of this effect, the audience may have gotten more involved, developed an emotional bond, and altered their behaviour(Chovanec, 2016).

Video Design Attractiveness

According to Xu et al. (2021), short travel video reels drew viewers in as a means of disseminating tourist information because of their attractive design. Transparent and fluid images, expert scripting, thoughtful background music selection, and other components were the key ways these short travel video reels provided viewers with a satisfying audio-visual experience (Fang et al., 2023). In the chosen examples, movie #14 used underwater photography to highlight Lijiang's stunning landscape, and video #32 paired classical music with the Forbidden City's snowy setting. The careful artistic design in both videos contributed to their visual beauty. The following remarks highlighted the attraction of video design; the image design was well done, and there was such an intense sensation of replacement. The right music perfectly complemented the setting. The snow landscape, the story, and the music were all exquisite. They were the ideal pair since they enhanced one another (Fang et al., 2023).

Product presentation was a crucial aspect of marketing (Bottger et al., 2017) Appealing presentation techniques frequently had a greater chance of grabbing customers' attention and assisting them in visualising and comprehending things (Shen et al., 2019) Innovative technology in the digital age enhanced product presentation and increased the likelihood that a consumer would be inspired (Bottger et al., 2017) Research demonstrated that consumer imagination, thinking horizons, para-social interaction, and ultimately high-level

customer inspiration could be enhanced by online videos, live streaming, augmented reality, and other product presentation formats with high media richness, entertainment, interactivity, and hyperreal sensory experience (Bi et al., 2021; Rauschnabel et al., 2019; Sheng et al., 2020; Xie et al., 2022; Zanger et al., 2022) Short travel video reels effectively created a coordinated audio-visual experience for the audience, which was conducive to new ideas and could stimulate travel inspiration (Fang et al., 2023) These videos could integrate various aesthetic design elements, such as copywriting, background music, and animation, to vividly show the tourist destination.

Destination Attractiveness

Reitsamer et al. (2016) defined destination attractiveness as visitors' judgment of the place's appeal and suitability for their specific needs. The primary material that presenters highlighted to the public in short travel video reels was the features of popular tourist sites (Fang et al., 2023) This result supported the theory put out by Gretzel (2021) that social media users intentionally sought out and concentrated on stunning locations. The presenters' presentations focused on whether they were well-known, beautiful, or energising. More specifically, reputation, aesthetic value, and novelty were the primary factors that contributed to a destination's popularity in short travel video reels (Fang et al., 2023).

To maintain an audience's interest, a tourist attraction has to provide them with aesthetic pleasure and delight (Zhang & Xu, 2020) This is known as aesthetic value. Product attractiveness plays a significant role in grabbing the attention of potential buyers and encouraging them to actively seek further information about the product (Akarsu et al., 2020; Elbedweihy et al., 2016) To motivate customers, it was critical to demonstrate the product's hedonic and utilitarian value and other benefits (Izogo et al., 2020; Rauschnabel et al., 2019) According to Buhalis (2000), a destination in the context of the tourism market is considered a tourist attraction offered in certain areas. Research has demonstrated that appealing locations could increase travellers' desire to travel and provide life-changing experiences while they are away (Ma et al., 2018; Reitsamer et al., 2016).

Novelty refers to the distinctive experience a tourism site could provide the public, such as uncommon and little-known historical, cultural, and natural landmarks(Fang et al., 2023). According to Kim et al. (2012), landscape resources were the most fundamental components of a destination's appeal. They were frequently emphasised as the primary material in destination marketing campaigns, which awakened potential visitors' inspiration states. To get inspiration for upcoming travels, social media users would proactively look for intriguing tourist destinations (Gretzel, 2021). In short, travel video reels, a destination's perceived attractiveness, increased the likelihood that viewers would get inspired to visit there (Fang et al., 2023).

Persuasion Theory

The persuasion model developed by Hovland et al. (1953) contended that the four fundamental components influencing attitude change and behavioural intention were the persuader, persuasive information, persuasion scenario, and object. In marketing and advertising, persuasion theory is a crucial concept that could be used in various marketing situations (Sparks et al., 201). Digital technology has aided the development of several online marketing apps in the Internet era. With their engaging and dynamic presentations, live streaming and short-form films became popular internet persuasion tactics (Flavián et al., 2017; Lo et al., 2022; Wang, 2020). Persuaders, particularly streamers and video bloggers, were the primary source of information distribution in these online interactions. Their trustworthiness and appeal were thought to be the main determinants of the marketing effect (Masuda et al., 2022; Sokolova & Kefi, 2020).

High-quality information helped customers see the worth of the product more favourably ((Cheung et al., 2008). Hence, argument/information quality was also essential to persuasion construction (K. Z. K. Zhang et al., 2018). According to prior research, detailed, limited, and hilarious information could better emphasise a product's benefits and increase persuasive effectiveness (Bigne et al., 2019; Lo et al., 2022; Sparks et al., 2013; Wang, 2020; Yoon et al., 2020) Although the presenter's personality and level of personal involvement were typical influencing factors, changes in the persuasion object could alter the persuasion's outcomes (Shavitt et al., 1994; Yang et al., 2022) According to Chang (2020), the persuasive effect manifested itself through inspiration. According to research, persuasive information was a crucial driver of consumer inspiration(Oltra et al., 2022). The current study had a solid theoretical foundation in persuasion theory, which explained why short travel videos were considered an effective source of travel longing (Fang et al., 2023).

Research Framework

In the framework of this research model, various interrelated factors contributed to shaping travel intention, with presenter attractiveness, video design attractiveness, and destination attractiveness as independent variables, travel inspiration as a mediating variable (comprising inspired-by and inspired-to), and personal characteristics as moderating variables.

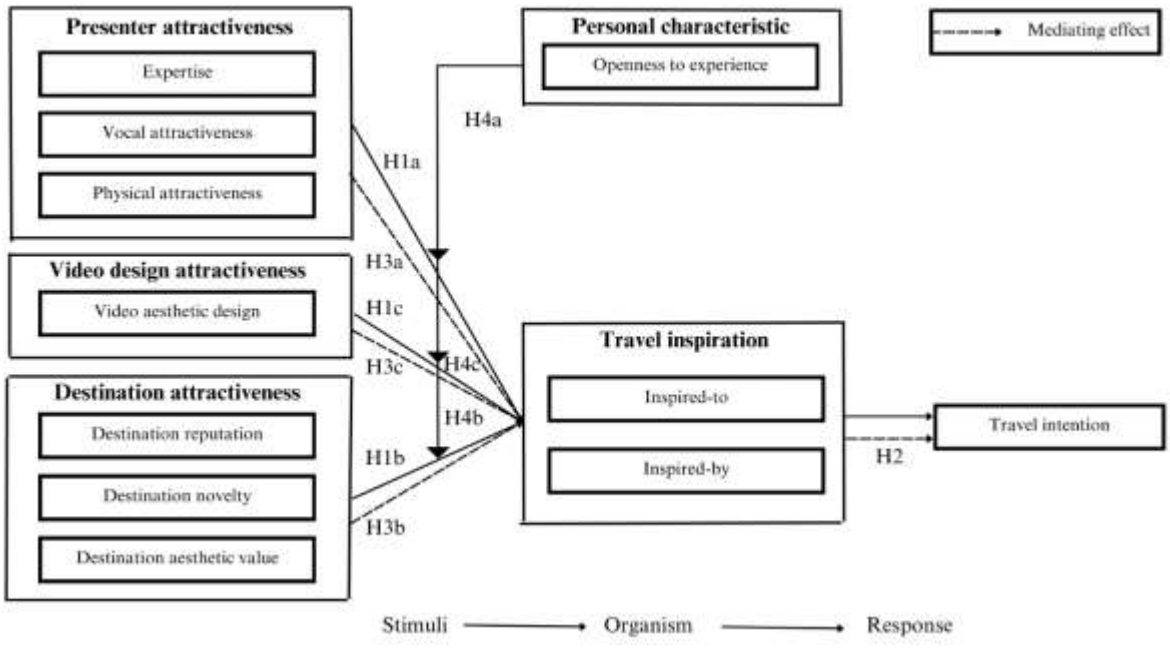
The presenter's attractiveness, including voice, physical, and expertise, influenced travel inspiration. Attractive presenters were likely to inspire viewers, who found them more believable and likeable (Praxmarer, 2011). Presenters' expertise and vocal and physical appeal contributed to the overall positive impression, creating a foundation for the subsequent stages of travel inspiration (Algoe & Haidt, 2009).

Travel inspiration was significantly shaped by the attractiveness of video design, defined by the aspect of video aesthetic design. The eye-catching visuals and inventive videography of short trip video reels drew in audiences. Aesthetically pleasing videos could trigger both inspired-by and inspired-to states, fostering a connection between the presented content and the viewer's motivation to explore novel travel ideas (Xu et al., 2021).

Destination attractiveness, comprising destination reputation, novelty, and aesthetic value, was another critical, independent variable influencing travel inspiration. The appeal of the featured destinations could evoke positive emotions and contribute to the overall inspiration experienced by the audience. Engaging and visually appealing destinations presented in the videos could enhance both the inspired-by and inspired-to stages of travel inspiration (Zhang & Xu, 2020). Furthermore, personal characteristics influenced the link between the independent and mediating factors by acting as moderating variables. Viewers' perceptions of the presenter, video design, and destination attractiveness could be influenced by an individual's features and attributes(Boettger, 2019).

Additionally, travel inspiration acted as a mediating variable to mediate the relationship between the dependent variable, travel intention, and the independent factors, presenter attractiveness, video design attractiveness, and destination attractiveness. The inspiration from these sources could significantly influence a viewer's motivation to travel, shaping their intentions to explore the destinations presented in the short travel video reels.

Figure 1: Framework adopted from Fang (2023)



Hypothesis

This study proposes, based on consumer inspiration, travel inspiration theory and persuasion theory, that the audience travel inspiration is positively impacted by short travel reels and video reviews, leading to the following hypotheses:

H1a: The presenter's attractiveness (PA) in short travel video reels positively impacts the audience's travel inspiration (TRVLINS)
H1b: The destination's attractiveness (DA) positively impacts the audience's travel inspiration
H1c: Video design attractiveness (VDA) positively impacts the audience's travel inspiration.
H2: Inspired by short travel reels, travel inspiration positively influences travel intention (TI)
H3a: The audience's travel inspiration plays a chain mediating role between presenter attractiveness and travel intention.
H3b: The audience's travel inspiration plays a chain mediating role between destination attractiveness and travel intention.
H3c: The audience's travel inspiration mediates between video design attractiveness and travel intention.
H4a: Presenter attractiveness on travel inspiration can positively moderate impact personal characteristics (PCRHC)
H4b: Destination attractiveness on travel inspiration can positively moderate impact personal characteristics.
H4c: Video design attractiveness on travel inspiration can positively moderate impact personal characteristics.

3. Methodology

Data Collection Method

Melaka was selected as the study site due to its unique characteristics that align with the research objectives. As a UNESCO World Heritage Site, Melaka offers a diverse array of historical landmarks, vibrant cultural festivals, and picturesque landscapes, making it an exemplary location for examining the impact of short travel video reels on travel inspiration. The city's well-preserved heritage sites and cultural events provide a compelling visual and thematic context for short travel videos, aligning with the study's focus on how destination attributes influence viewers' travel intentions. Melaka's popularity as a tourist destination, with its vibrant street markets, historical museums, and diverse cuisine, further supports its suitability for this research. The city's established tourism infrastructure and high visitor traffic make it an ideal location for capturing a broad range of responses to video content.

Additionally, Melaka's visually rich environment-including its colorful streets, historic buildings, and traditional festivals—offers a diverse range of content for video design. This setting allows for a thorough examination of how visual appeal and coherence impact travel inspiration. Practical considerations, such as the accessibility of Melaka and the availability of relevant tourist sites and cultural events, played a role in selecting the location for fieldwork. Melaka's wide variety of attractions facilitated comprehensive data collection on visitor responses to short travel videos, providing valuable insights into how destination attractiveness, video design, and presenter attractiveness influence travel motivation. By capturing these elements, the study aims to enhance understanding of travel inspiration through short travel videos, making Melaka an ideal and relevant site for this research.

This study employs a quantitative research design to investigate the impact of short travel reels featuring island reviews promoted on travel inspiration on social media platforms such as Facebook, TikTok, YouTube and Instagram. The target population for this research comprises visitors to Melaka in 2023, totalling 8.2 million (Rani, 2023). The aim is to gather responses from the public visiting the Bandar Hilir attractions rather than surveying local Melaka residents, as visitors come from various states across Malaysia. Bandar Hilir is an ideal spot for collecting responses due to its high concentration of over 12 museums and galleries and numerous nearby attractions, including monuments and historical buildings. A sample size of 384 was determined from this population based on the table developed by Krejcie and Morgan (1970). The survey was distributed and self-administered at various tourist attractions using QR codes. Respondents, aged between 18 and 65 and active on social media platforms, were approached to participate by scanning the questionnaire through a QR code, allowing them to fill out the form online using their gadgets. Simultaneously, the researcher was available to answer any questions or clarify any doubts they had. The study employed the intercept method (Bush &

Hair, 1985) with systematic random sampling, approaching every fifth respondent within a 5-foot distance as a potential participant. We have carefully selected a sample of individuals aged 18 to 65 to ensure that our research findings apply to a wide range of people. Specific questions are incorporated during the survey or data collection process to confirm the respondent's age. This method ensured a diverse and representative sample of the population. Out of the 384 distributed surveys, 86 were incomplete, leaving 298 as usable data. The incomplete surveys were primarily due to technical difficulties with QR code scanning, interruptions during the survey process, or respondents' unfamiliarity with the online form. Despite these challenges, the response rate (78%) is acceptable and provides a solid basis for the analysis and interpretation of the data.

Instrument

The questionnaire used in this study was carefully designed and consisted of 57 questions divided into sections A and B. Section A was dedicated to gathering demographic data, encompassing variables such as gender, age, education level, monthly income, and occupation. Meanwhile, Section B aimed to assess eleven components, utilising a 5-point Likert scale ranging from 1 "completely disagree" to 5 "completely agree." The online survey was created through Google Forms and distributed to the chosen participants. Section A of the questionnaire was created to gather demographic information such as gender, age, education level, monthly income, and occupation. Section B covered the measurement of eleven variables shown in Figure 1, with a total of fifty-seven items. Firstly, in Section B, we aimed to evaluate the perceived attractiveness of presenters in short travel videos across three key dimensions: expertise, vocal attractiveness, and physical attractiveness. Within the dimension of expertise, participants were asked to assess the presenter's professional skills, knowledge of tourism, experience in travel, and familiarity with the destination featured in the video.

Next, the questionnaire for assessing destination attractiveness encompassed three key dimensions: destination reputation, destination novelty, and destination aesthetic value. Under destination reputation, participants evaluated the island's fame, reputation, positive public perception, and how it compared to similar islands. Destination novelty focused on the scenery's uniqueness, rarity, and diversity presented in the short travel reels. Lastly, destination aesthetic value examined participants' perceptions of the island's beauty, attractiveness, aesthetic appeal, and overall impressive style. This structured approach thoroughly explored viewers' perspectives on destination attractiveness in short travel videos.

The study's evaluation of video aesthetic design was found in Section B, which consisted of seven items that collectively assessed different aspects of the video's visual and auditory appeal. Participants were prompted to provide feedback on the video's background music, graceful copywriting, attractive images, quality of the shots, overall audio-visual experience, storytelling, and the harmonious nature of the video's overall design. This comprehensive approach aimed to capture viewers' perceptions of the video's aesthetic elements and design qualities, providing valuable insights into their overall experience.

The questionnaire for assessing travel inspiration comprised two dimensions: inspired-by and inspired-to. Under inspired-by, respondents were prompted to reflect on how the short travel videos had broadened their horizons, stimulated their imagination, led to discovering new ideas, and sparked intrigue. The inspired-to dimension focused on the resulting motivations and desires to travel, gauging increases in interest, urges, and overall inspiration to embark on travel experiences. This dual-dimensional approach aimed to comprehensively capture the diverse ways in which short travel videos had inspired and influenced viewers. Next, the questionnaire in Section B, which assessed personal characteristics and openness to experience, included four items designed to gauge individuals' tendencies and preferences. Participants were prompted to reflect on their enjoyment of trying new things, engaging with novel ideas, appreciating diverse perspectives, and possessing a vivid imagination. This dimension aimed to capture the degree to which individuals exhibited openness to new experiences and ideas, providing insights into their characteristics.

Lastly, assessing travel intention included three concise items that measured participants' intentions regarding the island featured in the video. Respondents were prompted to express their plans, willingness, and intentions to visit the specific island showcased in the video. This straightforward approach aimed to capture participants' inclinations and motivations for future travel to the mentioned destination.

Data Analysis

In this study, the Statistical Package for the Social Sciences (SPSS) V.29 was employed as the primary tool for data analysis. Regression analysis explored intricate relationships among variables, including presenter attractiveness, destination appeal, and video design, in the context of travel inspiration. The mediating variable, travel inspiration, and moderating variables, such as openness to experience, were thoroughly examined. Their individual and interactive effects were analyzed using regression analysis to comprehend their complex relationships within the model. The data analysis strategy included descriptive statistics correlation.

4. Results

The data revealed a comprehensive profile of the surveyed population, offering insights into demographic distribution and preferences. Throughout this research, a total of 298 respondents answered the distributed questionnaire. The gender distribution indicated that a sizeable portion of respondents were female, representing 61.4% of the total sample, while males comprised the remaining 38.6%. The age breakdown highlighted a predominant age group between 19 and 25, constituting 73.2% of the respondents. Furthermore, educational backgrounds varied among the respondents, with 59.1% holding an undergraduate degree, 20.8% possessing a diploma, and 10.4% being high school graduates. The dataset also included individuals with professional certificates (3.7%), postgraduate degrees (5.0%), and others (1.0%). This diverse educational representation indicated the respondents' broad expertise and knowledge levels. Examining the occupational distribution, students made up the largest segment at 59.1%. Private sector employees accounted for 20.8%, public servants at 10.7%, and a smaller percentage engaged in various occupations, including teaching or research, self-employment, unemployment, and retirement. Geographically, respondents came from various states and regions, with Johor being the most represented at 28.2%, followed by Selangor at 21.8%. Including respondents from other states and international locations added a rich diversity of perspectives to the dataset. Monthly income distribution reflected the economic diversity of the sample, with 53.0% reporting no income and the remaining respondents falling into different income brackets, including ≤ RM1500 (11.7%), RM1501-RM3500 (25.8%), RM3501-RM5500 (6.0%), RM5501-RM7500 (2.7%), and ≥ RM7501 (0.7%). Regarding social media preferences, TikTok emerged as the dominant platform, chosen by 77.5% of respondents, suggesting its popularity as a medium for information and communication. Other platforms, including Instagram, YouTube, and Facebook, had notable but comparatively smaller user bases.

Table 1: Presenter Attractiveness

Items	1	2	3	4	5	Mean	Std Dev	Ranking
Expertise								
The presenter has professional skills in tourism.	2	12	68	130	86	3.96	0.860	4
The presenter has professional knowledge of tourism.	1	10	65	135	87	4.00	0.823	3
The presenter has rich experience in travel	0	5	57	139	97	4.10	0.759	1
The presenter is familiar with the destination in the video	0	10	63	130	95	4.04	0.815	2
Vocal Attractiveness								
The presenter has a lovely voice.	1	8	53	129	107	4.12	0.814	2
The presenter speaks at the right pace.	1	7	42	134	114	4.18	0.785	1
I like the presenter's narrative style.	3	13	67	123	92	3.97	0.895	5
The presenter's narrative style makes me comfortable.	2	8	60	132	96	4.05	0.831	3
The presenter's narrative style is pleasing to me.	3	9	71	119	96	3.99	0.880	4
Physical Attractiveness								
The presenter in the short travel reels is beautiful.	2	8	54	128	106	4.10	0.835	1
The presenter in the short travel reels is	5	19	71	126	77	3.84	0.938	3

elegant.								
The presenter in the short travel reels is charismatic.	3	18	71	118	88	3.91	0.927	2
The presenter in the short travel reels is attractive.	4	10	103	137	44	3.69	0.811	4

Table 1 evaluates presenter attractiveness across three categories: expertise, vocal, and physical attractiveness. In the "Expertise" category, "The presenter has rich experience in travel" received the highest mean score of 4.10, indicating that participants highly value the presenter's travel experience. This suggests that a presenter's credibility and depth of knowledge can significantly enhance viewer engagement and trust in the content. In contrast, "The presenter has professional skills in tourism" scored slightly lower at 3.96, highlighting a potential area for improvement in conveying professional tourism skills. In the "Vocal Attractiveness" category, "The presenter speaks at the right pace" achieved the highest mean score of 4.18, suggesting that the presenter's speech pace is crucial for maintaining viewer interest and comprehension. This implies that effective communication and delivery style are vital factors in audience retention. "The presenter's narrative style is pleasing to me" and "The presenter's narrative style is what I like" scored 3.99 and 3.97, respectively, indicating that while narrative style is essential, it may not be as critical as the pace of speech.

In the "Physical Attractiveness" category, "The presenter in the short travel reels is beautiful" received the highest mean score of 4.10, highlighting the significance of physical appearance in attracting viewers. This underscores the impact of visual appeal on first impressions and viewer engagement. Conversely, "The presenter in the short travel reels is attractive" scored the lowest at 3.69, suggesting that while beauty is important, overall attractiveness encompasses more than just physical appearance.

The findings suggest that a presenter's travel experience, speech pace, and beauty are the most influential factors in their perceived expertise, vocal attractiveness, and physical attractiveness, respectively. These insights indicate that creators should enhance the presenter's credibility, communication style, and visual appeal for short travel videos to effectively inspire and influence travel intentions. This deliberate focus on these elements can significantly boost viewer engagement and influence travel decisions.

Table 2: Destination Attractiveness

Items	1	2	3	4	5	Mean	Std Dev	Ranking
Destination Reputation								
The island in the short travel reels is very famous.	1	3	51	119	124	4.21	0.783	2
The island in the short travel reels has a very good reputation.	0	2	47	130	119	4.23	0.730	1
People speak very well of the island.	0	4	50	134	110	4.17	0.750	3
The island in the short travel reels has a better reputation than other similar islands.	1	2	75	138	82	4.00	0.765	4
Destination Novelty								
The scenery in the short travel reels is novel.	1	15	55	125	102	4.05	0.871	2
The scenery in the short travel reels is unique.	0	8	42	129	119	4.20	0.780	1
The scenery in the short travel reels is rare.	2	20	69	120	87	3.91	0.920	5
The scenery in the short travel reels is different from others.	3	17	67	119	92	3.94	0.923	4
The scenery in the short travel reels is diverse.	2	9	59	140	88	4.02	0.822	3
Destination Aesthetic Value								
The island in the short travel reels is beautiful.	1	0	21	124	152	4.43	0.654	1
The island in the short travel reels is attractive.	1	0	24	130	143	4.39	0.664	2

The island in the short travel reels is aesthetically appealing.	1	2	35	123	137	4.32	0.731	3
The style of the island in the short travel reels is impressive.	1	4	37	132	124	4.26	0.749	4

The dataset explored destination attractiveness across reputation, novelty, and aesthetic value. In the "Destination Reputation" category, "The island in the short travel reels has an excellent reputation" received the highest mean score of 4.23, indicating that the participants highly valued the island's reputation. The statement "The island in the short travel reels has a better reputation than other similar islands" received a slightly lower mean score of 4.00. In the "Destination Novelty" category, the statement "The scenery in the short travel reels is unique" had the highest mean score of 4.20, suggesting that the uniqueness of the scenery was the most appreciated aspect of the destination's novelty. However, "The scenery in the short travel reels is rare" received the lowest mean score of 3.91. In the "Destination Aesthetic Value" category, "The island in the short travel reels is beautiful" received the highest mean score of 4.43, indicating that the participants highly valued the island's beauty. This was followed by "The island in the short travel reels is attractive," "The island in the short travel reels is aesthetically appealing," and "The style of the island in the short travel reels is impressive," with mean scores of 4.39, 4.32, and 4.26, respectively. The findings suggest that the island's reputation, the uniqueness of the scenery, and its beauty are the most influential factors in their perceived reputation, novelty, and aesthetic value, respectively.

Table 3: Video Design Attractiveness

Items	1	2	3	4	5	Mean	Std Dev	Ranking
Video Aesthetic Design								
The background music of the video is nice.	10	15	83	116	74	3.77	0.990	7
The copywriting of the video is graceful.	2	24	78	121	73	3.80	0.924	6
The images in the video are attractive.	2	12	41	141	102	4.10	0.832	2
The video is well shot.	5	17	53	124	99	3.99	0.945	4
The video provides a good audio-visual experience.	4	18	53	133	90	3.96	0.919	5
The video tells a good story.	3	8	47	139	101	4.10	0.829	1
The overall design of the video is harmonious.	1	11	58	130	98	4.05	0.837	3

The data presents the results of a survey on video aesthetic design. The findings suggest that storytelling and visual appeal are the most influential factors in video aesthetic design, while background music is less impactful. These insights could be valuable for improving future video designs. Storytelling received the highest mean score of 4.10, indicating that it was the most appreciated element of the video. Visual appeal was also highly valued, with the attractiveness of the video's images receiving a mean score of 4.10. The overall design and shooting quality received positive responses, with the harmonious design and well-shot footage receiving mean scores of 4.05 and 3.99, respectively. Respondents also appreciated the audio-visual experience provided by the video, as indicated by a mean score of 3.96. While appreciated, the copywriting of the video was not as influential as other aspects, receiving a mean score of 3.80. Finally, background music had the most negligible impact, with a mean score of 3.77.

Table 4: Travel Inspiration

Items	1	2	3	4	5	Mean	Std Dev	Ranking
Inspired-by								
My horizon was broadened.	2	6	51	129	110	4.14	0.815	2
My imagination was stimulated.	2	9	53	137	97	4.07	0.826	4
I discovered something new.	3	6	37	134	118	4.20	0.808	1
I unexpectedly and spontaneously got new ideas.	2	13	63	117	103	4.03	0.891	5

I was intrigued by a new idea.	1	8	61	111	117	4.12	0.891	3
Inspired-to								
I felt a desire to travel.	1	5	32	102	158	4.38	0.770	3
My interest in traveling has increased.	1	6	35	105	151	4.34	0.789	4
I felt an urge to travel.	2	2	33	100	161	4.40	0.764	1
I am inspired to travel.	3	3	25	110	157	4.39	0.768	2
I am motivated to travel.	4	4	33	106	151	4.33	0.828	5

The survey results on travel inspiration reveal compelling insights across two categories: "Inspired-by" and "Inspired-to." In the "Inspired-by" category, respondents reported the highest mean scores for items such as "I discovered something new" (4.20) and "My horizon was broadened" (4.14), indicating that discovering new perspectives and expanding horizons were particularly impactful. Additionally, items like "I was intrigued by a new idea" (4.12) and "My imagination was stimulated" (4.07) also contributed significantly to the overall inspiration derived from the content. In the "Inspired-to" category, respondents expressed strong motivations for travel, with "I felt the urge to travel" (4.40) and "I am inspired to travel" (4.39) receiving the highest mean scores. These findings suggest that the content effectively stimulated travel desires and intentions among respondents, highlighting the importance of novelty and motivational appeal in travel-related media.

Table 5: Personal Characteristics

Items	1	2	3	4	5	Mean	Std Dev	Ranking
Openness to Experience								
I enjoy trying new things.	1	1	34	122	140	4.34	0.717	2
I enjoy thinking about new things.	0	1	43	118	136	4.31	0.723	3
I like hearing new ideas.	0	2	25	124	147	4.40	0.670	1
I have a vivid imagination.	2	2	45	121	128	4.24	0.781	4

The above table indicates a pronounced inclination among respondents towards novelty and intellectual engagement. Leading the response, "I like hearing new ideas", received the highest mean score of 4.40, demonstrating a robust interest in encountering and exploring fresh perspectives. Followed by "I enjoy trying new things", garnered a mean score of 4.34, indicating proactive engagement with novel experiences. Similarly, "I enjoy thinking about new things" scored 4.31, reflecting respondents' enjoyment in contemplating innovative concepts. The item "I have a vivid imagination" scored 4.24, suggesting a perceived strength in creative thinking among respondents. These findings underscore the value placed on openness to diverse experiences and ideas, highlighting the role of curiosity and imaginative thinking in shaping individuals' perspectives and behaviors.

Table 6: Travel Intention

Items	1	2	3	4	5	Mean	Std Dev	Ranking
Travel Intention								
I will visit the island I saw in the video.	1	13	65	112	107	4.04	0.885	1
I am planning to visit the island I saw in the video.	3	13	71	99	112	4.02	0.939	2
I am willing to visit the island I saw in the video.	2	16	75	105	110	3.96	0.929	3

Analysis of travel intention reveals consistent patterns across the surveyed items related to visiting the island featured in the video. "I will visit the island I saw in the video" received the highest mean score of 4.04, indicating a strong intention among respondents to visit the destination showcased physically. This was closely followed by "I am planning to visit the island I saw in the video," which scored 4.02, further underscoring respondents' active consideration of visiting the depicted location. Additionally, "I am willing to visit the island I saw in the video" achieved a mean score of 3.96, indicating a generally positive inclination towards visiting the destination. These findings suggest a robust and affirmative travel intention among respondents towards the island featured in the video content, highlighting the persuasive impact of visual media in influencing travel decisions.

Hypothesis Testing

Table 7: Correlation

		Travel Inspiration	Travel Intention	Result
Presenter Attractiveness	Pearson Correlation	**.710****		Supported (H1a)
	Sig. (2-tailed)	.000		
	N	298		
Destination Attractiveness	Pearson Correlation	**.792****		Supported (H1b)
	Sig. (2-tailed)	.000		
	N	298		
Video Design Attractiveness	Pearson Correlation	**.788****		Supported (H1c)
	Sig. (2-tailed)	.000		
	N	298		
Travel Inspiration	Pearson Correlation		**.733****	Supported (H2)
	Sig. (2-tailed)		.000	
	N		298	

**. Correlation is significant at the 0.01 level (2-tailed).

The data presents the Pearson correlation coefficients, which measure the strength and direction of the bivariate relationships between variables. All correlations were significant at the 0.01 level (2-tailed), indicating a high level of statistical significance. The correlation between presenter attractiveness and travel inspiration is 0.710, which is statistically significant (H1a). This suggests that presenter attractiveness has a positive impact on travel inspiration. Similarly, destination attractiveness strongly correlates positively with travel inspiration (H1b) (p = 0.792, sig 0.000). This suggests that the more attractive the destination is perceived to be, the higher the level of travel inspiration. Video design attractiveness also significantly correlates with travel inspiration (p = 0.788, sig 0.000). This indicates that attractive video design can effectively inspire travel (H1c). Finally, travel inspiration has a strong positive correlation significant at 0.000 with travel intention (H2). This suggests that the more a person is inspired by travel-related content, the stronger their intention to travel. The results support the hypothesis that presenter attractiveness, destination attractiveness, and video design attractiveness all significantly influence travel inspiration.

Table 8: Mediation Analysis

Path	**Unstd Coefficient (B)**	**Std. Error**	**t-value**	**Sig.**	**Sobel Test**			**Result**
					Test statistic	Std error	p-value	
PA→TRVINS→TI	.727	.042	17.335	.000				
	.861	.068	12.754	.000	10.2194	0.0612	0.00	Supported (H3a)
DA→TRVINS→TI	.942	.042	22.283	.000				
	.580	.075	7.768	.000	7.31095	0.0747	0.00	Supported (H3b)
VDA→TRVINS→TI	.707	.032	22.039	.000				
	.844	.077	10.915	.000	9.81906	0.0607	0.00	Supported (H3c)

PC=personal characteristics, PA=presenter attractiveness, VDA=video design attractiveness, DA=destination attractiveness, TI=travel inspiration

The above table demonstrates findings that support the hypothesis that the visitor's travel inspiration mediates the relationship between presenter attractiveness, destination attractiveness, and video design attractiveness with travel intention. For the first hypothesis (H3a), it was found that presenter attractiveness significantly influences travel inspiration (B = 0.727, t-value = 17.335, $p < 0.001$), which subsequently leads to higher travel intention. The Sobel test statistic of 10.2194 ($p < 0.001$) confirms that travel inspiration effectively mediates this relationship. These results emphasise the pivotal role of appealing to presenters in travel content, as their attractiveness significantly boosts the visitor's inspiration to travel, thus enhancing their travel intentions.

In examining the second hypothesis (H3b), the data revealed that destination attractiveness has a robust positive impact on travel inspiration (B = 0.942, t-value = 22.283, $p < 0.001$), which in turn positively affects travel intention. The Sobel test supports this mediation effect with a statistic of 7.31095 ($p < 0.001$). This underscores the importance of highlighting destination attractiveness in travel marketing efforts. By showcasing the appealing aspects of a destination, marketers can effectively inspire potential travellers, thereby increasing their intention to visit the featured locations.

The third hypothesis (H3c) concerning video design attractiveness demonstrated that well-designed travel videos significantly influence travel inspiration (B = 0.707, t-value = 22.039, $p < 0.001$), which then positively impacts travel intention. The mediation effect is confirmed by a Sobel test statistic of 9.81906 ($p < 0.001$). These findings highlight the critical role of high-quality video design in travel marketing. Attractive video content captivates the audience and inspires them to travel, thus significantly boosting their travel intentions. Overall, the study shows that travel inspiration is a crucial mediating factor in converting various attractive elements of travel presentations into actual travel intentions.

Table 9: Moderation Analysis

M	IV	DV	UC (B)	SE	t-value	Sig.	IEC (B)	SE	t-val	Sig.	F-value	Adj R^2	Result
PC	PA	TI	0.459	0.046	9.963	0.000	0.036	0.025	1.456	0.146	167.106	0.627	ns
PC	DA	TI	0.322	0.047	6.913	0.000	0.015	0.022	0.680	0.497	208.346	0.677	ns
PC	VDA	TI	0.365	0.043	8.468	0.000	0.011	0.020	0.566	0.572	226.986	0.695	ns

M=moderator, IV=independent variable, DV=dependent variable, UC (B)=unstandardized coefficient (B), SE=standard error, IEC(B)=interaction effect coefficient (B), PC=personal characteristics, PA=presenter attractiveness, VDA=video design attractiveness, DA=destination attractiveness, TI=travel inspiration, ns=not supported

Table 9 demonstrates the findings related to hypotheses H4a, H4b, and H4c, indicating that personal characteristics (PC) do not significantly moderate the impact of presenter, destination, or video design attractiveness on travel inspiration. For H4a, the interaction effect coefficient between presenter attractiveness (PA) and personal characteristics on travel inspiration (TI) was not significant (B = 0.036, t = 1.456, p = 0.146). Despite the direct effect of presenter attractiveness on travel inspiration being significant (B = 0.459, t = 9.963, $p < 0.001$), personal characteristics did not enhance this relationship. This suggests that while presenter attractiveness can independently inspire travel, individual differences in personal characteristics do not amplify this effect.

In H4b, the interaction effect between destination attractiveness (DA) and personal characteristics on travel inspiration was also insignificant (B = 0.015, t = 0.680, p = 0.497). Although destination attractiveness strongly influences travel inspiration (B = 0.322, t = 6.913, $p < 0.001$), personal characteristics do not moderate this relationship. This indicates that the inherent appeal of a destination can inspire travellers regardless of their traits. The lack of a moderating effect suggests that personal characteristics do not play a substantial role in how destination attractiveness translates into travel inspiration.

Similarly, H4c revealed that video design attractiveness (VDA) does not impact travel inspiration moderated by personal characteristics (B = 0.011, t = 0.566, p = 0.572). Despite video design attractiveness significantly

impacting travel inspiration (B = 0.365, t = 8.468, p < 0.001), personal characteristics do not enhance this relationship. This means that while high-quality video design can independently inspire travel, the viewer's characteristics do not significantly influence this effect. The findings suggest that the impact of attractive elements in travel content on inspiration is robust across different individual characteristics, highlighting the universal appeal of well-presented travel information.

These findings highlight an essential insight for travel marketers: the effectiveness of presenter, destination, and video design attractiveness in inspiring travel is not significantly influenced by the personal characteristics of the visitors. This suggests a universal appeal of these elements, implying that marketers can focus on enhancing these aspects without necessarily tailoring them to specific personal characteristics of the target audience. This universality in appeal simplifies marketing strategies, allowing for broader application of attractive elements in travel promotions.

The lack of significant moderation by personal characteristics also underscores the importance of intrinsic qualities in presenters, destinations, and video designs. For instance, a charismatic presenter or a visually stunning destination will likely inspire travel intentions across a diverse audience. Marketers should prioritize these universal attributes when designing travel content, ensuring the fundamental appeal is strong enough to resonate with a wide range of potential travellers.

5. Discussion and Conclusion

The study's findings underscore the significant roles that presenter attractiveness, destination attractiveness, and video design play in shaping travel intention, with travel inspiration as a crucial mediator. The substantial impact of presenter attractiveness confirms the findings of Masuda et al. (2022), who argue that charismatic and engaging presenters are pivotal in captivating potential travellers. This aligns with earlier research emphasizing the power of appealing figures in marketing and media (Gretzel, 2021). The ability of attractive presenters to capture attention and evoke emotional responses enhances the desire to travel, suggesting that travel marketers should strategically select presenters who can effectively engage and inspire their audience. Furthermore, the importance of destination and video design attractiveness reinforces the idea that aesthetic elements are integral to effective travel marketing (Fang et al., 2023). The study corroborates that a destination's reputation, novelty, and visual appeal significantly impact tourist attraction (Gretzel, 2021). Similarly, engaging video design elements such as coherence and storytelling enhance the overall appeal of travel content, echoing Xu et al. (2021), who highlight the importance of visual and narrative components in capturing viewer interest. Travel inspiration emerged as a key mediator between the attractiveness factors and travel intention. This mediation effect highlights the complex interplay between visual stimuli and emotional responses in driving travel behavior (Bottger et al., 2017). The study provides valuable insights into the mechanisms driving travel motivation by elucidating how presenter and destination attractiveness influence travel inspiration and, subsequently, travel intention.

Interestingly, the study did not find support for the hypothesis that openness to experience moderates the relationship between attractiveness factors and travel inspiration. This finding contrasts with earlier research suggesting that individuals more open to new experiences respond more to novel stimuli (Bottger et al., 2017). This discrepancy suggests a need for further investigation into how different personality traits interact with travel content to influence travel intentions.

Limitation of the Study

Despite the valuable insights provided by this study, several limitations need to be acknowledged. First, the study's reliance on self-reported data could introduce bias, as participants may overestimate or underestimate their travel intentions or inspiration. Social desirability bias might also influence responses, with participants potentially giving answers they believe are more acceptable or favourable. Additionally, the study's cross-sectional nature limits the ability to draw causal conclusions. While significant relationships between variables were identified, it is challenging to determine the directionality of these relationships or to infer causality without longitudinal data.

Another limitation is the generalizability of the findings. The study sample may not be representative of the

broader population, as it may have specific demographic or geographic characteristics that limit the applicability of the results to other groups. Furthermore, the study did not account for potential cultural differences in how travel inspiration is perceived and acted upon. Different cultural backgrounds may influence the effectiveness of presenter attractiveness, destination attractiveness, and video design attractiveness in inspiring travel. Future research should consider these cultural variations and include more diverse samples to enhance the generalizability of the findings.

Direction for Future Research

In destination marketing, several innovative ways exist to create inspiring material, including live streaming, virtual reality, and augmented reality advertisements for travel locations (Skard et al., 2021; Xie et al., 2022). These advanced media formats can provide immersive experiences that influence travel inspiration significantly. Future research should explore these formats' effectiveness and impact on travel intention. Additionally, measuring the amount of time spent interacting with the stimuli can provide a more complete picture of how interaction length affects the observed relationships. This can help in understanding the role of engagement duration in inspiring travel.

Research on the motivation for travel sparked by various media formats should also be conducted. Beyond the innovative formats, future studies may benefit from using a more comprehensive range of mixed-method techniques, such as focus groups or qualitative interviews. These methods can offer a deeper comprehension of the variables contributing to travel inspiration by revealing the breadth of personal experiences and preferences. Mixed-method approaches can uncover nuanced insights that quantitative methods might miss, providing a richer understanding of what inspires travel.

Considering the dynamic nature of online content creation, future research should examine how influencers and content creators shape travel inspiration. Understanding influencers' strategies to captivate and motivate their audience can be invaluable for content producers, marketers, and tourism industry experts looking to maximise social media's potential for tourist destination promotion. Additionally, understanding why personal characteristics do not significantly moderate the relationships between attractive elements and travel inspiration can guide future research. This suggests exploring other potential moderating variables, such as cultural background or past travel experiences, to understand better what influences travel inspiration. By identifying these variables, researchers can develop more targeted and effective marketing strategies that resonate with diverse audiences.

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Developing Madrasah Tourism Experience Model: Examining Tourist Psychological Variables through Systematic Literature Review

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Abstract: This study investigates the Madrasah Tourism Experience Model (MTEM), focusing on its role in understanding the complex interplay between cultural, psychological, and environmental factors in Madrasah tourism. Despite increasing interest in religious and cultural tourism, there is a significant research gap regarding the specific experiences and psychological impacts of visiting Madrasahs. This research addresses this gap by examining key psychological variables influencing tourists' experiences in these settings. Using a systematic literature review (SLR) methodology, the study analyses 16 carefully selected articles from 327,715 papers to construct a comprehensive model. It highlights how social interaction, cultural engagement, novelty, pleasantness, and relaxation contribute to the tourist experience. The findings extend existing theoretical frameworks by exploring how cultural exchange and hospitality within Madrasah tourism can enhance psychological well-being and satisfaction. Key findings indicate that Madrasah tourism can be significantly improved through tailored experiences, such as guided tours and interactive exhibits, and by creating serene, immersive environments. This approach reaffirms established theories and introduces new insights specific to Madrasah tourism. The implications are significant for both academic researchers and tourism practitioners. The MTEM offers practical guidelines for enhancing visitor experiences and promoting sustainable tourism practices. By integrating cultural exchange and environmental stewardship, Madrasahs can provide more engaging and satisfying experiences, fostering long-term visitor loyalty and contributing to cultural and religious tourism.

Keywords: *Madrasah tourism, psychological variable, Islamic heritage, tourist experience, Systematic Literature Review*

1. Introduction

With their deep roots in the rich history of Islamic education, Madrasahs have transformed significantly, balancing traditional Quranic teachings with contemporary academic knowledge. This evolution has been primarily driven by government support, private initiatives, and individual contributions, marking a substantial shift in their role within the educational landscape (Ismail et al. 2020; Norsalim et al. 2021). The Ministry of Education Malaysia's vision reflects this change, aiming to produce knowledgeable graduates with essential employability skills (Ministry of Education 2015).

A critical element of this transformation is integrating holistic education within the curriculum. The Department of Skills Development under the Ministry of Human Resources ensures that Madrasahs extend their focus beyond Quranic memorization to incorporate academic and practical skills, merging al-Quranic teachings with modern scientific knowledge and contemporary Islamic principles (Norsalim et al. 2021; Mohamad et al. 2016). This integrated approach is designed to provide students with a comprehensive educational experience, preparing them for religious vocations and the challenges of the modern industrial landscape. The curriculum includes practical skills tailored to meet industrial demands, supervised by the Department of Skills Development, thus enhancing the applicability of Madrasah education in real-world contexts (Ismail et al. 2020; Norsalim et al. 2021). This strategy enriches the educational outcomes of Madrasah graduates and equips them with the skills and competencies required to make significant contributions across various sectors.

However, the novel contribution of this paper lies in its exploration of Madrasahs as potential hubs for educational tourism. By examining the psychological impacts on visitors, this study extends beyond the traditional roles of Madrasahs. The research introduces a conceptual model highlighting tourists' emotional and personal experiences visiting Madrasahs, thereby contributing new insights into educational tourism. This

approach not only reaffirms the cultural and religious significance of Madrasahs but also positions them as unique destinations for immersive and intellectually stimulating experiences, aligning with broader trends in tourism that prioritize meaningful engagement over conventional sightseeing (Hosseini et al. 2021)

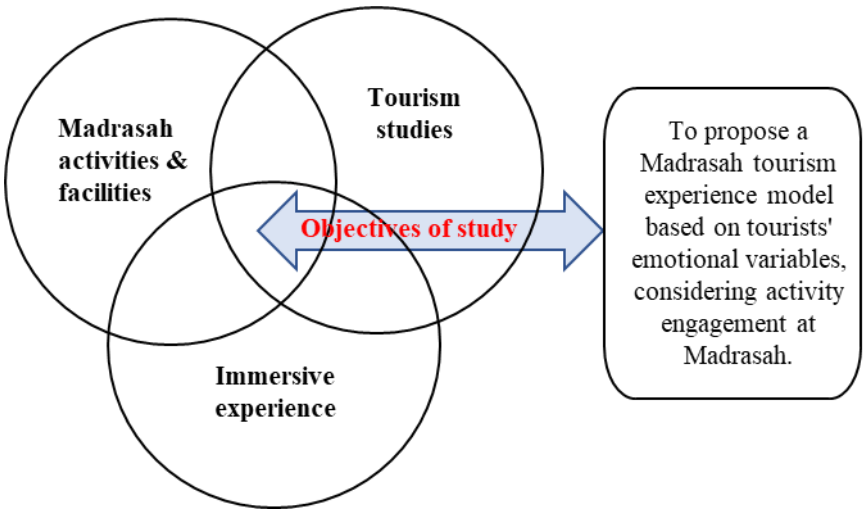
As educational institutions, Madrasahs are integral to preserving cultural and religious heritage. They serve as repositories of Islamic knowledge, fostering an environment where traditional teachings coexist with modern educational paradigms. The commitment to educational excellence and the incorporation of practical skills position Madrasahs as dynamic entities, bridging the gap between traditional and contemporary demands.

In the realm of Madrasah tourism, the significance of these institutions extends beyond religious and educational dimensions. The conceptual Madrasah tourism model proposed by this study seeks to unravel the layers of psychological nuances that shape visitors' experiences. By examining psychological variables, the model aims to provide an understanding of the emotional and personal impact on tourists during their visit to Madrasahs.

The operational challenges addressed in the study not only focus on the aspects of tourism but also examine the cultural and religious sensitivity inherent in Madrasahs. Respectful engagement with these aspects is crucial, as Madrasahs are not merely tourist attractions but living institutions with deep-rooted religious educational significance. Exploring tourism-related resources involves tapping into the rich cultural tapestry surrounding Madrasahs, highlighting their unique architectural features, historical importance, and the cultural richness embedded in their surroundings.

The proposed themes of fulfilling psychological benefits derived from a visit to Madrasahs capture the holistic impact on visitors. This study uniquely contributes by integrating psychological variables such as emotional attachment and well-being, which have not been extensively explored in the context of Madrasah tourism. Our findings suggest that these intangible elements significantly enhance the visitor experience, providing new insights into how educational and cultural tourism can be enriched through a deeper understanding of visitor psychology.

Figure 1: Objectives of the study



2. Madrasah Tourism

Madrasah Tourism (MT) refers to a niche segment within cultural and religious tourism, focusing on the visitation and exploration of madrasahs—Islamic educational institutions that serve as centers for religious learning and community engagement. Unlike traditional forms of tourism that often prioritize leisure or entertainment, Madrasah Tourism is deeply rooted in visitors' cultural and spiritual experiences.

In Madrasah Tourism, visitors are drawn to the historical, architectural, and educational significance of madrasahs. These institutions are often repositories of Islamic heritage, offering insights into the Muslim community's religious practices, educational traditions, and cultural values. Madrasahs serve as places of learning and sites where a community's cultural and religious identity is preserved and transmitted across generations.

Tourists in MT typically seek authentic and meaningful experiences connecting them with Islam's spiritual and intellectual legacy. This aligns with perceived authenticity, as Pestana et al. (2020) discussed, where the destination's genuine cultural and religious essence enhances the visitor experience. Moreover, the psychological ownership felt by visitors, as highlighted by Kumar & Nayak (2019), can deepen their connection to the place, fostering a sense of belonging and respect for the cultural site.

Madrasah Tourism also intersects with cultural interchange, as Seyfi et al. (2020) explored. This form of tourism allows for a profound exchange of ideas and cultural practices between tourists and the host community, enriching the visitor's understanding of Islamic culture and education. As Kassean and Gassita (2013) emphasized, the serene ambiance and opportunities for cultural immersion further enhance the overall experience, making madrasahs attractive destinations for those seeking peace, reflection, and learning.

Madrasah Tourism is gradually gaining recognition as an emerging niche within the broader cultural tourism landscape, particularly in nations with a strong Islamic heritage (Yusof & Simpong, 2021). These madrasahs embody Islamic culture's historical and architectural richness and serve as spaces for educational enrichment, making them attractive destinations for domestic and international tourists. This is especially true in countries like Malaysia, where madrasahs are integral to the national identity, reflecting the country's diverse Islamic heritage and hospitality offerings (Aziz, 2018).

Malaysia has positioned itself as a leader in promoting Madrasah Tourism due to its strategic emphasis on Muslim-friendly tourism environments. The availability of halal dining options, prayer facilities, and culturally immersive experiences enhances the appeal of madrasahs, catering specifically to Muslim travelers seeking spiritual and leisurely pursuits (Yan et al., 2017). This focus on meeting the unique needs of Muslim tourists aligns with Malaysia's broader tourism strategy, which increasingly prioritizes halal-friendly amenities and culturally sensitive hospitality services (Sulaiman et al., 2020). The growing global interest in Islamic tourism, reflected in the expanding market of Muslim travelers, further solidifies Malaysia's role as a competitive destination for Madrasah Tourism. This trend is about attracting tourists and promoting Malaysia's commitment to upholding Islamic values in its tourism offerings.

Countries such as Indonesia, Saudi Arabia, Turkey, and Morocco have also recognized the potential of Madrasah Tourism, leveraging their rich Islamic histories and well-preserved madrasahs to attract visitors (Haddade. et al., 2024; Salim, et al., 2023). Each country offers unique experiences, from Indonesia's blend of traditional Islamic education and local culture to Saudi Arabia's emphasis on pilgrimage routes (Rahman & Nahiduzzaman, 2019) and Turkey's Ottoman-era madrasahs (Kaynaş & Dişli, 2022). These destinations have successfully integrated madrasah visits into broader Islamic tourism itineraries, creating an immersive cultural and spiritual experience for travelers.

In Malaysia, the emphasis on Shariah-compliant practices within the tourism industry is crucial for the flourishing of Madrasah Tourism. As the country continues to align its tourism offerings with Islamic principles, there is significant potential for this niche market to grow. This development caters to an emerging demographic of Muslim tourists prioritizing destinations that uphold Islamic values and offer authentic cultural experiences. This alignment promotes madrasah tourism and contributes to the overall growth of Malaysia's tourism sector by attracting a significant demographic of Muslim travelers who seek culturally and religiously enriching experiences during their journeys. As Malaysia continues to enhance its Shariah-compliant offerings, the potential for Madrasah Tourism to flourish becomes even more pronounced, providing visitors with an authentic, spiritually fulfilling experience that resonates with their cultural and religious values.

Studies Related to Madrasah Tourism in Malaysia

Recent research on Madrasah-related tourism in Malaysia reveals a growing interest in exploring the role of Islamic institutions within the tourism sector, yet there remains a notable gap in focused studies specifically addressing Madrasah Tourism. The studies reviewed offer insights into how these institutions contribute to and shape the tourism landscape, but they often address broader themes rather than profoundly exploring Madrasah-specific contexts.

Table 1: Madrasah-related tourism in Malaysia

Author(s)	Focus/Topic	Methodology	Key Findings
Faizal et al. (2024)	Challenges and Potential of Pondok Institutions as Islamic Tourism Destinations in Malaysia.	Document analysis	Pondok institutions have potential as Islamic tourism destinations but face significant challenges in establishing themselves due to various obstacles.
Talib & Hamzah (2024)	Mosque's transformation into a center for Islamic education, community engagement, and economic activities	Content analysis	The mosque serves as a center for economic, social, educational, and tourism activities, enhancing the teachings of Islam.
Mat Isa et al. (2024)	Mosque's role as a place of worship and a tourist attraction within a bustling urban environment.	Qualitative (interviews and observations)	The historical significance of the mosque attracts visitors.
Ismail et al. (2024)	Development in Ibadah Tourism for sustainable economic growth in Sik, Kedah.	Documentation and focus group discussions	Strategies include enhancing existing products, introducing new ones, and improving facilities and promotion.
Absah et al. (2024)	Impact of brand image, facilities, services, and accessibility of Islamic cultural needs on halal tourism's economic growth.	Questionnaires from tourists traveling between Indonesia and Malaysia,	Positive correlation between economic growth and brand image, facilities, services, and accessibility of Islamic cultural needs
Yusof & Simpong (2021)	Pondok institutions' potential to enhance Islamic tourism through unique spiritual experiences.	In-depth interviews with Pondok operators	Pondok institutions offer tranquility, educational curricula, quality facilities, and services attractive for Islamic spiritual tourism.

Source: (Author, 2024)

As in Table 1, Faizal et al. (2024) examine the potential and challenges of Pondok institutions as Islamic tourism destinations. Their findings underscore a significant promise in leveraging these institutions for tourism, highlighting their unique appeal but also pointing to substantial hurdles such as financial constraints and inadequate infrastructure. This analysis suggests that while Pondok institutions hold potential, substantial effort is needed to overcome these barriers and fully realize their tourism potential.

Similarly, Talib and Hamzah (2024) explore the transformation of mosques into multifaceted centers for Islamic education, community engagement, and economic activities. Their research reveals that mosques are evolving to serve diverse roles, including educational and tourism hubs, enriching their contribution to Islamic teachings and local economies. This broader perspective highlights the mosques' growing significance beyond traditional worship, pointing to their potential to enhance Islamic tourism. Mat Isa et al. (2024) further illustrate this by focusing on the dual role of mosques as places of worship and tourist attractions within urban environments. Their qualitative study identifies the historical significance of mosques as a key attraction for visitors, emphasizing their potential to function as cultural and spiritual tourism destinations. This perspective

enriches the understanding of how historical and cultural contexts contribute to the appeal of Islamic tourism sites.

In contrast, Ismail et al. (2024) address the development of Ibadah Tourism in Sik, Kedah, focusing on strategies for sustainable economic growth. Their study outlines practical approaches, such as enhancing existing tourism products and introducing new ones, alongside improvements in facilities and promotional efforts. This approach underscores the practical aspects of developing Islamic tourism and suggests actionable strategies for achieving growth in this sector. Absah et al. (2024) contribute to the discussion by examining the impact of brand image, facilities, services, and accessibility on the economic growth of halal tourism. Through surveys conducted with tourists, the study finds a positive correlation between these factors and economic success, highlighting the importance of these elements in enhancing tourist satisfaction and driving economic benefits in halal tourism. This finding underscores the broader context of how infrastructure and branding influence the success of tourism ventures.

Meanwhile, Yusof and Simpong (2021) explore the unique potential of Pondok institutions in offering spiritual tourism experiences. Based on interviews with Pondok operators, their research reveals that these institutions provide a tranquil environment, educational curricula, and quality facilities, which are highly valued by Muslim tourists seeking spiritual enrichment. This focus on the unique offerings of Pondok institutions adds a valuable dimension to the understanding of Islamic tourism.

Despite these valuable contributions, the studies collectively reveal a significant gap in specific research dedicated to Madrasah Tourism. While the literature provides substantial insights into the broader context of Islamic tourism and the roles of various Islamic institutions, it does not sufficiently address the unique aspects of tourist psychological consumption benefits of visiting Madrasah institutions. In particular, the psychological benefits experienced by tourists during their visits to Madrasah or mosque environments are under-explored. Understanding how visits to Madrasah institutions impact tourists' emotional well-being, spiritual fulfillment, and overall psychological experiences remains largely absent from current research. Addressing this gap is crucial for developing a more comprehensive view of Madrasah Tourism. It allows for targeted strategies that enhance visitors' psychological satisfaction and cater to their specific needs, ultimately providing a clearer understanding of its role and potential within the Malaysian tourism sector.

The concept of Madrasah tourism

Madrasah tourism explores century-old Islamic educational institutions, primarily focusing on Malaysia and Indonesia, which hold significant places in Islamic history. From small local schools to globally recognized institutions, these madrasahs offer tours and educational programs, presenting a unique opportunity for visitors to study the intricacies of Islamic history, architecture, and culture. The architectural marvels of these institutions, characterized by intricate designs, domed roofs, and serene courtyards, serve as living testimonials to religious and academic programs, offering a captivating journey for those seeking a deeper understanding.

The immersive experience enables tourists to appreciate the physical grandeur and the intellectual and spiritual richness characterizing these learning centers. Madrasah tourism bridges education and cultural immersion, allowing visitors to acquire knowledge and actively engage with the local culture. This intersection between education and cultural exploration is not only enriching for the visitors but also holds economic significance for the rural areas hosting these madrasahs. A notable aspect of the madrasah visit is its role in conserving its traditional practice of memorizing the Quran. Visitors, drawn by the allure of these institutions, actively contribute to their preservation through their engagement and support. The funds generated through tourism activities aid in the upkeep and maintenance of these institutions, ensuring that they continue to stand as symbols of cultural and religious heritage.

Figure 2 visually illustrates the distribution of madrasahs in Malaysia, showcasing the extensive network of over 31 institutions that actively engage in tourism activities. This location diversity provides tourists with many options, offering a unique glimpse into Islamic history and culture. Table 1 complements this by listing specific institutions that not only offer tours but also provide a range of diverse activities, further enhancing the overall tourism experience.

The multifaceted nature of madrasah tourism, encompassing education, cultural immersion, and conservation efforts, positions it as a holistic and transformative experience for visitors. It goes beyond traditional tourism, offering a journey that intertwines intellectual exploration with cultural appreciation. As the interest in educational tourism continues to grow, madrasah tourism is a unique and compelling option for those seeking a profound and meaningful travel experience. The symbiotic relationship between tourists, madrasahs, and local communities reflects the potential for responsible tourism practices that contribute to both cultural preservation and economic development.

Fig 2: Distribution of Madrasah with tourist-related activities in Malaysia (n=31)



Table 2: List of tourism-related activities at Madrasah

No.	Madrasah	Tourist-related activities	Location
1.	Madrasah Tahfiz Dar Absyir	Archery, horse riding, and gardening	Johor Bahru, Johor
2.	Madrasah Tahfiz Huda Al Islam	Archery, camping, art, and craft	Larkin, Johor
3.	Madrasah Tahfiz Bustanul Jannah	Archery	Masai, Johor
4.	Maahad Tahfiz Darul Ulom Asadul Haramain	Silat	Pasir Gudang, Johor
5.	Maahad Tahfiz Al Quran Ummul Qura	Archery	Kota Kuala Muda, Kedah
6.	Madrasah Tahfiz Al-Ideris	Ping-pong	Bachok, Kelantan
7.	Madrasah Tahfiz al-Furqan	Horse riding lessons, combat archery, archery, Martial arts (Silat), and music	Bachok, Kelantan
8.	Madrasah Khairu Ummah	Archery class	Pasir Puteh, Kelantan
9.	Maahad Tahfiz Sains	Silat	Tanah Merah, Kelantan
10.	Madrasah Ar-Rabbaniyah Darul Ikhlas	Ping-pong, archery and futsal	Krubong, Melaka
11.	Pondok Pengajian Ilmu Wahyu	Archery, swimming pool, and horse riding	Merlimau, Melaka
12.	Maahad Tahfiz As-Sa'idiyyah (MTAS)	Archery	Seremban, Negeri Sembilan
13.	Maahad Tahfiz Al-Hidayah	Taekwondo, archery, ping-pong and chess	Kampung Janda Baik, Bentong, Pahang
14.	Madrasah An Nabawiyyah Lid Dirasatil Islamiyyah	Horse riding, archery, and gardening	Pulau Tawar Jerantut, Pahang

15.	Maahad Tahfiz Al-Quran wa Al-Tarbiyah Al-Diniyah Kg Relong	Archery	Kuala Lipis, Pahang
16.	Madrasah Tarbiah Islamiah	Archery	Mentakab, Pahang
17.	Maahad Tahfiz Al-Furqan (MATAF)	Taekwando	Temerloh, Pahang
18.	Maahad Ad Dirasah Al Islamiah	Archery	Ipoh, Perak
19.	Madrasah Tahfiz Al Iman	Archery	Nibong Tebal, Penang
20.	Maahad Tahfiz Darul Furqan	Culinary and pastry	Sipitang, Sabah
21.	Pusat Tahfiz Al-Fateh	Bakery and sewing	Asajaya, Sarawak
22.	Maahad Tahfiz Sains Fatimah Az-Zahrah	Silat	Batu Caves, Selangor
23.	Maahad Tahfiz AZ Zahrah	Swimming pool	Hulu Langat, Selangor
24.	Maahad Tahfiz Mifhatul Ulum	Archery	Hulu Langat, Selangor
25.	Madrasah Utmaniyyah Smart Tahfiz	Archery, Martial Arts (Taekwando), Ping-pong	Kajang, Selangor
26.	Maahad Tahfiz Vokasional Aman Bistari	Learning survival skills, culinary, automotive, sewing, arts and crafts, gardening	Puchong, Selangor
27.	Madrasah Tahfiz Baitul Farhah Perempuan	Archery and horse riding	Semenyih, Selangor
28.	Madrasah Tahfiz Al Furqan (MTAF)	Archery club	Shah Alam, Selangor
29.	Madrasah Irsyadul QURAN	Archery, horse riding and football	Shah Alam, Selangor
30.	Madrasah Moden Terengganu Besut	Ping-pong and archery	Besut, Terengganu
31.	Madrasah Tarbiyyah Islamiyyah Darul Hijrah	Swimming pool and futsal	Kuala Terengganu, Terengganu

Figure 2 provides a detailed overview of the distribution of Madrasahs across various states in Malaysia, showcasing the diverse range of activities offered by these educational institutions. Johor stands out with four Madrasahs strategically located in Johor Bahru, Masai, Larkin, and Pasir Gudang. These Madrasahs in Johor specialize in archery and silat, offering a unique physical and martial arts focus. Other states like Kedah, Negeri Sembilan, Perak, Penang, Sabah, and Sarawak each boast Madrasahs that concentrate on various activities. These include archery, cooking, pastry making, baking, and sewing, catering to various interests and skill development. Melaka features two Madrasahs in Krubong and Merlimau, equipped with archery facilities, a swimming pool, and horseback riding. In Terengganu, two Madrasahs offer an array of activities, including ping pong, archery, a swimming pool, and futsal.

Kelantan's Madrasahs specialize in teaching silat and archery, with one in Bachok offering the unique experience of battle archery. Pahang's Madrasahs focus on diverse activities, such as taekwondo, silat, gardening, horseback riding, and archery, providing visitors with a comprehensive range of choices. Selangor's Madrasahs predominantly offer programs in equestrian and archery, with one located in Puchong standing out for its vocational skills training. This particular Madrasah in Puchong imparts practical skills such as cooking, car mechanics, arts and crafts, sewing, and survival training, reflecting a commitment to holistic education.

Beyond academic and recreational pursuits, Madrasah communities recognize the importance of engaging and entertaining visitors. As Mohed & Ismail (2015) suggested, incorporating adventurous outdoor activities adds an extra layer to the overall Madrasah tourism experience. This focus on diverse and interactive activities ensures that Madrasah tourism becomes not only an educational journey but also an adventure that captivates and enriches the visitors' experiences.

Figure 3: The approach of the Madrasah Tourism Experience Model (MTEM)

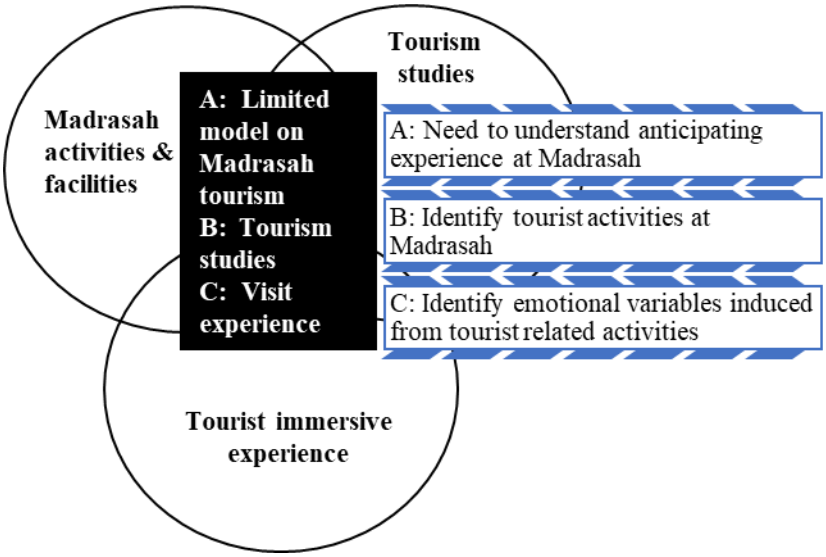


Figure 3.0 highlights the emerging field of Madrasah tourism, where visitors engage with Islamic religious schools. Limited academic attention has resulted in a lack of a comprehensive Madrasah tourism experience model, primarily due to cultural and religious sensitivity challenges these institutions face, hindering tourism theory development.

With tourism diversification, there is potential for increased interest in Madrasah tourism, necessitating further research and theoretical frameworks. The success of educational tourism in Madrasahs relies on improving facilities and infrastructure and incorporating psychological concepts like emotional attachment and well-being. Fostering positive perceptions is crucial, and dynamic elements such as happiness, peace, engagement, and well-being should be considered to attract visitors. Madrasahs can actively support educational tourism by offering diverse activities, from horseback riding to culinary arts. Including such activities persuades visitors to participate in educational programs, especially when showcasing local culture. Hosts must create a positive perception to boost attendance and cultivate unique relationships with tourists for return visits.

"Place attachment," defined by Kyle, Mowen, and Tarrant (2004), encompasses emotional connections between individuals and locations, including feelings of place, rootedness, insidedness, and environmental embeddedness. Human-place bonding involves affect, cognition, and practice, reflecting emotional connections, thoughts, knowledge, beliefs, and behaviors associated with a place. Iso Ahola (1982) suggests that motivation is driven by optimal arousal, leading individuals to seek environments to achieve psychological balance. Kaplan and Kaplan (1989) emphasize the restorative nature of environments, identifying fascination, being away, extent, and compatibility as essential elements.

In the context of Madrasah tourism, factors like ideology, social level, and religion significantly influence international travelers' enjoyment of cultural and educational tourism. A positive on-site experience, driven by shared levels of delight between Madrasah communities and tourists through knowledge sharing and pleasant environments, is predicted. The study suggests that satisfaction positively influences tourists' perspectives, enhances their appreciation for educational tourism, and contributes to mental well-being.

Significance of study

The Madrasah Tourism Experience Model (MTEM) significantly advances the understanding of tourism within Madrasah settings by integrating psychological variables such as social interaction, cultural engagement, novelty, pleasantness, and relaxation. This model enhances existing theories and offers a fresh perspective on how these factors influence visitor satisfaction and well-being.

The study's essential contribution lies in exploring the role of cultural and environmental elements in shaping Madrasah tourism experiences. By aligning with the findings of Seyfi et al. (2020) and Gou and Shibata (2017), the MTEM underscores the importance of cultural exchange and hospitality in fostering a sense of belonging and psychological ownership among tourists.

The MTEM emphasises the importance of tailored experiences, such as guided tours and interactive exhibits, and creating tranquil environments to enhance visitor satisfaction and loyalty. These recommendations address emotional and cognitive engagement, which is crucial for repeat visits and positive word-of-mouth.

The MTEM also paves the way for future research by highlighting the need for more comprehensive studies incorporating primary data to refine the model further. The MTEM enriches tourism theory and provides valuable insights for improving Madrasah tourism experiences.

3. Methodology

This study employs a Systematic Literature Review (SLR) to assess the psychological experiences of attending site attractions, aiming to provide a comprehensive understanding of the current knowledge and gaps in the field of madrasah tourism. Two techniques for SLR include meta-analysis and conventional narrative reviews. While narrative reviews are common, they can be subjective and biased, relying on the author's expertise rather than statistical analysis.

By mapping potential tourism services and visitor psychological benefits, the study seeks to inform decision-making for tourism stakeholders, develop tailored experiences for visitors, and contribute to overall sustainability and competitiveness in the tourism industry. The two critical justifications for conducting an SLR are to explore new variables within disciplines and to map boundaries on known and unknown aspects of the subject. This approach aims to uncover emerging knowledge and identify gaps in the existing understanding of the psychological aspects of site attractions (Pickering & Byrne, 2014; Pickering et al., 2015).

Planning and conducting the review

The authors adopted Tranfield, Denyer, and Smart (2003) and Pickering and Byrne (2014) as the systematic review methodology utilised in this study. This investigation was conducted by synthesising manually from the database. This initial investigation assisted in the identification of keywords for the subsequent stages. The following part covers the review's search, screening, and extraction/synthesis processes.

Table 3: List of keywords and associated terms for the SLR

Keyword	Associated words/terms
Madrasah	Pondok, Madrasah facilities, Madrasah infrastructure, Generate Income, Archery sport, Swimming pool, Equestrian
Edu tourism	Educational
Tourism	Travel, Tourist, Tourist attraction, Tourist experience, Tourist Expectations, Islamic tourism

In an initial scoping of the literature, the search terms "Madrasah", "Edu tourism" and "Tourism" were common keywords from the papers used in recent tourism studies. According to Pickering and Byrne (2014), the keywords chosen in an SLR should identify as much relevant literature as possible but not extend too far into unrelated fields. The academic database Scopus was used as the starting point for the literature search, followed by Science Direct and Google Scholar. Related studies have utilized these datasets (Yang & Khoo-Lattimore, 2017). By connecting the strings (see Table 5) with the Boolean operator, the electronic databases were searched for publications whose titles and abstracts contained at least one of the search phrases from two themes (AND).

Table 4: Search strings

Theme	Search String
Madrasah tourism	(Madrasah facilities* OR educational* OR tourism* OR travel* OR tourist* OR tourist psychological experiences*)

Screening

The ScienceDirect, Scopus, and Google Scholar databases were the most representative and complete social science databases. The following criteria were used to find the pertinent literature. Book chapters, conference papers, and Google information on Madrasahs were included; full-length research publications written in English/Malay language and background information were also identified in the Google database. The keywords "Tourism," "Edu-tourism," "Madrasah," and "Tourism facilities" were used to determine appropriate studies and build the sample. Papers were gathered from the ScienceDirect, Scopus, and Google Scholar databases after searches for titles, keywords, and abstracts.

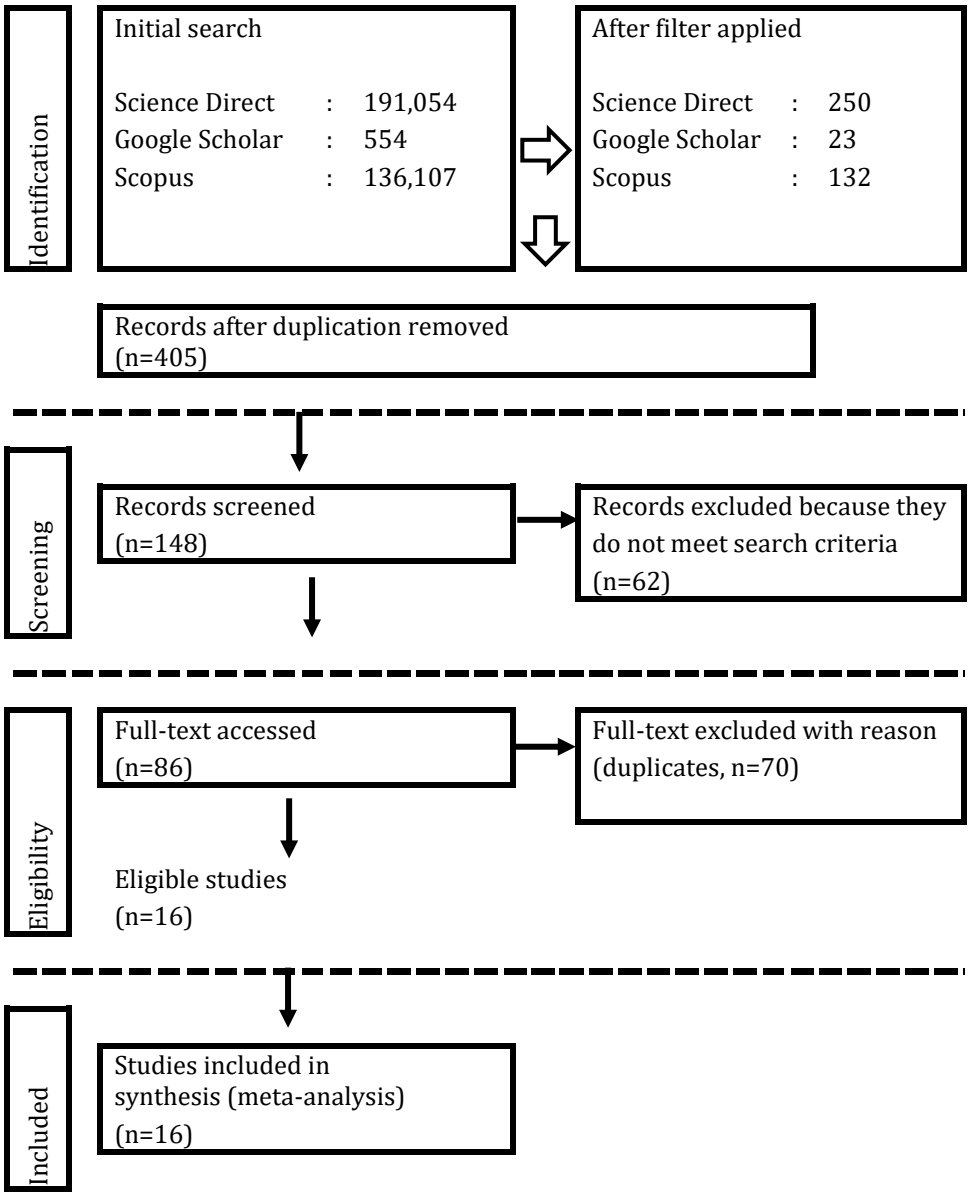
Table 5: Inclusion and exclusion criteria

Criterion	Inclusion	Exclusion
Study	Original empirical and theoretical/conceptual studies Peer-reviewed journal articles Madrasah tourism Islamic educational institution Tourist psychological experience	
Language	English and Malay	Other languages
Sector	Tourism research	Non-tourism related focus

The inclusion and exclusion criteria (see Table 5.0) were used to guide the screening of titles and abstracts at this stage. Even though every article in the databases had undergone peer review, there was a wide range in publication quality. These records were screened to identify original research articles published in English-language peer-reviewed journals, applying Madrasah facilities concepts and Edu tourism theories within the tourism sector. However, identifying journal papers on Madrasah that engage in tourism activities can be pretty challenging. This is because there is limited research on Madrasah and tourism, and the available studies often do not focus on the psychological experience of visitors to Madrasahs. Therefore, it is recommended that general tourism studies conducted at selected destinations be referred to to understand the visitor's psychological experience.

As shown in Figure 4.0, the preliminary term search yielded 327,715 studies, only 148 of which were psychological experience-specific and papers related to general tourist attractions. The initial search produced results outside the scope and purpose of this systematic literature evaluation. These included abstracts in which the primary focus was outside the range of tourism and disciplines other than the social sciences. After applying these exclusionary criteria, the number of under-study papers decreased to 148. For the final analysis, all the texts of these 148 records were further examined to determine their eligibility.

Figure 4: PRISMA flowchart



Extraction and Synthesis

For the secondary scan, a detailed analysis of each abstract (n=148) was needed to ensure a conscious and meaningful interaction with the idea of a tourist's psychological experience at the destination identified in the preliminary search string. The search yielded various abstracts in which psychological experience was significant to the research goals. Thus, a secondary scan of abstracts excluded another 62 papers since they did not meet the search criteria. For eligibility that the papers specifically qualify for tourist psychological experience at the touristic site, another 70 articles were excluded due to duplicates and not meeting the search criteria. As a result, only 16 tourism-specific studies were obtained as full-text, in-depth reviews. These studies were selected because the abstracts primarily focused on tourists' psychological experience at site attractions across different social science encounters.

The selection of 16 articles resulted from a rigorous and systematic literature review (SLR) process. The authors carefully refined the papers based on specific inclusion and exclusion criteria to ensure that only the most relevant and high-quality studies were considered. This approach was designed to maintain the focus and

relevance of the review rather than expanding the number of articles without a clear purpose. While the number may appear limited, the selected studies provide a comprehensive and insightful understanding of the Madrasah Tourism Experience Model (MTEM). Future research could benefit from examining a broader range of studies to further validate and extend the findings.

In-depth review and thematic content analysis

The review encompassed sixteen carefully selected studies, each contributing unique insights into the psychological dimensions of tourism. We explored the underlying variables from these studies by adopting a thematic content analysis approach. This rigorous process involved an exhaustive examination of each paper to identify recurring themes and subthemes. Notably, the analysis revealed several nuanced psychological factors that had not been previously synthesized in the existing literature. For instance, while earlier research, such as Seyfi et al. (2020) and Sthapit & Coudounaris (2018), had isolated certain psychological variables like cultural interchange and hedonic experiences, our synthesis highlights the intricate interplay between these factors and newer dimensions, such as tourists' psychological ownership and the role of destination branding as identified by Kumar & Nayak (2019). This finding suggests a more complex psychological framework driving tourist behavior than previously acknowledged.

Furthermore, our study uncovers the significant role of emotional connections and perceived authenticity in shaping memorable tourism experiences, as Pestana et al. (2020) highlighted. This novel insight broadens the theoretical landscape and offers practical implications for enhancing tourist engagement and satisfaction. Such a comprehensive thematic synthesis provides a more holistic understanding of the psychological experiences of tourists, thereby contributing a fresh perspective to the field.

4. Results

Table 6 synthesizes information to explore psychological experiences and identify key findings. The studies are presented below:

Table 6: Eligible studies (n=16)

No.	Author/ Year	Objective	Key findings	Emerging psychological variables
1.	Zhang et al. (2022)	To explore the impact of social communication on tourism transportation routes through empirical research.	Tourist flow mediates psychological perceptions and tour routes, and the scenic city's name, location, and attractions affect tourists' mentality.	Comfort, convenience,
2.	Wei et al. (2019)	To empirically study the psychological factors influencing memorable tourism experiences (MTEs) for urban residents.	Novelty, participation, social connection, hedonism, and perceived serendipity improved remembering memorable tourist experiences (MTEs).	Novelty, participation, social connection, hedonism, and perceived serendipity
3.	Sthapit & Coudounaris (2018)	To create and validate a scale for measuring memorable tourism experiences (MTE) and identify their specific dimensions.	The MTE scale has six dimensions, i.e., hedonic, intellectual, social, cultural, spiritual, and physical. MTE improves tourists' contentment, loyalty, and word-of-mouth intentions.	Hedonic, intellectual, social, cultural, spiritual, and physical

4.	Seyfi et al. (2020)	To pinpoint the factors contributing to memorable cultural tourism experiences (MCTEs) for cultural tourists in Paris.	Cultural interchange, particularly residents' helpful, polite, pleasant, social, enjoyable, tranquil, and sharing traits, significantly impacted tourists' experiences.	Perceived experience authenticity, engagement, cultural exchange, gastronomic, service excellence, residents' helpful, polite, pleasant, social, enjoyable, tranquil, and sharing traits.
5.	Pyo, Mihalik & Uysal (1989)	To investigate the perceptions and preferences of pleasure travellers from the United States regarding travel experiences.	The study acknowledges that motivation is only one of many variables that explain tourist attraction attributes.	Leisure and relaxation (visiting cities, natural areas, museums, dining, shopping, attending events, and engaging in outdoor activities)
6.	Pestana et al. (2020)	To develop a model that explains the mediation role of satisfaction in the relationship between motivation, emotion, and behavioural intentions.	Experience moderates satisfaction's impact on intention, and motivational differences exist between younger and older seniors.	Motivation, emotion, satisfaction, and behavioural intentions
7.	San Martín & Rodríguez del Bosque (2008)	To investigate how psychological factors, such as motivations and cultural values, influence the perceived image of a tourist destination.	Destination image is a multi-dimensional concept formed by cognitive and affective evaluations of a place.	Relaxing, peaceful, beautiful landscape, arousing, exciting & pleasant destination, interesting cultural values
8.	Madhavan & Rastogi (2013)	To identify the factors that influence the destination choices of domestic tourists in India.	Visitors value different dimensions depending on the destination. Tourists love these qualities based on their reason for visiting. Factor analysis can reveal tourist preferences.	Perceived attractiveness, leisure, business, cultural events, accessibility, the comfort of stay, entertainment
9.	Kumar & Nayak (2019)	To explore the relationship between tourists' identification and belongingness with a destination and their sense of psychological ownership towards the destination.	Tourists feeling connected to a destination also experience ownership, with brand salience moderating the impact of belongingness and identification on ownership.	Social interaction (destination identification, destination belongingness, destination psychological ownership, destination brand salience, revisit intentions, and intentions to recommend the destination to others)
10.	Kassean & Gassita (2013)	To identify the motivational factors influencing tourists' decision to choose Mauritius as a long-haul leisure and pleasure destination.	Tourists visit Mauritius for relaxation, nostalgia, escape, novelty, and social interaction, drawn by key attractions such as climate, landscape, flora and fauna, beaches, exotic atmosphere, Mauritian hospitality, and authentic culture. Repeat visitors exhibit different motivations compared to first-time visitors.	Relaxation, nostalgia, escape, novelty, social interaction, hospitality, and authentic culture.
11.	Hughes et al. (2013)	To investigate the experiences and motivations of visitors at religious tourism sites.	The Canterbury Cathedral study surveyed visitors, identifying essential services (signage, displays, value, attendants, equal access) and suggesting balanced	Satisfaction (fascinating info), emotional connection (closer to God, special place, sense of awe), cognitive

			religious and secular interpretations at religious sites.	engagement (better historical understanding, learning), interest in conservation (history interest, more likely to donate).
12.	Hsu et al. (2010)	Create an EMA model to explore how expectation, motivation, and attitude interrelate and influence tourists' behaviour.	Tourists' expectations impact their motivation and attitude toward visiting an outbound destination, with motivation mediating the relationship between expectation and attitude.	Expectations (knowledge, relaxation, novelty, shopping), motivation, and attitude
13.	Hosseini et al. (2021)	To systematically assess the literature on memorable tourism experience (MTE.)	The study found that the most common topics in MTE-related articles were how MTEs influenced tourists' perceptions and behaviours and how they shaped destination marketing.	Hedonism, novelty, knowledge, meaningfulness, involvement, local culture, and refreshment
14.	Gou & Shibata (2017)	To identify the natural and cultural landscape elements that contribute to visitors' experiences and verify the visitor's credibility, the photograph (VEP) technique is used as a measuring tool.	The paper suggests ways to enhance the quality of open views and create more interactive opportunities for visitors to explore and engage with local cultures.	Natural and cultural landscape elements in visitors' photographs (nostalgic, knowledge, beautiful)
15.	Ceylan et al. (2021)	To identify tourist typologies based on the intersection of destination familiarity and all-inclusive holiday experience	The study found differences in the clusters of tourist typologies in terms of attitudes and demographic factors influencing destination image.	Exciting, relaxing, pleasant
16.	Çelik & Dedeoğlu (2019)	The study explores the interconnections among personality traits, travel motivations, perceived destination quality, overall destination satisfaction, and behavioral intentions of domestic tourists.	The research findings indicate that traits such as agreeableness and conscientiousness contribute positively to the motivation for relaxation. Moreover, satisfaction indirectly influences behavioral intentions, along with perceived destination quality.	Emotionally relaxed, curious, knowledge, hospitality, outgoing, energetic, considerate/kind, authenticity

The above table provided valuable insights into the psychological variables influencing tourists' experiences, motivations, attitudes, and behavioral intentions. Zhang et al. (2022) found that the city's name, location, and attractions influence tourists' psychological perceptions and tour routes. Wei et al. (2019) identified novelty, participation, social connection, hedonism, and perceived serendipity as essential to improving tourists' memorable experiences. Sthapit & Coudounaris (2018) validated the six dimensions of the MTE scale, i.e., hedonic, intellectual, social, cultural, spiritual, and physical, and found that MTE improves tourists' contentment, loyalty, and word-of-mouth intentions. Seyfi et al. (2020) showed that cultural interchange during the visit, especially residents' helpful, polite, pleasant, social, interesting, tranquil, and sharing traits, influenced tourists' experiences. Pyo, Mihalik & Uysal (1989) acknowledged that motivation is only one of many variables that explain tourist attraction attributes, and other variables should also be considered in decision-making processes. Pestana et al. (2020) found that satisfaction mediates motivation, emotion, and behavioral intentions. San Martín & Rodríguez del Bosque (2008) found that destination image is a multi-dimensional concept formed by cognitive and affective evaluations of a place. Madhavan & Rastogi (2013) reported that visitors value different dimensions depending on the destination and their reason for visiting. Kumar & Nayak (2019) found that when tourists feel a sense of belonging and connection to a destination, they also feel a sense of ownership. Kassean & Gassita (2013) found that tourists were mainly motivated to visit Mauritius for relaxation, nostalgia, escape, novelty, and social interaction. Hughes et al. (2013) surveyed visitors to Canterbury Cathedral and identified essential services and facilities, including directional signage, displays and exhibits, value for money, attendants, and equal access.

Hsu et al. (2010) examined the relationship between tourists' expectations of an outbound destination and their motivation and attitudes toward visiting the destination. Hosseini et al. (2021) explored the most common topics in articles related to mobile technology in tourism and hospitality, finding that the most frequent issues related to how mobile technology influences tourists' perceptions and behaviors and how it shapes destination marketing. Gou and Shibata (2017) proposed ways to enhance the quality of open views and create more interactive opportunities for visitors to explore and engage with local cultures. Ceylan et al. (2021) investigated the differences in tourist typologies regarding attitudes and demographic factors influencing destination image. Çelik and Dedeoğlu (2019) studied the relationship between personality traits, motivation, and tourists' behavioral intentions. When it comes to madrasah tourism, these studies can provide valuable insights into the psychological factors influencing tourists' experiences and motivations. For instance, Kassean & Gassita (2013) found that tourists were mainly motivated to visit Mauritius for relaxation, nostalgia, escape, novelty, and social interaction. These motivations could also apply to madrasah tourism, with visitors seeking a place to relax, escape from their daily routines, and experience something new and unique. Similarly, Seyfi et al. (2020) found that cultural interchange during the visit, especially residents' helpful, polite, pleasant, social, interesting, tranquil, and sharing traits, influenced tourists' experiences. This finding highlights the importance of providing a welcoming and hospitable environment for visitors to madrasahs, which could enhance their experiences and satisfaction.

The above studies provide valuable insights into the factors influencing tourists' experiences, motivations, attitudes, and behavioral intentions. For example, Zhang et al. (2022) found that the city's name, location, and attractions can affect tourists' psychological perceptions and tour routes, while Sthapit & Coudounaris (2018) validated the six dimensions of the MTE scale and found that MTE improves tourists' contentment, loyalty, and word-of-mouth intentions. These studies highlight the importance of considering a range of variables when trying to understand tourists' experiences and behaviors. The table also highlights the importance of understanding how these findings apply to specific contexts, such as madrasah tourism. For instance, Kassean & Gassita (2013) found that tourists were motivated to visit Mauritius for relaxation, nostalgia, escape, novelty, and social interaction, and these motivations could also apply to madrasah tourism. Similarly, Seyfi et al. (2020) found that cultural interchange during the visit influenced tourists' experiences, emphasizing the importance of providing a welcoming and hospitable environment for visitors to madrasahs.

However, it is essential to note that while these studies offer valuable insights into the psychological factors impacting tourists' experiences, motivations, attitudes, and behavioral intentions, it is crucial to recognize potential limitations in their generalizability. Findings may be specific to particular destinations, populations, or contexts but not universally reflective of all tourists. Furthermore, the focus on psychological factors overlooks the significance of socio-cultural, economic, and environmental elements. Language barriers, cultural differences, accessibility, affordability, and sustainability also shape tourists' interactions and decision-making processes.

The Memorable Tourism Experience (MTE) scale, as delineated by Sthapit and Coudounaris (2018), encompasses six dimensions: hedonic, intellectual, social, cultural, spiritual, and physical. While these dimensions have been well-documented, this study extends the application of the MTE scale to the context of Madrasah tourism, uncovering how these dimensions uniquely manifest in religious and educational tourism settings. The research highlights distinct tourist engagement and satisfaction patterns that emerge in Madrasah environments by conducting a comparative analysis with traditional tourism contexts. This expanded application provides new insights into the psychological and emotional factors that enhance visitor experiences in culturally and spiritually rich destinations, offering a valuable contribution to the existing body of knowledge.

Though the study acknowledges that Pyo, Mihalik & Uysal's (1989) motivation is one of many variables explaining tourist attraction attributes, a deeper analysis reveals that these motivational factors are interwoven with psychological and cultural dimensions that have not been previously explored in the context of Madrasah tourism. For instance, Zhang et al. (2022) highlight the importance of social communication and its impact on tourism transportation routes, which adds a layer of complexity to the understanding of tourist flows and their psychological experiences. This study expands on these findings by examining how these psychological variables interact with the unique cultural and religious context of Madrasah visits, offering a

novel perspective that integrates cultural immersion and spiritual significance as key components of the tourist experience.

The mentioned studies offer valuable insights into factors shaping tourists' psychological experiences and perceptions of madrasahs. For instance, research on destination image and visitor satisfaction can aid in creating positive impressions and enhancing contentment, loyalty, and positive word-of-mouth intentions. Similarly, studies on cultural exchange, gastronomic attraction, and service excellence guide elevating engagement with local cultures, offering unique and memorable experiences. The table forms a foundational understanding of psychological and environmental variables impacting tourists' experiences, motivations, and behavioral intentions. Applying these insights to madrasah tourism can enrich visitor experiences, boost tourism promotion, and positively impact visitors and local communities.

Developing the Madrasah Tourism Experience Model (MTEM)

Based on Table 8. through an in-depth analysis, the Madrasah Tourism Experience Model (MTEM) development involved the meticulous coding of 62 psychological experience variables. These variables were thoughtfully categorized into several overlapping themes, encompassing diverse aspects of the visitor experience. The iterative coding process aimed to capture the richness of the psychological, community, social connection, conservation, environment, cultural, expectation, personal, and other relevant dimensions (Table 9.0). Subsequently, these coded variables were refined and recoded to extract more nuanced and contextually suitable meanings. The culmination of this analytical process resulted in the identification of 10 distinct and comprehensive themes, each encapsulating a cluster of related psychological variables. These themes are integral to shaping the holistic Madrasah tourism experience model. This systematic approach ensures a robust method for understanding and enhancing the diverse facets of the Madrasah tourism experience.

Table 7: Frequency of word count (psychological variables)

No	Variable	Word count	Coding	Further coding
1.	Social interaction	6	Community	
2.	Residents' traits (helpful, polite, etc.)	5	Community	Community and Social
3.	Social connection	3	Social connection	connection
4.	Interest in conservation	2	Conservation	
5.	Peaceful	1	Environment	
6.	Beautiful landscape	1	Environment	Environment and
7.	Comfort of stay	1	Environment	conservation
8.	Natural and cultural landscape elements	1	Environment	
9.	Expectations	4	Expectations	
10.	Knowledge	4	Knowledge	Expectation and
11.	Participation	1	Participation	knowledge
12.	Cultural	2	Cultural	
13.	Authentic culture	2	Cultural	Cultural Immersion and
14.	Local culture	1	Cultural	Authenticity
15.	Cultural events	1	Experience	
16.	Spiritual	1	Experience	
17.	Cultural exchange	1	Cultural	
18.	Interesting cultural values	1	Cultural	
19.	Leisure & relaxation	6	Experience	
20.	Relaxing	3	Experience	Leisure and Relaxation
21.	Relaxation	2	Experience	
22.	Leisure	1	Experience	
23.	Escape	1	Experience	

24. Refreshment	1	Experience	
25. Nostalgia	2	Experience	
26. Gastronomic attraction	1	Experience	
27. Entertainment	1	Experience	
28. Hospitality	2	Experience	
29. Business	1	Experience	Hospitality and Serendipity
30. Arousing	1	Experience	
31. Perceived serendipity	1	Experience	
32. Service Excellence	1	Experience	
33. Intellectual	1	Experience	
34. Perceived experience authenticity	1	Experience	Intellectual Stimulation and
35. Engagement	1	Experience	Engagement
36. Cognitive engagement	1	Experience	
37. Satisfaction (fascinating info)	1	Experience	
38. Social	1	Experience	
39. Behavioral intentions	1	Experience	Social Dynamics and
40. Exciting and pleasant destination	1	Experience	Destination Appeal
41. Perceived attractiveness	1	Experience	
42. Exciting	1	Experience	
43. Novelty	3	Novelty	
44. Hedonic	1	Experience	
45. Physical	1	Experience	
46. Visitors' photographs	1	Experience	
47. Comfort	3	Comfort	
48. Convenience	1	Convenience	Functional and convenience
49. Accessibility	1	Convenience	
50. Business	1	Purpose	
51. Emotional connection	3	Emotional connection	
52. Attitude	1	Personal	
53. Meaningfulness	1	Personal	
54. Involvement	1	Personal	
55. Curious	1	Personal	Psychological and personal
56. Authenticity	1	Personal	
57. Emotionally relaxed	1	Personal	
58. Energetic	1	Personal	
59. Considerate/kind	1	Personal	
60. Motivation	2	Psychological	
61. Emotion	2	Psychological	
62. Satisfaction	2	Psychological	

Table 8: Synthesis of psychological experience that relates to Madrasah tourism (Source: Author)

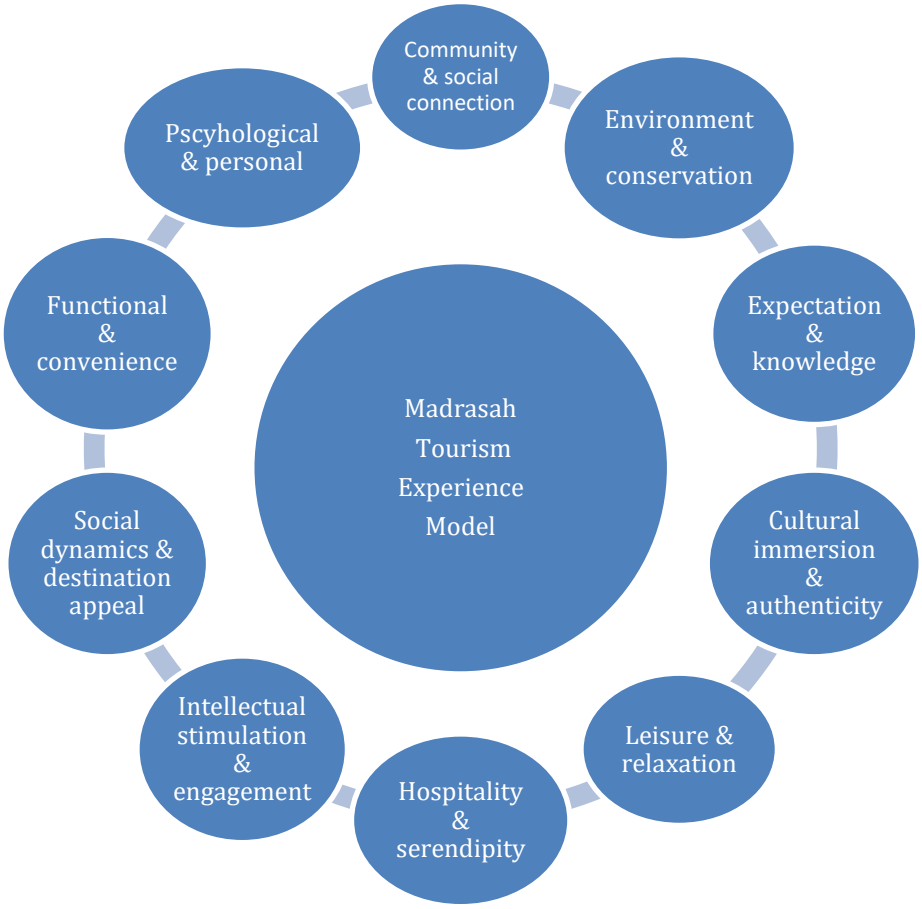
No	Theme	Definition	Anticipating Engagement
1.	Community and Social Connection	Emphasizes the sense of belonging and connection within the community surrounding madrasah tourism.	We are encouraging community participation in events, workshops, and cultural activities.
2.	Environment and Conservation	It focuses on preserving the natural and cultural environment around madrasahs and promoting sustainable practices.	Engaging visitors in eco-friendly initiatives, nature walks, and awareness campaigns for conservation.
3.	Expectation and Knowledge	Involves managing visitor expectations and providing educational insights into the history and significance of madrasahs.	Conducting guided tours, workshops, and interactive sessions to enhance visitors' historical and cultural knowledge.
4.	Cultural Immersion and Authenticity	Aims to offer an authentic and immersive experience of the local culture, traditions, and lifestyle tied to madrasahs.	Facilitating cultural exchanges, traditional performances, and hands-on experiences for visitors.
5.	Leisure and Relaxation	Centers around providing recreational opportunities and relaxation spaces for visitors at madrasah tourism sites.	Creating leisurely zones, gardens, and relaxation spots, along with cultural events to enhance the overall experience.
6.	Hospitality and Serendipity	Focuses on creating a warm and welcoming atmosphere for visitors, promoting hospitality and unexpected positive experiences.	Encouraging local hospitality, surprise events, and personalized services to enhance the visitor's serendipitous moments.
7.	Intellectual Stimulation and Engagement	Involves activities stimulating the intellect and engaging visitors in meaningful experiences related to madrasah history.	Hosting lectures, seminars, and interactive exhibits to encourage intellectual curiosity and deeper understanding.
8.	Social Dynamics and Destination Appeal	Centers around the social interactions and overall appeal of the madrasah tourism destination.	Facilitating social gatherings, events, and marketing strategies to enhance the destination's attractiveness.
9.	Functional and Convenience	Focuses on providing practical amenities and convenience to enhance the overall functionality of madrasah tourism.	Implementing user-friendly facilities, information centers, and easy navigation to ensure a convenient visitor experience.
10.	Psychological and Personal	Explores the psychological impact and personal connections visitors may establish with madrasahs during their visit.	Offering personalized experiences, mindfulness activities, and spaces for self-reflection to enhance the emotional connection.

In formulating the MTEM, as in Table 10, the study investigates the intricate interplay between a tourist's psychological experience and their journey to the Madrasah (see Figure 4.0). The invaluable contributions of various researchers fortify this scholarly endeavor, each adding a distinct layer to our conceptual model. Notably, Zhang et al. (2022) significantly augment our comprehension of the community and social connection theme by highlighting the crucial role of fostering a supportive atmosphere and cultivating a sense of belonging. Their empirical research, examining the impact of social communication on tourism transportation routes, illuminates how shared experiences contribute to the overall visitor experience.

Wei et al. (2019) further underscore the significance of the environment and conservation theme, asserting that the scenic cityscape profoundly influences tourists' psychological well-being. Their empirical study on the psychological factors influencing memorable tourism experiences aligns seamlessly with our emphasis on this thematic element's heightened sense of responsibility and sustainability. In parallel, Hsu et al. (2010) emphasize the importance of managing expectations and providing educational insights, aligning with our focus on the expectation and knowledge theme. Their exploration into how tourists' expectations shape motivation and attitude toward visiting destinations resonates with our commitment to ensuring a well-informed and engaged visitor experience.

Moreover, Seyfi et al. (2020) contribute valuable insights into the cultural immersion and authenticity theme, accentuating the transformative potential of authentic cultural encounters within the Madrasah context. Their exploration of factors contributing to memorable cultural tourism experiences in Paris aligns harmoniously with our emphasis on deepening emotional connections and providing genuine local experiences. Expanding our discourse, Gou and Shibata's (2017) exploration of natural and cultural landscape elements through the Visitor's Experience Photograph (VEP) technique resonates with our discussion on hospitality and serendipity. Their insights into enhancing the quality of open views and creating interactive opportunities align with our assertion that a touch of warmth fosters positive emotions and memorable experiences.

Figure 5: Madrasah Tourism Experience Model



The selection of factors for the MTEM, as in Figure 5, was driven by a deliberate focus on aspects significantly influencing tourist experiences within Madrasah settings. Psychological variables such as environment & conservation, expectation & knowledge, cultural immersion & authenticity, and leisure and relaxation were chosen for their documented impact on enhancing tourist satisfaction and psychological well-being. This choice aligns with Seyfi et al. (2020) and Gou and Shibata (2017), whose studies emphasize the transformative potential of cultural and environmental elements in fostering positive visitor experiences. By integrating these

variables, the MTEM aims to offer a robust model that reflects existing theoretical insights and provides actionable guidelines for improving the quality of Madrasah tourism.

Moreover, the inclusion of factors related to hospitality & serendipity and social dynamics & destination appeal factors is supported by empirical evidence indicating their role in cultivating a sense of belonging and psychological ownership among visitors. The model's design reflects the insights of Zhang et al. (2022) and Pestana et al. (2020), who highlight the importance of emotional and cognitive engagement in fostering repeat visits and positive word-of-mouth. These factors are essential for creating an immersive and emotionally engaging tourism experience, which is vital for the long-term success of Madrasah tourism.

The MTEM's focus on leisure and relaxation also responds to the need to offer visitors a retreat from daily stresses, as identified by Hsu et al. (2010). This approach ensures that Madrasahs are perceived not only as cultural and historical landmarks but also as spaces that cater to the holistic psychological needs of tourists. By addressing these multifaceted aspects, the MTEM provides a comprehensive framework that enhances the theoretical understanding of Madrasah tourism while offering practical recommendations for stakeholders to improve visitor experiences.

The factors selected for the MTEM are justified by their relevance to enhancing the tourist experience, supported by existing literature, and aligned to provide a holistic and enriching tourism model. This careful selection process ensures that the MTEM effectively captures the complexities of Madrasah tourism and contributes valuable insights to both academic research and practical applications in the field.

The chosen factors address gaps identified in existing literature. While previous studies may have explored individual aspects of Madrasah tourism, the MTEM framework integrates these factors to provide a more complete picture of the psychological dimensions of the tourism experience. This approach fills a gap by offering a nuanced model that considers the intricate interplay of various factors in shaping tourists' experiences.

Discussion

The literature synthesis reveals complex psychological factors influencing tourists' experiences, motivations, attitudes, and behavioral intentions, particularly in Madrasah tourism. Our analysis surpasses conventional notions of satisfaction and motivation, offering more profound insights into how psychological ownership, as discussed by Kumar & Nayak (2019), and perceived authenticity, emphasized by Pestana et al. (2020), play crucial roles in shaping tourist behavior.

Specifically, the study by Seyfi et al. (2020) on cultural interchange confirms its significant impact and opens up new avenues for exploring how tailored cultural experiences can enhance tourist engagement. This is complemented by the findings of Kassean and Gassita (2013), which highlight the importance of addressing varied visitor expectations through strategically managing the serene ambiance and cultural immersion opportunities.

Additionally, our findings underscore the importance of emotional connections and psychological well-being in tourism, as evidenced by Wei et al. (2019). This aspect has often been overlooked in previous studies but is critical in fostering repeat visits and positive word-of-mouth, thereby enhancing destination branding and loyalty. By integrating these multifaceted psychological variables into a coherent framework, our study provides a comprehensive and novel contribution to the existing body of knowledge, offering valuable insights for both academic researchers and tourism practitioners.

By synthesizing psychological variables, this study delineates how Madrasah tourism experiences intricately weave social interaction, cultural engagement, novelty, pleasantness, and relaxation themes. Building upon the framework established by Seyfi et al. (2020), this analysis explores the transformative potential of cultural interchange within Madrasah settings, suggesting that such engagements can significantly enhance tourists' psychological well-being and satisfaction. Furthermore, integrating insights from Gou and Shibata (2017), the study emphasizes the role of hospitality and environmental factors in fostering a sense of belonging and psychological ownership among visitors. This nuanced approach not only reconfirms existing theories but also

introduces new cultural and psychological interplay dimensions specific to Madrasah tourism, thereby contributing a fresh perspective to the field.

Reinforcing this idea, Zhang et al. (2022) emphasize the significance of cultural and geographical elements, reinforcing the need for cultural engagement in Madrasah tourism. Furthermore, Gou and Shibata's (2017) study demonstrates the role of hospitality in fostering belongingness and psychological ownership, contributing to positive experiences and repeat visits. Understanding the interplay of satisfaction, emotional connection, and cognitive engagement, as demonstrated by Pestana et al. (2020), is pivotal for cultivating repeat visits and positive word-of-mouth. This is especially crucial, as the successful provision of satisfying and emotionally engaging experiences fosters brand loyalty, amplifying the impact of destination marketing and community engagement.

These insights have profound implications for Madrasah tourism, particularly in guiding stakeholders to develop strategies that enhance visitor experiences and promote sustainable tourism practices. The study's findings advocate for a holistic approach integrating cultural exchange, authentic engagement, and environmental stewardship. For example, the analysis of psychological variables suggests that tailored experiences, such as guided tours and interactive exhibits, can significantly enhance visitors' emotional and cognitive engagement.

Additionally, the emphasis on creating tranquil and immersive environments aligns to foster long-term visitor satisfaction and loyalty. This comprehensive approach enriches the theoretical framework of tourism studies and provides practical guidelines for enhancing the overall quality of Madrasah tourism. Notably, the synthesis indicates that Madrasahs can benefit from a holistic approach addressing cultural exchange, authentic engagement, and creating tranquil environments.

As repositories of cultural and religious heritage, Madrasahs can strategically leverage cultural exchange and authentic engagement for a distinctive visitor experience. This is evident in the studies of Seyfi et al. (2020) and Gou and Shibata (2017), which emphasize the pivotal role of cultural interchange. To implement this effectively, guided tours and interpretive exhibits provide visitors with a profound understanding of cultural and historical significance, fostering engagement.

Recognizing the importance of psychological factors, Madrasahs can create environments that serve as retreats from daily stresses. By incorporating elements identified by Hsu et al. (2010), such as providing spaces for relaxation and ensuring a hospitable atmosphere, perceptions of Madrasahs as peaceful and inviting places are reinforced. This aligns seamlessly with the MTEM, where the thematic element of leisure and relaxation underscores the significance of offering visitors recreational opportunities and fostering a serene ambiance. As the model emphasizes, these psychological considerations contribute to the overall well-being of tourists and the formation of memorable and positive experiences during their Madrasah visits. Implementing such strategies ensures that Madrasahs are not only perceived as cultural and historical landmarks but also as spaces that cater to the holistic psychological needs of the visitors, creating a harmonious interplay between the architectural and cultural richness of Madrasahs and the psychological satisfaction of the tourists.

5. Limitations and Future Directions

The systematic literature review (SLR) has provided valuable insights into the key themes shaping the MTEM. However, it is crucial to acknowledge certain limitations inherent in this study. Firstly, relying on existing literature may introduce a potential bias, as the selected studies may not fully capture the diversity of Madrasah tourism experiences. The availability of literature on this specific topic is limited, which could impact the comprehensiveness of the identified themes. Moreover, the geographical scope of the literature may be a limitation, as most of the studies might focus on specific regions with well-established Madrasah tourism practices, potentially overlooking nuances in other locales. This geographic bias could impact the generalizability of the identified themes to a broader Madrasah tourism context.

Furthermore, the SLR methodology itself may introduce limitations related to the inclusion and exclusion criteria, potentially leading to the oversight of relevant studies. Lastly, the study's reliance on existing literature

may limit the depth of understanding of specific themes, as the available literature might not cover every facet of Madrasah tourism experiences extensively. Future research incorporating primary data collection methods and a broader, more diverse set of sources could address these limitations, providing a more nuanced and up-to-date Madrasah Tourism Experience Model.

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The Needs and Readiness of the Islamic Banks to Adopt the Comprehensive Islamic Accounting Standards: The Malaysian Experience

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Abstract: The Islamic finance sector in Malaysia has seen substantial growth over the past few decades, becoming one of the leading markets for Islamic financial products and services. This growth has brought about significant challenges in financial reporting, primarily due to the limitations of conventional International Financial Reporting Standards (IFRS) in addressing the unique characteristics of Islamic financial transactions. The shari'ah transactions are governed by Shariah principles, which prohibit interest (riba) and emphasize on risk-sharing, ethical investments, and social justice. The study aims to provide a comprehensive analysis of the current issues and debates surrounding the need for comprehensive Islamic accounting standards in Malaysia. It will review recent literature, regulatory developments, and the experiences of practitioners in the particular field. Furthermore, the report seeks to highlight the readiness of Bank Negara Malaysia and all Islamic Banks to adopt Accounting and Auditing Organization for Islamic Financial Institution (AAOIFI) standards and explore the feasibility of integrating these standards within the International Financial Reporting Standard (IFRS) framework. Additionally, this report aims to contribute to the ongoing discourse on Islamic accounting by offering critical insights and recommendations for policymakers, regulators, and financial institutions. The ultimate goal is to enhance the transparency, comparability, and reliability of financial reporting in the Islamic finance sector, thereby promoting its sustainable growth and integration into the global financial system.

Keywords: *Islamic Accounting Standards, Islamic Banks, International Financial Reporting Standards (IFRS), Accounting and Auditing Organisation for Islamic Financial Institutions (AAOIFI).*

1. Introduction

Islamic finance has grown significantly globally, owing to rising demand for Shari'ah-compliant financial goods and services. Malaysia, being a prominent base for Islamic finance, is critical to the industry. Malaysia has built a regulatory framework and supporting government policies that have helped it become a global benchmark for Islamic finance. However, to retain and improve this position, strong Islamic accounting principles are becoming increasingly important. Accounting principles have changed in response to rapid growth in the Islamic finance industry, especially in Islamic financial institutions. According to Sarea and Hanefah (2013), there has been a significant increase in the number of Islamic financial institutions globally, and the Islamic financial industry has attracted large Western institutions such as Citibank, HSBC, and Deutsche Bank to function as Islamic windows within conventional banks. The continued growth rate of Islamic financial institutions in both Islamic and non-Islamic countries necessitate Islamic accounting standards, as existing accounting standards such as IFRS or local GAAP are based on conventional institutions, product structures, or procedures, and may be considered inadequate to account and report Islamic financial transactions (Deloitte, 2023).

Islamic accounting standards are a set of accounting regulations and guidelines based on Shariah principles that are intended to handle the specific accounting issues encountered by Islamic financial organizations. These standards were created by the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI), an independent, non-profit international Islamic legal entity that develops accounting, auditing, governance, ethics, and Islamic law standards for Islamic financial institutions and businesses (Ismail & Muhamad Sori, 2017). Shariah-compliant transactions that follow the prohibition on imposing interest do not resemble conventional finance and hence have substantial accounting consequences. Islamic accounting standards address a wide variety of issues, covering financial reporting, auditing, governance, and risk management. The creation and implementation of Islamic accounting standards is critical to the growth and development of the Islamic accounting sector (Ahmad et al., 2023; Syahdatul et al., 2022; Delloite, 2023).

Problem Statement

Islamic finance has grown significantly globally, owing to rising demand for Shariah-compliant financial goods and services. Malaysia, being a prominent base for Islamic finance, is critical to the industry. Malaysia has built a regulatory framework and supporting government policies that have helped it become a global benchmark for Islamic finance. However, to retain and improve this position, strong Islamic accounting principles are becoming increasingly important. Accounting principles have changed in response to rapid growth in the Islamic finance industry, especially in Islamic financial institutions. According to Sarea and Hanefah (2013), there has been a significant increase in the number of Islamic financial institutions globally, and the Islamic financial industry has attracted large Western institutions such as Citibank, HSBC, and Deutsche Bank to function as Islamic windows within conventional banks. The continued growth rate of Islamic financial institutions in both Islamic and non-Islamic countries necessitate Islamic accounting standards, as existing accounting standards such as IFRS or local GAAP are based on conventional institutions, product structures, or procedures, and may be considered inadequate to account and report Islamic financial transactions (Delloite, 2023).

As the global Islamic finance industry continues to grow, the need for a robust and Shariah-compliant accounting framework becomes increasingly important. This report explores the current landscape of Islamic finance in Malaysia, the existing accounting standards, and the arguments for and against the adoption of specific Islamic accounting standards developed by the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI).

Research Question

(i) Is it necessary for Islamic Banks to adopt the comprehensive Islamic accounting standards in Malaysia?

(ii) Are Islamic Banks ready to adopt the comprehensive Islamic Accounting standards to be applied by all of the Islamic banks operated within Malaysia?

Objectives of the Research

(i) The objective of this study is to critically examine the necessity of adopting comprehensive Islamic accounting standards in Malaysia.
(i) To explore the readiness of Bank Negara Malaysia and all Islamic banks to adopt the comprehensive Islamic bank standards in Malaysia.

2. Literature Review

Definition of Islamic Accounting Standards (IAS)

Islamic Accounting Standards (IAS) are a set of guidelines designed to ensure that financial practices and reporting within Islamic Financial Institutions (IFIs) are aligned with Shariah principles. These principles include profit-sharing, risk-sharing, and the prohibition of interest (riba). Unlike conventional accounting standards, which primarily focus on financial transactions and profit maximization, IAS emphasizes ethical, social, and religious considerations in financial dealings. The objective of IAS is to ensure that all financial transactions and reporting practices comply with Islamic law, promoting transparency, fairness, and accountability (Harisova et al., 2023).

Comparison between Islamic Accounting Standards and Conventional Accounting Standards

A fundamental distinction lies in the underlying principles guiding each set of standards. AAOIFI standards are firmly rooted in Sharia principles, emphasizing ethical and socially responsible financing practices. This translates to prohibiting interest-based transactions (riba) and promoting profit-sharing arrangements that align with Islamic values. IFRS, on the other hand, focuses on broader accounting principles like fair value, accrual accounting, and a going concern assumption (Hassan & Raza Rabbani, 2022). While these principles aim for transparency and financial health assessment, they don't inherently address the specific ethical considerations of Sharia law.

The way each set of standards treats specific financial instruments is another key difference. AAOIFI provides detailed guidance for Islamic finance instruments like Mudharabah (partnership with profit sharing), Ijarah

(leasing agreements), and Sukuk (Islamic bonds). These standards dictate how profits are recognized, risks are shared, and losses are allocated, ensuring adherence to Shariah principles. In contrast, IFRS may not have specific guidance for these instruments (Perwiragama & Fauziyah, 2022). Applying IFRS to such transactions can lead to interpretations that deviate from Sharia compliance. For instance, IFRS might classify a Mudarabah as a loan, which wouldn't reflect the profit-sharing nature of the Islamic partnership.

AAOIFI places a strong emphasis on extensive disclosures related to Shariah compliance processes, profit distribution mechanisms, and the valuation methods used for Islamic financial products. This transparency is crucial for stakeholders to understand both the ethical and financial aspects of an Islamic financial institution's (IFI) operations. Conversely, IFRS disclosures related to Sharia compliance might be limited or even absent (Bibi et al., 2023). This lack of transparency can make it difficult for users to assess the Islamic character and risk profile of an IFI's activities.

By integrating AAOIFI standards within the IFRS framework, Islamic financial institutions can achieve several advantages. Firstly, it enhances Sharia compliance. AAOIFI standards ensure that Islamic financial transactions are conducted according to Shariah principles, fostering trust and confidence among stakeholders who value ethical conduct. Secondly, it improves comparability. Combining IFRS with AAOIFI standards allows for a more standardized approach to financial reporting within the Islamic finance industry. This facilitates financial analysis and comparison between different IFIs, providing a clearer picture of their performance. Finally, greater transparency is achieved. The additional disclosures mandated by AAOIFI provide a more comprehensive picture of the IFIs' financial health and risk profile, particularly for users unfamiliar with Islamic finance concepts (Elhalaby et al., 2023).

The Needs of Comprehensive Islamic Accounting Standards in Malaysia

The need for comprehensive Islamic accounting standards in Malaysia is driven by several key factors, stemming from the unique requirements of Islamic finance and the overarching principles of Shariah law. Islamic Financial Institutions (IFIs) in Malaysia and elsewhere operate based on principles that differ significantly from conventional financial institutions. These differences necessitate a distinct approach to accounting standards to ensure that financial reporting aligns with the ethical and religious obligations of Shariah.

The core principles of Islamic finance prohibit activities such as paying or receiving interest (riba), engaging in speculative transactions (gharar), and investing in businesses that provide goods or services contrary to Islamic values (haram). Given these principles, the financial transactions and instruments used by IFIs differ markedly from those of conventional banks (Kaya, 2023). For example, Islamic finance employs profit-sharing contracts like mudarabah (profit-sharing) and musharakah (joint venture), sales-based contracts such as murabahah (cost-plus financing), and lease-based contracts like ijarah (leasing). Each of these contracts has specific implications for recognition, measurement, and disclosure in financial statements, which are not adequately addressed by conventional accounting standards.

Moreover, the credibility and authenticity of Sharia-compliant products are paramount for IFIs. To build and maintain public trust, these institutions need to demonstrate compliance with Shariah through transparent and specific financial reporting standards. The use of conventional accounting standards without necessary modifications can undermine stakeholders' confidence in the Shariah compliance of the financial products and services offered by IFIs. Therefore, a separate set of Islamic accounting standards would provide clarity and enhance the reliability of financial statements, ensuring they reflect the true nature of Islamic financial transactions (Nor Farizal et al., 2018).

The Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) has developed a set of accounting standards tailored for IFIs, addressing the unique characteristics of Islamic financial transactions. Despite this, the adoption of AAOIFI standards is not widespread, and many countries, including Malaysia, continue to primarily use IFRS. The collaboration between AAOIFI and the International Accounting Standards Board (IASB) is crucial in bridging the gap and developing comprehensive guidelines that can be integrated into the IFRS framework (Haroun, 2021). This collaboration would facilitate the creation of standards that are globally recognized and accepted, enhancing the comparability and consistency of financial reporting among

IFIs worldwide.

3. Methodology

Description of Methodology: This study emphasizes the need for comprehensive Islamic Accounting Standards to be fully adopted by Islamic Banks throughout Malaysia. Moreover, this study also will focus on the readiness of Bank Negara Malaysia as well as all the Islamic bank operators in Malaysia to adopt the comprehensive Islamic Accounting Standards within Malaysia. Hence, the study focuses on the subsequent factors. i)The definition of Islamic Accounting Standards as per the Islamic banks understanding, ii) Comparison between Islamic Accounting Standards and Conventional Accounting Standards, iii) The Need for Comprehensive Islamic Accounting Standards in Malaysia.

This study will employ data from the combined research method which consists of a qualitative method comprised of interviews and a quantitative method using the questionnaires to be distributed to the Islamic bank practitioners. The qualitative approach will focus on the in-depth interview with the Islamic Banks respondent and the feedback will be recorded, documented and transcribed by applying the procedure of thematic analysis while the quantitative approach will focus solely on using the structured questionnaires to get accurate results.

Furthermore, the researcher will use systematic sampling which will focus on the respondents from Bank Negara Malaysia as well as all the related Islamic Banks that operate in Malaysia regardless of the local and international Islamic Banks. The data will be analyzed using Structural Equation Modelling (SEM) and Atlas.ti (Tanggamani, Rahim, Bani and Alias, 2024).

4. Contribution of The Study

The contribution of the study is to address the comparability issue with IFRS and AAOIFI Standards. Therefore, it is recommended that Islamic banks in Malaysia adopt a dual reporting framework that incorporates both AAOIFI and IFRS standards. This approach would allow Islamic financial institutions (IFIs) to prepare supplementary financial statements by AAOIFI standards alongside their IFRS-compliant reports. This dual reporting could enhance transparency and comparability for stakeholders who are familiar with IFRS while ensuring that the unique aspects of Islamic finance are adequately captured. For example, IFIs could prepare IFRS-based financial statements for international investors and regulatory bodies, while also providing AAOIFI-compliant reports for local stakeholders and Shariah scholars, thus meeting diverse needs without compromising on compliance (Perwiragama & Fauziyah, 2022).

As for the limitation of regulatory reluctance, the Malaysian Accounting Standards Board (MASB) must engage in dialogue with industry stakeholders, including IFIs, Shariah scholars, and international accounting bodies. By fostering collaboration, MASB can work towards integrating certain AAOIFI standards into the existing IFRS framework in a way that addresses the specific needs of Islamic finance while maintaining global comparability (Muhamad Sori, 2017). Additionally, conducting pilot projects that implement AAOIFI standards on a trial basis could demonstrate their feasibility and benefits. For instance, MASB could pilot AAOIFI standards in select IFIs and assess the outcomes, using the findings to make informed decisions about broader adoption and modifications to the regulatory framework.

Last but not least, to mitigate the challenges posed by economic dependency on Western financial systems, Malaysia should promote the internationalization of AAOIFI standards. This can be achieved by advocating for broader acceptance and understanding of these standards among global investors and financial institutions. Malaysia could also seek alliances with other countries with significant Islamic finance sectors to create a bloc that collectively endorses and uses AAOIFI standards. For example, Malaysia could collaborate with countries in the Gulf Cooperation Council (GCC) to standardize and promote AAOIFI standards, thereby creating a more robust and unified Islamic finance framework that is attractive to global investors. This collective effort could reduce reliance on IFRS and increase the legitimacy and acceptance of AAOIFI standards internationally (Elhalaby et al., 2023).

5. Conclusion

The adoption of comprehensive Islamic Accounting Standards in Malaysia for Islamic banks is essential for ensuring that financial reporting in the Islamic finance sector aligns with Shariah principles. The current use of conventional International Financial Reporting Standards (IFRS) presents significant challenges, as these standards do not adequately address the unique characteristics of Islamic financial transactions. The integration of Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) standards would enhance transparency, comparability, and reliability of financial statements, fostering greater stakeholder confidence and promoting the growth of the Islamic finance industry both locally and globally.

However, the transition to Islamic Accounting Standards is fraught with implementation challenges, including the need for extensive training, updates to accounting systems, and compliance with regulatory requirements. The costs associated with these changes can be substantial, particularly for smaller financial institutions. Moreover, harmonizing Islamic accounting standards with global frameworks like IFRS presents another layer of complexity, as it requires balancing Shariah compliance with international financial reporting norms.

Despite these challenges, the benefits of adopting Islamic accounting standards in Malaysia outweigh the drawbacks. Enhanced transparency and stakeholder confidence, better alignment with Shariah principles, and the potential for Malaysia to position itself as a global hub for Islamic finance are compelling reasons to pursue this transition. Future research should focus on comparative studies with other countries that have implemented AAOIFI standards to identify best practices and address common challenges. Such efforts will be crucial in achieving a more robust and unified Islamic finance framework that can thrive in the global financial landscape.

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From Taste Buds to Loyalty: How Food and Service Quality Influence Customer Satisfaction and Repeat Intentions in Hotel Restaurants

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Abstract: Customer satisfaction with food and service quality in hotel restaurants is a crucial driver of repeat intentions, directly influencing guest loyalty and long-term business success in the hospitality industry. This study examines the factors that affect customer satisfaction with hotel restaurant offerings and the subsequent impact on customers' intentions to return. The researchers gathered the data for this study using a quantitative research design and customer questionnaires. A 95% response rate was collected and analyzed using SPSS software. Next, the researchers quantitatively analyzed the survey responses using statistical methods to measure customer satisfaction levels and identify key variables influencing repeat intentions. The results of this study have practical implications for hoteliers and restaurant managers looking to improve customer satisfaction and encourage repeat business. Emphasizing continuous staff training, maintaining high food safety standards, and creating a welcoming ambiance are key strategies to enhance customer experiences. Ultimately, understanding the dynamics of customer satisfaction and its direct link to repeat intention can assist hotel restaurants in building enduring guest relationships and establishing a competitive edge in the hospitality market.

Keywords: *Customer Satisfaction, Food Quality, Service Quality, Repeat Intention, Hotel Restaurants*

1. Introduction and Background

Quality is a perception or overall evaluation of a service's superiority (Dam & Dam, 2021). To be internationally competitive, service sectors must provide service quality that exceeds what their clients expect. The quality of service determines whether an organization succeeds or fails. Businesses and organizations use customer satisfaction measures in almost every field because satisfied customers are essential for a profitable business operation (Ali et al., 2021). The quality of service provided can impact a customer's level of satisfaction. However, the ever-changing nature of the business environment complicates the factors influencing service quality (Murphy et al., 2021). As a result, these measurement dimensions are specific to the industry in question. Consumers, who have used their experiences and emotions to form opinions, determine service standards. Customers' expectations influence service quality, process quality, and product quality (Ali et al., 2021).

Commitment from workers and cooperation from all management tiers are required to build a successful business focused on providing outstanding service. As a result, it is essential for managers who consistently deliver products or services to keep detailed records of their customers in terms of how effectively they satisfy the requirements set forth by their clientele (Mehmood, 2021). Service providers are constantly seeking new methods to enhance their operations and provide clients with services of an increasingly higher standard (Rane et al., 2023). The study also stated that providing satisfaction to consumers should be an ultimate objective for every business, given that customers are a company's most valuable resource in terms of its immediate and long-term viability. Quality significantly influences and determines the level of client satisfaction (Tannady & Purnamaningsih, 2023). Canteens, cafeterias, and hotels are some of the many establishments that fall under the "category of food service providers." Businesses that rely on customer service, such as hotels and restaurants, exert significant effort to evaluate and enhance the quality of the customer experience they provide. One thing that unites them all is their priority on putting the consumer's needs first.

This study applies to the Malaysian context to ascertain the role that food and service play in determining the level of customer satisfaction experienced in hotel restaurants. There are a variety of internal and external

factors that have the potential to affect the degree of satisfaction experienced by customers (Yunus & Ishak, 2012). We can refer to the contentment of an organization's interior and exterior customers as customer satisfaction (Khadka & Maharjan, 2017). Existing literature has frequently focused on these aspects in isolation or within broader contexts, leaving a gap in the comprehensive examination of how they interact in the hotel restaurant setting. This study aims to close this gap by investigating the key drivers of customer satisfaction in hotel restaurants and how these factors interact to influence guests' repeat intentions, resulting in increased guest loyalty and long-term business success. In addition, the literature study has led to the identification of researchers focusing on external customer satisfaction. However, there is also discontent with the level of service provided to internal customers from the company's perspective. This is a problem that has caused concern among certain organizations, particularly those who are concerned about their personnel's well-being.

There is a widespread misconception among food service suppliers that customers only visit eating establishments for food. It is commonly believed that customers visit restaurants because of the food they order (Hakim et al., 2021). Customers are considered content as long as they can purchase the food that meets their requirements. However, patrons of full-service restaurants, whose primary objective is to conduct business or enjoy the company of their dear ones (friends, family, spouse, etc.), may need to reconsider this perception. The restaurant business has conducted very few investigations, despite several recent studies on customer satisfaction and service quality (Ahmed et al., 2023). The level of internal customer satisfaction in Malaysian hotels and restaurants compared to their workers has remained constant. This research attempts to clarify the attributes of food and service quality in hotel restaurants that influence internal customer satisfaction by explicitly examining how food and service quality responsiveness of staff, as well as food and service quality and hotel restaurant ambiance, affect internal customer satisfaction. This research specifically examines how the responsiveness of staff, along with the quality of food and service, and the ambiance of hotel restaurants, influence internal customer satisfaction.

Research Objectives:
The primary objectives of this research are as follows:

RO1: To examine the relationships between food quality and customer satisfaction.
RO2: To determine the relationships between service quality and customer satisfaction.
RO3: To examine the relationship between customer satisfaction and repeat intention in hotel restaurants.

By addressing these research objectives, the study hopes to provide substantial insights into customer satisfaction with hotel restaurant cuisine and service quality, which may influence customers' intentions to return to certain restaurants. The data will help us gain a better understanding of consumer behavior in the sharing economy, as well as ideas for improving customer satisfaction and repeat intentions in hotel restaurants. The insights will also help to improve our understanding of customer behavior in the sharing economy.

2. Literature Review

Food Quality and Customer Satisfaction: Food quality is a primary determinant of customer satisfaction in hotel restaurants. Chaturvedi et al. (2024) found that guests were more likely to be satisfied and inclined to revisit establishments that offered fresh, flavorful, and well-prepared dishes. Han and Hyun (2017) also emphasized the importance of culinary creativity and menu innovation in enhancing customer satisfaction with food offerings.

Service Quality and Customer Satisfaction: The literature well documents the significance of service quality in shaping customer satisfaction. Hotel guests place a high value on personalized and attentive service, widely acknowledging its impact on overall satisfaction (Tai et al. 2021). A study by Ali et al. (2021) highlighted the critical role of staff competence and friendliness in influencing guest perceptions of service quality and repeat intention.

Factor that May Affect Repeat Intentions toward Customer Satisfaction at Hotel Restaurants: Repeat intention refers to the likelihood of customers returning to an establishment, which is a critical indicator of

customer satisfaction and loyalty in the hotel restaurant industry. Understanding the factors influencing repeat intention can help hoteliers and restaurant managers devise effective strategies to enhance customer satisfaction and encourage guests to return. This review explores vital factors that may affect repeat intention toward customer satisfaction at hotel restaurants.

Food Quality and Culinary Offerings: Food quality plays a central role in influencing customers' likelihood of returning to a hotel restaurant. Serving fresh, delicious, and well-prepared dishes increases the likelihood of positive repeat experiences for guests (Zarezadeh et al., 2022). Varied and innovative menu options, catering to diverse tastes and dietary preferences, contribute to enhanced customer satisfaction and higher chances of returning patrons.

Service Excellence and Personalized Interactions: The quality of service provided by hotel restaurant staff has a significant impact on repeat intentions. Guests value attentive, friendly, and knowledgeable service (Ali et al., 2021). Personalized interactions that recognize individual preferences and anticipate needs create memorable experiences, fostering customer loyalty and encouraging repeat visits.

Ambiance and Atmosphere: A hotel restaurant's ambiance and overall atmosphere are key factors affecting customer satisfaction and repeat intention. An inviting, well-designed space enhances the dining experience (Hwang & Ok, 2013). Elements such as restaurant decor, lighting, background music, and seating arrangements contribute to the perception of dining quality and influence customers' desire to return. As stated by Nawawi et al. (2018), revisit intention is unique in that it deals with intangible factors such as atmospheric factors.

Consistency and Reliability: Consistency in delivering high-quality experiences is crucial for encouraging repeat intention. Guests seek reliability in food preparation and service delivery (San Lam et al., 2020). Establishing standardized procedures, maintaining quality control, and ensuring uniform service across different visits still boost customers' confidence and positively influence their decision to revisit.

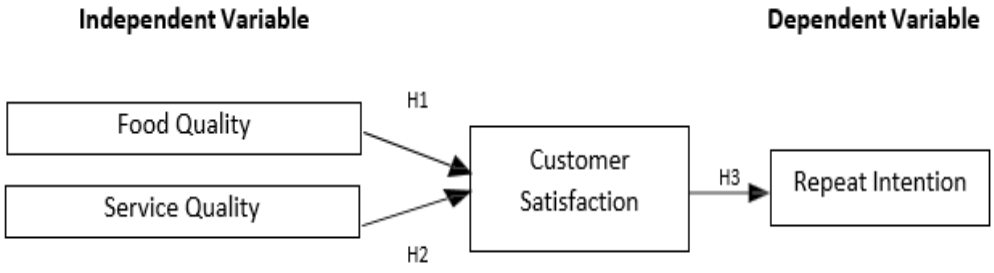
Value for Money: Perceived value for money is critical to customer satisfaction and repeat intent. Guests want to feel that they are receiving fair prices for the quality of food and service provided (Foroudi et al., 2020). Offering competitive pricing, promotions, and loyalty programs can further enhance customer perception of value and contribute to repeat business.

Post-Dining Experience and Feedback: The post-dining experience, which includes follow-up communication and feedback response, can influence repeat intention. According to Han & Hyun (2017), guests who perceive their opinions as valued and addressed are more inclined to make repeat visits. Encouraging feedback, promptly resolving complaints, and expressing gratitude for patronage can build stronger customer connections, leading to increased repeat visits.

Study Framework

Figure 1 shows the conceptual framework of the study. The study involved two independent variables: food quality and service quality, with customer satisfaction as the moderating variable and repeat intention as the dependent variable.

Figure 1: Study Framework



3. Research Methodology

Research Design: This study used a deductive approach to determining causal relationships using structured methodological questionnaires. The questionnaire will only be available to respondents who have previously dined at a hotel restaurant. As a result, future researchers may find this information useful. By employing this strategy, one can ascertain the existence and reasons behind certain phenomena. For example, this study aims to identify aspects of food and service quality that influence customer satisfaction, which in turn may influence a customer's intention to return. We conducted the study in an unstructured environment, as respondents could access the survey from their homes or places of employment. To gather information concerning the level of contentment felt by their customers, we will first administer a questionnaire survey before distributing the level of contentment felt by their customers. The study will use the participants as individual units of analysis. Our primary target audience consists of Malaysians from the general public who have previously eaten in hotels' restaurants. This is because we have a variety of factors that impact customer satisfaction. Consequently, this unit of analysis fits our investigation well.

Population and sampling: According to the Key Findings Population and Housing Census of Malaysia 2020, the total population of Malaysia in 2020 was 32.4 million. The estimated population proportion is 50%, the confidence level is 95%, and the margin of error is 5%. The sample size for this study will be consistent with Krejcie & Morgan's (1970) table, which specifies a sample size of 385 public individuals selected from a total population of 32.4 million in Malaysia.

Instruments and data collection: We adopted a questionnaire from the previous study, which had four sections. Factors to consider include demographic profile, food quality, service quality, customer satisfaction, and customer repeat intention. The survey will use a five-point Likert-type scale (Very satisfied = 5, satisfied = 4, neutral = 3, dissatisfied = 2, and very dissatisfied = 1) to determine the levels of satisfaction with the investigated statements. Therefore, the researchers have adopted a voluntary response sampling method to collect data, inviting the public who have dining experience at hotel restaurants to participate. Meanwhile, the researchers distributed an electronic survey form on Google Forms, utilizing a Quick Response (QR) code to encourage respondents to respond. The respondents will share their personal experiences with dining at hotels and restaurants.

4. Results

This section provides the findings of the analysis, which includes reliability analysis, frequency distribution of demographic profiles, descriptive statistics, cross-tabulation, and correlation analysis. The results of this section will establish whether there is a correlation among the course, gender, and age and the preferences for learning methods.

Reliability Analysis: Table 1 displays Cronbach's alpha values for independent and dependent variables. Reliability analysis evaluates the internal consistency of the variable selected by respondents. According to Salkind (2015), Cronbach's alpha values greater than 0.8 indicate excellent internal consistency. The table shows that all of the variables in the study have a high level of internal consistency.

Table 1: Cronbach's Alpha Value

Variable	Cronbach's Alpha
Food Quality (Independent Variable)	0.800
Service Quality (Independent Variable)	0.810
Customer Satisfaction (Moderating Variable)	0.805
Customer Repeat Intention (Dependent Variable)	0.801

Profile of Respondents: Table 2 reveals that 167 male respondents and 218 female respondents participated in our research. Male respondents account for 43.4%, while female respondents account for 56.6%. The majority of respondents are between the ages of 26 and 35, with 156 respondents accounting for 40.5%. Groups of 18 to 25 years old have 63 respondents (16.36%), and those aged 36 to 45 have 97 respondents (25.2%).

Forty-seven respondents (12.2%) fell within the age group of 46 and 55 years old. Finally, only 5.7% of the total, or 22 respondents, are 56 years and older. Table 2 also reveals the occupations of our survey respondents. A total of 178 respondents, accounting for 46.2%, are students, while 167 respondents, accounting for 43.4%, hold employment. Thirty-four respondents, or 8.8% of the total respondents, are self-employed, whereas six, or 1.6%, are unemployed. The respondents with the highest amount, 176 (45.7%), have a monthly income between RM 1,000 and RM 2,000. Eighty-six respondents have a monthly income of less than RM1,000 (22.3%). Eighty-four respondents fall within RM 2,001 to RM 3,000 (21.8%). The next income bracket, from RM3,001 to RM5,000, accounts for 31 respondents, or 8.1% of the total. Eight respondents, or 2.1% of the total, have a monthly income of more than RM5,000. The data analysis reveals the ethnicity of these respondents. The highest amount, 273 respondents (70.9%), are of Malay ethnicity. Fifty-seven respondents are Chinese, comprising 14.8% of the total respondents. Finally, 28 Indian respondents make up 7.3% of the total respondents.

Table 2: Demographic Profiles of the Respondents

Classification		Frequency	Percentage (%)
Gender	Male	167	43.4
	Female	218	56.6
Age	18-25 Years Old	63	16.36
	26-35 Years Old	156	40.5
	36-45 Years Old	97	25.2
	46-55 Years Old	47	12.2
	56 Years Old and above.	22	5.7
Occupation	Student	178	46.2
	Student	167	43.4
	Employed	34	8.8
	Self-employed	6	1.6
Monthly Income	Less than RM1,000	86	22.3
	RM1,000-RM2,000	176	45.7
	RM2,001-RM3,000	84	21.8
	RM3,001-RM5,000	31	8.1
	More than RM5,000	8	2.1
Ethnic	Malay	273	70.9
	Chinese	57	14.8
	Indian	28	7.3

According to Table 3, of the five food quality items (A), A1 has the highest mean (3.7198) and standard deviation (0.94584), followed by A5 with a mean (3.60077) and standard deviation (1.004743), and A4 with a mean (3.5516) and standard deviation (1.001446). Finally, A3 follows with a mean of 3.3569 and a standard deviation of 1.11977, while A2 follows with a mean of 3.2832 and a standard deviation of 1.18523.

Table 3: Mean and Ranking on the Statement of Food Quality (A)

No.	Statement	Mean	Std. Deviation
1.	Is the price of food at the hotel restaurant reasonable?	3.7198	0.94584
2.	Does the food provided meet your taste?	3.2832	1.18523
3.	Is the food in the hotel restaurant prepared in a clean condition?	3.3569	1.11977
4.	Is the food at the hotel restaurant healthy to eat and does it not bring disease?	3.5516	1.001446
5.	Is the appearance of the food prepared at the hotel restaurant very attractive compared to the local restaurants?	3.60077	1.004743

According to Table 4, of the five items in service quality (B), B1 has the highest mean (3.7198) and standard deviation (0.94584), followed by B2 with a mean (3.60077) and standard deviation (1.04743), and B3 with a

mean (3.3717) and standard deviation (1.09486). Next, B4 has a mean of 3.3569 and a standard deviation of 1.11977, while B5 follows with a mean of 3.2832 and a standard deviation of 1.18523.

Table 4: Mean and Ranking on the Statement of Service Quality (B)

No.	Statement	Mean	Std. Deviation
1.	Displaying the halal logo, hygiene grade by the Department of Health and Business License.	3.7198	0.94584
2.	Hours and days of operation.	3.6007	1.04743
3.	Options for special requests (Example: Birthday Celebration/ Wedding Anniversary and so on).	3.3717	1.09486
4.	The length of time it takes to complete the booking.	3.3569	1.11977
5.	Treatment provided by hotel restaurant workers.	3.2832	1.18523

According to Table 5, the three items of Customer Satisfaction and Customer Repeat Intention (DV), DV2 has the highest mean (3.5251) and standard deviation (1.06384) followed by DV3 with a mean (3.5044) and standard deviation (1.12889) and lastly, DV1 with a mean (3.3835) and standard deviation (1.01781).

Table 5: Mean and Ranking on Customer Satisfaction and Customer Repeat Intention (DV)

No.	Statement	Mean	Std. Deviation
1.	In the future, will you visit the same hotel restaurant if it provides food and service quality Does that satisfy you?	3.3835	1.01781
2.	Your level of satisfaction with the services provided at the hotel restaurant.	3.5251	1.06384
3.	Your level of satisfaction with the food at the hotel restaurant.	3.5044	1.12889

Correlation Analysis: The correlation analysis results in Table 6 show a relationship between three variables influencing customer satisfaction in hotel restaurants' food and service quality, which may affect repeat intention.

Table 6: Correlations of the Variable

Correlations						
		Price	Social	Home	Local	Decision
Food Quality	Pearson Correlation	1	.709**	.729**	.646**	.149**
	Sig. (2-tailed)		<.001	<.001	<.001	.006
	N	339	339	339	339	339
Service Quality	Pearson Correlation	.709**	1	.716**	.752**	.176**
	Sig. (2-tailed)	<.001		<.001	<.001	.001
	N	339	339	339	339	339
Customer Satisfaction	Pearson Correlation	.729**	.716**	1	.691**	.118*
	Sig. (2-tailed)	<.001	<.001		<.001	.030
	N	339	339	339	339	339

**. Correlation is significant at the 0.01 level (2-tailed).
**. Correlation is significant at the 0.05 level (2-tailed).

Table 6 indicates that food quality influenced customer satisfaction in hotel restaurants food and service quality with a correlation of r = 0.149 (p = 0.006 < 0.05). Moreover, it also shows that service quality influenced customer satisfaction in hotel restaurants' food and service quality with a correlation of r = 0.118 (p=0.001< 0.05). At the same time, overall customer satisfaction correlates with r =0.118 (p = 0.03 < 0.05).

Discussion

The study aims to examine the relationship between service and food quality, customer satisfaction, and customer repeat intention in hotel restaurants. Table 7 lists the study summary of hypotheses, which is based on Figure 1: Study Frameworks. The following discussion provides evidence of the relationship between the variables:

H1: There is a relationship between food quality and customer satisfaction at hotel restaurants.

The restaurant business heavily relies on the quality of its food. To meet the requirements of the consumer, food quality is crucial (Trivedi & Sama, 2021). To meet the demands and expectations of the consumer, food quality is a crucial factor. Everyone agrees that food quality plays a crucial role in the dining experience. The most significant aspect to consider when choosing a restaurant is the food quality, which directly affects the satisfaction level experienced by patrons. Food quality is a factor in determining a customer's loyalty, and customers judge a restaurant based on the quality of the cuisine served there. "Food quality" encompasses the taste, presentation, temperature, freshness, nutritional value, and variety of menu options (Sari et al., 2024).

Talukder et al. (2023) stated that food quality influences customers' decisions to return to a restaurant. Customers are increasingly interested in academic topics because they perceive the number of items available on a menu as an essential factor in determining the overall quality of the cuisine. The taste quality is a perceptual aspect of food. After ingestion, one may evaluate how something tastes. Despite this, buyers predict the meal's flavor before they consume it based on factors such as price, quality, food labels, and brand name (Wassmann, 2023). The way food tastes is a crucial factor in determining the level of consumer pleasure achieved. The presentation of food can greatly influence the overall dining experience. The customer's expectations regarding the restaurant's commitment to providing nutritious options significantly impact the restaurant they select. The meal's scent, juicy texture, crispiness, and overall fresh posture indicate its recent preparation.

H2: There is a relationship between service quality and customer satisfaction at hotel restaurants.

For decades now, the hospitality sector has placed a significant emphasis on service quality. According to Mola and Jusoh (2011), businesses that provide services must understand their customers' expectations and perceptions, as well as the elements that influence their assessment of the services delivered to them and their level of satisfaction with those services. While this is happening, the focus of service quality is on meeting the requirements previously outlined by the clients. The diversity of service characteristics that customers anticipate receiving is extensive.

Devi et al. (2021) found that these service characteristics influence customers' perceptions of the quality of services they receive. Typically, we evaluate a client's impression of service quality after they have used the service (Ali et al., 2021). In the hospitality industry, the benefits or attributes of service quality encompass an increase in customer satisfaction, positive effects on customer behavioral intentions such as loyalty, retention, and positive word of mouth, as well as increased profitability for the service provider. Marcos et al. (2022) researched the effect of perceived service quality on customer satisfaction. They concluded that an improvement in service quality could lead to an increase in customer satisfaction.

H3: There is a relationship between customer satisfaction and customer retention in hotel restaurants.

Repeat intention, also known as repurchase intention or customer loyalty, is a concept that is similar to those two terms (Law et al., 2022). It refers to consumers' willingness to frequently visit the same location, destination, or person because of the accumulation of positive experiences. In customer service, the word "return intention" refers to the extent to which a client is interested in returning to the same service provider, such as a hairdresser, service center, restaurant, or hotel. Such service providers include a restaurant and a hotel. In the service industry, marketing managers and practitioners are interested in establishing long-term relationships with a concentration on the factors influencing consumer intention to make a repeat purchase because retaining existing customers is more cost-effective than attracting new customers (Fiiwe et al., 2023).

Table 7: Summary of Hypothesis and Results

	Hypothesis	Results
H1	There is a relationship between food quality and customer satisfaction at hotel restaurants.	supported
H2	There is a relationship between service quality and customer satisfaction at the hotel restaurants.	supported
H3	There is a relationship between customer satisfaction and customer retention in hotel restaurants.	supported

5. Managerial Implications and Recommendations

Future research should focus on other age groups, such as business users and international visitors because these demographics are more likely to interact with hotels. This will enable them to reach the intended conclusions and provide definitive answers. Visitors from other countries and business travelers frequent hotel restaurants. In addition, researchers might investigate the elements that impact the likelihood of a customer returning to a particular hotel or restaurant, specifically regarding their income type.

In addition, researchers should evaluate the food and service quality offered at hotel restaurants in Malaysia, such as those in the Hilton Hotel, the Marriott Hotel, and the Genting Hotel. These hotels are popular destinations for both international guests and neighborhood residents (Kumar et al. 2017). The researchers recommend that future studies explore the elements that influence a customer's inclination to return to a hotel or restaurant's service after having previously experienced it, and we endorse this recommendation. As a consequence, this approach can enhance the credibility of the research and improve the accuracy of the results. Lastly, to reliably replicate earlier research findings, we should increase the sample sizes in subsequent research. In addition, a more accurate field representation is possible.

Conclusion

This study aimed to investigate the potential relationship between consumer satisfaction with hotel restaurant food and service quality, and its potential impact on customer repeat intention. The study also explored how different generations value service quality and how their perceptions of its importance influence customer repeat intention. Specifically, this research wanted to determine whether or not there is a relationship between customer satisfaction with hotel restaurant food and service quality. The most convincing conclusion from a quantitative study was that service quality has a reasonably significant influence on customer satisfaction, with the impact appearing to be more significant when service quality reaches high levels. We reached this conclusion after examining the relationship between service quality and customer satisfaction. Furthermore, data suggests that service quality can positively impact brand retention. On the other hand, the effect has become substantially more important when the service quality is outstanding or at a very high level. This aligns with the findings of previous research on the subject.

Overall, this study adds to the existing literature by conducting a thorough analysis of the factors that influence customer satisfaction and repeat intention in the hotel restaurant context, as well as making actionable recommendations to industry practitioners. Future research could benefit from examining how customer satisfaction and repeat intention change over time using longitudinal methods. Comparing these factors across different types of hotel restaurants, such as luxury and budget, could provide useful insights for tailoring strategies. Furthermore, researching the role of digital tools, cultural influences, and employee perspectives can provide a more comprehensive understanding of what motivates guest loyalty. Exploring how non-price factors such as ambiance and menu variety affect satisfaction, as well as evaluating the effects of crises, will aid in the development of more comprehensive strategies for maintaining and increasing customer loyalty in hotel restaurants.

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An Exploration of Accounting Student's Perspective on Factors Influencing Audit Career Choice

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Abstract: This study aims to explore the factors influencing undergraduate accountancy students at Universiti Teknologi MARA Melaka branch to pursue careers in auditing. A structured questionnaire, distributed to participants via Google Forms, was employed to gather feedback from the students. The participants, categorized based on their academic levels, represent various stages of both theoretical and practical exposure to auditing subjects. The research team administered a questionnaire to evaluate accounting students' perceptions and intentions on the factors influencing careers in auditing. There is a strong positive correlation between job security and career intention followed by career development and a moderately significant positive correlation between job satisfaction and financial reward toward students' intention to become auditors. A general lack of interest in the profession and concern about work-life balance contribute to the challenges of not pursuing a career in audit. Students perceived that real exposure to the auditing profession via academic visits, engaging experts through seminars, and interactive teaching methods could bridge the gap between academic learning and professional practice. Enhancing the alignment of educational offerings with industry requirements and students' career aspirations with curriculum development, enhancing teaching methods, and partnerships between academia and industry will assist accounting students in developing a positive view of auditing careers and better preparedness for their future careers in this field.

Keywords: *Auditing, auditing education, career, accounting students*

1. Introduction

The role of auditors is very crucial in achieving financial transparency and accountability in the ever-changing business world. It's also among the most prevalent concerns on how to attract and retain young professionals as they are key players who will shape tomorrow's accounting profession. Nonetheless, the number of trained accountants joining public practice continues to decline and this shortage may grow worse in the future. According to the AICPA 2023 Trends Report, bachelor's degree completions in accounting declined 7.8% between 2021 and 2022, following a consistent decline of 1-3% every year from 2015-2016. Consequently, audit firms could encounter substantial challenges in retaining staff and keeping graduates on the audit path for a sufficient duration (Pauzi et al., 2021). There is a significant shortage of accountants in the country. This is due to increasing regulatory pressures, as well as challenges in hiring and bringing in talent. Accounting and auditing jobs are often viewed as lower-paying, less valued, and less exciting compared to careers in tech, investment banking, and private equity (Poo, 2024).

Prior studies revealed that accounting students may not intend to pursue a career in auditing due to numerous factors. Factors such as the high workload and pressure associated with auditing roles, insufficient professional training opportunities, negative perceptions of auditing as stressful and monotonous, and a mismatch between students' personalities and the characteristics required for auditing roles contribute to their lack of interest in pursuing an auditing career (Kurniawati, 2022; Tetteh et al., 2022). According to the Malaysian Economic Transformation Program in 2010, stated that Malaysia aimed to produce 60,000 accountants in the nation by 2020. However, subsequent data from the Malaysian Institute of Accountants (MIA) revealed that, as of June 2023, there were more than 38,500 members in its registry (Poo, 2024). The data is almost half of the expected number required which imperatively could be worse in the future. Auditing, as an integral part of the accounting degree curriculum, plays a vital role in shaping the education and professional development of aspiring accountants where its strategic component is designed to equip students with the knowledge, skills, and ethical foundation necessary for a successful career in accounting. The inclusion of auditing as a required subject for accounting students at Universiti Teknologi MARA, Malaysia (UiTM) is a strategic and foundational aspect of the curriculum. For the Bachelor of Accountancy program at UiTM, students will enroll in auditing subjects in semester 4 (Basic Auditing), semester 6 (Advanced Auditing), and semester 7 (Internal Auditing).

This requirement is to provide students with well-rounded theoretical knowledge and prepare them for the multifaceted challenges they will encounter in professional practice. Auditing is often a key component for professional accreditation and certification in the field of accounting. Professional accounting bodies such as the Malaysian Institute of Accountants (MIA), emphasize the importance of auditing knowledge for aspiring accountants. By making auditing a requirement in the bachelor program curriculum, UiTM ensures that graduates are well-positioned to pursue professional certifications and memberships once they graduate.

In this regard, the primary objective of this study is to explore factors that influence accounting students' intentions to choose auditing as their profession. Secondly, the study aims to examine the perceived challenges in choosing an auditing career. By exploring the motivations, influences, and perceived barriers that students experience when thinking about auditing careers, this research will help in understanding what motivates individuals into this professional practice. By addressing these questions, this study seeks to provide insights relevant to academia, policymakers, and industry players helping them understand further what makes students opt for certain careers. The results of this research could lead to improvements in curriculum design strategies, outreach initiatives by industry, or even mentoring strategies that could enhance learning and create future auditors capable of adapting to the business environment.

The remaining part of this article is structured as follows. The following sections provide a review of pertinent literature, followed by a discussion of the methodology. Next, the findings and discussion section address the results of the study, while the concluding section explores the conclusion, drawbacks, and recommendations for future research.

2. Literature Review

Nature and Scope of Audit

Auditing is essential in financial and corporate governance fulfillment, as it offers stakeholders an impartial assessment of internal control systems, operational activities, and financial statements to evaluate their accuracy, completeness, and compliance with relevant standards and regulations (Sapiri, 2024). The process is evidence-based, utilizing the accumulation and analysis of verifiable data to conclude. Audit activities should be carried out by qualified and independent auditors. Auditors' independence pertains to their ability to perform their responsibilities without any unwarranted influence or conflicts of interest, therefore maintaining impartiality and objectivity (Cohen, Krishnamoorthy, & Wright, 2019). Subsequently, an opinion is conveyed regarding the reliability of financial records or the efficacy of internal processes through auditing. The auditor's opinion is one of the primary results of an audit. This typically takes the form of an audit report that states whether the financial statements are free from material misstatement, whether due to fraud or error, in the context of financial audits. The opinion may be unqualified (clean), qualified, adverse, or a disclaimer, contingent upon the findings. However, the audit process only serves to provide reasonable assurance but does not guarantee the correctness of the financial statements.

In the new business era, auditing's role has expanded and diverse. Audit may include business risk assessment and addressing complexities in financial instruments which helps in financial crisis identification and prevention (Sapiri, 2024). In addition to this, Saeed et al., (2024) explored the auditing role in ensuring sustainability in corporate practice. The study suggests that high audit quality in external governance assists companies in minimizing their waste generation, thus promoting better sustainability. The Malaysian Institute of Accountants (MIA) also highlighted the importance of sustainability knowledge among accountants to accommodate the wide practice of sustainability activities among firms in Malaysia. The institute has supported the agenda by facilitating the implementation of the sustainability blueprint, promoting stability within the profession, and supporting efforts to enhance professional skills. Next, with the increasing numbers of Shariah compliance firms, there is a need for competent and qualified Shariah auditors to conduct audits for these institutions. This requires a certain set of abilities, particularly in developing an understanding of *fiqh muamalat* (Ali, Shahimi & Shafii, 2018).

In light of the evolving contemporary function of auditing which imposed several challenges to the auditing profession, it necessitates a diverse range of abilities among young and experienced auditors. Therefore, skill development should commence at the university throughout the classroom learning session. Through their

university education, graduates will acquire theoretical knowledge of audit procedures and enhance their skills through internship which has been embedded in the curriculum. It is necessary to augment such talents among students to meet the demands of the present business environment. Furthermore, academic institutions should actively promote and support students in their pursuit of a profession in auditing. By demonstrating and reinforcing the favorable outcomes associated with the role of an auditor, educators can assist students in their decision to pursue a career in auditing (Tetteh et al., 2022).

Factors Influencing Undergraduates' Choice to Pursue a Career in Auditing

A branch of accounting that is distinct from financial reporting, taxation, risk management, and other disciplines is auditing. Auditing is a distinct area of expertise within the subject of accounting that entails scrutinizing financial records and statements to verify their precision and adherence to regulatory standards. Comprehending the determinants that drive accounting graduates to choose auditing professions is crucial for educational institutions, companies, and legislators. This literature review examines a range of internal and external factors that impact the choices made by graduates when deciding to pursue a career in auditing. Furthermore, this section synthesizes findings from empirical studies, offering insights into the motivations, deterrents, and influences that shape their career decision. Among others, the review covers a broad spectrum of factors, including financial reward, opportunity for career development, job security, job satisfaction, and parental and peer influence.

Financial Reward: Numerous factors influence the decision to pursue a career in auditing, and financial incentives are frequently a significant factor. Extensive research suggests that financial compensation has a crucial role in shaping career decisions among graduates (Bhatt & Khan, 2023; Wang & Wang, 2022; Kong, Ngapey, & Qalati, 2020). Financial rewards motivate employees through monetary compensation, including money, bonuses, allowances, benefits in kind, pension funds, or, in the Malaysian case, Employees Provident Fund (EPF) contributions by employers. These awards are given to employees who have made significant contributions to the company through their work, talents, and performance, aiding the organization in achieving its goals.

Accounting graduates perceived the accounting, including auditing, profession as akin to the potential for substantial financial rewards and high earnings. There exists a direct and substantial correlation between financial reward and the selection of a profession among accounting graduates, which extrinsically motivated them to pursue the career, (Tantular, Mardi & Fauzi, 2023; Marsintauli, Situmorang & Suminar, 2022; Kong, Ngapey, & Qalati, 2020; Uzman & Abeyrathna, 2021; Amarathunga & Ajward, 2018). The graduates also view the audit profession as demanding and professional, with exacting standards, and as a respected career due to its high pay despite being hectic and uninteresting (Wang & Wang, 2022). The perceived long-term lucrative nature of auditing as a profession serves as a strong incentive for students to choose it as a career path (Amondarain, Aldazabal, & Espinosa-Pike, 2023). For example, research affirmed that there is financial gain in pursuing a career in auditing, because, due to its legal requirement, auditors enjoy a consistent stream of revenue and are financially prosperous. The studies also indicated that auditors earn a substantial income because of the high fees associated with their profession, rendering it a lucrative occupation, and indicated that financial gain was the primary and first motivation for these students to consider pursuing a career in auditing (Tetteh et al., 2022).

On the other hand, some of them are not interested in auditing because they fear that it is a high-pressure job and does not pay well. In this regard, Pauzi et al., (2021) conducted a study and found out that though there is only a small number of students who have a passion for becoming professional auditors; others dislike it due to working under pressure and getting less remuneration. Additionally, students with minimal interest in auditing express a preference for alternative career paths such as entrepreneurship or business consulting. These findings highlight the need for industries such as auditing firms to address issues like working environment and competitive remuneration to attract and retain talent.

Career Development: The auditing profession is widely recognized for its demanding nature and vital function in assuring financial accountability and transparency. Students perceived that the auditing field offers more career opportunities (Graschitz, Holzknecht, & Steller 2023; Marsintauli, Situmorang & Seminar 2022). Students' intentions to pursue careers in auditing are influenced by job development opportunities, including

career advancement, learning new skills, and professional growth. A study conducted in Ghana among accounting graduates posits that they are motivated to think about pursuing careers in accounting following graduation by opportunities for job advancement (Amaning, et al., 2020). In comparison to other professions, the respondent believes that the accounting field offers excellent prospects for advancement. Students also generally held a favorable impression of the audit profession and were confident in their ability to have successful careers in auditing (Pelzer & Nkansa, 2022).

The opportunity to have professional training also creates prospects for career development. It is a process of an organization providing and improving the skills of both potential and current employees, which offers direct advantages to employees in achieving the company's objectives efficiently and effectively. The study findings suggest that professional training plays a significant role in motivating students to choose careers as auditors as they are exposed to the real work environment. A survey, distributed by Saidin et al., 2023 to all employers of 230 interns, revealed that employers reported elevated levels of satisfaction with the accounting interns' technical, functional, communication, and organizational management skills. The positive feedback loop encourages more students to believe that their efforts in developing these skills will be recognized and rewarded in the workplace, making the profession of auditing more attractive to students who are deciding on a career path, as it suggests a supportive and appreciative work environment.

Accounting graduates anticipate receiving job training before commencing employment, both within and outside the school, to enhance their professionalism and get diverse work experiences (Wardayati, Wahyuni, & Arif, 2021). A study conducted in Vietnam by Thuy, Hanh & Hong (2022) found that students describe the auditing profession as an intriguing job that offers several prospects for professional growth, involves various activities, and makes major contributions to the community. They also view auditing as a challenging job that requires rigorous adherence to responsibilities. The data also indicates that auditors are perceived as very competent and ethical.

Although auditing careers offer perceived benefits in terms of employment development chances, there are also persistent obstacles. For example, the fast-paced advancement of auditing technologies and regulatory frameworks requires auditors to continuously enhance their skills and acquire new knowledge. Thus, recognizing and acknowledging the existence of obstacles is crucial for maintaining ongoing progress in the field.

Job Security: One of the most crucial factors when selecting a career is job security, especially for professions like auditing where changes in regulations and the economy can have an impact. Research constantly confirms that job stability and security are fundamental considerations for graduates when choosing to pursue a career in various branches of accounting, including auditing. Theoretical frameworks, such as Maslow's Hierarchy of Needs and Herzberg's Two-Factor Theory, offer a basis for comprehending how job security fulfills essential safety needs and influences career choices. Accounting students also hold the belief that the auditing profession provides employment stability, leading them to possess an ardent desire to obtain a professional auditing certificate and venture into this profession (Ilias et al., 2022; Jenkens & Camillo 2011).

Uzman & Abeyrathna (2021) reported that accounting graduates' decision to pursue a career in accounting is favorably and considerably influenced by employment stability. Comparable results depicted by Amarathunga & Ajward (2018) indicate that job security and stability have a positive and significant impact on accounting graduates' decisions to pursue careers in the field. In addition, Mustapha & Hassan (2012) conducted a study of final-year accounting students at a public university in Malaysia and discovered the choice of respondents to become professional accountants was found to be positively and significantly correlated with job security and stability, which in turn greatly motivated them to pursue professional qualifications.

Students' intentions to pursue careers in auditing are significantly influenced by their employment perceived stability and security. Students view the auditing profession as a secure and viable career path because of perceptions of stability, regulatory compliance requirements, and career growth chances. Talented students who value job security and long-term career stability in auditing can be drawn to and retained by auditing firms and educational institutions by addressing these characteristics.

Job Satisfaction: Job satisfaction among auditors plays a vital role in an organization because it will help to make sure that the productivity and performance of the company achieve targets or expectations. Auditors have essential roles in an organization because they have the right to declare in the audit report whether the financial statements of the company are prepared according to standards and with a true and fair view. Herzberg's Two-Factor Theory is a prominent framework for assessing job satisfaction, emphasizing motivators and hygiene factors. The theory posits those factors like growth potential, promotion, praise, and achievement function as motivators, positively influencing job satisfaction (Chachar, Lothi & Naz 2022. About job motivation, the theory says that internal causes, including factors like accomplishments, advancement, the work itself, acknowledgment, and growth, promote job motivation. Job satisfaction is attributable to external factors such as the company's policies, the relationship with peers, the level of work security, the relationship with one's supervisor, the amount of money, and the working circumstances.

Saat, Halim, & Rodzalan (2021) applied Herzberg's Two Factor Theory to examine the factors that contribute to job satisfaction among auditors in Malaysia. The study found that there are strong positive correlations between job satisfaction and both internal and external determinants of motivation about job satisfaction. When it comes to job satisfaction, "achievement" and "growth" are the most important internal factors of motivation, while "company policy" and "relationship with supervisors" are the most important external factors of motivation. Additionally, Byrne, Willis, & Burk (2012) evaluated how well financial benefits, professional advancement, and job happiness are balanced. Their findings suggest that, although monetary rewards play a significant role in luring skilled individuals, job satisfaction is indispensable for preserving job contentment among accounting graduates.

Eventually, job satisfaction significantly influences students' inclination to pursue a profession in auditing. Factors such as the work environment, task completion, ability to accomplish challenging tasks, and organizational culture have a substantial impact on how students consider auditing as a career choice, affecting their job satisfaction. To boost overall job satisfaction within the auditing profession, auditing businesses and educational institutions can better prepare students for auditing careers by comprehending these dynamics.

Family and Friends Influence: Other than previous factors, graduates' job decisions are also influenced by social and cultural variables such as family expectations, peer influence, and public opinions of auditing as a respectable profession. From a Malaysian perspective, social impact does affect an accounting graduate's decision to work in that field (Muhamad et al., 2020).

Previous literature also suggests that undergraduates choose to pursue a career in auditing due to a complex interplay of intrinsic motivations, educational experiences, social influences, and perceived career benefits and deterrents. Thus, parental or peer influences influence accounting students' intention to pursue a career as a professional accountant (Srirejeki et. al, 2019). Kong et al., (2020) reported in their studies that family members significantly influence students' motivation to pursue a career in accounting. In addition, a study conducted from an Indonesian perspective discovers that family members who already have established careers in accounting may significantly, guide the students' interest and inclination toward following a similar career path as their relatives as such influence these students to choose a career in accounting (Hasiara et al., 2023).

The current study's findings suggest that students' propensity to pursue a career in auditing is impacted by their beliefs about their capacity to uphold ethical standards and their expectations of achieving favorable results, such as higher salaries and social status. Furthermore, the study shows that the factors that prevented students from choosing auditing as a career were self-efficacy beliefs, notably job stress and accounting stereotypes.

3. Methodology

This section explains the methodology used in this study. To gather data, a quantitative approach was employed. A structured questionnaire was distributed via Google Forms to gather data from third- and final-year undergraduate accounting students at the Universiti Teknologi MARA Melaka branch. The sample is limited to one institution to allow for more accurate analysis and controlling extraneous variables such as

differences in academic structures, teaching methods, and student services (Barra & Zotti 2017). According to Donina & Hasanefendic (2019), studies carried out in a single institution can produce more reliable findings because they eliminate the complexity brought about by various institutional governance systems and educational programs. The total 239 participants were divided into three groups, which are semesters 6, 7, and 8, ensuring a comprehensive insight into the diverse perspectives and experiences at various stages of their academic and practical exposure to auditing. Semester 6 students are currently enrolled in the Advanced Auditing course, which provides basic knowledge and insights into initial reactions and perceptions of the auditing field. Semester 7 students, who have completed the Advanced Auditing course and are currently exploring other elective subjects, such as Internal Auditing, also offer a retrospective evaluation of the impact of auditing education on their career aspirations. Semester 8 students, on the other hand, who are presently engaged in internships at auditing or accounting firms, will contribute real-world experiences and the influence of practical exposure on their career inclinations.

The questionnaire is divided into three main sections to ensure a comprehensive collection of data. The first section, Section A, encompasses demographic information. Section B employs a Likert scale question evaluating students' interests, motivations, and intentions to pursue a career in auditing. A 5-point Likert scale denotes 1 as representing "Strongly Disagree" and 5 representing "Strongly Agree". This section is integral to assessing the impact of educational experiences on students' views on the auditing profession. The responses may provide a correlation between factors influencing audit career choices, offering insights into the effectiveness of the current curriculum in fostering a positive perception of the auditing career. The last section, Section C, comprises two (2) open-ended questions eliciting qualitative insights into the factors influencing students' career choices. This section will provide a platform for participants to express their perspectives on the auditing subject learned. Once data was collected, the data was tested to determine its normality and reliability. The reliability test indicates that all items exhibit more than the acceptable range test of 0.7. Cronbach's alpha values greater than 0.7 are believed to indicate strong internal consistency. as the correlation between scales provided evidence for concept validity (Chung et.al, 1998). Further analysis using Stata software is done to present the findings and address the research questions of this study.

4. Findings and Discussion

Demographic information

The data were collected from 239 participants, comprising semesters 6, 7, and 8 students of the Faculty of Accountancy undergraduates of Universiti Teknologi MARA Melaka branch, each representing various stages of exposure to auditing education and knowledge. Most of the respondents were female (178, 74.5%) with a significant total respondents of semester 6 students (126, 52.7%), followed by semester 7 (72, 30.21%) and semester 8 (42, 17.6%). The age distribution is uniform, with most students falling between the ages of 20 to 24 years old, the standard age for undergraduates in Malaysia. The demographic information is depicted in Table 1 below.

Table 1: Distribution of participants

	Semester 6	Semester 7	Semester 8	Total
Gender				
Male	32	23	6	61 (25.5%)
Female	94	48	36	178 (74.5%)
Age				
20- 24	126	71	38	235
Above 24	-	-	4	4

Table 2 shows the mean and standard deviation of respondents' scores on their perception of factors influencing auditing careers. Based on the table, the respondents strongly agree with the statement "The auditing profession is challenging." (M=4.49, SD=0.04). The highest mean score for career development is represented by "IT skills and knowledge are important in pursuing the auditing profession" (M=4.30, SD=0.04), while the lowest score among this respondent's career development presented by "I have participated in practical auditing projects or internship" (M=2.95, SD=0.08). This lower mean is explained by the lower

number of semester 8 respondents. As for financial reward and job security, the mean score is the same (M=4.05, SD=0.05) for items "Salary prospects influence my interest in an auditing career" and "A competitive job market could be a barrier to pursuing an auditing career". The lowest mean score for job satisfaction shows "I have a good understanding of auditing principles" (M=3.74, SD=0.04) followed by "The challenge and variety of work influence my interest in an auditing career (M=3.82, SD=0.05).

Table 2: Mean and standard deviation of factors influencing audit career choice.

Variable	Questions	Mean	Std Dev
Financial reward	Salary prospects influence my interest in an auditing career	4.05	0.05
Career development	I believe a career in auditing offers attractive job prospects and career growth	4.29	0.04
	I am interested in pursuing further education or certifications related to auditing	3.82	0.05
	I have had the opportunity to engage with auditing professionals or firms during my undergraduate studies	3.42	0.06
	I have participated in practical auditing projects or internship	2.95	0.08
	Professional development opportunities influence my interest in auditing career	4.00	0.05
	Lack of experience could be a barrier to pursuing an auditing career	4.25	0.04
	Lack of professional networks could be a barrier to pursuing an auditing career	4.03	0.05
	IT skills and knowledge are important in pursuing the auditing profession	4.30	0.04
Job security	Job security influences my interest in auditing career	3.97	0.05
	A competitive job market could be a barrier to pursuing an auditing career	4.05	0.05
Job satisfaction	The auditing knowledge I have received in both Auditing 1 and 2 has been practical and applicable to the real world	3.92	0.05
	I am confident in my understanding of the roles and responsibilities of auditors	3.93	0.04
	I feel that the auditing profession is valued and respected in society	4.25	0.04
	I am aware of the ethical and professional standards expected in the auditing profession	4.31	0.04
	I have a good understanding of auditing principles	3.74	0.04
	I believe that auditing can offer a fulfilling and rewarding career	4.23	0.04
	I am concerned about the workload and stress associated with a career in auditing	4.42	0.04
	The auditing profession is challenging.	4.49	0.04
	The challenge and variety of work influence my interest in an auditing career	3.82	0.05

Factors Influencing Accountancy Students' Career Choices in Auditing

This section presents data to determine the factors influencing accountancy students' career choices in auditing. It is also aimed to determine if there is a significant association in the mean scores between all factors with the audit career choice. Results are presented in Table 3 below.

Table 3: Correlation between factors influencing audit career choice

	Career Score	Job satisfaction	Career development	Financial reward	Job Security
Career Score	1.0000				
Job satisfaction	0.6215 0.0000	1.0000			
Career development	0.7062 0.0000	0.5316 0.0000	1.0000		
Financial reward	0.6905 0.0000	0.3384 0.0000	0.4082 0.0000	1.0000	
Job Security	0.8264 0.0000	0.5552 0.0000	0.5200 0.0000	0.5588 0.0000	1.0000

Table 3 shows the association between job satisfaction, career development, financial reward, job security, and career score. The career score represents the intention of students in pursuing a career in audit. Schober & Schwarte (2018) is referred to in determining the relationship's strength using the Spearman Correlation coefficient. Based on the table, all factors are statistically significantly correlated (p=0.01). There is a strong positive correlation at the significance level between job security and career score (r = 0.8264). Career development also strongly correlated with career score (r = 0.7062). Furthermore, there is a moderately significant positive correlation between other factors which are job satisfaction and financial reward with career score (r = 0.6215, 0.6905).

Next, regression analysis is done to further understand the factors that influence students' audit career choices. The table below depicts the result.

Table 4: Regression result between factors influencing audit career choice.

Career Score	Coefficient	Std. error	t	p>|t|	[95% conf. interval]	
Job satisfaction	1.059178	0.287164	3.69	0.000	0.493422	1.624935
Career development	2.170326	0.237917	9.12	0.000	1.701593	2.639059
Financial reward	1.450414	0.163377	8.88	0.000	1.128536	1.772291
Job Security	2.829376	0.223863	12.64	0.000	2.388332	3.270419
_cons	1.770957	0.993644	1.78	0.076	-0.18667	3.728589

The overall result shows that the model is highly statistically significant, meaning that each of these factors has a significant impact on explaining the variation in career score (Prob > F = 0.0000). The high R-squared value (R-squared = 0.8474) suggests a good fit for the model and provides meaningful insights. The result shows that all factors are found to be important in influencing audit career choices, where job security is the most important factor. Subsequently, the factors are followed by career development, financial reward, and job satisfaction.

Furthermore, the result of ANOVA discovered weak evidence on the different groups of respondents (semesters 6, 7, and 8) regarding their audit career choices (Prob > F = 0.0554), meaning that the variances across the groups are likely similar. This result suggests that the auditing knowledge level among the respondents does not influence their intention to pursue an audit career. The respondents still have a similar view on audit careers whether they have basic audit knowledge, exploring advanced audit knowledge, or have practical audit knowledge.

Factors Addressing Challenges for Students to Pursue Careers in Auditing

From the questionnaires, 17 students (7.1%) expressed their hesitance to pursue a career in auditing, citing several reasons that universities and educators need to address to better prepare and motivate students for this field. The primary reasons include perceived difficulties in the profession, a general lack of interest, and concerns about maintaining a healthy work-life balance.

Perceived Difficulties: Some of the students express that auditing is challenging and stressful. They mention the difficulty of catching up with the rigorous demands of auditing, a perceived lack of ability to analyze and differentiate errors, and a general fear of not having the confidence to perform well. Students made comments such as "*It's hard*," "*Demanding and draining*," and "*I cannot analyze and differentiate what is wrong*" indicating a need for enhanced support and confidence-building measures. This is in line with Wang & Wang (2022), who discover that accounting graduates perceive the audit profession as rather demanding with high standards and seen as dull and hectic. As such universities could address these concerns by integrating more practical training and real-life case studies into the curriculum, which can help demystify the auditing process and build student confidence.

Lack of Interest: A considerable number of students simply state a lack of passion or interest in auditing as found in a study by Pauzi et al. (2021). Responses such as "*Not my passion,*" "*No reason, just not interested*," and "*Because I want to be a teacher" suggested* that while the auditing profession is positively perceived, it may not align with every student's personal or career aspirations. To help these students choose pathways that are more closely aligned with their interests, universities should think about providing additional opportunities for job exploration in the early stage of the program. Furthermore, utilizing creative and interactive teaching strategies and seminars to deliver auditing in a more relatable and interesting way may pique the interest of students who are still unsure of their career path.

Work-Life Balance and Compensation Concerns: Among the responses received from the respondents are concerns about work-life balance and compensation. Responses such as "*No work-life balance and compensation too little unless working in a big company*," "*Too much workload*," and "*stressful work*" highlight the perceived demanding nature and stereotype of auditing careers. This perception may deter students who value a balanced lifestyle (Kurniawati 2022, Tetteh et. al., 2022) or who are wary of burnout. To alleviate these concerns, universities might provide more transparent information about the various career pathways in auditing, such as employment in smaller firms or less typical settings that may provide better work-life balance. Furthermore, engaging guest speakers to share positive experiences and successful work-life integration tactics may help transform the narrative and stereotype around auditing careers.

Student Perception for Better Preparing for Careers in Auditing

Open-ended questions were asked in the questionnaire for the students to voice their opinions about how universities can better prepare students for careers in auditing. From the 228 feedback received, responses are categorized into these four main categories namely, 1. Exposure to real-world auditing & Practical Experience, 2. Enhanced Curriculum & Skills development, 3. Educational Resources & Support, and 4. Industry Engagement & Networking

Exposure to Real-world Auditing & Practical Experience: Some of the opinions gathered stated that universities should take proactive steps to bridge the gap between theoretical knowledge and practical application by organizing field trips to audit firms and collaborating with both private sector firms and government agencies for specialized programs and internships. For instance, students suggested initiatives such as "*having a field trip to an audit firm and give the student the opportunities to see how the environment is*" and "*having a study trip to any audit firm such as Jabatan Audit Negara to* provide them with a tangible

understanding of the auditing profession. As one student suggested, universities should "*bring students to the real industries to look and learn how auditors work*" & other students emphasized that "*students also can see clearly what an audit is.*" Another student agreed with this sentiment, emphasizing the need to "*provide practical programs for students to expose them to real-world environments*."

Such practical exposure not only helps students gain a clearer understanding of auditing practices but also allows them to observe the day-to-day operations of professional auditors. As students transition from theoretical to real-world exposure, this knowledge is essential to help them make informed career choices and strengthen their confidence.

Enhanced Curriculum & Skills Development: To further enhance students' preparedness for auditing careers, the respondents highlighted the necessity of practical knowledge and firsthand experience within the university curriculum. This includes incorporating audit practice, real-life scenarios, and workshops that simulate the complexities of auditing work. Students emphasized the need for training in audit-specific software and tools, with particular attention to technologies like Excel, which are commonly used in the field. One of the recommendations given by the student is to "*integrate training on audit technologies more often,*" while another suggested "*need more exposure to Microsoft skills, especially Excel*" highlighting its function in performing auditing tasks. By providing such technical training, universities can equip students with the skills necessary to navigate the technological landscape of modern auditing. Other respondents stated that "*make audit subjects fun and easy to learn in class*" while others stated, "*Expose students to using audit software and audit fieldwork like vouching, not only theory or conceptual auditing just like in the syllabus"* signaling that students are looking for more engaging and practical approaches to learning auditing. This feedback highlights the desire for a curriculum that is not only informative but also interactive and relatable, thereby fostering a more enjoyable and effective learning environment. The inclusion of practical courses and workshops led by industry experts can further enhance this aspect of their education, as one student proposed, "*Invite industry experts for workshops, create courses with practical experience, and make auditing a compulsory subject*."

Educational Resources and Support: Students reported that universities should provide sample audit documents and tutorials, incorporate real-life audit scenarios into coursework, enhance access to study materials and answer keys, and actively monitor and guide students during internships to bolster educational resources and support. As reported by one of the students, "*Universities could enhance audit preparation by incorporating more practical, real-world case studies, fostering critical thinking skills, and offering opportunities for internships or co-programs with auditing firms"*. This could include analyzing financial statements, conducting risk assessments, and navigating through common auditing scenarios.

Furthermore, active monitoring and guidance during internships were highlighted as crucial elements of support. According to Jinkens & Camillo (2011), work-integrated learning (WIL) has emerged as a promising approach to better align accounting education with the demands of the profession. By providing students with authentic, practical learning experiences, institutions can enhance their career preparedness and engagement with the accounting industry.

Industry Engagement & Networking: Students perceived that universities should increase their engagement with the auditing industry through various initiatives to improve career guidance and awareness. According to MIA Sustainability Blueprint Report 2024, accountants in public practice will play a key role in attracting the next generation into the profession by sharing their experiences in sustainability and showcasing it as a dynamic career choice, offering significant growth opportunities and exposure to a wide variety of experiences. One student suggested that universities should "invite representatives from auditing firms to give talks to the students," while another proposed organizing "seminars or talks with expert auditors to share their experience with us." Such interactions can provide students with insights into the career paths available within auditing, the challenges they may face, and the skills they need to succeed.

5. Conclusion

This study provides valuable insights into the factors, perceptions, and challenges of undergraduate students at Universiti Teknologi MARA Melaka regarding a career in auditing. The result of the study shows that job

security is the most important factor that influences students in choosing an audit career, followed by career development, job satisfaction, and financial reward. Besides that, it is found that the auditing career intention has similar views among students who have different auditing knowledge. While students have a positive perception of the auditing profession, their interest in pursuing a career in this field is rather moderate as they perceive it as challenging and daunting. Another highlight in the study is the perceived lack of practical application in auditing education, with students expressing a desire for more real-world exposure and practical experience. This is underscored by the limited participation in practical auditing assignments or internships, which students believe are essential for building confidence and competence in the auditing field. Furthermore, a small but notable group of students are hesitant to pursue a career in auditing due to concerns about the challenges facing the profession, lack of personal interest, and issues related to work-life balance.

The findings provide significant insights for universities to better align their curriculum with the realities of the auditing profession, potentially through more engaging and practical learning experiences, enhanced career guidance, and greater industry engagement. In conclusion, while students recognize the value and challenges of a career in auditing, there is a clear need for educational institutions to address gaps in practical experience and provide more comprehensive support to help students make informed career choices and succeed in the auditing profession. This study catalyzes future research and development in auditing education, aiming for a harmonious blend of academic learning and professional aspiration which can minimize the gap that arises.

This study has limitations that need to be considered. The data used is not comprehensive because it only covers respondents from one institution, which may not represent the whole accounting students' perception. As a result, the conclusions drawn may not be generalizable to the entire population. Given the limitations of the current study, future research could greatly benefit from more comprehensive data from other universities and cultural backgrounds to enhance the generalizability of the study. Further studies could integrate qualitative methods to gain a deeper understanding of the contextual factors contributing to students' intention to pursue a career in auditing. Employing longitudinal studies and investigating the role of technological advancements in future research could further give valuable insights that influence career prospects and in shaping students' perceptions in choosing auditing as a career.

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Mitigating Negligence in Regulatory Enforcement: Analyzing the Communications and Multimedia Act 1998 and the Criminal Procedure Code

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Abstract: The Communications and Multimedia Act 1998 is pivotal in regulating Malaysia's communications and multimedia industry. While the Act gives Malaysian Communications and Multimedia Commission officers enforcement rights, it excludes the ability to make arrests, which is a privilege reserved for police officers under the Criminal Procedure Code. This paper examines the practical implications of this division of arrest authority, focusing on potential negligence in enforcement. The study examines the intersection of regulatory enforcement and the tort of negligence by reviewing relevant laws and case studies. The study found that incorporating accountability measures into the enforcement process can help maintain transparency and uphold the integrity of regulatory actions. Recommendations based on the findings suggest strategies for mitigating negligence in enforcement actions. Understanding this intersection is crucial for ensuring lawful and responsible law enforcement actions in the communications and multimedia industry.

Keywords: *Law enforcement, negligence, arrest of power, communication, multimedia*

1. Introduction

The Communications and Multimedia Act 1998 forms the backbone of Malaysia's communications and multimedia industry regulatory framework. The Act establishes a comprehensive regulatory framework to ensure compliance with licensing requirements and enforce industry standards. A significant feature of the Act is its delegation of enforcement powers to the Malaysian Communications and Multimedia Commission (MCMC) officers. The Criminal Procedure Code only grants the police the authority to make arrests, which places the MCMC in a limited position despite its significant role. This restriction poses significant challenges, mainly when evidence of wrongdoing exists and the MCMC cannot take immediate action.

Given the critical role of enforcement in maintaining industry standards and legal compliance, this paper examines the interplay between the regulatory powers outlined in the Communications and Multimedia Act 1998 and the arrest powers stipulated by the Criminal Procedure Code. Furthermore, it investigates instances of potential negligence during enforcement and the resulting legal implications. Through a comprehensive review of legislative texts and case law, this study examines the practical implications of this division of arrest authority, focusing on potential negligence in enforcement. Consequently, this paper contributes to the broader discourse on regulatory enforcement and legal responsibility within Malaysia's communications and multimedia industry. The scope of this study is confined to the examination of legislative texts and their practical enforcement implications.

2. Method

This study employs a qualitative research approach, namely a doctrinal analysis, to investigate the application of arrest powers under Malaysia's Criminal Procedure Code within the communications and multimedia industry. Doctrinal research involves an examination of existing legal frameworks and statutes. This study's primary focus is analyzing the Communications and Multimedia Act 1998 and the Criminal Procedure Code to understand the legal provisions governing arrest powers in Malaysia. A thorough review of legal textbooks and journal articles was carried out. Key legal sections relevant to the communications and multimedia industry were identified and interpreted. In addition, a comprehensive literature review was conducted to place the results within the framework of existing academic discussions. This review included scholarly articles, legal commentaries, and previous research on enforcement practices and regulatory frameworks in Malaysia.

3. Results and Discussion

Enforcement Mechanisms under The Communications And Multimedia Act 1998 and The Criminal Procedure Code

The enforcement mechanisms under the Communications and Multimedia Act 1998 and the Criminal Procedure Code are pivotal for maintaining regulatory compliance within Malaysia's communications and multimedia industry. While the Communications and Multimedia Act 1998 does not explicitly grant arrest powers to its authorized officers, it includes several sections for enforcement. Specifically, sections 245 and 246 outline the powers and responsibilities of officers in enforcing the Communications and Multimedia Act 1998.

Section 245 of the Communications and Multimedia Act 1998 provides for the appointment of authorized officers, typically from the Malaysian Communications and Multimedia Commission (MCMC), to enforce the Act. These officers are vested with the authority to investigate offenses under the Communications and Multimedia Act 1998, ensuring adherence to regulatory standards and compliance within the communications and multimedia industry. Section 246 of the Communications and Multimedia Act 1998 further elaborates on the investigative powers of these authorized officers. It grants them the authority to enter premises, inspect documents, and seize equipment related to offenses under the Communications and Multimedia Act 1998. These provisions are fundamental in enabling officers to conduct thorough investigations and gather necessary evidence to support enforcement actions. However, it's important to note that the powers conferred by sections 245 and 246 of the Communications and Multimedia Act 1998 have their limitations, as they stop short of granting arrest powers (Daud & Abd. Jalil, 2017; Hassan, Abdelhameed, & Ismail, 2018).

On the other hand, the Criminal Procedure Code outlines the overall authority granted to police officers in Malaysia to make arrests, stating the extent and circumstances in which this authority may be exercised. According to section 23 of the Criminal Procedure Code, police officers have the power to arrest individuals involved in a seizable offense without requiring a warrant. This authority extends to individuals against whom a reasonable complaint has been made, credible information has been received, or a reasonable suspicion exists of their involvement in such an offense. This provision allows for the immediate detention of individuals against whom credible complaints have been made or reasonable suspicions exist regarding their involvement in criminal activities (Shamsuddin, Rahamad, & Zanuddin, 2022). Furthermore, as per section 2(1) of the Criminal Procedure Code, seizable offenses are defined as those for which a police officer has the authority to arrest without a warrant. This definition is crucial as it guides police officers in identifying offenses that necessitate immediate action, contributing to the maintenance of public order and safety within society (Farrar, 2009; Shamsuddin, Rahamad, & Zanuddin, 2022).

The way enforcement powers are divided between the Communications and Multimedia Act 1998 and the Criminal Procedure Code shows how important collaboration is for effective regulatory oversight. While MCMC officers possess comprehensive investigative powers under the Act, the authority to make arrests is exclusively reserved for police officers as outlined in the Criminal Procedure Code. This division highlights the need for MCMC and police officers to work together to ensure that enforcement is both effective and legally sound, reinforcing the importance of cooperation in upholding standards within the communications and multimedia industry (Daud & Abd. Jalil, 2017; Shamsuddin, Rahamad, & Zanuddin, 2022). This collaboration, when executed within the legal framework, provides reassurance about the soundness of the enforcement process.

The Intersection of Enforcement Powers and The Tort of Negligence

The enforcement mechanisms under the Communications and Multimedia Act 1998 and the Criminal Procedure Code play a crucial role in ensuring regulatory compliance within Malaysia's communications and multimedia industry. The Communications and Multimedia Act 1998 provides the legal framework for regulating the communications and multimedia sector, while the Criminal Procedure Code outlines procedures for law enforcement actions, including arrest powers vested solely in police officers. This dynamic intersection between the Communications and Multimedia Act 1998 and the Criminal Procedure Code raises important considerations regarding the responsibilities and liabilities of both MCMC and police officers during enforcement actions.

The exclusive allocation of arrest powers to police officers under the Criminal Procedure Code introduces a crucial intersection with negligence law. In the context of enforcement actions within the communications and multimedia industry, this allocation prompts important considerations regarding the potential liabilities of MCMC officers involved in operations alongside police officers. Although MCMC officers do not possess arrest powers, their responsibilities in coordinating and supporting enforcement efforts necessitate a clear understanding of their roles and potential exposure to liability under negligence law. In Malaysia, establishing liability for negligence in enforcement actions under the Communications and Multimedia Act 1998 and the Criminal Procedure Code involves four key elements: duty of care, breach of duty, causation, and damages.

Duty of Care: Establishing a duty of care is a fundamental element in negligence law. MCMC officers and police officers owe this duty to the public and the entities they regulate. This duty mandates that MCMC officers perform thorough investigations, preserve evidence, and ensure regulation of the Communications and Multimedia Act 1998. Based on the evidence that MCMC officers have provided, police officers must make arrests legally and promptly. In the case of enforcement actions within the communications and multimedia industry, MCMC and police officers must act by the law and ensure regulatory compliance to safeguard the public interest (Hassan, Abdelhameed, & Ismail, 2018).

A landmark case in tort law, *Donoghue v Stevenson [1932] UKHL 100*, introduced the "neighbor principle", which is essential for understanding the duty of care in negligence law. This principle requires individuals to take reasonable care to avoid actions or omissions that could foreseeably cause harm to those who are closely and directly affected by their conduct. In regulatory enforcement, MCMC and police officers have a duty of care towards individuals and entities affected by their actions. For MCMC officers, this duty involves ensuring that their enforcement practices do not negligently harm businesses or individuals by failing to apply regulations fairly and effectively. For police officers, it entails taking reasonable care in their investigative and enforcement activities to prevent causing undue harm or injustice to individuals or the public.

The case of C*aparo Industries plc v Dickman [1990] UKHL 2* is highly relevant in this context, as it establishes the "Caparo test" for determining the existence of a duty of care. The test involves three criteria: foreseeability, proximity, and whether it is fair, just, and reasonable to impose a duty. To use the Caparo test on MCMC and police officers, one must carefully consider how their actions or inactions could cause harm, whether their duties are close enough to those who will be affected, and whether it is fair and reasonable to impose a duty of care in the regulatory and enforcement setting. This framework helps assess the legitimacy of negligence claims and ensures that the enforcement actions align with established legal principles and public expectations.

However, the case of *Hill v. Chief Constable of West Yorkshire [1988] AC 53* introduces a significant consideration regarding the limitations of police liability. In this case, the House of Lords ruled that the police did not have a responsibility to protect specific members of the public from criminal harm. The reasoning was that imposing such a duty could lead to defensive policing and divert resources from crime prevention. This case highlights the potential limitations and challenges in holding police officers liable for negligence in performing their duties and the need to balance accountability with operational effectiveness in policing.

Breach of Duty: A breach of duty happens when someone fails to meet the standard of care expected from a reasonably prudent person. In the context of enforcement actions, a breach could occur if MCMC officers fail to conduct a proper investigation or delay coordinating with police officers for an arrest. Similarly, if police officers ignore credible information from MCMC officers or delay action, they breach their duty of care. For instance, if MCMC officers identify an illegal broadcasting operation but do not secure the necessary evidence or fail to notify the police promptly, this negligence could lead to continued illegal activities. Similarly, if police officers delay arresting being notified by MCMC officers, the suspect might destroy evidence or continue their illegal operations, thus breaching their duty of care (Olivia Swee Leng , Rossanne , Raphael C. W, Khan, & Khan, 2020).

The case of *Roe v. Minister of Health (1954) 2 All ER 131* is relevant here. In this case, the Court of Appeal emphasized that the standard of care required in negligence cases is based on what was known or should have been known at the time of the alleged breach. This case highlights that a breach of duty cannot be judged by hindsight; instead, it must be assessed based on the information available at the time. If the harm could not have been reasonably anticipated or prevented given the circumstances, a breach of duty may not be

established. When applying the principles to regulatory enforcement, such as the responsibilities of MCMC and police officers, it is essential to recognize that negligence claims must consider what was known or knowable at the time of the enforcement action. For instance, if an enforcement action fails to address an issue due to factors that were not foreseeable or preventable with existing knowledge and resources, a breach of duty may not be established. This means that both MCMC and police officers are judged on their actions based on the standards and information available to them at the time. This perspective helps in understanding that liability for negligence requires a clear demonstration that the breach of duty was avoidable with reasonable foresight and adherence to the standard of care applicable at the time.

The case of *Michael v Chief Constable of South Wales Police* [2015] UKSC 2 revisited critical principles established in *Hill v Chief Constable of West Yorkshire* and explored the circumstances under which police might owe a duty of care, particularly regarding the assumption of responsibility. In *Michael*, the plaintiff, a victim of violent assault, had called the police to report a threat. Due to errors in call handling and prioritization, the police response was delayed, and the victim argued that this delay constituted negligence, contributing to the harm she suffered. The Supreme Court ruled that the police did not owe a duty of care to the victim regarding the delayed response. The court reaffirmed the principles from *Hill*, emphasizing that public authorities, including the police, generally do not owe a duty of care to individuals in the performance of their operational duties unless there is a special relationship or an explicit assumption of responsibility. In the context of regulatory enforcement by bodies like the MCMC and police officers, *Michael* highlights the importance of distinguishing between operational duties and the assumption of specific responsibilities. The ruling suggests that unless a regulatory or enforcement body explicitly undertakes a duty to protect or act in a particular manner, it may not be held liable for negligence. For example, if MCMC or police officers are involved in enforcement actions, their potential liability for negligence would depend on whether they have assumed a specific duty of care towards individuals. General operational failures or delays are unlikely to result in negligence claims unless there is clear evidence of an assumption of responsibility and a breach of that duty.

Causation: To demonstrate causation, one must show that the breach of duty directly caused harm. This element requires proving that the negligence of MCMC or police officers resulted in a specific adverse outcome. Establishing legal causation or proximate cause links the breach of duty to the actual harm suffered. For example, if MCMC officers fail to secure premises and gather evidence, allowing a suspect to destroy crucial evidence, or if police officers delay making an arrest, enabling the suspect to continue illegal activities, these actions can be seen as directly causing harm. Establishing the direct link between the officers' actions (or inactions) and the resultant damage is critical for proving causation (Manique, Ahmad Rajuhan, & Adnan, 2023).

In the case of *Barnett v. Chelsea & Kensington Hospital Management Committee (1969) 2 WLR 422*, the court held that despite the hospital's negligence in failing to diagnose a patient properly, the patient would have died regardless due to arsenic poisoning. This case demonstrates the importance of proving that the breach of duty directly caused the harm. In the case of MCMC and police officers, it must be shown that any negligence in their actions or inactions directly led to negative outcomes. For example, if an MCMC officer fails to investigate a clear regulatory breach, leading to continued non-compliance and harm to the public, it must be demonstrated that this failure was the direct cause of the harm experienced. Similarly, if a police officer fails to arrest an individual despite having the authority and evidence, and this inaction leads to further violations or harm, the causation must be established.

In *Kent v Griffiths [2000] 2 All ER 474*, the court found negligence due to a delayed response by the ambulance service, highlighting the importance of timely action. Similarly, timely action is crucial for MCMC and police officers. MCMC officers must act promptly to address regulatory violations and ensure compliance. Delays in investigating or enforcing regulations can exacerbate issues, leading to increased harm or non-compliance. Police officers, too, must act swiftly when dealing with criminal activities or arrest situations to prevent further offenses or harm.
Another relevant case is *Graham Barclay Oysters Pty Ltd v Ryan [2002] HCA 54*, which examines the liability of public authorities for negligence, and provides valuable insights into causation within regulatory enforcement contexts. The case emphasizes the importance of establishing a direct link between the breach of duty and the harm caused. For MCMC officers, this involves demonstrating how their failure to enforce regulations or

address violations directly leads to adverse outcomes. Similarly, for police officers, it means showing how delays or failures in carrying out their duties result in further harm or offenses. Causation must be proven to establish negligence, which requires a clear connection between the officers' actions or inactions and the resulting harm.

Damages: In negligence claims, the final element is the presence of actual damages resulting from the breach of duty. In the context of enforcement, damages can be both economic and non-economic. Economic damages include financial losses incurred by affected parties due to continued illegal activities or the costs associated with rectifying the breach. For instance, if MCMC and police officers' negligence allows a competitor to continue unfair trade practices, a company may suffer financial losses and reputational damage. Non-economic damages encompass reputational harm or a loss of public trust in the regulatory and enforcement framework. For example, failing to promptly address and rectify the regulatory breach can lead to significant economic and non-economic damages for compliant entities and the public. (Farrar, 2009).

A relevant case that illustrates the significance of damages in negligence claims is *Phelps v Hillingdon London Borough Council [2000] 3 WLR 776*. In this case, a child with special educational needs alleged that the local authority had failed to provide adequate special educational resources and support. The claim was brought against the local authority because their negligence in fulfilling their duty of care led to significant educational and personal harm to the plaintiff. The House of Lords held that the local authority was found liable for negligent educational advice which resulted in significant financial and reputational damages. The case reinforces the principle that damages in negligence claims must be assessed based on the actual harm suffered. The court's decision emphasized that damages are not just about financial loss but also the broader consequences of the breach on the plaintiff's quality of life and well-being. In the context of regulatory enforcement bodies like the MCMC or police officers, the principles from Phelps highlight the importance of ensuring that enforcement actions and regulatory decisions do not cause undue harm.

4. Mitigating Negligence in Enforcement Actions

Numerous strategies can be implemented to enhance the effectiveness and accountability of the Malaysian Communications and Multimedia Commission (MCMC) and police officers' enforcement efforts to address and mitigate negligence in enforcement actions, particularly when the power of arrest is vested in police officers. Drawing from relevant literature, several strategies can be considered to enhance the effectiveness and accountability of enforcement actions while minimizing the risks of negligence.

Firstly, establishing clear guidelines and protocols for enforcement procedures can help standardize practices and reduce the likelihood of negligence. This includes defining the roles and responsibilities of MCMC and police officers in enforcing the Act. (Wok & Mohamed, 2017). Providing clear directives on handling different situations and ensuring that all personnel are well-trained on these protocols can minimize the risk of negligent actions. Clear guidelines and protocols should be established to govern the conduct of police officers when enforcing the Act, ensuring that arrests and detentions are carried out lawfully and with proper justification. (Fairgrieve & Squires QC, 2019). Training programs that emphasize the proper application of the law, respect for human rights, and ethical conduct can help equip officers with the necessary knowledge and skills to perform their duties responsibly and effectively. (Claire & Richard, 2022).

Secondly, enhancing collaboration and coordination between the MCMC and law enforcement agencies, such as the police, is crucial for effective enforcement. Effective communication and collaboration among regulatory bodies are essential for streamlining enforcement efforts. (Peng Kee, Suet Nie, Korff, & Sascha , 2015). By promoting information sharing and mutual support, agencies can work together more efficiently to address violations of the Act and prevent oversights that may lead to negligence.

Thirdly, implementing regular training programs and capacity-building initiatives for MCMC and police officers can enhance their knowledge and skills in enforcing the Communications and Multimedia Act 1998. Training sessions on relevant laws, investigative techniques, digital evidence handling, and ethical conduct can equip enforcement personnel with the necessary tools to carry out their duties effectively (Abdul Rahman, Mohamad Fateh , Haq, Mohamed Yusoff, & Abd. Aziz, 2024). Ensuring that police officers are well-versed in the specifics

of the Act and proper arrest procedures is crucial. Comprehensive training programs can enhance officers' understanding of the Act's nuances, evidence preservation, and lawful arrest procedures, thereby reducing the likelihood of errors that could lead to negligence claims. This highlights the importance of police training in enhancing competencies and reducing misconduct (Wood, Tom , & Papachristos, 2020).

Lastly, promoting transparency and accountability in enforcement actions is essential to mitigate negligence. Adhering to rules and regulations is key to ensuring market integrity and preventing misconduct (Velu, Krishnaswamy, Yahya, & Kiumarsi, 2014). By maintaining detailed records of enforcement activities, conducting regular audits, and engaging in public reporting, the MCMC and police officers can demonstrate their commitment to upholding the law and building trust with the public. Officers must ensure that their actions comply with the legal standards outlined in the Communications and Multimedia Act 1998 and the Criminal Procedure Code. This adherence is crucial in preventing unlawful actions that could be seen as negligent. Strictly following legal standards and protocols helps significantly reduce instances of police misconduct (William, Eugene, & Peter, 2003).

5. Conclusion

The enforcement mechanisms established by the Communications and Multimedia Act 1998 (Act 588) and the Criminal Procedure Code (CPC) are crucial for maintaining regulatory compliance within Malaysia's communications and multimedia industry. Nevertheless, the rights of arrest powers to police officers raises concerns about potential negligence, particularly regarding the responsibilities and liabilities of both MCMC and police officers during enforcement actions. This study contributes to addressing these gaps by identifying areas where enforcement responsibilities are unclear, highlighting the risks associated with such ambiguity. To mitigate these risks, it is essential to implement several measures, including comprehensive training, strict adherence to legal standards, thorough investigations, the appropriate use of force, and respect for individual rights. The study's findings suggest that by adopting these measures, MCMC and police officers can improve both regulatory compliance and accountability. This will ensure that enforcement actions are lawful, justified, and respectful of individual rights. Such reforms not only enhance the effectiveness of the regulatory framework but also foster public trust in both regulatory and enforcement bodies.

In conclusion, this study has significant policy implications. It suggests an enhanced collaboration between MCMC and the police officers, and the introduction of accountability measures to ensure responsible enforcement actions. The development of clear guidelines on the division of arrest authority and comprehensive training programs should be developed to mitigate negligence risks. These strategies are essential for ensuring lawful and responsible regulatory actions, ultimately contributing to a more robust and trustworthy regulatory framework in Malaysia’s communications and multimedia industry.

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Impact of Technological Advancements on Tax Compliance Among Individuals in Southern West Malaysia

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Abstract: This conceptual research paper aims to examine the effects of technological innovation and tax management on the compliance of income tax among individual taxpayers in the southwest of Malaysia. In light of the e-tax and other related technologies, the paper discusses how tax administration and technologies, which are the independent variables, influence tax compliance which is the dependent variable. While digitalization has led to increases in efficiency and transparency, issues such as the digital divide, inadequate infrastructure, and data privacy concerns remain a barrier to widespread use, especially in rural regions. Based on the theoretical frameworks of the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT), this paper proposes a mixed-method research design for future empirical study. The qualitative component is through interviews with officers from the Inland Revenue Board of Malaysia (LHDN) while the quantitative is through administering questionnaires to individual taxpayers in some of the urban, suburban and rural regions of Southern West Malaysia. Thus, the objective of this research is to understand the challenges to the implementation of digital tax platforms and provide recommendations to improve compliance among taxpayers, which will help in the development of a fair and effective tax system.

Keywords: *Tax Compliance, Tax Administration, Technological Advancements, LHDN, Tax Payer*

1. Introduction

Technology has advanced at a very high rate and it has impacted many fields and among them is tax administration. Digitalization is becoming crucial for governments to improve efficiency, transparency and tax collection (Estevão, 2019). Technological advancements including e-filing, digital payments, and automated audits have enhanced taxpayer relations and minimized bureaucracy (Bellon et al., 2022). Malaysia has recorded great progress towards the adoption of digital technology in tax administration but there are still some hurdles, which include digital literacy, digital infrastructure, and digital inclusion.

As with many developing countries, there are problems with tax evasion and incomplete compliance by taxpayers in Malaysia. To solve these problems, the Malaysian government has embarked on various digital measures in tax administration through the Inland Revenue Board of Malaysia (LHDN) which included e-filing that was initiated in 2006 as seen in the study conducted by Nory, Yasin, Alsagoff, and Bidin (2022). Subsequently, the continued process of modernizing the tax system has sought to enhance its effectiveness, decrease its costs, and improve voluntary compliance. Computerized returns and payment services have made it easier for taxpayers to prepare and submit their returns more efficiently.

However, several challenges persist regarding Malaysia's quest for increased compliance with taxes (Hassan, Palil, Ramli, & Maelah, 2023). Another challenge is that there is a digital divide in terms of the implementation of tax systems across different population groups. Urban areas have higher levels of adoption due to better infrastructure than rural areas where technology access and digital literacy remain limited (Samsuddin, Mohamed, & Bolong, 2021). A 2020 report by the Malaysian Communications and Multimedia Commission (MCMC) showed that the rural area has a lower internet connection, which makes it challenging to implement digital tax systems.

However, there is still doubt about the protection of the information and the confidence of the taxpayers in the electronic processes. Most taxpayers are reluctant to input their financial details online because of concerns over security breaches and cyber-crimes. Phishing scams and fraudulent emails in the name of LHDN have also contributed to the decline of the public's trust in digital tax services as stated by Bernama (2024). To encourage wider usage and voluntary adherence, protecting the confidentiality and accuracy of taxpayers' data is crucial.

Worldwide, the advantages of digitalizing tax administration have been established beyond doubt. For instance, Rwanda and Brazil have realized an enhancement in the level of tax compliance and revenue mobilization via digital tax regimes. The Rwandan electronic tax system helped to drastically reduce cases of tax evasion and enhance revenue collection (Rotimi et al., 2020), while the Brazil digital tax filing system contributed to enhanced tax transparency and higher tax revenues (Bassey et al., 2022). The cases from other countries provide useful lessons for Malaysia as they show that even with technological innovations, tax collection can be improved.

MyDIGITAL, for instance, is a plan to transform Malaysia into a digitally-driven, high-income economy through the promotion of the use of advanced technologies in different sectors, including tax administration (Bernama, 2022). Even though MyDIGITAL does not define the adoption of emerging technologies in tax administration, it creates a window for Malaysia to consider the use of AI-driven models and blockchain technology as observed in other countries such as the U.S (Adelekan et al., 2024). Such technologies, as comparative studies by Adelekan et al., (2024) have shown, hold promise in increasing tax compliance, reducing fraud and increasing transparency. Risk assessment and audits can be done more efficiently through AI models while blockchain can offer a more secure and transparent record of transactions reducing tax fraud and increasing accountability.

However, the effectiveness of these initiatives depends on factors like digital literacy, infrastructure, and the confidence of the taxpayers in the digital environment. Some challenges may limit the engagement of rural areas and lower-income populations in the use of digital tax platforms. Furthermore, the increasing use of technology increases the risk of data privacy, cyber security, and misuse of taxpayers' information (O'Hare et al., 2022).
This paper seeks to discuss the impact of technology in the area of taxation focusing on e-filing and other tax services in Malaysia. Thus, the study offers insight into the positive and negative effects of technological development on the tax administration in Malaysia.

This research aims to achieve the following objectives:

- To investigate how technological advancements affect tax administration in terms of efficiency, accuracy, and transparency.
- To investigate the relationship between technology, tax administration, and tax compliance, focusing on how digital tools influence taxpayer behavior and compliance rates.

2. Literature Review

Tax compliance

Compliance with taxes is the ability of the people to obey the laws of taxation without any enforcement measures being taken against them. Roth et al. (1989) defined tax compliance as the accurate and timely reporting of tax obligations by the tax laws at the time of filing of returns. To be compliant, a taxpayer is supposed to report his or her income honestly, claim allowable expenses, and pay the right amount of taxes within the stipulated time (Saptono et al., 2023). This definition emphasizes the fact that compliance is done voluntarily and the need to report taxes on time and accurately.

Marti (2010) also stresses that tax compliance is the willingness to perform all legal requirements regarding taxes. Compliance by taxpayers is therefore a function of the knowledge of the laws and the availability of tools that help them to meet their tax obligations. This is important in the efficient operation of tax systems since non-compliance leads to low revenues for the government and thus affects the delivery of basic services.

The use of technology, especially electronic tax systems, has been a key factor in improving tax compliance. According to Shafique et al (2021), voluntary compliance which occurs when the taxpayers file their returns and make payments without being compelled by the tax authorities is the best. This self-implementation lowers the amount of paperwork for the tax agencies and enhances the effectiveness of the tax collection procedures.
Studies show that if the system is user-friendly and secure, then people are more likely to obey the rules voluntarily. Haryani et al. (2015) state that voluntary compliance is achieved through a system that is user-friendly, secure and trustworthy. Further, Rotimi et al. (2020) show that countries that have implemented electronic tax systems have experienced an increase in compliance rates. Such systems help in reducing the

burden of filing taxes and the effort that is needed by the taxpayers to fulfill their responsibilities hence encouraging timely compliance and participation.

However, there are still some issues that hinder the achievement of full tax compliance especially in developing nations. Saptono et al. (2023) note that the digital divide is a major challenge to compliance because many taxpayers in developing countries do not have the technological tools including internet connection and knowledge in tax compliance. This leads to variation in the compliance levels between the urban and the rural people making it difficult to achieve equal levels of compliance in the different areas.

Tax Administration

The term tax administration can be defined as the process through which government agencies oversee the administration and enforcement of tax laws and policies to achieve efficient collection of taxes and compliance with tax laws. Kooshkebaghi, Emamgholipour, and Dargahi (2022) have noted that for the government to obtain the required revenue to finance public services and maintain economic stability, there is a need for efficient tax administration. A good tax administration system assists in the promotion of a fair taxation system and minimizes tax evasion since every taxpayer is bound to pay the required tax as supported by the study done by Yu (2022).

In the past, the traditional tax administration systems were characterized using manual and paper-based methods, which led to many problems such as inefficiency and errors. Some of the challenges that tax authorities encountered included; delays in processing of returns, lack of supervision, and the problem of implementing the law, particularly in third-world countries (Mansfield, 1988). These systems were not accurate and, in most cases, led to low taxpayer satisfaction and confidence in tax authorities. As a result of these limitations, governments have looked for means to enhance and update their tax administration systems (Khozen and Setyowati, 2023).

As pointed out by Mbise and Baseka (2023), the adoption of digital tax administration systems is a shift in the field. Some of the changes include the use of e-filing and automated audits, which have helped the tax authorities to minimize their workloads. According to Maisiba and Atambo (2016), e-tax systems enhance efficiency as they enable taxpayers to file their returns and make payments online hence reducing errors and costs. They also give the tax authorities improved means of tracking compliance and dealing with non-compliance.

The Inland Revenue Board of Malaysia or LHDN has introduced several measures to enhance the tax administration system in the country. In 2006, the e-filing system was implemented which enabled taxpayers to file their tax returns through the Internet which made the process of collection of taxes more efficient (Santhanamery & Ramayah, 2012). However, there are still some issues that need to be addressed and some of them are as follows: Firstly, the digital infrastructure and the level of digital literacy are not as high in rural areas as they are in urban areas (Samsuddin, Mohamed, & Bolong, 2021). Digital literacy remains a major barrier to full compliance and participation in digital tax systems to this date.

However, there is always the issue of data security and privacy in the use of digital tax systems as pointed out by the study carried out by Aidonojie, Majekodunmi, Eregbuonye, and Ogbemudia (2024). Since more and more taxpayers use online tax services, it is important to protect personal financial information. Cahyadini, Putri, Safiranita, and Hidayat (2024) have pointed out that it is crucial to address these concerns to enhance the level of trust of taxpayers and to increase the usage of digital systems.

Technologies

Technologies, particularly in tax administration, are defined as digital applications or systems that enhance tax collection and compliance. Some of these technologies include e-filing systems, big data analytics, blockchain, and artificial intelligence (AI) which have revolutionized the traditional tax administration (Belahouaoui & Attak, 2024). According to Yakubu et al. (2022), these tools assist in making tax systems less complicated more efficient and effective in compliance and reducing the administrative burden.

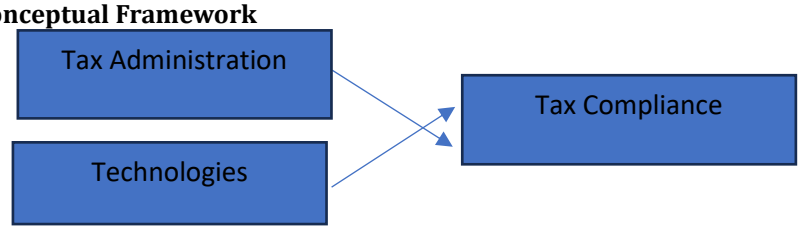
Another important technological advancement in the management of taxes is the electronic tax system also known as the e-tax system. From Wasao's (2014) perspective, an e-tax system enables taxpayers to complete transactions including filing of returns, payments, and applications for compliance certificates without the need to engage in paperwork and physical visits to tax offices. According to Maisiba and Atambo (2016), such systems not only facilitate the filing of taxes but also increase voluntary compliance by increasing access to tax services, increasing taxpayer satisfaction, and decreasing errors in tax returns.

Big data analytics and artificial intelligence (AI) have also been instrumental in enhancing the efficiency and effectiveness of tax administration. Nembe et al. (2024) note that through digital platforms, tax authorities can process large amounts of data in a short time and with high efficiency, thereby cutting costs and avoiding lengthy processing of taxes. AI-based systems assist in the early identification of errors in tax returns, while big data analytics improve fraud detection and increase scrutiny of taxpayers. Ihnatišinová (2021) notes that these technologies not only enhance the efficiency of tax administration but also enhance the transparency of tax administration, allowing the governments to track compliance with the tax laws and identify the potential cases of tax evasion.

However, the use of these technologies is not uniform, especially in the developing world, because of the digital divide. According to Samsuddin, Shaffril, Mohamed, and Bolong (2021), the availability of digital infrastructure is still a problem in rural areas where people have poor access to the internet and low digital literacy. Therefore, despite the success of e-tax systems in urban areas, the rural populace has numerous challenges that limit the implementation of digital tax solutions.

However, the most critical issues that affect the use of digital tax systems include data security and privacy. Since taxpayers use online platforms to submit personal and financial data, the threat of hacking and data leakage is real. Hesami, Jenkins, and Jenkins (2024) note that data security is paramount to the success of digital platforms since any data loss may deter taxpayers from using the platforms, thus undermining the success of digital tax systems.

Framework 1: Conceptual Framework



Theoretical Frameworks

Technology Acceptance Model (TAM)

The theoretical model that can be considered the most important one in the field of IT adoption is the Technology Acceptance Model (TAM) which was introduced by Davis in 1989. This model has been used extensively to explain the level of adoption of many digital systems such as the electronic tax systems in the tax administration. According to the TAM, two factors influence an individual's behavioral intention to use new technology; perceived ease of use and perceived usefulness.

Aljarrah, Elrehail, and Aababneh (2016) defined Perceived Ease of Use (PEOU) as the extent to which an individual thinks the use of a specific technology is going to be easy. In the context of tax administration, this applies to the extent to which users require assistance in using electronic tax systems. A user-friendly system helps promote the use and sustenance of compliance since the taxpayers are more willing to adhere to the set tasks like filing returns or making payments (Haruna et al., 2023). Haryani et al. (2015) also note that voluntary compliance is enhanced through the implementation of a user-friendly system due to simplification of tax processes.

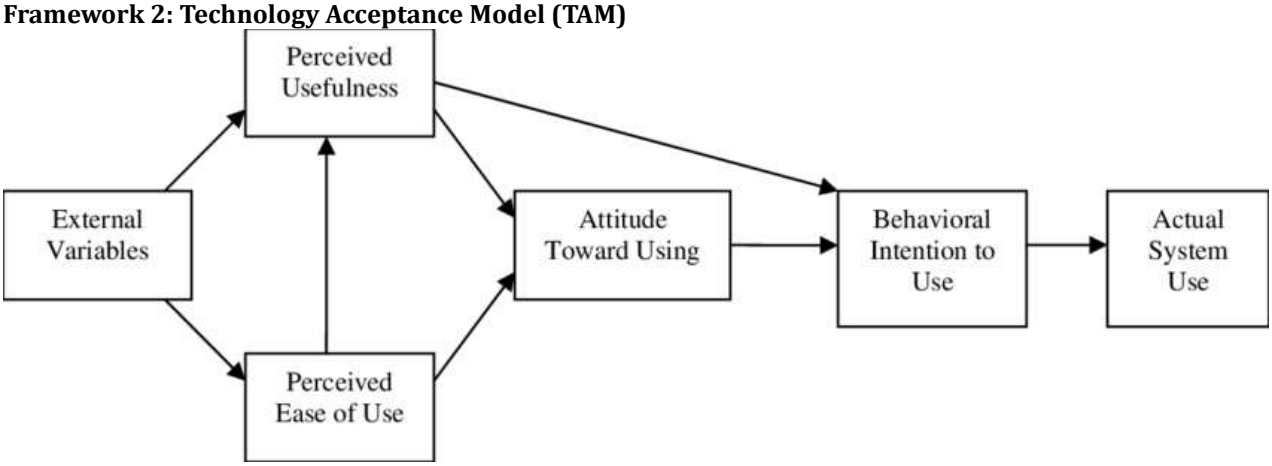
Perceived Usefulness (PU) is the extent to which an individual perceives a particular technology to enhance his/her performance or productivity (Bolodeoku et al., 2022). In tax administration, PU is concerned with the

perception that the adoption of an e-tax system makes the process of compliance with tax regulations easier and less time-consuming and error-prone. Research has demonstrated that the more taxpayers consider digital tax systems favorable for their tax control, the higher the chances that such systems will be adopted and sustained (Yakubu et al., 2022b).

The TAM model also includes another variable known as Behavioral Intention to Use (BI) which refers to the level of an individual's plan to use technology as perceived ease of use and perceived usefulness by Mailizar, Almanthari, and Maulina (2021). Therefore, in the context of tax administration, the perceived ease of use and perceived usefulness of e-tax systems will enhance the adoption rate by the target users hence a positive impact on the level of compliance. Rotimi et al., (2020b) have stated that their study showed that the high percentage of countries that have implemented electronic tax systems show signs of better compliance because the taxpayers believe in their ability to manage the system to their advantage.

As a result of this research, policymakers and tax authorities will be able to make improvements in the adoption of the digital tax system through the help of the TAM model. Removing barriers related to ease of use and stressing the utility of such systems can go a long way in improving the compliance level and usage of e-tax platforms among taxpayers.

Framework 2: Technology Acceptance Model (TAM)



Source: Mailizar, Almanthari, and Maulina (2021)

Unified Theory of Acceptance and Use of Technology (UTAUT)

The Unified Theory of Acceptance and Use of Technology (UTAUT) advanced by Venkatesh et al. (2003) is a framework that encompasses prior theoretical work in technology acceptance including the TAM. UTAUT is particularly useful for understanding user behavior and technology adoption by integrating four core constructs: Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Conditions (Ayaz & Yanartaş, 2020). These factors are crucial in analyzing the processes through which users in both the public and private sectors embrace change, as well as the implementation of new technologies including the electronic tax systems in the tax administration.

Performance expectancy is the extent to which an individual perceives that the use of a particular technology will improve his/her performance at the workplace (Abbad, 2021). In the context of tax administration, this construct is about the belief that adopting e-tax systems will enhance efficiency, accuracy and ease of compliance with tax obligations. The analysis by Yakubu et al. (2022) has revealed that the taxpayer's perception of the benefits of digital tax systems over traditional ones determines their willingness to embrace the change. This factor is especially important in developing countries, where manual processing of taxes is carried out slowly and inefficiently.

Effort Expectancy is defined as the perceived ability of the users to utilize the technology that is at their disposal Camilleri (2024). Within the context of tax administration, this is the extent to which the e-tax system is regarded as user-friendly by simple or non-complex taxpayers, with consideration given to factors such as the

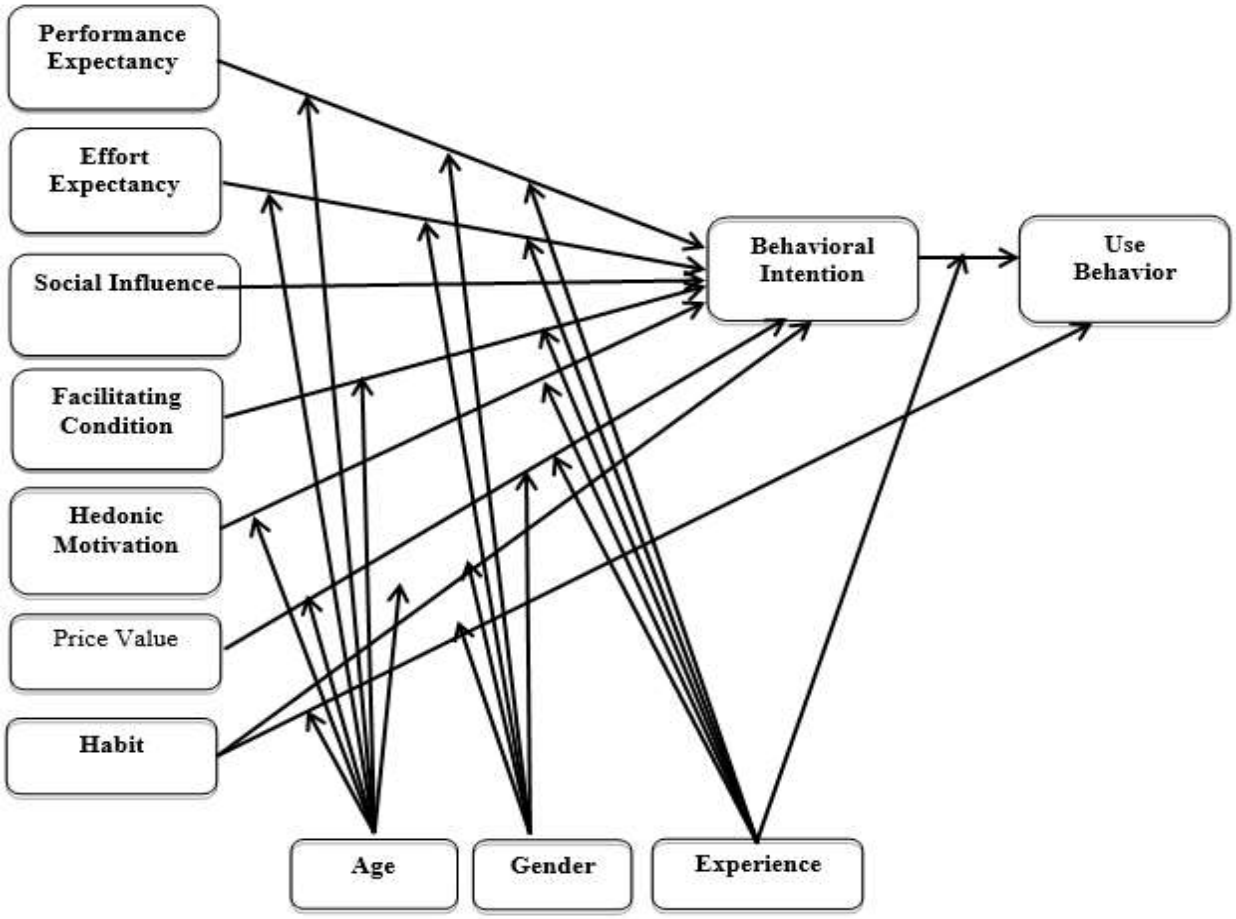
ease of navigating the online platform, filing returns and making payments online. Maisiba and Atambo (2016) suggest that voluntary compliance increases where systems are easily accessible, and the process of compliance is less complicated. This construct is especially relevant when seeking to enhance take-up among potentially less-technology-savvy or technologically disadvantaged populations.

Social Influence measures the degree to which consumers believe that the people in their social circle (friends, government agencies, or accountants) expect them to use the new technology. In the case of e-tax systems, social influence can be a factor that greatly impacts the way taxpayers behave especially whenever government or other organizations encourage their use. This suggests that the more the taxpayers believe that their fellow taxpayers or those they trust are using e-tax systems and reaping benefits from them, the more likely they are to embrace e-tax systems as well.

Finally, the Facilitating Conditions entail factors that enable the usage of the technology, including internet technology, gadgets, and tech support (Zuiderwijk et al., 2015). In the context of tax administration, this factor is important, especially in developing countries like Malaysia where there are gaps in internet connectivity between the urban and rural areas (Saptono et al., 2023). The feasibility of the digital tax systems and their implementation depends on internet connectivity and technical help.

The UTAUT model can therefore be used as a reference model in analyzing the factors that affect the adoption of e-tax systems. Thus, by considering both individual and contextual factors, including perceived usefulness and ease of use, perceived pressure, and facility, which are given in UTAUT, it is possible to determine how tax authorities can improve the design and implementation of digital tax systems.

Framework 3: Unified Theory of Acceptance and Use of Technology (UTAUT)



Source: Opoku, Pobee, and Okyireh (2020)

3. Methodology

This research work adopts both qualitative and quantitative research methodologies to examine the effects of technological developments on tax collection and adherence in the southern part of West Malaysia. The integration of qualitative and quantitative data is beneficial because it offers detailed information about the subject matter while at the same time offering generalized information about the same.

Qualitative Method

For the qualitative aspect of the study, the authors will have to conduct semi-structured interviews with the officers from the Inland Revenue Board of Malaysia (LHDN), particularly in the southern region of West Malaysia. The rationale for these interviews is to capture, from the tax administrators' point of view, the experiences and prospects of implementing e-tax systems. The interviews will be conducted with officers from urban, suburban and rural offices to capture the different implementation and usage of e-tax systems in the various regions.

The interviews will focus on issues like the level of efficiency of the digital tax platforms, reasons why there is no total adoption and measures used to ensure compliance from the taxpayers. These interviews will help the study obtain qualitative data that will enable it to determine specific challenges and opportunities in the various regions that may not be easily determined by quantitative methods.

Quantitative Method

For the quantitative part, a survey questionnaire will be administered to individual taxpayers in the southern region of West Malaysia including the urban, suburban and rural areas. The questionnaire will be developed to capture the taxpayers' perceptions and satisfaction with the e-tax system, their IT literacy and their compliance level. The survey will also include demographic variables that will help in comparing the technology adoption and compliance across different demographic groups including age, education level and income.

The survey will utilize a Likert scale to assess the perceptions of the taxpayers about the ease of use and usefulness of the e-tax system, the security of the system and the tax authorities. These findings will be used to determine the correlation between the openness of e-tax systems and the compliance behavior of taxpayers in the various regions.

Data Analysis

The data collected from the interviews will be analyzed using thematic analysis, where patterns of the difficulties and enablers of implementing digital tax systems will be determined. For the quantitative data, statistical analysis will be conducted using the Statistical Package for the Social Sciences (SPSS) to test hypotheses relating to variables like digital literacy, trust in the tax authorities, and taxpayer compliance. This research will use both qualitative and quantitative data to give a comprehensive view of the factors that affect the use of e-tax systems and taxpayers' compliance in the southern part of West Malaysia.

4. Conclusion

This conceptual paper has highlighted the possible challenges that technological developments may bring to the administration of taxes in Malaysia. Despite the theoretical analysis by prior scholars and established models such as the TAM and UTAUT, which predict that e-tax systems may create efficiency, transparency, and compliance, there are still barriers including digital literacy, infrastructure, and data security. Therefore, the framework provided in this paper will pave the way for further empirical investigations to establish how these technologies are adopted in different regions and demography within Malaysia. As for further research, it will be crucial to examine these assumptions and reveal concrete barriers to designing relevant strategies for the improvement of digital tax systems. Therefore, if these challenges are addressed, Malaysia will be in a position to improve its tax administration through the adoption of technology.

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Exploring Education Beyond the Classroom: Experiences From the Malaysia-Indonesia Student Exchange

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Abstract: Student outbound activities offer unique opportunities for experiential learning beyond the traditional classroom setting. These activities, ranging from international exchanges to community projects, are instrumental in developing students' key skills such as cultural awareness, adaptability, and global citizenship. They foster a firsthand approach to education, encouraging students to engage with diverse environments and challenges, thereby enhancing their academic and personal growth in real-world contexts. This study explores the perceptions and experiences of students participating in a four-day academic exchange outbound program between the Faculty of Accountancy at Universiti Teknologi MARA (UiTM), Malaysia, and the State Islamic University of North Sumatera Medan (UiNSU), Indonesia. Engaging 14 students with bachelor's in accountancy, five lecturers from Malaysia, and 40 students with 18 lecturers from Indonesia, the program encompassed community service, innovation projects, and cultural activities. These activities aimed to enhance cultural understanding, academic collaboration, and a platform for experiential learning, crucial in today's increasingly interconnected world. The study employs a mixed-method approach, utilizing questionnaires and interviews, to explore students' perceptions of short-term inter-country academic exchanges. The results of the independent t-test indicate no significant differences between the perception of respondents from UiTM and UiNSU in both categories assessed, community service and innovation competition. Additionally, outbound activities contribute to students' educational and personal development, fostering community service and encouraging cross-cultural interaction through innovation competition. The study highlights the potential of short-duration academic trips to educational contexts in Southeast Asia, underscoring their importance in enhancing the global readiness of university students.

Keywords: *Experiential learning, outbound, student development, short-term academic exchange*

1. Introduction

Education transcends the boundaries of traditional classroom settings, evolving into a dynamic and immersive experience that extends into various facets of life. In recent years, the concept of education beyond the classroom has gained significant traction, emphasizing the importance of experiential learning, cultural exchange, and real-world applications. This idea, supported by Yu (2023), stated that international student mobility, as an essential component of internationalization, has transformed the higher education landscape.

In this realm, global education is one of the important components of the educational experience that provides lasting influence and future benefits for learners. According to Fisher et al., (2022), global education is competence as a concept that informs how we encourage and train people to interact with and open themselves to other cultures and to build the relationship capital that makes global relationships possible. Students reap many benefits from exposure to different cultures such as improving students ability to communicate across cultural boundaries, as they learn to appreciate foreign linguistic nuances and idiomatic expressions (Chaika 2023). Graduates must be globally aware of and function effectively in a global environment. In other words, it is the process of weaving academic programs, institutions, and their quality into a global context (Kwon, 2013).

With this vision in line, the Faculty of Accountancy, Universiti Teknologi MARA, Malaysia (UiTM) has provided the opportunity for students to undergo an exchange program internationally with the State Islamic University of North Sumatera Medan, Indonesia (UiNSU). This exchange program focused on the growing relevance and influence of international academic exchange programs in the context of global education. These four-day programs offered students an opportunity to step outside their comfort zones and immerse themselves in the

cultural, social, and educational landscapes of a neighboring country. Through these experiences, students not only gained academic knowledge but also developed a deeper understanding of the diverse perspectives and shared histories between Malaysia and Indonesia. The program fosters cross-cultural communication, enhances global awareness, facilitates academic collaboration, and provides a platform for experiential learning through a variety of activities such as community service (visit to Panti Asuhan or independent orphanage center), innovation programs, sightseeing within the local historical and legendary places, interactive games within the students, and builds lasting connections among students, educators, and communities.

Academic and Professional Advantages

Exchange students benefit from exposure to different educational systems, learning methodologies, and innovation competition among both universities. Sharing sessions and teaching methodologies were accomplished in the four days programmed by the accounting lecturers from UiTM. This can lead to a more well-rounded academic experience and inspire new interests or career paths for their future.

Enhanced cross-cultural understanding

UiTM students have gained a deeper appreciation and understanding of the UiNSU country's culture, traditions, and societal norms. A visit to "Istana Maimon" gave a picture of the administration and cultural background of the community there. Besides that, the geographical factor influences their way of life and thinking when the visit to Lake Toba represents their community lifestyle. This exposure fosters respect and understanding of cultural diversity and helps students develop a global perspective.

Contribution to Community

UiTM lecturers and students serve as informal ambassadors of their home country, sharing their own cultures with the host community, which enriches the cultural diversity and understanding of the local population. In addition, many exchange programs encourage or require students to engage in community service or local activities, such as contributing to members of Panti Asuhan, which is an independent orphanage, while gaining valuable insights into local social issues, as what UiTM lecturers and students had accomplished.

These unique outputs demonstrated that the value of exchange programs extends far beyond traditional academic achievements. They play a crucial role in preparing students for the complexities of a globalized world, equipping them with the skills, perspectives, and networks necessary to succeed in a diverse and interconnected environment. As mentioned by Byun et al. (2022) in their study, students tended to participate in student exchange programs "to experience something new," "to grow personally," and "to learn about different cultures and meet new people.".

Whilst short-term outbound programs offer intensive and focused experiences, they also raise concerns about the depth and longevity of their influence compared to longer-term programs. According to Fisher et al. (2022), the extent to which short-term abroad programs provide the type of transformative learning necessary to enhance global learning outcomes and meet the needs of the evolving global economy remains underexplored in the research literature. To address this gap, this study is undertaken to assess the perceptions and experiences of students from both universities regarding a short academic outbound program, to improve future academic programs.

2. Literature Review

The increasingly global face of business and borderless transactions nowadays has highlighted the importance of providing students with a global perspective in their education (Evans et al., 2008). Thus, the outbound mobility student program has received an enormous response among university students in the last decade. This outbound mobility, known as internationalization, has been related to different fields worldwide, including cultural, societal, and economic (Suhaimi et al., 2023). Thus, the initiatives of sending undergraduates to be involved in an outbound activity and physically traveling to another country have been conducted with many objectives, such as exposing students to the perspectives of the international environment, developing soft skills, increasing their motivations, and improving their knowledge and networks.

Only a few studies have been done to understand the correlation between outbound student mobility and its role in shaping students' employability (Lee and Tan, 1984). However, a study by King and Ruiz-Gelices (2003) found that graduates who had spent time abroad were more successful in getting a job related to their type of degree and were less likely to have experienced a period of unemployment as compared to those who did not go abroad. It was supported by Van Hoof and Verbeeten (2005), who believe that an international experience will enhance students' positions in the job market and that their future employers will see it as an advantage. Thus, in taking advantage of the importance of outbound students' mobility in achieving the development of an "international perspective" or "global outlook," many universities have increasingly increased their activities of sending undergraduates to participate in an international study experience during their studies (Olsen, 2013). Bretag and Van Der Veen (2015), their studies, confirmed that students involved in short-term international study tours showed motivation in completing their coursework quickly, experiencing cultural immersion, expanding their networks, developing their soft skills, and setting themselves apart from other graduates in the future. In addition, research shows that an outbound program enhances networking and collaboration between students which can lead to facilitating exchange and co-creation, enhancing the entrepreneurial ecosystem for students (Martín, 2022).

As outbound programs vary in terms of the duration, objectives, and time spent for the program, there were issues related to the efficiency of the programs with the duration and objectives. The longer the duration of the programs, the more cost needs to be borne by the participants, while the more ambitious the program objectives, the more limitations and challenges there are to handling all the activities in a short-term period. Therefore, it is necessary and important, in the limited time resources, to balance the ideal programs that can meet the educational objectives. Developing programs that are perceived as useful and valuable will enhance the success of the program for the students (Evans et. al., 2008). However, the issue of whether a short study tour can benefit the students and faculty is still questionable. As Praetzel and Curcio (1996, p. 175) concluded, "*Students in a professional program must be cognizant of international issues and possess the sensitivity to work in a diverse environment characterized by an alternative set of cultural, historical, political, social, religious, and economic issues*".

The concept of internationalizing the curriculum at higher learning institutions can take several forms, such as overseas internships, exchange programs, faculty development, joint ventures, international outbound programs, or study abroad (Alber-Miller et al., 1999). Their study found that only 35.2 percent of the students would take an international course if it were required. The students believed that studying abroad would benefit them, is a good experience, and they prefer a short program to a longer one. Another study by Toncar and Reid (2004), who explored business students' preferences, also found that students preferred a short, several-week-long program under the supervision of the faculty rather than a long-term program. Besides that, Suhaimi et al. (2023) in their study of analyzing the short-term program (a one-month outbound mobility of students) to countries outside Malaysia found that the outbound student mobility program forces students to interact as their survival method in a foreign country on which they get the experience culture by just communicating with the locals. It will also improve their communication skills and create employment opportunities.

Enhancing intercultural learning

The efficacy of short-term academic exchange programs in enhancing intercultural learning and collaboration has been a subject of considerable interest in educational research. Smith and Khawaja (2011) emphasize that even brief international experiences can significantly impact participants' cultural sensitivity and understanding. Another study by Bretag and Van Der Veen (2015) found evidence that students generally expressed increased confidence about their knowledge of the new culture, such as basic language skills and understanding of the host culture. They confirmed that the main benefits of the study tour centered on increased confidence from "pushing the boundaries", enhanced intercultural understanding, improved interpersonal skills, and the perception towards career goals.

Such programs, according to Spencer-Oatey and Dauber (2019), are particularly effective in developing communication skills and fostering cross-cultural teamwork. In understanding other cultures, it is difficult to gain new perspectives if students never left their country (Sachau et al., 2010). Sachau et al. (2010) believed that students had greater knowledge of other cultures, and the overseas experience (that is, a short-term study

tour) combined with a cultural point (e.g., a "buddy" in the host country) may help them to increase their confidence levels and consider participating in a longer mobility program. When the students are involved with the outbound activities together with friends in the host country, they can guide students to empathize with the thoughts, feelings, and behaviors of the host culture. Furthermore, it will establish initial self-awareness and build the essential foundation for intercultural learning (Searle & Ward, 1990).

Duration of outbound program

It was argued that a tour with a duration of only a few weeks (short-term outbound program) cannot give the student as much cultural exposure as a semester-long tour (Scharoun, 2016). This issue also had been highlighted by Donnelly-Smith (2009), who pointed out that the duration of these programs can influence the depth of cultural and educational experiences, suggesting a potential trade-off between program length and learning intensity. As has been argued by Pitman, et al. (2010), who perceive that short-term study tours are little more than tourism dressed up as education. Some scholars also challenged the widely asserted relationship between outbound experience and intercultural competence, regardless of the time spent (Salisbury et al., 2013). However, based on a study by Anderson et al. (2006) found the positive effect of the outbound study tour, that even on a short-term program, students improved their ability to accept and adapt to cultural differences. It was supported by Sachau et al. (2010), who found that even if the short-term overseas study tour does not allow enough time for students to become fully immersed in a culture, at least it can begin the process of self-reflection and trigger a lasting curiosity. Suhaimi et al. (2023) also found that students agree that even for a short-term outbound mobility program (e.g., a one-month program), this program gave benefits in terms of gaining new skills, intercommunication, adapting to the new environment, and enhancing graduate readiness in the labor market. Previous studies by Lipsett (2008) showed that graduates who have studied abroad, even for a short period, are more culturally adaptable, aware, and able to work more effectively in multicultural work environments than students without this experience. Thus, it is believed that a short-term experience from outbound activities to other countries is a viable option in enabling students to improve their soft skills, preparing them to adapt to a new environment, culture, and language, and at the same time exposing them to the importance of corporate social responsibility to society.

While previous studies have extensively explored the outcomes of outbound mobility programs, particularly in terms of employability, intercultural competence, and skill development, there is still a need to focus more specifically on understanding students' perceptions of these experiences, especially in short-term programs. Outbound programs can be costly. Hence, students' perceptions are primarily influenced by family, peers, and faculty, highlighting the importance of a supportive network. This study aims to fill this gap by providing insights into how students perceive the value and impact of short-term inter-country academic exchanges on their personal and professional growth. By focusing on the students' perspectives, this research will contribute to a clearer understanding of how these programs influence their learning experiences and intercultural competence, offering valuable implications for the design and implementation of future academic exchange initiatives.

3. Methodology

This study employed a mixed-method approach to assess students' perceptions of the academic outbound program between UiTM and UiNSU. A total of 30 students, comprising 13 from UiTM Malacca and 17 from UiNSU, responded to the questionnaire. Quantitative data were collected through structured questionnaires focusing on participants' satisfaction and learning outcomes across different program activities. The questionnaire was divided into five sections: Section A covered demographics; Sections B, C, and D focused on students' views regarding their learning experiences through various activities conducted during the outbound program; and Section E centered on students' overall experience participating in the academic outbound program. Qualitative data were gathered through semi-structured interviews with six students, three from each university. These interviews provided an in-depth exploration of participants' experiences and perceptions.

As for analysis, a descriptive analysis is performed as well as a t-test to determine whether there is any difference in perception related to community service and innovation programs held between the students of UiTM and UiNSU. The data was run using the Excel 365 version.

4. Findings and Discussion

A total of 54 students from both universities participated in the outbound activities, with 14 from UiTM Malacca and 40 from UiNSU. Since the program took place at UiNSU, it is understandable that there were more participants from UiNSU. However, only 30 participants from 54 participants of the program, responded to the questionnaire. The distribution of the participants is shown in the table.

Table 1: Demographic of respondents

	UiTM Malacca	UiNSU	Total
Gender			
Male	5	7	12
Female	8	10	18
Age			
• 20 – 21 years old	3	14	17
• 22 – 25 years old	10	3	13
Current year of study			
First year	1	1	2
Second year	1	4	5
Third year	8	6	14
Final year	3	6	9

From the above table, only 30 out of 54 participants (55.5%) have provided feedback on the program. The number of respondents is acceptable for analysis purposes (Yin, 2017). In terms of gender, the majority of respondents are female (18, 60%), aged in the range of 20 to 21 years old (17, 56.67%), and currently in their third year of study (14, 46.67%). Comparatively, both UiTM and UiNSU have slightly more female students participating in the program as compared to male students. However, the majority of UiNSU students (14/17, 82.35%) fall under the age of 20 to 21 years old while the majority of UiTM students (10/13, 76.92%). In terms of year of study, the majority of students from both universities are in their third and fourth year of study, towards the end of their degree program.

Table 2: Summary of Students' Feedback on the Program

	Strongly disagree (no/%)	Disagree (no, %)	Satisfactory (no, %)	Agree (no, %)	Strongly agree(no, %)
Community service (n=30)					
The community service activities were well-organized	Nil	1 (3.33)	4 (13.33)	13 (43.33)	12 (40)
I felt that my participation in the community service was meaningful	Nil	1 (3.33)	4 (13.33)	9 (30)	16 (53.33)
The community service activities increased my understanding of local issues in another country.	Nil	1 (3.33)	3 (9.99)	11 (36.67)	15 (50)
I am satisfied with my involvement in the community service activities.	Nil	1 (3.33)	2 (6.66)	11 (36.67)	16 (53.33)
Innovation competition program (n=30)					
The innovation competition was a valuable learning experience	Nil	1 (3.33)	4 (13.33)	11 (36.67)	14 (46.67)
The competition encouraged creative thinking and problem-solving	Nil	1 (3.33)	4 (13.33)	11 (36.67)	14 (46.67)

I felt a sense of achievement participating in the innovation competition.	Nil	1 (3.33)	4 (13.33)	12 (40)	13 (43.33)
The competition fostered a spirit of collaboration between the two universities.	Nil	1 (3.33)	4 (13.33)	13 (43.33)	12 (40)

Table 2 summarizes the views of the respondents about the activities of community service, and innovation programs.

Community Service

The community service activities were generally well-received by the participants. A significant majority (83.33%) agreed or strongly agreed that the activities were well-organized, with only a small percentage (3.33%) expressing dissatisfaction. Furthermore, 83.33% of the students felt that their participation in community service was meaningful, reinforcing the value of these activities. Additionally, the majority of participants (86.67%) agreed that the community service activities increased their understanding of local issues in another country. A majority (90%) are also very satisfied with their involvement in community service activities. These results suggest that the community service component of the program was effective in achieving its objectives and was perceived positively by the students.

Innovation Competition

The students also reacted positively to the innovation competition. Most participants (83.34%) agreed or strongly agreed that the competition was a valuable learning experience, with only 3.33% disagreeing and 13.33% finding it satisfactory. Similarly, 83.34% of students felt that the competition encouraged creative thinking and problem-solving. A sense of achievement was reported by 83.33% of the participants, indicating that the competition was both challenging and rewarding. Additionally, 83.33% of students agreed or strongly agreed that the competition fostered a spirit of collaboration between the two universities, highlighting the program's success in promoting teamwork and cross-cultural interaction.

Overall, both the community service and innovation competition programs were successful in providing meaningful experiences, enhancing learning outcomes, and fostering collaboration among students from the two universities.

Analysis of the perception of university students of the programs

An analysis was performed to determine whether there is any significant difference between the perception of students from UiTM and UiNSU on their experiences in the programs organized between the students. The result is depicted in the table below.

Table 3: Independent t-test between Respondents from UiTM and UiNSU

Respondents	p-value	Results
Experience in community service	0.115	p-value is greater than 0.05, not significant
Experience in the Innovation competition program	0.202	p-value is greater than 0.05, not significant

The t-test analysis shows that there is no statistically significant difference between the perception of students from UiTM and UINSU on their experience in community service and innovation competitions. Hence, in both cases, the p-values suggest that the experiences of the respondents in these programs are statistically similar.

Feedback from the interview

Table 4: Demographic of the interviewees

Respondents	UiTM Malacca	UiNSU	Total
Gender			
Male	1	1	2
Female	2	2	4
	3	3	6

The interviews with three students from Indonesia and Malaysia provided insightful perspectives on their participation in outbound activities, their experiences, and suggestions for future programs, enriched with specific quotes from the participants.

Indonesian respondents (R1 and R3) highlighted their engagement in the Innovation competition. R2 added depth to this, mentioning involvement in innovation and other activities from an early stage of the program. The Malaysian respondents collectively emphasized their participation in an international program. R1 stated it was driven by an interest in lamenting,
"The university in Indonesia intrigued me to learn about their culture and learning environment"

Both groups described the outbound experience positively. Indonesian students (R1, R2, R3) shared enriching experiences, finding the program as R1 mentioned,
"It is interesting, I learned a new language"
R2 also described the experience as.
"Extremely interesting"
The Malaysian students (R1, R2, R3) reflected on deeper insights as R2 shared a moment of cultural respect,
"As a student, learning how to deal with international parties requires respect and understanding how they conduct events"
For future activities, Indonesian respondents (R1, R2, R3) suggested ideas like
"I hope there will be a return visit there" and,
"A broader program with more advanced features"
On the other hand, the Malaysian participants (R1, R2, R3) proposed continuing such programs but recommended targeting more advanced countries for a richer learning experience, with R3 suggesting.
"Countries that are more advanced than us so that we learn more"

This interview highlights a shared appreciation for cultural exchange and learning across borders, with each group bringing unique perspectives based on their experiences. The Indonesian students focused on immediate program benefits like language acquisition and friendship, while Malaysian students viewed the program through a broader lens, considering its impact on future careers and the importance of international exposure. Both groups agree on the need to expand and deepen future outbound programs, albeit with different approaches to achieving these goals.

Past literature highlights the importance of community service activities in outbound programs for fostering intercultural competence and a practical understanding of global issues. Studies by Bretag and Van Der Veen (2015) and Spencer-Oatey and Dauber (2019) highlight how these activities enhance students' appreciation of cultural and societal contexts besides contributing to their personal and professional development. This aligns with the findings from both the questionnaire and interviews conducted with students from UiTM Malacca and UINSU. The questionnaire's results revealed that a majority of students (83.33%) agreed that the community service activities were well-organized and meaningful, with many also reporting an increased understanding of local issues in the host country. The interviews further enriched these insights, with Indonesian students discussing how their participation in community service helped them learn a new language. Malaysian students emphasized the importance of respect and cultural understanding in international contexts, reinforcing the value of these activities in promoting global citizenship.

In addition to community service, the students have also embraced the innovation competition enthusiastically. The questionnaire results indicated that the majority of participants (83.34%) found the competition to be a valuable learning experience, encouraging creative thinking and problem-solving. This sentiment was reinforced in the interviews, where students from both universities expressed a sense of achievement and highlighted the competition's role in fostering collaboration. The participants' suggestions for future programs, such as including more advanced activities and targeting more developed countries, reflect their recognition of the program's benefits and their desire for further enrichment.

Overall, the combined results from the questionnaire and interviews underscore the significant role that well-designed community service and innovation activities play in academic exchange programs. These components are instrumental in creating meaningful, transformative learning experiences that contribute to students' intercultural competence, personal growth, and professional readiness. The positive feedback and constructive suggestions from the students provide valuable insights for enhancing future outbound programs, ensuring they continue to meet the evolving needs of learners in a globalized world.

5. Conclusion

Based on the findings, this study concludes that short-term outbound academic exchange programs hold significant value in fostering educational and personal development among university students. Both countries can build stronger, more adaptable education systems. The program between the Faculty of Accountancy, MARA University of Technology, Malaysia, and State Islamic University of North Sumatera Medan, Indonesia, demonstrated that such exchanges enhance cultural understanding, adaptability, and global citizenship.

Engaging in community service, innovation projects, and cultural activities provided students with firsthand experiences that bridged theoretical knowledge and practical application. In addition, students reported gaining deeper insights into different educational systems and cultural practices, which enriched their academic perspectives and people skills. The interaction with peers and lecturers from another country also helped to cultivate respect for diversity and encouraged collaborative learning. The short-duration programs can significantly boost intercultural competence and global readiness, preparing students for the complexities of the modern world. The study underscores the importance of integrating such outbound activities into the academic curriculum to produce well-rounded graduates equipped with the skills necessary to thrive in an interconnected global environment. The success of such initiatives lies in sustained government support, institutional collaboration, and inclusive policies that ensure all students can benefit from these valuable cross-border experiences. The policy implications derived from the Malaysian-Indonesian exchange experience suggest that both nations can significantly benefit from enhancing their collaboration in education beyond the classroom. By focusing on experiential learning, digital engagement, teacher development, and equitable access, these countries can create more dynamic and globally aware education systems that are prepared to meet the challenges of the 21st century. To sum up, short-term academic exchanges are invaluable in providing a holistic education, promoting academic excellence, fostering essential life skills, and making students more competitive and adaptable in the global workforce.

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Accounting Internship: Unlocking Skills and Perceived Value of Future Career

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Abstract: In today's competitive job market, internships have become an integral component of higher education, particularly in professional fields such as accounting. It provides experiential learning opportunities bridging between academic theories and practical applications to allow students to gain firsthand experience and insight into their chosen careers. Recognizing the importance of internships in equipping students with the competencies needed, the study aims to explore the internship experience of accounting students relating to skills development and career prospects. The study further examines the impact of internship placement institutions on skills development, namely technical, functional, and soft skills, as well as future career prospects and incentives. Data were gathered using questionnaires distributed to accounting students who completed six-month internships across various institutions. The findings suggest that while accounting and audit firms enhance technical skills, other aspects of professional growth are not heavily dependent on the type of internship institution. This study offers valuable insights for policymakers, academic institutions, employers, and students, emphasizing the need for strategic internship placements to optimize accounting professional skills and better prepare students for the demands of the accounting profession.

Keywords: *Internship, Accounting, Skills, Career prospects, Institution placement*

1. Introduction

The accounting profession plays a vital role across the dynamic business landscape, delivering not only complex financial reporting and decision-making but also being contemporarily involved in sustainable business growth. The Competency Framework for Finance Function in Public Interest Entities reported that the role of the accountant has evolved beyond the domain of bookkeeping (The Malaysian Institute of Accountants, 2019). For a sustainable future, the role of the accountant evolved into a more integrated function that includes providing sustainable business growth, cost-effectively enhancing business processes and maximizing risk management and any regulatory changes (PriceWaterhouseCooper, 2023). In addition, Industry 4.0's fast-paced digital era poses a serious challenge to the labor market. As automation is replacing labor-intensive tasks with machines and technology, today's accountant is required to possess significant competency and due care to respond in a more imperative sustainable role. It is crucial to develop an appropriate plan when the Malaysian Institute of Accountants (MIA) Sustainability Blueprint 2024 reported the key challenge facing accountants today is a lack of knowledge and competency (The Malaysian Institute of Accountants, 2024). Furthermore, among the sustainability agenda stated in the report is to shape the future generation of accountants where there is an urgent need to update the tertiary accounting curriculum to include sustainability-related courses to fulfill the demand for future accountants.

In the Malaysian context, the Ministry of Higher Education (2010) describes internship programs, often known as "industrial training" or "practical," as a platform to provide graduates with appropriate information, experience, and soft skills before entering the real working landscape. Thus, the accounting internship program is now considered a solid foundation for building relevant professional skills as well as opening ways to various bright career prospects. Undergraduates benefit from the internship program since it sharpens their analytical and soft abilities including communication, teamwork, and problem-solving (Musa et al., 2023; Pauzi et al., 2022; Ng, Lee & Teoh, 2021; Bender, 2020; Maelah et al., 2014; and Warinda, 2013). Internships also provide an opportunity for students to develop these skills, which are increasingly valued in the industry. Furthermore, the design of internship programs is critical for improving students' improvisation capacity, allowing them to effectively handle challenging situations (Ling, 2020).

Internships provide students with the opportunity to acquire skills that are essential for them to prepare for the professional realm. The accounting profession, characterized by its technical complexity and evolving regulatory environment, requires a deep understanding of financial principles, analytical skills, and ethical

judgment. Many accounting students struggle with soft skills like communication and adaptability. These skills are not typically taught in traditional accounting courses but are crucial for professional success. During internships, students may not have sufficient opportunities to engage in tasks or assignments where these skills could be developed. Furthermore, accounting students are perceived as lacking the necessary preparation from their academic institutions to effectively navigate the demands of the Industry 4.0 labor market (Purnamasari et al., 2019). While accounting students face different challenges during internships, the extent to which placement in specialized firms contributes to skill acquisition remains underexplored. The study aims to fill this gap by investigating how different types of skills are influenced by institutional placement, and by identifying areas where current internship models may fall short in providing comprehensive skill development. Furthermore, despite the growing emphasis on this experiential learning in accounting education, there remains a significant gap in understanding how internship experiences specifically contribute to the development of essential skills and future career prospects for undergraduate accounting students.

Prior empirical studies have mostly ignored the perspectives and experiences on how accounting internships influence students' perceived skill growth and career prospects from the trainees' perspectives. Therefore, the objective of this study is to explore the internship experience of accounting students relating to skills development and career prospects; and further examine whether skills development and career prospects are significantly affected by the institution of placement. By addressing these questions, the research seeks to shed light on important aspects of accounting internship efficacy and offer suggestions for enhancing these opportunities to better meet the demands of students' professional development and career goals. The subsequent sections of the paper are organized in the following manner. Following this, the literature review is discussed. The following parts will provide an explanation of the methodology used, the findings obtained, and a discussion of the results. The report finishes by summarizing the research findings, discussing the limits of the current study, and proposing recommendations for further research.

2. Literature Review

Internship in Accounting Profession

Internships have become a component of higher education, acting as a connection between academic learning and practical application in a professional setting. Internships are regarded as short periods of hands-on work experience that students gain in a certain area of interest (Saputra & Sukirno, 2020). It provides graduate students with a distinct chance to acquire hands-on experience, cultivate professional abilities, improve their job prospects and also allows individuals to acquire knowledge and skills. Tišma et al., (2021), Madurapperuma (2014) and Mihail (2006) argued that an internship will provide a realistic assessment of the academic knowledge that has been obtained. Morris & Blaney (2016) found that internships are necessary to cultivate highly skilled graduates who can effectively apply their knowledge in professional settings. This literature review analyses the existing research on internships among graduating students, with a specific emphasis on the advantages and influence on career results.

Prior studies have identified numerous advantages derived from internships. Among the advantages are gaining practical experience, skill enhancement, establishing networking for professional relationships, exploring career interests, and improvement in job prospects.

Practical Experience

Internships provide students with the opportunity to put their theoretical knowledge into practice by applying the theories, concepts, and abilities they have learned in the classroom to real-world circumstances (Madurapperuma, 2014). The actual application of knowledge often diverges from academic exercises, offering a more profound comprehension of the area. It also equipped students with firsthand experience of the daily activities within their selected business, (Akhtar & Parkar, 2024). This understanding assists individuals in comprehending the operational setting, organizational ethos, and intricacies of the sector, which cannot be entirely apprehended solely through academic textbooks. Certain students have been required to operate under less supervision which exposed them to real working situations, particularly within the COVID-19 pandemic when a majority of individuals are working remotely. However, a study by Ahmad (2020) revealed that the majority of intern students are not inclined towards working from home due to several drawbacks, such as being occasionally overwhelmed by additional responsibilities, experiencing a disparity in financial

remuneration, and lacking access to necessary facilities. Students should familiarize themselves with this situation because real-world employment will require less supervision, particularly in the accounting profession. Overall, students who participate in internship programs evaluate every aspect of the work preparation construct positively. They were aware of the expectations employers had for them in the workplace while successfully utilizing fundamental academic capabilities, advanced cognitive skills, and specialized professional skills demanded by employers in the workplace,(Kapareliotis, Voutsina, & Patsiotis, 2019).

Enhancing Skills

Numerous internships offer practical experience in utilizing industry-specific tools, technologies, and procedures. For instance, a computer science student may engage with authentic codebases, but an accounting student may conduct a full audit process and preparation of full financial reports. Several accounting firms offer standardized internship programs to assist students in identifying the most ideal area of accounting for their interests and skills, (Sawani et al., 2016). Internships facilitate the development of crucial soft skills, such as effective communication (Ng, Lee & Teoh,2021; Bender, 2020; Maelah et al., 2014; and Warinda, 2013), collaborative teamwork (Luk & Chan, 2022; Lim et al.,20162), proficient problem-solving (Schulz, 2008), and intrapersonal skills which include self-confidence and open-mindedness among students (Di Pietro, 2022). These skills are frequently challenging to impart in a traditional classroom setting, although they are crucial for achieving success in one's job. Sawani et al., (2016) indicated that the majority of employers expressed satisfaction with the trainee's performance in terms of job competence, responsibility, and adherence to work regulations. It can only be observed if the student possesses adequate skills to perform their duties during the internship.

Networking for professional purposes

The link between academic studies and industry requirements is crucial in professional degrees such as accounting. Internships provide students with the opportunity to cultivate connections with industry experts in their respective fields and increase employability potential, (Ramani & McHugh, 2024). Students perceive their internships as advantageous for broadening their professional networks and enabling their contributions to projects that would benefit others, (Minnes, Serslev & Padilla, 2021). These contacts can result in mentorship prospects, employment recommendations, or even potential job offers in the future. Engaging in networking activities within a company also provides students with a valuable understanding of the patterns of relationships and communication that exist in a professional setting, enhancing their ability to manage their future jobs with greater effectiveness (Chan et al., 2020).

Exploring career interest

Internships offer students a firsthand experience of the work environment and responsibilities associated with a specific position or industry. This encounter has the potential to either strengthen their professional decision or make them aware that they might choose to pursue an alternative path. Students choose internships to acquire knowledge about job functions or sectors to determine their potential suitability for future careers, (Rothman & Sisman, 2016). Through practical experience, students can more effectively recognize their areas of proficiency and areas that require development. Self-awareness is essential for graduates to discover their full potential and make well-informed job choices, (O'Riordan & Morrison, 2017). At this stage, they can assess their strengths and weaknesses to better prepare themselves for actual employment. However, the adverse experiences of interns can impact their choice of career where they might choose a different career path, (Husain & Mahfoodh, 2021; Venkatraman, Joshi,& Parasnis,2019; Datta, Biswakarma & Nayak, 2013).

Improved job prospects

Including internship experience on a resume showcases to employers that the student possesses practical experience and has been acquainted with professional job settings. This can enhance a candidate's appeal in comparison to someone lacking such experience. Internships frequently educate students on the requirements of professional life, including timeliness, professionalism, and accountability. Acquiring this information upon graduation can facilitate the shift from being a student to being an employee, (Kapareliotis, et al., 2019). Internships serve as a testing ground for employment, allowing organizations to assess and appraise individuals who may become future workers, (Galbraith & Mondal, 2020). Successful performance during an internship may lead to a job offer upon graduation. Internships provide an opportunity for both the student

and the company to evaluate their compatibility with each other. This shared comprehension can result in more seamless transfers into permanent positions. Furthermore, their commitment to internships also equipped them with the experience to thrive in professional settings after completing their studies, (Imjai et al., 2024).

In conclusion, internships play a crucial role in facilitating the transition from academic life to professional occupations for graduating students. Internships offer practical experience, aid in the enhancement of skills, provide networking prospects, and frequently result in employment offers. In addition to enhancing career readiness, internships foster personal development by cultivating self-assurance, autonomy, and a more profound comprehension of the corporate environment which are a vital component of a student's education and professional growth. Nevertheless, several students may not derive any advantage from an internship due to their insufficient time, which prevents them from acquiring all the essential skills (Karunaratne & Perera, 2019). Khwarizmi (2022) and Madurapperuma & Perera, (2015) indicate that there is a positive correlation between the length of internship training and the level of preparedness and future job advancement among accounting undergraduates. Therefore, the higher learning institution must evaluate the duration of the internship to accomplish the internship goal.

Skills development.

Accounting students who have the chance to gain professional industry experience during their undergraduate degree not only have a competitive advantage in the job market but also get to experience the activities while acquiring various skills related to their chosen profession. It offers students a tangible chance to apply their knowledge in a real-world setting and to contemplate their learning process (Madurapperuma, 2014). The primary skills that interns are expected to develop throughout their internship include technical and functional skills, as well as soft skills.

Technical skills are defined as "skills that are relevant to particular topics and normally obtained from a formal traditional classroom format" (Lim et al., 2016). Possessing technical abilities in accounting is crucial for accurately documenting financial transactions and providing recommendations to management. Technical accounting abilities involve but are not limited to the creation of financial statements, recording financial activities in journals, and ensuring that the balances of the accounts are in agreement, (Ng, Lee & Teoh, 2021). Luk & Chan (2022), Ng et al., (2021), Bender (2020), Maelah et al., (2014) and Warinda (2013) discovered that the internship proved significant results in enhancing students' technical skills which are important for accounting fields. In addition, internships help enhance one's understanding of accounting, which may appear unclear during classroom learning, (Martin & Wilkerson, 2006). The acquisition of various technical and functional skills also can be observed even during the e-learning internship period during Covid-19 where the students valued the acquisition of skills related to preparing financial statements, filing tax returns, operating finance and accounting programs, (Januszewski & Grzeszczak, 2021). Saidin (2023) also discovered a comparable outcome, in which internships in the digital learning era facilitate adequate skill development among students and employers are generally satisfied with the performance of students during their internships.

In addition to technical and functional skills, another crucial talent that enhances the worth of an accounting graduate is soft skills, which may be acquired through internships (Cernuşca, 2020). Soft skills are "personality traits and habits comprising interpersonal and intrapersonal communication, engagement with others including teamwork, analytical skills including the ability to provide solutions to problems and take initiatives" (Schulz, 2008). Significant numbers of accounting graduates acknowledged that internship programs effectively aided students in improving their employability skill sets, encompassing both soft skills and technical skills. Based on recent findings, the majority agreed that participating in internship programs can enhance a person's communication skills, (Imjai et al., 2024: Ng, Lee & Teoh, 2021; Bender, 2020; Ahmad et al., 2018; Warinda, 2013; Loyland & Ellingson, 2009). Additionally, they recognized that an internship equips them with the necessary technical and soft skills needed in the job market, particularly the development of three key skills, which are time management, communication skills, and ability to work in a team, (Maelah et al., 2014).

Internships frequently necessitate students to work autonomously or assume substantial duties, emphasizing independence and responsibility. This experience has the potential to enhance their skills and equip them for

the demands of full-time employment. Students must rapidly adjust to working in a novel setting among unfamiliar individuals. The ability to adapt is a highly valuable characteristic in any professional environment.

Career prospect

Internships provide students with an opportunity to familiarize themselves with the most up-to-date trends, technologies, and optimal methods in their respective fields. Keeping abreast of current changes is essential for maintaining competitiveness in the job market. Interns frequently receive instruction from senior professionals, enabling them to acquire specialized techniques and tactics that are not typically taught at educational institutions. According to Cernuşca (2020) findings, a sizable portion of the accountants surveyed believed that companies would be more eager to hire recent accounting graduates with high soft skills and able to contribute to further development of their hard skills which is necessary for daily tasks. To add to the literature, empirical results indicate that graduates who have completed a firm internship are at a reduced risk of unemployment during the first year of their careers, which implies a more seamless transition to the labor market, (Margaryan et al., 2022).

The majority of intern students believed that internships would improve their social networking and provide them with additional incentives. Social networking is a skill that students must acquire during their internship. The significance of social networks is that they will expand the number of employment opportunities. According to a study conducted among intern students in Malaysia, the likelihood of being employed will increase as a result of the social network they develop during their internship, (Chan et al., 2020). During the internship, students have the opportunity to establish not only one but several professional connections, ultimately enhancing their prospects of being employed, (Alawamleh & Mahidin, 2022; Hora et al., 2020). Additionally, by securing an internship at an enterprise, students acquire not only new skills, but also connect with individuals from diverse backgrounds, thereby expanding their network and enabling them to work more professionally in the future (Bhattacharya & Neelam, 2018).

In addition to the social networking discussed above, throughout the internship, the student will realize that they will receive a diverse range of incentives and rewards because they have enhanced their value through the internship. Intern students strongly valued the benefits of responsibility and chance for progress (intrinsic rewards) as well as the work atmosphere (extrinsic reward), (Kapareliotis, et al., 2019). Both intrinsic and extrinsic rewards play a crucial role in motivating interns to exhibit appropriate behavior and derive satisfaction from their overall internship experience. Therefore, to maximize the benefits of their internship, students should seize every opportunity and perform at their highest level.

3. Research Methodology

This study aims to investigate the trainees' perspectives regarding their skills development and career prospects after completing their internship attachment. The questionnaire used was adapted from a study done by (Muhamad et al., 2009) and (Warinda, 2013) and no pilot testing was done. There are four sections to the questionnaire setting, namely Section A: Demographics profile of trainees, Section B: Student's perception on skills development, Section C: Student's perception on career prospects and Section D: Other related issues. For Sections B and C, respondents were required to give their opinion based on a five-point Likert scale ranging from "Strongly disagree" to "Strongly agree".

The study population comprised University Teknologi MARA (UiTM) undergraduate accounting trainees who participated in a six-month internship attachment throughout Malaysia. The institution was selected because it offers a comprehensive accounting program that is accredited by professional bodies such as the Malaysian Institute of Accountants (MIA) and the Association of Chartered Certified Accountants (ACCA). By focusing on this institution, the study can draw detailed conclusions since the internship program is an essential part of their curriculum while ensuring consistency in the academic background and internship experiences of the participants. Conducted through the 2024 academic year, this study provides current and relevant input from accounting trainees regarding the contemporary demands of the accounting industry. The survey questionnaires were sent electronically to the entire population of 130 accounting trainees who participated in a six-month internship attachment throughout Malaysia, and only 123 responses were received. Once gathered, the data was tested for normality and reliability. The results of the normality test indicate that all

items are reasonably normally distributed. Statistical analysis was further carried out using STATA software to assess the skills development and career prospects toward internship placement.

4. Discussion and Findings

A demographic profile for the respondents is depicted in Table 1. The data consisted of 90 (73.17%) female and 33 (26.23%) male students (*N*=123). Merely half of the respondents chose to do their internship in the central region (Kuala Lumpur and Selangor), followed by the southern region (Negeri Sembilan, Melaka and Johor), northern region (Perlis, Kedah and Perak), eastern region (Kelantan, Terengganu and Pahang) and lastly Borneo (Sabah and Sarawak).

Table 1: Distribution of respondents

	Male	Female	Total (*N*=123)	Percentage (%)
Location of placement				
Central Region	21	36	57	46.3
Southern region	6	32	38	30.9
Northern region	3	11	14	11.4
Eastern Region	3	10	13	10.6
Borneo	0	1	1	0.8
	33	90	123	100

Table 2 below represents the internship placements for all the respondents. The majority of the respondents completed their internship in an accounting and audit firm (83.7%) and others in different organizations (16.3%), where most were attached to the finance or accounting department of the company. For internship placement at accounting and audit firms, 3 respondents (2.4%) completed at Big 4 firms (EY, KPMG, PWC and Deloitte) while 100 respondents (81.3%) from non-big 4 firms (medium and small firms).

Table 2: Placement of institution

	Male	Female	Total (*N*=123)	Percentage (%)
Accounting and audit firm				
Big 4	1	2	3	2.4
Non-big 4	28	72	100	81.3
	29	74	103	83.7
Non-accounting firm				
Government-linked companies (GLC)	0	4	4	3.3
Multinational companies	2	2	4	3.3
Government & government agencies	0	2	2	1.6
Manufacturing firm	0	2	2	1.6
Retail/Trading of consumer product	2	0	2	1.6
Others	0	6	6	4.9
	4	16	20	16.3

This section further discusses the perception of respondents regarding their skills development and career prospects after completing their internship.

Table 3: Mean and standard deviation of respondent's skills development

	Questions	Mean	Std Dev
Technical	The internship experience helped me to relate the theories learned in the classroom to the work environment.	4.45	0.75
	The internship experience helped me to enhance my knowledge of internal auditing.	4.08	0.92
	The internship experience helped me to enhance my knowledge of external auditing.	4.20	1.01
	The internship experience helped me to enhance my knowledge of taxation.	4.00	1.00
	The internship experiences helped me to enhance my knowledge of financial accounting and reporting.	4.50	0.79
	The internship experiences helped me to enhance my knowledge in cost accounting and control.	4.18	0.92
	The internship experiences helped me to enhance my knowledge of information systems.	4.20	0.90
	The internship experiences helped me to enhance my knowledge of corporate finance.	4.17	0.88
	The internship experiences helped me to enhance my ability to prepare financial statements.	4.37	0.92
	The internship experiences helped me to have a better understanding of interpreting and evaluating financial statements.	4.46	0.84
	Total average score	**4.26**	**0.89**
Functional	The internship experiences helped to develop my problem-solving skills.	4.56	0.76
	The internship experience has given me exposure to the latest technology adopted in the workplace.	4.40	0.88
	Total average score	**4.48**	**0.82**
Soft skills	The internship experiences helped me to develop my communication skills.	4.55	0.77
	The internship experiences helped me to develop my interpersonal skills.	4.57	0.75
	The internship experiences helped me to improve my confidence and self-esteem.	4.54	0.73
	Total average score	**4.55**	**0.75**

Table 3 shows the mean and standard deviation of respondents' scores on their skills development following the completion of the internship. Based on the table, the soft skills have a slightly higher total average mean score (M=4.55, SD=0.75) as compared to technical (M=4.26, SD=0.89) and functional skills (M=4.48, SD=0.82). This conforms to Luk & Chan (2022), Ng, Lee & Teoh (2021), Bender (2020), Lim et al. (20162), Maelah et al. (2014) and Warinda (2013) studies showing that internships increase the level of trainee's soft skills. From the technical skills development, the highest mean score represented "The internship experiences helped me to enhance knowledge in financial accounting and reporting" (M=4.50, SD=0.79) while the lowest is for "The internship experience helped me to enhance knowledge in taxation" (M=4.00, SD=1.00).

Table 4: Mean and standard deviation of respondent's career prospects

	Questions	Mean	Std Dev
Future career	The internship experience prepared me to be a better employee in the future.	4.52	0.78
	The internship experience has provided me with relevant knowledge and practical experience to assist me in adapting myself to my future working environment.	4.53	0.77
	The internship attachment provided me with the necessary job experience that can improve my chances of getting a good job upon graduation.	4.39	0.86
	The internship attachment provided me with the necessary information and experiences to choose the right career path upon graduation.	4.46	0.82
	Total average score	**4.48**	**0.81**
Incentives	The internship attachment has allowed me to build rapport and network with people in the industry and business area.	4.41	0.91
	The internship attachment allowed me to earn some money.	4.48	0.78
	Total average score	**4.44**	**0.85**

The mean and standard deviation of respondents' scores on career prospects after completion of the internship are shown in Table 4. According to the table, future careers show a higher total average mean score (M=4.48, SD=0.81) as compared to incentives (M=4.44, SD=0.85). For the future career, "The internship experience has provided me with relevant knowledge and practical experience to assist me in adapting myself to my future working environment" (M=4.53, SD=0.77) has the highest mean score, followed by "The internship experience had prepared me to be a better employee in the future" (M=4.52, SD=0.78).

Table 5: Estimation results of logistic regression analysis

Institution	Coefficient	Std. err.	z	P>z	[95% conf.	interval]
technical	2.181745	0.5494846	3.97	0	1.104775	3.258715
functional	-0.3155151	0.9255179	-0.34	0.733	-2.129497	1.498467
softskills	-0.7518439	0.8062776	-0.93	0.351	-2.332119	0.8284312
future career	-1.219638	0.7722123	-1.58	0.114	-2.733146	0.2938702
incentives	0.1483892	0.7703282	0.19	0.847	-1.361426	1.658205
/cut1	-2.343012	2.578198			-7.396188	2.710164

Further analysis was conducted to examine whether skills development and career prospects were significantly affected by institution placement. Logistic regression results are presented in Table 5. The p-value (prob>chi2=0.0007) indicates that the model as a whole is statistically significant, meaning that the independent variables (technical skill, functional skill, soft skills, future career and incentives) when considered together, significantly predict the dependent variable (institution of placement). A pseudo-R2 of 0.1964 suggests that the model explains about 19.64% of the variance in the dependent variable, which is a modest level of explanatory power. There is a positive and statistically significant coefficient (coefficient=2.1817, p<0.001) between technical skills and the institution of placement. This is consistent with research conducted by Luk & Chan (2022), Ng et al., (2021), Bender (2020), Maelah et al., (2014) and Warinda (2013). Particularly, the results indicate that higher technical skills are strongly associated with trainees who were attached to accounting and audit firms.

Regarding functional skills (coefficient=-0.3155, p=0.733), soft skills (coefficient=-0.7518, p=0.351) and future career (coefficient=-1.2196, p=0.114), the analysis shows a non-significant negative coefficient, suggesting that these skills are not influenced by the trainees' placement in the institution. While there appears to be a negative relationship in this data, the statistical evidence is not strong enough to support the conclusion that this relationship exists in the broader population. The observed negative effects are more likely due to random chance within the sample, rather than reflecting a real effect of trainees' placement on these skills. Furthermore, the non-significant positive coefficient (coefficient=0.1484, p=0.847) suggests that perceived incentives during internships do not have a significant impact on the institution placement. Hence, the empirical evidence indicates that technical skills are the only variable significantly associated with the institution placement, with stronger technical skills acquired when the trainees' institution placement is at the accounting and audit firm. The other variables, namely functional skills, soft skills, future career prospects, and incentives; are not significantly associated with institution placement, suggesting that trainees are still acquiring these skills and career prospects regardless of the institution placement at an accounting and audit firm or non-accounting firm.

5. Conclusion and Recommendations

In conclusion, accounting internships are a crucial component of professional education, offering trainees a valuable platform to develop skills and gain insights into the industry. Based on the empirical analysis, this study found that being placed in accounting and audit firms had a significant positive impact on trainees' technical skills. However, the study did not find any significant effects on other skills such as functional skills, soft skills, career prospects, and incentives based on the placement institution. Accounting and audit firms were found to offer more improvement in technical skills in comparison to other types of institution placement. These findings highlight the importance of accounting and audit firms in enhancing technical abilities, which are essential components for achieving success in an accounting career. Besides, the study could have wider implications in other contexts beyond Malaysia, where internship placements are crucial for developing technical skills, whereas other competencies are continuously realized irrespective of institution placement.

Therefore, the findings of this study provide valuable insights for policymakers, academic institutions, employers, and students to assess and enhance internship programs, as well as develop more strategies for professional growth. Policymakers in higher education could revise internship programs to ensure that functional and soft skills development is integrated more deliberately as well as to facilitate a more holistic skills development during the internship period. Moreover, employers should be aware of their roles in fostering an adaptable and competent accounting workforce. This study can also assist students in making well-informed decisions regarding their internship placements, especially if their objective is to enhance specific skills that are highly regarded in the accounting industry. By addressing the point of view of trainees, this study enhances a wider academic discussion on internship outcomes, providing useful insights into the current body of literature on how placement institutions impact skills development and job preparedness.

This study has limitations that must be taken into consideration. Firstly, the sample size of this study is restricted to students from one institution and country only, thus constraining the extent to which the study findings may be applied to other fields or regions. Furthermore, this study solely examines the skills development and career prospects, disregarding additional elements such as work culture or institutional assistance that could potentially impact trainees' internship experience. Hence, it is advisable to conduct additional studies to broaden the research's scope and employ a more comprehensive methodology to acquire a more comprehensive understanding of the outcome of internship placements. Future research could further explore the long-term impact of internships on career prospects and investigate the role of technological advancements in shaping internship experiences.

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The Antecedent of Life Insurance Penetration in Malaysia

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Abstract: A slower rate of economic growth is indicated by a low degree of market penetration for insurance. In contrast to other Asian countries, Malaysia has a comparatively low life insurance penetration rate of 54% throughout the five years before 2020. If Malaysia has a less advantageous rate of life insurance coverage, its citizens will be more financially vulnerable. The observation suggests that people are generally skeptical when discussing insurance-related topics. People's perceptions of insurance are often unfavorable. Now, most people think that getting insurance or being an agent is fraudulent. This is a result of a general lack of understanding about insurance. This study aims to identify or determine the possible causes of Malaysia's low life insurance penetration. Age, awareness, and service quality are the variables linked to life insurance's low uptake. We used a questionnaire to gather primary data, and all the results were evaluated. In Temerloh, Pahang, Malaysia, the researchers distributed the questionnaire to a sample of 150 respondents. To ascertain the research outcome, SPSS was used to analyze the collected data. The outcome of this study revealed that there is a substantial correlation between low life insurance penetration in Malaysia and age, awareness, and service quality.

Keywords: *Life insurance, insurance policy, financial intermediaries, demographic diversity, risk management.*

1. Introduction and Background

A sense of safety and the assurance that one's life will go on are among the most fundamental human needs. In this situation, insurance policies are appealing because they shield policyholders from financial ruin in the event of catastrophic mishaps, such as the onset of a terminal illness. One way that people mitigate the risk of financial loss is by purchasing insurance. Insurance can help transfer or lessen the risk of death and property loss. Individuals and organizations have practiced insurance since the beginning of time which has played a crucial role in both the economy and society due to its collection of premiums, worldwide and regional investment activities, and, notably, its significant function in providing coverage for risks faced (OECD, 2021).

According to the Life Insurance Association of Malaysia (LIAM), the Malaysian insurance market is divided into two categories: life insurance and general insurance. Life insurance safeguards the financial interests of creditors, the insured's family, and other parties by ensuring that they do not suffer a loss of income in the event of the insured's death or serious injury. In contrast, general insurance, offered in various formats, aims to protect policyholders from financial damages resulting from the complete or partial loss of the insured property. It also includes compensation for losses arising from any harm or destruction to the mentioned property. This research examines life insurance policies, which have attracted special attention and examination among insurance products considering the COVID-19 pandemic (Descombes, 2021). Life insurance is a financial instrument that is utilized globally. When things are not going well, it is done to safeguard the wealth of one person or the family's primary source of income (Budin et al., 2020). Nevertheless, many people still refuse it and hesitate to buy it even when they have the money. This is a result of the fact that insurance is an exceptionally complex product for them. Reaching the full rate of life insurance penetration is challenging everywhere, including in Malaysia. The significance of this study resides in its capacity to augment comprehension of the determinants impacting life insurance penetration in Malaysia, hence mitigating the financial susceptibility of residents and fostering heightened consciousness and acceptance of insurance products in the local setting.

Problem Statement: As per Kamel's (2020) findings, only a third of the Malaysian population is covered by life insurance, and the proportion that holds multiple life insurance policies in 2020 is unfavorable. Five years

prior, the penetration rate for 2020 was a meager 54%. In Malaysia, 32.70 million people have no life insurance at all, while 13.54 million have inadequate coverage. The industry stands to earn significantly financially from it. With 26.28 million Malaysians working in this field, there is still a growth market. By the end of 2020, the Malaysian life insurance market is predicted to have a 75% penetration rate overall, according to Life Insurance Association Malaysia (LIAM). However, based on past statistics, the goal was not accomplished. Life insurance in Malaysia is currently underinsured since the country's per capita sum assured in the country remains relatively small. In developing economies like Malaysia, the density and penetration rate of life insurance are often lower than in developed Asian countries.

In Malaysia, the need for life insurance is still not given enough attention. The researcher has investigated the factors and causes that have influenced Malaysians' adoption of life insurance while keeping these worries in mind. According to the Life Insurance Association of Malaysia (LIAM), some individuals believe that they do not require life insurance just because they are single and have no dependents. People under thirty have a stronger tendency to spend more on lifestyle expenses. As such, they do not believe that insurance is required. A low insurance penetration rate has also been linked, it has been acknowledged, in part, to a lack of knowledge of life insurance, especially in suburban and rural regions, as well as a lack of appreciation of its advantages. In addition, several objections to the agents' actions have been raised. Several complaints, such as those regarding insurers not receiving premium payments from policyholders on time, policy benefits and terms being misrepresented, agents not giving customers enough information about the terms and conditions of the policy and its benefits, and pressure to purchase policies that are inappropriate for their needs, can be blamed for Malaysia's low adoption rate of life insurance. Finding the causes of the low penetration rate of life insurance among Malaysians is the aim of this study. Age, awareness, and service quality were the parameters found as independent variables.

2. Literature Review

Low Penetration of Life Insurance: Given the current COVID-19 environment and the need to secure and safeguard human life and health, there is a greater need than ever for life insurance. As a vital component in reducing both individual and business risks in the event of unanticipated events, the health insurance sector is widely recognized as a significant catalyst for economic growth. Family Takaful and Life Insurance penetration rates in Malaysia, however, are much lower than Bank Negara Malaysia's target of 75% for the year 2017 at 54% and 19%, respectively. According to Malaysia Takaful Dynamics (2015), the penetration rate may be calculated by the ratio of the premiums underwritten each year with the GDP. From RM338 in 2000 to RM771 in 2010, the per capita insurance expenditure in Malaysia has increased by 128%, because of the public's increased awareness of the value of insurance over the past decade. Swiss Re (2020) statistics show that insurance penetration rates in developed markets have not performed well overall compared to developed countries over the past 10 years due to persistent issues.

The capacity to select the appropriate healthcare plan for oneself based on one's financial and medical well-being, as well as one's capability, knowledge, and assurance in evaluating correct information regarding healthcare plans, is referred to as health insurance literacy (Quincy, 2011; Williams et al., 2021). There is a strong favorable correlation between purchasing health insurance and doing so (Al Mamun et al., 2021). Given that everyone uses a smartphone, the insurance industry needs to spend heavily on robots, digital, AI, analytics, and analytics. Thus, there is a significant chance to make technological investments to reach every individual in both urban and rural areas, increasing insurance penetration above the global average (Radhika & Satuluri, 2019).

The government should prioritize researching the variables that drive growth in the insurance industry to increase insurance activity and ensure higher insurance penetration and density (Hristova, 2022). Cytonn Investments (2015) and IRA (2015) have highlighted that the growth of the insurance sector is mainly propelled by the expansion of services, varied distribution channels, favorable demographics, innovation, a robust regulatory framework, and industry-specific compliance obligations (Barasa, 2016). Certain economists endorse the concept of an efficient market and argue that competition typically leads to the most favorable social consequences (Damtew & Muraguri, 2021). The study suggests that the utilization of government subsidies, implementation of policy incentives, evaluation of regulations, and ensuring their compliance will

result in the availability of competitive insurance solutions and the establishment of market trust. These factors are crucial for achieving higher insurance penetration rates (Damtew & Muraguri, 2021). Previous studies have identified many factors associated with the adoption of insurance in multiple regions and countries, such as Kenya, Bulgaria, and India. This study investigates the factors contributing to the low level of life insurance adoption, with a specific focus on service quality, income level, education, awareness, and age.

Service Quality: To evaluate service quality, client expectations as well as perceptions are compared (Bungatang, 2021). The customer's expectations are taken into consideration as a foundation for service quality assessment. "Focusing on meeting the wants and necessities of the customer and how good the service delivered meets the customers' expectations" is the definition of service quality (Paposa, Ukinkar & Paposa, 2019). When making purchases, customers can assess the quality of goods by considering a variety of aspects, including the design, feel, color, durability, packaging, and so forth. Siddique and Sharma (2010) state that six criteria are used to assess the quality of a service: assurance, competence, corporate image personalized financial planning, tangibles, and technological aspects. It was discovered that assurance and competence are priority service sectors and that personalized financial planning comes next.

Intangible elements like services are far harder to evaluate than products. The key differentiator for both goods and services is quality. However, because services are intangible and have a wide range of characteristics, customers find it challenging to assess them or treat them as products that are solely reliant on the attitudes of the staff and the customer (Wirtz, et al (2020). Service quality can be measured by how well a specific service satisfies the expectations of the consumer. Service quality, according to Limna and Kraiwanit (2022), Khan and Fasih (2014), and Naeem et al. (2009) significantly influences all customer loyalty, customer contentment, financial performance, and efficacy of marketing tactics. Firms can increase customer satisfaction, maintain a competitive edge, and improve service quality by concentrating on service quality (Limna & Kraiwanit, 2022; Karim & Chowdhury, 2014; Wijetunge, 2016). As a result, it is important to consider service quality.

The quality of insurance can be assessed using the following standards because it is an intangible service: tangibility, safety, technology, responsiveness, empathy, and reliability (Paposa, Ukinkar & Paposa, 2019; Siddiqui & Sharma, 2010; Parasuraman et al., 1991). The capacity to offer tangible proof of the services being provided—which could include a variety of objects like people, real buildings, supplies, and machinery—is known as tangibleness. Reliability is the constancy and trustworthiness of performance. It encompasses things like solving customer issues, keeping promises, keeping records free of errors, offering service right away, and providing service on schedule. Employee responsiveness is defined as their eagerness or willingness to provide services that demonstrate the timeliness of the services provided and include components like accuracy, promptness, helpfulness, and the ability to respond quickly. Safety is defined as the capacity of employees to establish and maintain consumer confidence via tact, prudence, safety, and civility. Empathy is the organization's ability to actively listen to and understand the needs of its customers and to offer customized services, individualized attention, accessible operating hours, customer need analysis, and customer-centricity. The clients receive that kind and individualized care. Technology is the assortment of many strategies, techniques, and protocols used in service delivery.

Awareness: As per the report by the Life Insurance Association of Malaysia (LIAM, 2018), there were sixteen family life insurance and takaful companies active in Malaysia as of January 2020. A person gains knowledge because of their learning process. Aramiko, Zuhrinal, Yanti (2021), and Wulandari and Suyanto (2014) assert that a range of internal and external factors, such as facilities and socio-cultural contexts, can have an impact on knowledge. The degree of attention a person pays to internal or external environmental stimuli is known as awareness, and the author also mentioned it (Aramiko, Zuhrinal & Yanti, 2021; Solso, 2007).

Most of the company's goals are to boost sales and profits. The organization will attempt to attract customers to acquire its products and services, as well as customer lifetime value (CLV), denoting the number of transactions completed throughout a customer's entire lifecycle. According to Gustafson and Chabot (2007), brand awareness is the process of piquing the interest of both present and future consumers in goods and services. However, there are inadequate studies that investigate people's awareness of takaful and their comprehension of insurance (Salman, Rashid & Hassan, 2017). When choosing a product or service, brand consideration is essential because, if nothing is available for consideration, it is likely that nothing will be

selected (Baker et all, 1986). According to a study conducted in India, non-Muslim insurance customers lack awareness of this uncertainty, gambling, and interest that the insurance business is susceptible to. Most non-Muslims do not think that insurance practices should be prohibited because of their various beliefs, and the same is true for Muslim policyholders (Salman, Rashid & Hassan, 2017).

To mitigate the risk in society, insurance is the one-of-a-kind and most significant financial tool. As a result, insurance is crucial to the economy's ability to continually grow. Regrettably, despite insurance's significance, few people use insurance products. The Life Insurance Association of Malaysia commissioned a study on individuals in 2013 who had purchased life insurance, and the results revealed numerous significant observations. The community will be more receptive to purchasing family life insurance if its significance and advantages are better understood. However, the less favorable statistics from BNM and LIAM that the prevalence of life policies, particularly the B40, that target Malaysian citizens may suggest a limited understanding among the public regarding the advantages of family takaful or life insurance. (Sang, Mohidin & Budin, 2020). When making a purchase, a person will depend on their in-depth product knowledge to help them choose the item that will best serve their needs and make the right decision (Keat, Zakaria & Mohdali, 2020). According to Keat, Zakaria, and Mohdali (2020), product knowledge is the degree to which an individual understands and is cognizant of details regarding goods, particularly their brand, price, or quality.

Age: There are multiple methods to articulate the concept of awareness. In contemporary times, individuals are anticipated to exhibit an excessive level of concern regarding their well-being, the ecological system, their social connections, and their economic stability. Every time we go out to grab a takeaway or stroll downstairs, there is a possibility of having an accident. It is a condition that can be experienced by anyone, regardless of their age or health condition. It is essential to remember to dispel the widespread misunderstanding that young and healthy individuals do not require financial stability for their overall welfare. Additional data has substantiated the fact that health issues do not exhibit discrimination towards individuals based on their age or personal history, as poor health consequences might affect anyone. As stated by Poan, Merizka, and Komalasari (2021), insurance serves as a social protection tool that mitigates life risks by providing coverage against unforeseen events and potential dangers that can occur to individuals.

Rahman and Daud (2010) state that when Malaysia Medical and Health Insurance (MHI) was first established in the early 1970s, the major industry participants were foreign-based insurers such as AIA Prudential, American International Assurance, AETNA, and numerous other insurance companies. The significance of protecting assets is acknowledged by the Malaysian financial system, which currently places a strong emphasis on the family takaful and life insurance sectors. It is recognized that purchasing insurance is one of the personal responsibilities that should take precedence to ensure future stability. Increased information is being disseminated by government and non-government organizations to increase public knowledge of personal protection insurance.

Through the National Strategy for Financial Literacy 2019–2023, the Malaysian Inland Revenue Board (Lembaga Hasil Dalam Negeri) revealed that 33% of Malaysians have little personal financial literacy and that around 92% of these individuals possess deposit products and have a reduced likelihood to diversify their financial portfolio with high-risk investment products. This includes their readiness for unforeseen life events; a startling 52% of them struggle to accumulate even RM1,000, for the fund of emergency, and only 24% have enough money to cover their living needs for at least three months.

Significantly, the statistics unveiled that a meager proportion of individuals, specifically less than 20%, own sufficient life insurance coverage to safeguard themselves from unforeseen circumstances (Goh, 2022). As of the present moment, there are sixteen active family life insurance and takaful businesses in Malaysia, as reported by the Life Insurance Association of Malaysia (LIAM, 2018). In addition, Lim, Mohidin, and Budin (2020) discovered that less than 50% of Malaysians own family takaful or life insurance, which aids in reducing risks.

Even though having life insurance coverage is crucial, a few things influence people's commitment to this. According to Min (2008), age, gender, level of personal debt, income, education, number of dependents, and the minimum quantity guaranteed by the current policy are all determinants. Adopted by the Affordable Care Act

(ACA), insurers are required to provide coverage to any applicant who desires it, and the method by which premiums are calculated is limited to the applicant's background or characteristics. This situation elucidates the rationale behind the prohibition on insurers basing premium rates on gender or health status disparities. The ratio of premiums based on age is limited to three to one, meaning that the premium for an individual aged sixty-four is three times the one with the age 21. According to Lim and Tan (2019), it has been observed that individuals aged 30 to 39 are more likely to have life insurance in comparison to those aged 20 to 29. Age is statistically negligible, according to Abdul-Fatawu, AI Logubayom, and Abonongo (2019) after more research showed a favorable association between life insurance demand and age. This scenario elucidates the reason behind the increasing demand for life insurance as individuals age. This could be explained by the fact that as people age, they must take care of both their own basic needs, such as housing, higher education, and retirement funds, as well as the needs of their dependents. Regarding the age component, Nidhiagrawal and Agrawal (2017) and Yadav and Tiwari (2012) stress that a person's decision to buy life insurance policies is significantly influenced by several characteristics, including gender, age, and income.

Research Hypothesis: Despite the present growth in life insurance products, this study attempts to evaluate the following hypothesis based on past literature:

H1.There is a relationship between penetration of life insurance and service quality.
The activities of the agents in terms of information gathering and processing have a significant impact on service quality (Eckardt & Doppner, 2010). When a customer buys life insurance, a lot depends on the agent's level of service and the depth of their relationship with the customer.

H2. A correlation exists between the penetration of life insurance and awareness.
Regarding the previously mentioned facts, Sang, Mohidin, and Budin (2020) state that the expansion of the country's family takaful and life insurance sectors is generally positive. The BNM intends for family takaful and life insurance penetration rates to reach 75% by 2020; however, as of 2017, Malaysia's penetration rate was just 56%. Consequently, such data should not be the primary criterion used.

H3. There is a correlation between life insurance penetration and age.
A major factor influencing the insurance purchasing policy is the age of the policyholder. Estevez (2021) provided evidence that the insurance premium is determined by the policy's duration and the time of purchase. For each year of age, the insurance premium will rise by around 8%–10%, as explained by this condition. Considering this, buying insurance becomes more costly as people age

3. Methodology

Quantitative data was gathered as part of this research. Primary and secondary data were the primary focus of the researchers. The production of primary data was based on the preliminary data acquired from the sample's self-administered questionnaire. Furthermore, secondary data was sourced from internet sources, journals, and publications by the scholars who ran this study. To find out why there is such a low percentage of life insurance penetration, 150 random people in Temerloh, Pahang, Malaysia were surveyed. We took into account each response when we analyzed the data. This study's questionnaire consisted of three parts: A case study by the Life Insurance Association of Malaysia and Universiti Kebangsaan Malaysia (2013) served as the dependent variable for the research on life insurance penetration, which was discussed in Section B. Service quality (derived from Singh, Sirohi & Chaudhary, 2014), age (modified from Liebenberg, Carson & Hoyt, 2010; Savvides 2006), and researcher-developed awareness were all covered in Section C, which dealt with independent factors. Demographic information (gender, age, income, profession, and marital status) was included in Section A. In Section A, the ordinal scale was used to assess income and age, while the nominal scale was used to measure gender, occupation, and marital status. Furthermore, in Parts B and C, the 5-point Likert scale was utilized. In this study, convenience sampling also referred to as non-probability sampling, was employed. In a non-probability sampling method, the constituents of the population have no likelihood attached to them being chosen as sample subjects (Sekaran & Bougie, 2013). The researchers used convenience sampling since the data was collected from individuals who were willing to participate but were not yet insured.

The sample frame used in this study is the list of respondents from Temerloh, Pahang, Malaysia. Temerloh, as

a specific location within Pahang, might have distinctive socio-economic, cultural, or market dynamics that make it a pertinent case study for understanding life insurance penetration in Malaysia. Temerloh, Pahang may have been chosen for several reasons such as accessibility, demographic diversity, existing data or infrastructure, and specific characteristics. For accessibility, Temerloh's geographical location and accessibility may make it convenient for conducting fieldwork and gathering data. Meanwhile, for demographic diversity, Temerloh's population composition may offer a diverse range of perspectives and experiences relevant to the research topic. In addition, the availability of existing data or research infrastructure in Temerloh could facilitate data collection and analysis. Finally, Temerloh may possess unique characteristics or trends that make it an ideal location for studying life insurance penetration within the Malaysian context. Therefore, at least 150 respondents were gathered for this study to fairly represent the size of the population. According to Altunışık et al. (2004), most studies would benefit from a sample size of at least thirty and no more than five hundred. A sample size of 150 can still provide adequate statistical power to detect meaningful relationships and draw reliable conclusions about the antecedents of life insurance penetration in Malaysia. Version 26 of the Statistical Package for Social Science (SPSS) program was used to examine all the collected data.

4. Findings

Demographic Respondents: In terms of gender, men made up most responses with 54.7% being men and 45.3% being women. On the other hand, the respondents who were between the ages of 26 and 35 made the largest contribution (33.3%), which was followed by the respondents who were between the ages of 36 and 45 (30%), the respondents who were under 25, the respondents who were between the ages of 46 and 55 (9.3%), and the respondents who were beyond the age of 56 (2.0%). In all, 150 people responded to the survey. In terms of occupation, 45.3% of all respondents worked in the non-government sector. Then, 11.3% of the respondents were self-employed, 3.3% were retirees, and 40.0% were employed by government. Finally, a considerable proportion of the participants (34.0%) earn between RM 1001 and RM 2000. With 31.3% of the total, the respondents with earnings between RM 2001 and RM 3000 came in second. Second, out of all responders, only 2.7% made over RM 4001. On the other hand, 8.0% of those surveyed made between RM 3001 and RM 4000.

Reliability Test: Table 1 presents the reliability indicators for both the independent and dependent variables. The reliability coefficients for the questionnaire items measuring life insurance penetration, service quality, awareness, and age were 0.841, 0.812, 0.789, and 0.702, respectively, indicating high internal consistency and stability. All values were exceptional. Therefore, it can be asserted that the survey's questions were reliable and consistent in every case.

Table 1: Reliability Statistics of Variables

Life Insurance Penetration	0.841
Service Quality	0.812
Awareness	0.789
Age	0.702

Descriptive Analysis: The descriptive statistics for each independent variable are shown in Table 2. To be more precise, the highest mean value is 4.36 for age and 4.20 for awareness. With a mean score of 4.16, service quality receives the lowest overall rating.

Table 2: Descriptive Statistics for Independent Variables

Service Quality	4.16
Awareness	4.20
Age	4.36

Correlation Analysis: The Pearson-product moment correlation coefficient was used to analyze the relationship between the dependent and independent parameter variables. Table 3 can be used to assess the

relationship's strength. First, the data showed that low life insurance penetration and bad service quality were positively correlated (r = 0.927, p0.01), with low insurance penetration being linked to poor service quality. The second study showed a high positive correlation (r = 0.775, p<0.01) between low life insurance penetration and lack of awareness. In conclusion, there was found to be a noteworthy positive association (r = 0.749, p < 0.01) between age and low life insurance penetration. Age and low life insurance penetration are related.

Table 3: Correlation Analysis Pearson Correlation

Low Life Insurance Penetration	1	.927**	.775**	.749**
Service Quality	.927**	1	.690**	.872**
Awareness	.775**	.690**	1	.559**
Age	.749**	.872**	.559**	1

Multiple Regression Analysis: Model Summary of R-Square: Table 4 indicates that the independent variables may explain 90.4% of the variation in the characteristics that may lead to low life insurance penetration, leaving just 9.6% of the variation unaccounted for. This is an indication of an excellent R2 value. Thus, 9.6% of the variables may be explained by factors not included in the factors list.

Table 4: Descriptive Statistics for Independent Variables

.951A	.904	.902

ANOVA: The F-statistic, with P-value = 0.00, is shown in Table 5 and is less than the alpha value of 0.05. It implies that every variable is significant.

Table 5: Descriptive Statistics for Independent Variables

	Regression	18.459	4	343.173	.000a
	Residual	1.950	145		
	Total	20.409	149		

Regression Coefficient: The regression analysis's default indicator is at the 95% confidence level. A P-value is considered significant if it is less than 0.05; if it is larger than 0.05, it is considered not significant.

Based on the result in Table 6, the regression for the hypotheses that analyze the low penetration of life insurance can be derived as below:

Y = Constant + Bx1+ Bx2 – Bx3

= 0.453 + 1.069x1 + 0.232x2 – 0.270x3

Where Y = Low life insurance penetration

X1 = Service Quality

X2 = Awareness

X3 = Age default indicator for regression

Based on Table 6 and the developed formula, an increase of one unit in the independent variables of service quality yielded 1.069 improvement units and 0.232 awareness units. However, there was a 0.270 unit drop in the age-independent variable.

Table 6: Coefficients

	B	Std. Error			
(Constant)	.453	.177		2.553	.012
Service Quality	1.069	.121	1.026	8.814	.000
Awareness	.232	.042	.225	5.565	.000
Age	-.270	.070	-.205	-3.876	.000

Summary of Hypothesis Testing: Age, awareness, and service quality are three independent variables of significance that demonstrate the result's consistency with or support from prior research. Researchers have succinctly summarized the findings of their regression analysis.

H1, H2, and H3 are the three hypotheses that can be deemed valid after the multiple regression analysis, as indicated in Table 7. Moreover, regarding Hypothesis 1, it is possible to argue that the inadequate service quality of an insurance company is the root cause of the low penetration of life insurance. This demonstrates that service quality serves as a predictor of the factor in question. Furthermore, it is possible to infer from Hypothesis 2 that the lack of knowledge and cognizance among the respondents is the root cause of the low life insurance penetration. It implies that knowledge regarding life insurance significantly influences market penetration. However, based on the P-value of 0.000, it can be concluded that age has no impact on the decision of respondents to purchase life insurance premiums, as stated in Hypothesis 3.

Table 7: Summary of Hypothesis Testing

H1	Accepted
H2	Accepted
H3	Accepted

Discussion

In recent years, the individual life insurance industry has encountered slow growth due to economic challenges and limited customer interest. This downward trajectory highlights a lack of public awareness regarding the importance of protection, necessitating increased efforts to assist individuals and families in mitigating potential risks. Life insurance plays a crucial role in equipping and preparing individuals to address future financial uncertainties. According to Nidhiagrawal and Agrawal (2017), it is recommended that life insurance businesses offer prospective clients unique and perfect solutions that offer high-risk coverage, attractive returns, and low insurance premiums. This strategy aims to enhance customer attraction and increase the customer base. It is advised to expand the scope of this premium coverage to encompass other demographic variables, premium lifetime, and a social support system.

One potential approach to promote the uptake of life insurance subscriptions is imparting knowledge to individuals regarding the significance of safeguarding themselves against potential risks and dangers. Furthermore, this technique is a noteworthy method for fostering societal acceptability among individuals in Malaysia. The provision of information regarding life insurance is anticipated to enhance comprehension of the future financial system, hence facilitating more effective investment practices for insurers. Consequently, individuals will develop a more thorough comprehension of the underlying objectives of life insurance and gain awareness of the diverse array of insurance products accessible in the market. This enhanced knowledge is expected to result in an increased demand for life insurance packages.

Furthermore, it is advisable to include a savings component for one's life insurance premium. The authors of the study conducted by Lim et al. (2020) underscored the need to provide individuals with education regarding the value of life insurance products and the benefits of long-term saving packages. This effort has the potential to aid individuals with limited financial literacy, particularly those belonging to the B40 socioeconomic group and the younger demographic. In the meantime, it is imperative for the life insurance provider to proficiently elucidate the insurance package, ensuring the provision of precise and reliable information that is conveyed in

a manner that is comprehensible to individuals from diverse backgrounds and experiences. This will result in a more pronounced effect on enhancing comprehension and awareness of life insurance products. Furthermore, the inclusion of outpatient care for specific hazardous behaviors, whether provided by the insurer or the insurance providers, can also contribute to an increase in healthcare access through package coverage (Bakar, 2016). Individuals are inclined to be swayed towards acquiring a comprehensive package that offers a safeguard against quantifiable losses, physical harm, legal responsibility, deficits, as well as external or internal vulnerabilities that can be mitigated by initiative-taking measures (Abdul-Fatawu, Logubayom, & Abonongo, 2019).

According to Chung (2020) findings, the life insurance sector in Malaysia witnessed a substantial expansion of 14.9% in new business during the year 2019. The upward trend in performance can be attributed to the growing consumer awareness and knowledge regarding life insurance protection, which has subsequently bolstered their confidence and inclination to purchase such insurance policies. Given the favorable trajectory, the life insurance provider should capitalize on this chance to enhance public trust and stimulate the inclination to acquire insurance policies. The presence of expert guidance and advisors who have received comprehensive training can exert a substantial impact on individuals' purchasing choices. This move has the potential to enhance individuals' perception of insurance firms. Hence, the study is important for the local context because it tackles the problem of low life insurance penetration in Malaysia. It aims to improve financial security for Malaysian citizens and dispel myths and skepticism about insurance products by identifying factors like age, awareness, and service quality that contribute to this challenge.

5. Conclusion and Recommendations

The possible outcomes of the study encompass heightened awareness of life insurance advantages among Malaysians, well-informed policy suggestions for enhancing service quality strengthened financial stability for households, market expansion through customized products, educational endeavors to enhance financial literacy, enhanced customer satisfaction, understanding of the insurance needs related to age, data-based decision-making for insurers, community involvement in discussions about financial planning, and the establishment of a standard for future research in the insurance industry. This study has achieved substantial achievements in addressing the knowledge gaps about the assessment of factors that impact individuals' acceptance of life insurance products. Substantial data indicates that awareness and understanding, service quality, and age are key characteristics that greatly influence insurance penetration. This influence is statistically significant at a level of $p=0.00$ ($p<0.05$). The results clearly show that each variable has a statistically significant and positive correlation with people's tendency to engage in protective and mitigating measures against probable future dangers. Potential policyholders should acquaint themselves with extensive information regarding insurance coverage, consumer protection, and regulatory rules to enhance their understanding of their responsibilities as policyholders. Moreover, life insurance providers must give relevant information to educate households about the level of coverage for potential risks and to improve their understanding and knowledge of insurance products and markets.

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The Impact of Turnaround Strategies on SME Performance

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Abstract: This study examines the impact of various turnaround strategies on the performance of small and medium-sized enterprises (SMEs). Specifically, the research focuses on five key strategies: CRM, publicizing efforts, rebates, credit periods, and online business. The goal is to examine the interaction between these tremendous strategies for SME performance in business sales growth. A survey research methodology was used, and data was collected from 300 SMEs from various sectors by a structured questionnaire. Chi-square tests and regression analysis are used to establish the interaction between the company's turnaround strategies and its performance results. The result disclosed that online business was the most viable strategy for enhancing SME performance. According to the studies, CRM also positively affected business performance, even though the results differed depending on the implementation. On the other hand, credit period was a negative factor, whereby the performance of SMEs declined when credit period was offered. The influence of publicizing efforts and providing rebates yielded a moderate effect; therefore, the effectiveness of the two strategies depends on the existing context.

Keywords: *Turnaround strategies, SME performance, Customer relations management (CRM), Online business, Credit periods*

1. Introduction

SMEs play a critical role in developing the economy and introducing product innovation into the market. Nevertheless, they are used to experience some difficulties in sustaining themselves in the long run (Pearce & Michael, 2006; Trahms et al., 2013). In today's intensified global competition and limited resources, implementing better sustainable management practices has become critical for SMEs' enhanced performance (Porto et al., 2016; Panicker & Manimala, 2015). Turnaround strategies include CRM, publicizing efforts, giving rebates, giving credit to clients, and carrying out an online business, which has been praised for improving sales, operational efficiency, revenue and profitability (Kaplan & Haenlein, 2010; Ngai et al., 2015).

With the development of the digital economy's concept, the online business is considered a practical element of the SMEs' strategic success to extend their business to reach a broader market, minimize expenses and increase customers' appeal (Yatskivska, 2024). Social networks have become more than tools for people's interaction beyond their primary designated purpose of reunion (Boyd & Ellison, 2007; Kietzmann et al., 2011). These platforms can be hugely beneficial for business organizations struggling with adversity or companies needing rejuvenation; these platforms have been characterized as helpful tools for organizations needing to facilitate their turnaround strategies (Trainor et al., 2014; Verhagen et al., 2015). Therefore, the recovery of the companies can be influenced through social media, and as a result, strategies can be redefined, planning and organizational approaches can be changed. The behavior of customers and employees can be determined to enhance the prospects of recovery. Understanding the causes of company decline is important, as it would promote the achievement of tactical measures that can minimize the possibility of failure, especially among SMEs.

Social media also has the added advantage of giving business people hints on what their customers need so that they can make informed decisions (Kosinski et al., 2013). Using Twitter provides companies with an avenue through which they can pass their message across, regain the trust of their stakeholders and establish a positive relationship with their target market (Hanna et al., 2011; Kietzmann et al., 2011). Furthermore, social media is a cheaper marketing tool than traditional advertising, meaning it reaches many people (Hassaro & Chailom, 2023, Weinberg & Pehlivan, 2011). In particular, exciting campaigns and suitable content are likely to prove attractive to potential consumers, thus boosting their interest and generating revenues (Killian & McManus, 2015; Kumar et al., 2016). Therefore, using social networking as a strategic turnaround activity has been

deemed valuable and necessary in the growing kitchen in the current badged market (Järvinen & Taiminen, 2016; Quinton & Simkin, 2017).

In addition to the marketing role, social networking platforms are also helpful for customer service and reputation management (Trainor et al., 2014; Verhagen et al., 2015). Within this context, the use of new technologies, the application of innovation to produce creative patterns of marketing communication, and the possibility of developing adaptable production capacities help satisfy customers' needs and thus improve the current performance of business activities (Weber, 2002). Other aspects reflecting a company's response capability include external issues, including the evolution of competition regulations (Vithessonthi, 2011) and other environmental uncertainties (Cho et al., 2023; Giaglis & Fouskas, 2011; Hassani & Mosconi, 2021). Through timely and proper handling of customer grievances, the image of a particular business can be restored, and the customers' trust can be gained again (Ciliberti et al., 2008; Ismail, 2017).

Although engaging in online business is widely acknowledged for its positive impact on performance, the relative effectiveness of traditional strategies, such as extending credit periods and offering rebates, needs to be further explored, particularly regarding their effect on financial health and operational efficiency. Furthermore, while CRM and publicizing efforts are believed to strengthen customer loyalty and brand reputation, their direct impact on business performance remains contested, particularly in resource-constrained SMEs (Yatskivska, 2024; Fiiwe et al., 2023).

Given the diverse range of turnaround strategies available to SMEs, which strategies most effectively enhance business performance remains unclear. The impact of CRM, publicizing sustainability efforts, offering rebates, extending credit periods, and engaging in online business can vary significantly depending on the context in which they are implemented. This variability raises important questions about how SMEs can best leverage these strategies to improve their cash flow, profitability, and long-term sustainability.

Therefore, this study seeks to address these gaps by evaluating the effectiveness of turnaround strategies across various SMEs, focusing on the conditions under which these strategies lead to improved business performance. By analyzing the impact of each strategy, the research aims to provide actionable insights for SMEs looking to enhance their sustainability and competitiveness.

Research Objectives

The following were the objectives of the study:

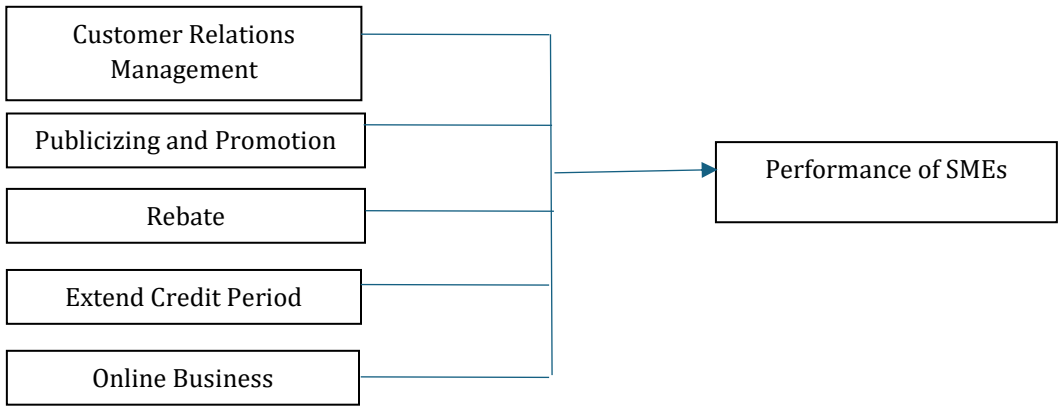
- To assess the impact of customer relationship management (CRM) strategies on SME business performance.
- To analyze the effect of publicizing and promoting efforts on the performance of SMEs.
- To examine the impact of offering rebates as a turnaround strategy on SME performance.
- To investigate the influence of extending credit periods on SME cash flow and overall performance.
- To evaluate the effectiveness of online business as a turnaround strategy in improving SME performance.
- This study hopes to address the following research questions:

Research Questions

- How do customer relationship management (CRM) strategies affect the business performance of SMEs?
- How do publicizing and promoting efforts affect SME performance, and how does it vary across industries?
- How does offering rebates affect SME performance, and does it lead to short-term sales growth or long-term business success?
- What are the potential negative impacts of extending credit periods with suppliers on SME cash flow and overall performance?
- How does engaging in online business as a turnaround strategy improve SME performance, and why is it the most effective?

Conceptual framework and hypotheses development

Figure 1: The Conceptual Framework



2. Literature Review

Social networking has thus become very vital in the current business environment for any company that wants to have good customer relations. Interacting with customers through applications such as Facebook, Instagram, Twitter, and Linked In helps respond to customers' questions or complaints and otherwise sustains a company's relationship with the customers. There is much evidence to prove that satisfying relationship development through social media strategies improves the brand image and facilitates the attraction of new customers and loyal customers' maintenance. Furthermore, these platforms serve as tools that businesses can use to capture essential consumer feedback and trends, which would, in turn, help them identify areas of change for their products and services to meet the market demands, hence increasing the growth and profitability of these businesses (Yatskivska, 2024). This makes social networks very useful for business management since they help enhance communication, marketing and customer relations, hence enhancing brand development and new customer acquisition (Fiiwe et al., 2023; Pearce & Robbins, 2008; Trahms et al., 2013).

Another essential objective that can be derived from the evaluation process is to obtain and incorporate feedback from the consumers in a bid to enhance customer satisfaction with products, services, and other processes. Some of the techniques used by organizations to gather this feedback include Twitter handles, online surveys and customer questionnaires (Efthymiou & Orphanidou, 2022; Shah & Rai, 2022; Trainor et al., 2014; Verhagen et al., 2015). Such interaction with customers through these channels can also go a long way in getting helpful information from the companies to devise methods of satisfying the market needs and customers' expectations.

Customer relationship management (CRM) has been identified as an important element of effective turnaround strategies in any organization that is experiencing poor performance or financial difficulties. This is important for the growth of the company's business by ensuring that the existing customers are kept on and new ones are embraced. This, in turn, leads to higher revenue generation and, hence, better long-term viability of the project (Ari Suryaningsih, 2022; Ugwu & Udanor, 2021; Bhuian et al., 2005; Naudé et al., 2003). It is indicated that in an organizational crisis, customers may develop skepticism and doubt the company's capacity to produce value (Bhuian et al., 2005; Pearce & Michael, 2006). This paper argues that trust and loyalty can be regained by organizations by embracing customers, attending to their complaints and ensuring that they fulfil their obligations as per the agreed terms (Cater & Schwab, 2008; Naudé et al., 2003).

Customers need to be approached personally, offered attractive deals and incentives, and attention should be paid to the quality of customer service for managing relationships with them during a turnaround (Bhuian et al., 2005; Naudé et al., 2003). Customer Orientation; not only increases customer satisfaction but also reduces costs and provides a company with opportunities to tap into new sources of income (Kanev et al., 2023; Biswas & Rakshit, 2022; Cater & Schwab, 2008; Pearce & Robbins, 2008). This thus calls for a high level of commitment

from the top management, adequate resources and a culturally oriented organization to embrace customer relationships. However, all the employees should be trained and encouraged to address customers in a manner that will make them feel valued to enhance the customer-conscious culture of the organization (Bhuian et al., 2005; Naudé et al., 2003).
Based on the above discussion, the following hypotheses are proposed:
H1: Customer relationship management (CRM) strategies have a positive impact on SME business performance.

The other component of the turnaround strategies includes publicizing and promoting the company through social media platforms. Businesses can use social media platforms like Facebook, Twitter and Instagram at a cheaper cost to market their products to the targeted customers and create awareness in the market about their existence and services. Gary Vaynerchuk has pointed to content marketing and social media, the promotion of content on social networks, influencers, and opinions as effective methods for increasing awareness, attracting interest and making a sale (Rosário & Dias, 2023; Mostova, 2022; Porto et al., 2016; Fuciu & Dumitrescu, 2016). To address these problems that compel companies to market their brands to the same consumers when they face problems such as declined revenues, companies need to increase their marketing efforts because this can reinvent the brand and gain back the consumers' trust (Barros et al., 2023; Fifield, 2007; Merrilees & Miller, 2008).

This strategy indicates that when the performance of companies is worst off or the firms experience financial woes, the critical area of publicity and promotion is developed. A strong and relevant marketing and communication strategy could come in handy with brand recall and customer base, creation and retention together with the revival of lost revenues (Barros et al., 2023; Fifield, 2008; Merrilees & Miller, 2008). Brand image and reputation are important areas that have to be managed when using promotion for turnarounds. In organizational distress, brand equity and perceived quality are certain to erode along with the market share and customer loyalty (Dutta et al., 2003; Nguyen & Kleiner, 2003). Publicity and other efforts in advertising, public relations, and special campaigns can help reinstate the companies' brand to the population of existing and potential clients and thereby spread the word concerning the ongoing companies' turnaround strategies (Merrilees & Miller, 2008; Pearce & Robbins, 2008).
H2: Publicising and promoting initiatives positively influences business performance.

The use of rebates or discounts, on the other hand, is another good aim of using social networks when establishing sales strategies. Through social media marketing, companies can market such programs, hence gaining new customers as well as customer loyalty (Xu & Xiao, 2022). These efforts can make a positive impact in helping firms that have seen their business deteriorate and enhance their customers' experience (Mishra et al., 2023). Also, instead of regular credit purchases, suppliers' credit can help enhance liquidity, especially for organizations experiencing some liquidity shortfalls. This strategy enables organizations to also preserve cash flow, make investments in strategic projects and improve supplier relations (Garcia-Appendini & Montoriol-Garriga, 2013; Amberg & Jacobson, 2021).
H3: Offering rebates have a mixed effect on SME performance

Another action that can be taken to apply the turnaround strategy is to extend the credit period with the suppliers. Extending the supplier's payment terms is another good strategy to enhance working capital. Organizations that possess more cash are more responsive, and capital can be readily deployed to strategic projects, enhancing innovation and responding to challenges from competitors. Here, we want to extend the credit period to manage cash flows better and affect our financial obligations that would ensure the running of the business. This move will also assist us in improving relations with our suppliers since they will be pleased to learn that we value our relations with them. Several papers prove that firms with a liquidity squeeze receive more trade credit from their suppliers and grant less trade credit to their customers (Garcia-Appendini & Montoriol-Garriga, 2013; Amberg & Jacobson, 2021).
H4: Extending credit periods with suppliers has a negative impact on SME performance

Online business leads to higher performance of SMEs because it avails market opportunities and organizational efficiency for SMEs. Blending various forms of digital marketing is important for SMEs to be competitive in their environment. Retailing has tripped up massively, especially during and after the pandemic. In contrast, according to the latest research by Türkeş (2024), the e-marketing orientation, which has benefited from the

pandemic, has a positive link with the business performance of SMEs in Romania. Indeed, the performance of SMEs in Indonesia is boosted by social media, most notably Facebook, in communicating and promoting their products to targeted customers, especially during difficult economic times (Virani, 2024). A cross-sectional survey study established the positive effects of implementing social media marketing on the operational performance of SMEs based on organizational support and perceived employee skills (Fu et al., 2024). Some common approaches to digital marketing that SMEs can adopt to improve visibility and customer reach to their products, including Search Engine Optimization and Content Marketing, among others, are relatively cheaper, hence making it possible for SMEs to achieve sustainable growth (Ijomah et al., 2024). The application of technological tools is vital for organizations planning to improve their organizational performance and adapt to the current market conditions. Using technology and purchasing online helps organizations cope with complexity and creativity and re-strategize their operations to meet new market requirements (Abebe et al., 2021; Lascu & Deselnicu, 2023). Although adopting change may be a problem for many organizations, the successful application of technology means better performance and sustainability (Zimmerman, 1986).
H5: Engaging in online business significantly improves SME performance

In conclusion, a comprehensive turnaround plan focused on strengthening customer relationships, promoting brand awareness, and leveraging digital tools can enhance a company's prospects for recovery and future growth (Ferri & Ricci, 2021; Sodoma et al., 2023).

3. Methodology

This research utilizes a quantitative method to analyze the impact of different turnaround strategies on SMEs. Its emphasis is on how strategies such as CRM, publicizing and promoting initiatives, rebate and/or credit promotions, and conducting business online impact SMEs' performance. Due to the method of investigating the nature and strength of the relationship between the variables under analysis, the study can be best described as having a descriptive and correlational research design and employing statistical analysis tools.

Population and Sample

The population for this study comprises SMEs across various sectors, including Retail, Services, Manufacturing, Wholesale, and Construction. The sample is drawn from SMEs implementing at least one of the targeted sustainability strategies. A stratified random sampling technique is used to ensure adequate sector representation. SMEs will be divided into strata based on their implemented turnaround strategy, and a random sample will be selected from each group. A sample of 300 SMEs were targeted for data collection. The sample size is deemed appropriate to ensure sufficient statistical power for conducting chi-square tests and other analyses.

Data Collection Methods

Data was collected using a structured questionnaire to capture information on SMEs' turnaround strategies and the resulting performance outcomes. The questionnaire includes closed-ended and Likert-scale questions to quantify the impact of each turnaround strategy (e.g., customer relations, publicizing and promoting efforts, rebates, credit periods, and online business) on SME performance. The performance outcomes are measured based on sales growth. The questionnaires were distributed electronically to SME managers and business owners. Additionally, follow-up emails were sent to ensure a high response rate.

Data Analysis

Descriptive statistics were used to summarise the characteristics of the sample, including the type of turnaround strategies implemented and the overall performance of the SMEs. To delve deeper, a chi-square test of independence was conducted to examine the relationship between the type of turnaround strategy implemented and the performance outcomes of SMEs. The test assessed whether the observed performance improvements (e.g., increased/decreased/remained the same sales growth) differ significantly across the various turnaround strategies.

4. Results and Discussion

The following section presents a comprehensive analysis of the research findings. It examines the core results obtained through the research methodology and how they align with existing knowledge and contribute to a broader understanding of the research topic. By scrutinizing the data, we aim to uncover significant patterns, trends, and insights that inform the subsequent discussion and interpretation.

Figure 2: Percentage of Ownership of the business

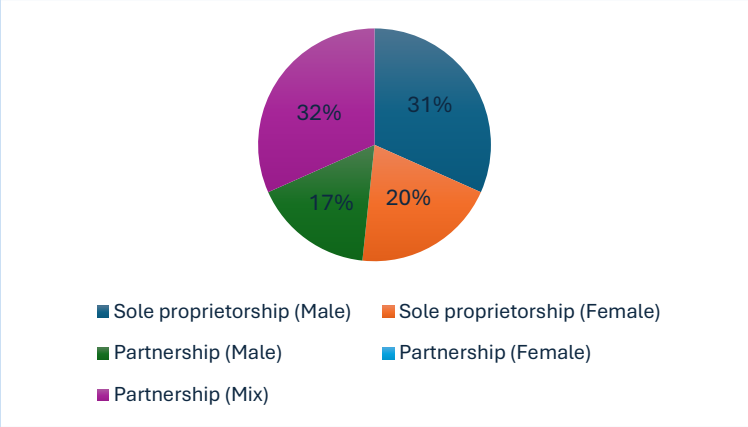


Figure 2 shows the proportion of businesses with different types of proprietorships and partnerships by gender. These analyzed results help understand the percentage distribution of business ownership across the different categories. Gender-Based Sole Proprietorship According to Table 3, Sole trader means that most % of the business ownership preference, 31% is male preference and 20% is female preference. From this, it is inferred that men dominate the sole proprietorship type of business than women, though women are seen participating in the ownership type. It may be due to one or more of the following socio-economic factors: capital availability, type of business, or culture.

The figure above shows that partnerships also show a significant differentiation in gender, where 17 % of the businesses belong to male partnerships and 32% belong to more than one gender. This mixed gender is the most common type of ownership, which means that cooperation between genders is one of the main trends in forming business relations. Even so, 0% of the partnerships are female-only, suggesting that there is scope for research into why women cannot enter the formal sector as female-only partners or are unwilling to form partners with men. As seen in Table 4, the research results also indicate a probable change in the diversification trends in the ownership structure where the predominantly recorded highest number of mixed-gender partnerships (32%). Organizational relationships can be more innovative and effective since partners bring different approaches and skill sets. This could suggest societal changes that might be tolerating and embracing the work of men and women equally.

This lack of Female-only partnerships is exciting and leads us to pose some questions that need to be answered. It could imply structure issues, for instance, access to networking, access to finance, or other socio-cultural factors that may pull women into entering into female-only business partnerships. This underrepresentation means there is a need for policy and intervention to allow women to form and sustain business partnerships. While women own a small percentage of sole proprietorships (20%), the rate is still considerably lower than that of men. It is still relevant to learn and find out what hinders women from opening up sole proprietorship ventures to enhance equal proportions. It might be helpful to introduce relevant measures that would narrow the gap, including entrepreneurship courses, financing opportunities, and mentoring, especially for women.

In conclusion, the distribution of business ownership by gender and type reveals essential trends and gaps in the current entrepreneurial landscape. While mixed-gender partnerships show promising signs of diversity and collaboration, there is still a significant underrepresentation of female-only partnerships and sole

proprietorships. Further research is necessary to understand these disparities' underlying causes and develop strategies that promote equitable business ownership across all genders.

The data was further analyzed using the Chi-square test, and the results from this analysis are as follows:

Table 1: Distribution of Business Structures by Gender

Gender	Male	Female	Mix (F+M)	Total
Sole Proprietorship	19	12	0	31
Partnership	10	0	19	29
	29	12	19	60

Table 2: Expected Frequencies

Ownership Type	Male	Female	Mix (F+M)
Sole Proprietorship	14.98	6.2	9.82
Partnership	14.02	5.8	9.18

Given that the assumptions of independence and sufficient expected frequencies are met, the chi-square test is suitable for analyzing the association between business structures and gender in this dataset.

Table 3: Chi-square test between ownership of the business and gender distribution

Chi-square statistic (χ^2)	33.76
Degrees of freedom (df)	2
P-value	0.000000047

The chi-square test shows a statistically significant association between the ownership of the business (Sole Proprietorship or Partnership) and the gender distribution (Male, Female, Mix). The very low p-value ($p < 0.05$) indicates strong evidence against the null hypothesis of no association between these variables. This suggests a significant relationship between the type of business ownership and the gender distribution within the businesses. The observed gender distributions are significantly different from what would be expected if there were no association between ownership type and gender.

Figure 3: Percentage distribution of businesses by their sectors

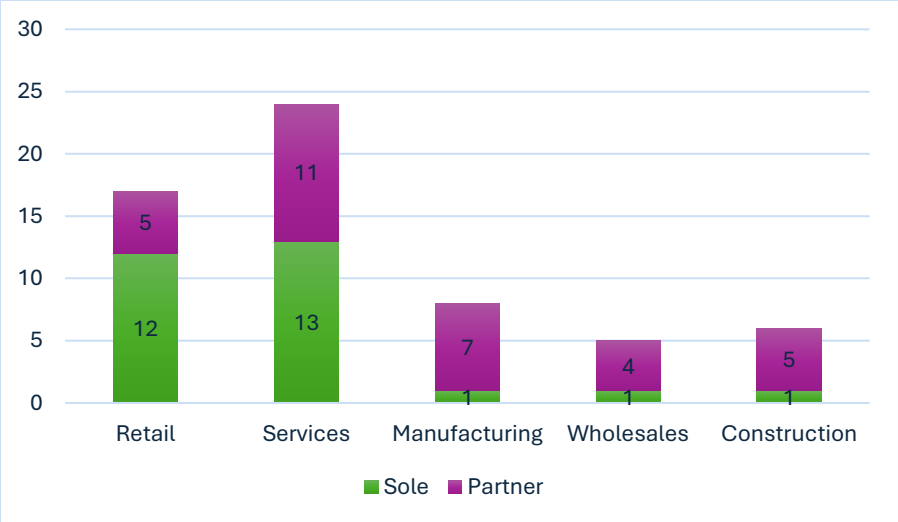


Figure 3 provides an analysis of the percentage distribution of businesses by their nature, specifically differentiating between sole proprietorships (green) and partnerships (purple) across various sectors,

including Retail, Services, Manufacturing, Wholesale, and Construction. The findings highlight significant variations in business ownership models across different industries. The data indicates that sole proprietorships are more common in the Retail (12%) and Services (13%) sectors. This trend is likely due to the relatively low barriers to entry and the personal nature of the services and retail businesses, which a single individual can effectively manage. Moreover, the flexibility and lower initial capital investment associated with sole proprietorships make them popular for small-scale entrepreneurs in these sectors.

In the manufacturing sector, partnerships own 7% of the businesses; sole proprietorship only owns 1% in the same sector. This is because manufacturing is generally capital-intensive and can involve some owners owing to its complexities, including the sharing of risks, skills, and connections, among others. The partnership model in this sector may afford the needed collaboration and risk-bearing that a sole proprietor may not handle on his own. Wholesales have a relatively higher percentage, with 4% being partnership businesses and 1% sole trader businesses. In comparison, the Construction sector also recorded a higher percentage of partnership businesses than the sole trader businesses. This may be because of the issues of capital intensity, risks, and the advantages of integrating several skills and competencies in the challenges of these sectors. Thus, the fact that sole proprietorships are barely present in these industries shows that these forms of businesses cannot work for people who do not have much money to invest or specific expertise.

High combined representation is recorded from the Services sector, with sole proprietors at 13% and partnerships at 11%. This, you will realize, goes a long way in proving the dynamism of the services sector, which comprises personal, professional, and technical services with diverse business models. The more proportional distribution of the two ownerships indicates that both possess their benefits regarding the selected sector depending on the type of services to be delivered, environment and business strategies. The study shows the importance of having unique support mechanisms, particularly targeting organizations that operate in different industries. Thus, specific programs and actions under the policies of promoting entrepreneurship in the Retail and Services sectors should be directed at sole traders, providing them with microcredit, training and IT education. On the other hand, the manufacturing, wholesale and construction sectors may find pressures arising from partnership-promoting measures that include co-investment, joint venture promotion and collaboration marketing, and the creation of networks and partnership databases.

The difference, like ownership structures by sectors, reaffirms that unique challenges and opportunities characterize each sector. For example, the fact that partnerships dominate manufacturing indicates that risks such as high start-up costs can be offset since cooperation works well in the industry. Looking at the retail and services industries, the results could indicate a relatively easy entry since most firms operate as sole proprietorship businesses. However, they may be highly exposed to market fluctuations and have limited growth potential.

The Chi-Square Test was run to analyze whether there is a significant association between the type of business ownership (Sole, Partner) and the nature of the business (Retail, Services, Manufacturing, wholesale, Construction).

Observed frequencies

Table 4: Nature of business

Ownership	Retail	Services	Manufacturing	wholesales	construction	total
Sole	12	13	1	1	1	28
Partner	5	11	7	4	5	32
total	17	24	8	5	6	60

Table 5: Expected Frequencies

	Retail	Services	Manufacturing	wholesales	construction
Sole Prop	7.933333333	11.2	3.733333333	2.333333333	2.8
Partnership	9.066666667	12.8	4.266666667	2.666666667	3.2

Table 6: Chi-square test between type of business and nature of business

Chi-square statistic (χ^2)	11.80
Degrees of freedom (df)	4
P-value	0.0189

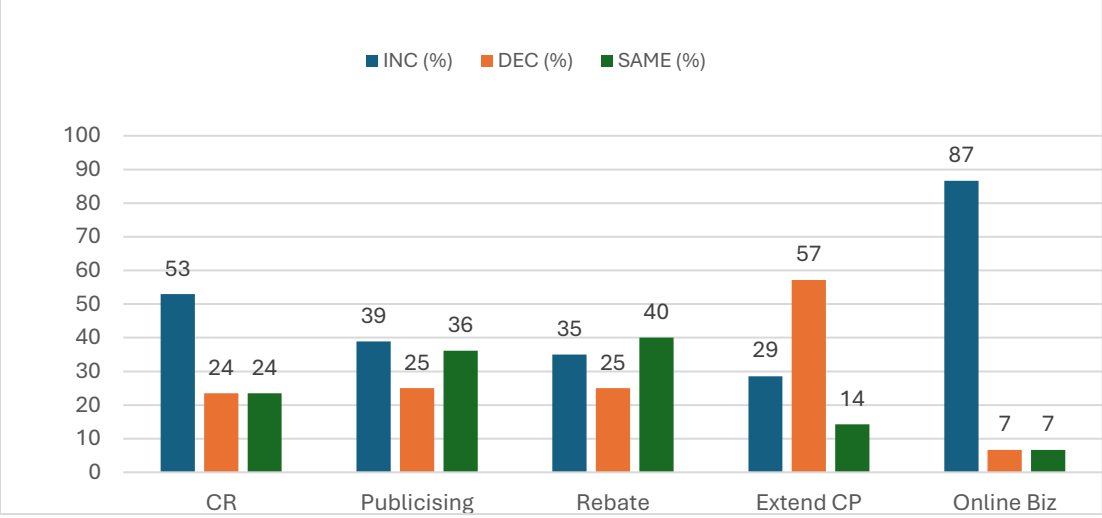
The Chi-Square Statistic (χ^2) is 11.80. This value represents the difference between the observed frequencies (actual data) and the expected frequencies (what we would expect if there were no association between the variables). Degrees of Freedom (df) are 4. The p-value is 0.0189. The p-value indicates the probability of observing a chi-square statistic as extreme as 11.80 (or more extreme) if there is no association between the type of business ownership and the nature of the business. Since the p-value (0.0189) is less than the significance level of 0.05, we reject the null hypothesis. This means there is a statistically significant association between the type of business ownership and the nature of the business. The differences between observed and expected frequencies suggest that certain types of business ownership (like sole or partner) are more or less common in specific business sectors than expected if there were no association. In conclusion, there is enough evidence to conclude that the type of business ownership (Sole or Partner) is significantly associated with the nature of the business. In practical terms, this means that different business sectors (e.g., Retail, Services, Manufacturing) have different likelihoods of being operated as sole proprietorships or partnerships.

The following findings discussed the turnaround strategies SMEs implement and their impact on business performance.

Table 7: Turnaround strategies implemented by SMEs

	INC	(%)	DEC	(%)	SAME	(%)
CR	18	53	8	24	13	24
PUBLICISING	14	39	9	25	2	36
REBATE	7	35	5	25	8	40
EXTEND CP	2	29	4	57	1	14
ONLINE BIZ	13	87	1	7	1	7
Total	54		27		25	

Figure 4: Turnaround Strategies Implemented by SMEs and impact on Business performance



The table presents the percentage impact of five turnaround strategies implemented by SMEs on their business performance. These strategies include Customer Relations Management (CRM), Publicising and Promoting, Offering Rebates, Extending Credit Periods, and Engaging in Online Business. The impact is classified into three categories: increase (INC), Decrease (DEC), and same (SAME), indicating the percentage of SMEs that experienced each outcome.

Customer Relations Management is seen as a quite efficient strategy with 53% of SME respondents experiencing an enhanced overall performance. This implies that strategies to develop customer relationship marketing, like customer service, customer loyalty, and communication, could improve organizational performance. Nevertheless, there is a 24% decline in business performance, which may suggest that the poor implementation or increased costs of rating and maintaining customer relations can lead to reduced effectiveness. Another 24% of respondents pointed to no change, which suggests that, while customer relations can indeed be critical, their effectiveness is likely to depend on certain industries or target client segments. Taking the message public has a moderately positive result: 39% of the companies responded with higher performance levels, while 36% stated that their performance did not noticeably change. Although communicating sustainability initiatives can improve the organization's image and attract environmentally concerned consumers, it may not guarantee growth. Moreover, 25% of SMEs noted a decrease, which can be attributed to the ineffectiveness of their marketing strategies or the expenses of promoting such initiatives. Therefore, publicizing and promoting initiatives can have a positive effect on the performance of SMEs.

Rebate promotion also had good and bad effects, with 35% of the SMEs experiencing increased performance and 40% stating that they did not experience any change at all in their performance. This implies that rebates can cause consumer acquisition within the initial stages or increase sales, but they may not invariably contribute to organic growth. Thus, rebates were shown to have a negative impact on performance for 25% of SMEs, perhaps because the associated discounts erode margins and do not generate adequate customer interest. The worst effect was observed in the case of credit period extension this tool negatively affected the SME's performance, and 57% of them faced it. Extending the credit period with suppliers undermines the company's liquidity. Essentially, only a few businesses experienced a positive shift in performance, with less than a third exhibiting an enhanced performance and 14 % showing no performance difference. The high percentage of declines also suggests that credit extension is a high-risk venture for most SMEs.

Engaging in online business was the most successful, and 87% of the SMEs stated increased performance. This has brought about the cost of digitization since running the operations online helps one to access new markets, increase efficiency, and meet the changing customer requirements. A smaller percentage of only 7% complained about performance decline, while another 7% reported no performance change, which underlines the high advantages of SMEs' participation in online business. The data were further analyzed using the chi-square test of independence. This test was run to see if there is a significant association between the type of sustainability strategy and business performance.

Table 8: Observed Data

	INC	DEC	SAME	Total
CRM	18	8	13	39
PUBLICISING	14	9	2	25
REBATE	7	5	8	20
EXTEND CP	2	4	1	7
ONLINE BIZ	13	1	1	15
Total	54	27	25	106

Table 9: Expected Frequencies

	INC	DEC	SAME
CRM	19.86792	9.933962	9.198113
PUBLICISING	12.73585	6.367925	5.896226
REBATE	10.18868	5.09434	4.716981
EXTEND CP	3.566038	1.783019	1.650943
ONLINE BIZ	7.641509	3.820755	3.537736

The chi-square test of independence determines if there is an association between sustainable strategies and business performance.

Table 10: Chi-square test between type of business and nature of business

Chi-square statistic (χ^2)	20.56
Degrees of freedom (df)	8
P-value	0.0084

The Chi-Square Statistic (χ^2) is 20.56, representing the total difference between the observed frequencies (actual data) and the expected frequencies (what we would expect if there were no association between the variables). Degrees of Freedom (df) in this test are 8, and the P-value is 0.0084. This value represents the probability of observing a chi-square statistic as extreme as 20.56 (or more extreme) if there is no association between the type of marketing strategy and business performance.

In conclusion, since the p-value (0.0084) is less than the significance level of 0.05, we reject the null hypothesis. This means a statistically significant association between sustainable strategies and business performance exists. The significant chi-square statistic indicates that the observed distribution of performance outcomes (Increase, Decrease, Same) across different sustainable strategies differs from expected if there were no associations. The results suggest that different sustainable strategies are associated with various business performance outcomes. For example, using "Online Boost" is associated with a higher rate of business performance increase, while "CRM" (Customer Relationship Management) strategies are more balanced across all three outcomes.

5. Contribution of the Study

This study makes several significant contributions to the literature on sustainability strategies and SME performance. First, through the assessment of the degree of success of important turnaround strategies like the management of customer relations, publicizing and promoting efforts, offering rebates, extending credit periods, and conducting online businesses, this study presents a range of insights on how these factors affect different aspects of SME performance. The implications highlight the most effective initiatives for SMEs when setting up business in a resource-scarce environment. The study helps to build up the overall understanding of digital transformation because it establishes that the level of business engagement in online platforms has a highly positive effect on the efficiency of SMEs. By identifying the growing importance of digital platforms in business, this research concludes that online business contributes to the success of SMEs in the current and increasingly competitive market, finally, by investigating the risks concerning such strategies as credit periods and rebates offered by the SMEs to its customers, thereby contributing to the gap in the literature on how traditional motivational tools can be counterproductive contributing to cash flow problems and operational issues. This realization is central to SMEs' efforts to adopt new sustainable and resilient practices in their business strategies.

Policy Implications

The findings from this study carry several important policy implications for governments, financial institutions, and business support organizations, such as the significant impact of engaging in online business on SME performance; policymakers should prioritize digital transformation initiatives. Programs that provide financial support, digital training, and technological infrastructure will help SMEs integrate online platforms into their

business operations. This is especially crucial for SMEs in developing regions with limited access to digital tools. Since CRM strategies have positively affected SME performance, albeit depending on execution, policymakers should support CRM capacity-building programs. Providing SMEs with tools and training on customer engagement and relationship management can strengthen customer loyalty and contribute to long-term business success. The study highlights the risks associated with extending credit periods with suppliers and offering rebates could result in cash flow issues. Thus, policymakers should consider creating financial safety nets for SMEs to avoid cash flow issues. Additionally, promoting financial literacy programs for SMEs can help businesses better understand the financial risks of these strategies and implement them more effectively. Publicizing and promoting efforts can enhance brand reputation, but its impact on performance is context-dependent. Governments and trade organizations can help SMEs by guiding sustainability marketing and helping them tailor their sustainability messages to attract environmentally conscious consumers without incurring excessive costs.

Limitations of the study

It has a cross-sectional design, which reduces the chances of setting causal relationships between sustainability strategies and SME performance, and it uses ratings that can be biased. Also, there is a possibility of not capturing the sector-specific characteristics or replicating the results for other geographical or cultural settings. Five sustainability strategies do not encompass other potentially effective strategies like green technology or CSR plans; external factors are the economic and regulatory influence. The effectiveness of the strategies is not captured in the study. Several possibilities for further research can be identified, including using longitudinal data, extending the list of examined strategies, and accounting for differences by sector and geographical location.

Conclusion

This research examined the effects of five types of turnaround activities: CRM, publicizing and promotion activities, giving rebates, extending credit periods, and engaging in online business on SMEs' performance. The study also reveals that online business is the best approach to enhancing SME performance and increasing sales, profitability and efficiency. It is also worth noting that CRM strategies improve performance. However, their impact is highly dependent on effective implementation. On the other hand, the poor performance of credit period extension influenced negative cash flows, which is risky for SMEs. I found that the positive impacts of publicizing and promoting efforts and offering rebates were moderate, while the negative impacts were negligible, meaning their effectiveness depended on the environment. Therefore, the paper also strongly emphasizes the right choice of measures that can positively influence the performance of a business and properly address the risks connected with sustainability issues.

Recommendations

SMEs should prioritize digital transformation by engaging in online business to improve performance and efficiency, with support from government programs providing training and financial assistance. Strengthening customer relationship management (CRM) practices is essential for boosting customer loyalty, and tailored CRM tools should be made available. SMEs need to cautiously implement strategies like extending credit periods and offering rebates, as these can strain cash flow, with financial literacy programs helping mitigate risks. Publicizing and promoting efforts should be enhanced through targeted messaging, with guidance from trade organizations. Finally, policymakers should offer sector-specific support to ensure that SMEs adopt the most effective strategies based on their industry context.

SMEs must promote the performance and efficiency of operations by adopting online businesses as a shift toward digital transformation while seeking assistance from relevant government programs for training and funds. The importance of enhancing customer relationship management (CRM) in raising customer commitment should not be overlooked, with customized CRM tools to be provided. However, offering rebates can be risky to SMEs since they affect the cash flows, but financial literacy programs can assist in reducing the impacts. Publicizing and promotional practices should be promoted through accurate marketing strategies, as affirmed by trade organizations. Lastly, policymakers must provide targeted assistance with the implementation of these strategies to help SMEs pick optimal strategies depending on the industry environments in which they operate.

Ethical Considerations

The study will adhere to strict ethical standards to ensure the confidentiality and privacy of respondents. Informed consent will be obtained from all participants before data collection. The data will be anonymized to protect the identity of the SMEs involved, and all responses will be stored securely.

Limitations of the Study

The study focuses only on SMEs that have already implemented turnaround strategies, which may not capture the experiences of SMEs that have yet to adopt these practices. Additionally, the cross-sectional nature of the study limits the ability to assess the long-term impacts of the strategies.

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Board Size and Corporate Performance in the Industrial Property Sector in Malaysia

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Abstract: This research investigates the relationship between the size of the board of directors and the financial performance of publicly listed industrial property firms in Malaysia. The study examines secondary data from annual reports, financial statements, and corporate governance disclosures, focusing on key financial performance indicators such as Return on Assets (ROA), Return on Equity (ROE), and Net Profit Margin (NPM). The study reveals significant correlations between board size and financial performance using correlation analysis and multiple regression. The findings provide valuable insights for regulators, investors, and business leaders, emphasizing the importance of refining corporate governance standards to ensure long-term financial success in Malaysia's industrial property sector.

Keywords: *Board Size, ROA, ROE, NPM, Industrial Property, Malaysia*

1. Introduction

The industrial property market in Malaysia has experienced notable growth, particularly over the recent past, which has been supported by the increasing manufacturing industry and the efforts put in place to attract FDI. The manufacturing plant, logistic centers, and warehousing facilities have become inevitable in Malaysia due to the increase in demand from electronics trading in e-selling and electrical and electronics (E&E) sectors, as acknowledged by Knight Frank, 2023. However, despite the positive growth trend, Malaysia experiences several domestic and global challenges that can hurt the sector.

This is so because macroeconomic factors affect the overall growth of an economy, and country-specific factors affect the growth of the industrial property market in Malaysia, including geopolitical risks around the world and locally, as well as inflation and political risks. The COVID-19 pandemic hurt the supply chain, causing rising costs of raw materials and labor (Rahim & Co Research, 2023). The following disruptions are some of the challenges that have affected the inflation rates, thus putting pressure on the property sector. The price of construction materials has increased, resulting in increased project costs and longer time to develop industrial projects. Furthermore, the shortage of labor, especially exceptionally skilled labor, has led to bottlenecks in developing projects, which has forced the sector to experience many difficulties (EdgeProp, 2023).

Political instability in Malaysia has also contributed to uncertainties in the business environment. Shifts in government and policy changes have led to investor confidence fluctuations, particularly among foreign investors, who are essential for the continued expansion of the industrial property sector. According to the Malaysian Investment Development Authority (MIDA), in 2022, foreign investments accounted for 60% of total approvals in the manufacturing sector, highlighting the significant role of international capital in driving industrial growth (MIDA, 2023). However, political instability and unclear regulatory frameworks have caused some foreign investors to adopt a wait-and-see approach, which could slow future industrial development.

In addition to economic and political challenges, environmental concerns are becoming increasingly relevant in the Malaysian industrial property sector. Sustainability and compliance with Environmental, Social, and Governance (ESG) standards are growing priorities for developers, mainly as investors increasingly demand green and energy-efficient industrial spaces (Sunway Property, 2022). The push toward sustainable industrial development, while beneficial in the long term, presents short-term challenges, particularly in terms of higher initial costs. Many developers must incorporate green technologies, increasing upfront capital expenditures while navigating land scarcity in prime industrial zones (Knight Frank, 2023). These factors drive up property prices and rental rates, making it harder for businesses to find affordable spaces in critical areas.

Based on the current economic and political challenges the sector faces, ensuring the company can succeed in the industry in the long term is critical. Therefore, effective corporate governance, especially regarding board structure, is vital in how companies navigate market uncertainties and drive financial performance. The board of directors oversees management and provides strategic direction, playing a central role in corporate governance. One of the most debated aspects of board structure is its size. The relationship between board size and financial performance has been an issue of considerable academic debate. In some contexts, larger boards have been associated with higher performance, particularly in terms of Return on Assets (ROA) and Return on Equity (ROE), as the broader range of expertise can contribute to more informed decisions (Coles et al., 2008). However, other studies have found no significant relationship between board size and specific financial performance metrics, such as Net Profit Margin (NPM), suggesting that the benefits of larger boards may be context-dependent (Eisenberg et al., 1998). In Malaysia's industrial property sector, where firms face industrial challenges and global pressures, understanding the optimal board size for financial success remains an open question.

This study will compare the board size of the ten most prominent property development companies listed in Bursa Malaysia with the financial performance of Malaysia's industrial property sector. The quantitative work aims to assess the impact of the board size on the financial performance between 2018 and 2022. We hope that the findings will help understand the effectiveness of corporate governance practices, especially the board structure, in improving the industry's financial performance and contributing to Malaysia's economic growth.

Research Objectives (RO)

The following are the research objectives that are expected to achieve:

RO1: To examine the relationship between board size and Return on Assets (ROA) in the Malaysian industrial property sector.

RO2: To analyze the impact of board size on Return on Equity (ROE) in the Malaysian industrial property sector.

RO3: To investigate the correlation between board size and companies' Net Profit Margin (NPM) in the Malaysian industrial property sector.

Research Questions (RQ)

The following are the research questions that are expected to answer:

RQ1: How does the size of the board of directors influence the Return on Assets (ROA) of companies in the Malaysian industrial property sector?

RQ2: What is the relationship between board size and Return on Equity (ROE) in companies within the Malaysian industrial property sector?

RQ3: Is there a significant correlation between the size of the board of directors and the Net Profit Margin (NPM) of companies in the Malaysian industrial property sector?

2. Literature Review

It is important to note that the relationship between board size and financial performance is complex and influenced by various factors.

Board Size

The corporate board size is one of the critical determinants of governance and performance, and empirical studies have produced inconclusive evidence concerning the optimal board size. Boards with more directors bring more diversity and possibly higher expertise. They may have positive impacts on ESG standards, as those revealed by recent studies showing that firms with larger boards and more women on them provided more substantial ESG promises (Sepulveda-Nuñez et al., 2024). Nonetheless, other works show that there is a negative relation between board size and firm performance; German firms showed that mandated board size increases cause a decline in operating return on assets and Tobin's (Jenter et al., 2023) Consequently, this study's results imply that, although the expansion of board size can be helpful, it might also imply increased decision-making difficulties and coordination issues that need to be counterbalanced to obtain the best results of governance and performance (WAFUKHO et al., 2022). The existing literature on board size can be divided into two main streams: The empirical stream tests the relationship between board size and various measures of corporate performance, such as profitability, market value, growth, innovation, and social responsibility, and the theoretical stream and the empirical stream. The theoretical stream provides different perspectives and

arguments on how board size influences the board's functions and outcomes, such as decision-making quality, monitoring effectiveness, resource provision, and conflict resolution.

Board size significantly shapes the expertise and perspectives contributing to corporate governance (Chatjuthamard et al., 2021). Smaller boards are considered more effective in reducing agency costs and are more likely to hire generalist CEOs (Agrawal & Lakshmi, 2020). However, the impact of board size on financial performance is inconclusive, with some studies finding no significant relationship (Pratiwi & Chariri, 2021). In the banking sector, smaller board sizes, fewer non-executive directors, and minimum activity levels are associated with better performance (Falikhatun & Putri, 2022). Additionally, board size positively correlates with market performance, especially in larger banks, while board activity tends to have a negative correlation. Furthermore, board size is positively related to profitability in public sharia insurance.

As for the effect of board size on financial performance, the findings of the literature are still ambiguous. Some empirical research finds a positive correlation between the effect of greater board size on high financial performance; conversely, a negative or insignificant correlation is also identified. For instance, a study conducted in Nigeria established a direct relationship between board size and corporate financial performance. It recommended the formation of a large board to improve measures such as return on equity (ROE) and return on capital employed (ROCE) (Igbinosa et al., 2024). However, a study in Vietnam established an inverse relationship between board size and financial performance, meaning that financial performance decreases as board size increases. It may be because large boards make decision-making more difficult (Phong Le & Nguyen, 2024). Also, a study on the Indonesian foreign exchange banks was carried out, and the result indicated a non-significant negative coefficient of the board size on the Financial Performance measures such as ROA and ROE (Bahari, 2024). These contradictions accentuate the board size-performance link frictions and imply that contextual aspects and industrial features may cause dramatic outcome differences (Oktriasih, 2024). Thus, while some evidence supports the notion of larger boards enhancing performance, caution is warranted due to varying results across different contexts.

However, large boards may bring drawbacks to the effectiveness of the company's operations. A larger board of directors may face problems in terms of communication and coordination, as well as decision-making. The director may become a free rider as the board size is larger and the director neglects its monitoring and control duties. Consequently, small boards might be more effective in monitoring managerial behavior and positively related to earnings management (Jaggi & Leung, 2007). There is a negative association between board size and firm value (Kumar & Singh, 2013). Therefore, neither argument is likely to explain satisfactorily the relationship between board size and earnings management.

Most of the studies in the empirical stream have shown mixed or no significant signs or negative relationships between the size of the board and the firm's performance, depending on the circumstances, the methods of data analysis, and the measurement of the variables. Some scholars have observed signs of a negative relationship between board size and corporate performance, and the conclusion has been made that larger boards are as effective and efficient as smaller boards (Yermack, 1996; Huther, 1997; Conyon & Peck, 1998; Bhagat & Black, 2001; Cheng, 2008; Belkhir, 2009). Other research has indicated a direct link between board size and firm performance, suggesting that larger boards yield more benefits and resources than small boards (Dalton et al., 1999; Lehn et al., 2003; Raheja, 2005; Coles et al., 2008). Some of the studies have not established any correlation or a curvilinear correlation between board size and corporate performance to suggest that the right board size depends on several factors and contingencies (Eisenberg et al., 1998; Bohren & Odegaard, 2001; Postma et al., 2003; Loderer & Peyer, 2002; Beiner et al., 2004; Bennedson et al., 2004). Also, recent studies have focused on the moderating role of some other corporate governance factors, including board leadership structure, board diversity, board independence, and boards' committees on the board size & corporate performance nexus (Elsayed, 2011; Affes & Jarboui, 2023).

Several more recent articles have investigated the moderating roles of other corporate governance factors, including the board leadership structure, board diversity, board independence, and board committees' structure on the board size and the corporate performance nexus. For instance, Affes and Jarboui (2023) established that board leadership structure influences the association between board size and corporate performance in the sense that the negative association is more pronounced in the group of firms that have

combined chairmen and CEOs than in the group of firms that have separate chairmen and CEOs. Likewise, Al-Matari et al. (2020) claim that firm size and ownership concentration mediate the relationship between board size and corporate performance; the positive correlation is more substantial in firms with low ownership concentration and large firm size.

Financial Performance Indicator

When evaluating a company in the property development industry, one has to look at its various financial and operational indicators for effective evaluation of the company's performance, prospects, and soundness.

Return on Assets (ROA)

As a measure of financial performance, Return on Assets (ROA) is useful for analyzing a company's performance since a business uses its assets to generate returns. ROA is one of the financial ratios, and it computes the company's net income in proportion to its total assets. It is one of the most commonly used indicators that allows investors and other stakeholders to assess the profitability and efficiency of a company (Antić et al., 2022; Mogonta & Pandowo, 2016). Several scholars have realized that ROA positively impacts market share price; this enhances the use of ROA in identifying a suitable investment opportunity for investors(Cronjé & De Beer,2010). Also, it has been predicted that in comparisons, when ROA is adjusted by the efficiency of Operating Income and Operating Expenses, it represents a much stronger projection of future performance, thus establishing a positive correlation between ROA and future earnings (Cernisevs et al., 2023). Consequently, the hypothesis that was developed based on the above discussion was as follows:

H1: The size of the board of directors is positively correlated with the financial performance (ROA) of companies in the Malaysian industrial property sector.

Return on Equity (ROE)

ROE is one of the most popular financial ratios for analyzing the performance and profitability of a firm. It captures the amount of investment income and factors such as gross profit margin, asset turnover, and financial leverage (Antić et al., 2022). Analysts consider ROE to be one of the most critical indicators when evaluating the financial performance of a business, and it is adopted when investing in shares. Yet, ROE can give a distorted picture of an organization's financial performance because of factors, including earnings legerdemain, the influence of financing decisions on risk and procyclicality, and inflation. However, these limitations have not trivialized ROE due to the potential of relating the statement of income with the statement of balance and for being a constituent of the DuPont analysis that provides a broad outlook of organized corporate performance (Moussu & Petit-Romec, 2017). It is pertinent to mention that ROE helps evaluate firm financial performance. However, using this ratio would require other financial ratios and factors to create an all-around appreciation of a company's business operations (Ricordel & Majlath, 2019). Therefore, based on the above discussion, the following hypothesis was proposed.

H2: The size of the board of directors is positively correlated with the financial performance (ROE) of companies in the Malaysian industrial property sector.

Net Profit Margin

The net profit margin is an indication of how efficient a firm's financial operation is (Budiyanta, 2021). This measure is applied to examine the profitability of the company in earning revenues according to the positively recognized revenues (Zager et al., 2016). The net profit margin defines profitability using the relation of gross profit and sales (Antić et al., 2022). The net profit margin could be variable in the relevant years and could be influenced by factors such as market forces and other competitors as well as generally the economy (Moch & Hamdi, 2022). Therefore, it is a key indicator that investors, together with other stakeholders, can use in the evaluation of the financial standing of a firm. Hence, in the above discussion, the following hypothesis was formulated:

H3: The size of the board of directors is positively correlated with the financial performance (NPM) of companies in the Malaysian industrial property sector.

3. Methodology

This research employs quantitative, correlational work, and its objective is to determine the correlation between board size and financial performance in the Malaysian industrial property market. The study used

document analysis to gather data from the annual reports, financial statements, and corporate governance reports of the ten most listed industrial property companies in Bursa, Malaysia. It included only the companies with significant market capitalization and significant positions in the market so the sample could describe the significant actors of the sector. The emphasis is placed on the financial information that has been gathered within five years, starting from 2018 up to 2022. Following this timeline enables one to examine performance trends and governance practices over this period, thereby arriving at a more conclusive result regarding the effects of board size on key financial ratios such as ROA, ROE, and NPM. In this study, the author proposes board size as the independent variable while financial performance indicators are the dependent variables; hence, the study applies multivariate regression analysis to analyze the correlation between board size and these measures of firm performance. Companies have been chosen, and a period of analysis has been considered in line with the fact that this study aims to study the leading firms that hold overwhelming influence over the Malaysian industrial property market to find out how factors such as board size affect financial performance in this crucial industry.

4. Findings

A cross-sectional analysis with a time series component is a research method that examines multiple subjects (in this case, companies) at a specific time and tracks changes in these subjects over a defined period. It allows for a snapshot of the current situation (cross-sectional) and an understanding of how these subjects evolve (time series). This analytical approach is particularly suitable for this study because it enables comparing the financial performance of different companies within the same industry at specific points in time. By combining cross-sectional and time series elements, this analysis provides a comprehensive view of the financial landscape, allowing for a deeper understanding of the factors influencing the performance of these companies.

Figure 1: Board size of the companies (2019-2022)

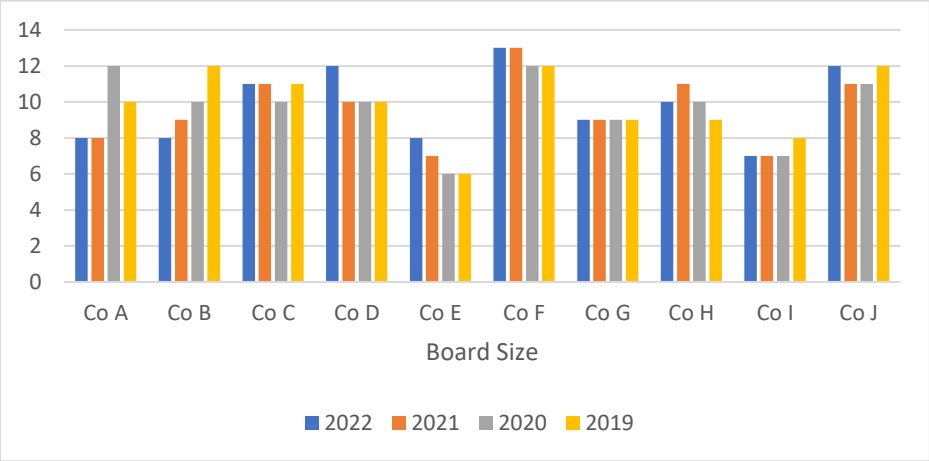


Figure 1 illustrates the board size of ten companies (Co A to Co J) over four years (2019 to 2022). Board size also shows significant variation in the number of members across companies and over the years. What stands out from the data is the considerable variations in the board size: there are variations by company and year. Perhaps they indicate that factors such as companies' performance, changes to the legal requirements, or perhaps shifts in business strategies could affect the composition of the boards. No overall pattern of board increases or decreases in size is apparent for the four years under consideration. Maybe it could mean that small and big enterprises included in the dataset employ a more fluid approach to the factor of board size since there is no general strategy for achieving growth or reduction based on board configuration. As can be observed from the chart, there are different trends in each firm. For instance, it seems that the size of the board of Co A has been relatively consistent over the years, whilst the board of Co B is less consistent. Such trends indicate that several other factors explaining the company's features, like ownership, business model, or the phase of its development, can affect the board size.

Figure 2: Return on Assets (2018-2022)

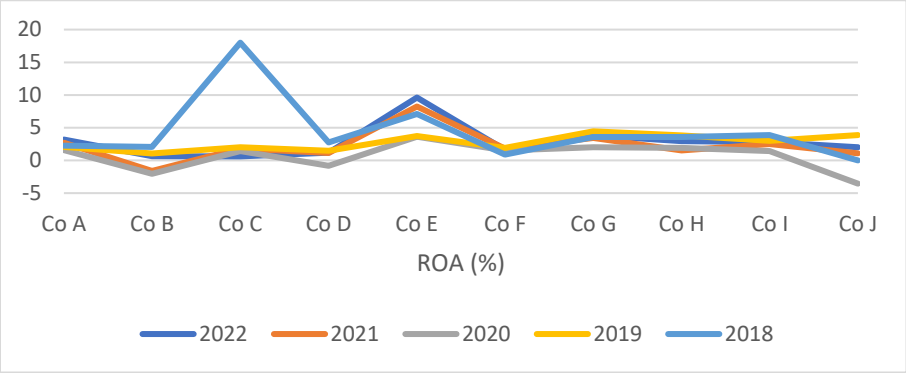


Figure 2 displays the Return on Asset (ROA) of ten sample companies, Co A to Co J, in five years: 2018 to 2022. This graph presents a very active state of the companies' ROA performance, as illustrated above. The most significant level of fluctuation is reflected in ROA, which can sharply differ between companies and years. It suggests that industry forces, firm-level factors, and macroeconomic factors have impacted profitability to a reasonable extent. It was also found that the ROA of most companies moved up and down in the analyzed period. This means sustaining constant profitability is essential in the industry, possibly due to changes in the business cycle regarding competition and operations. The above graph indicates that some firms gave 2021 higher ROA than other firms in a similar industry; for instance, Co C. It may be due to a good strategy implementation process operational efficiency or implementation of cost leadership strategy, or due to some favorable market conditions. Businesses with a rate of return on assets below the industry average, such as Co J, can have issues with the increase in profits. After reviewing the trends for each company, it is possible to note that their performance shapes different trends. However, some companies, such as Co A, offered ROA that fluctuated slightly; others had more volatile profiles. It indicates the different approaches and actions regarding the external environment of the companies.

Figure 3: Return on Equity (2018-2022)

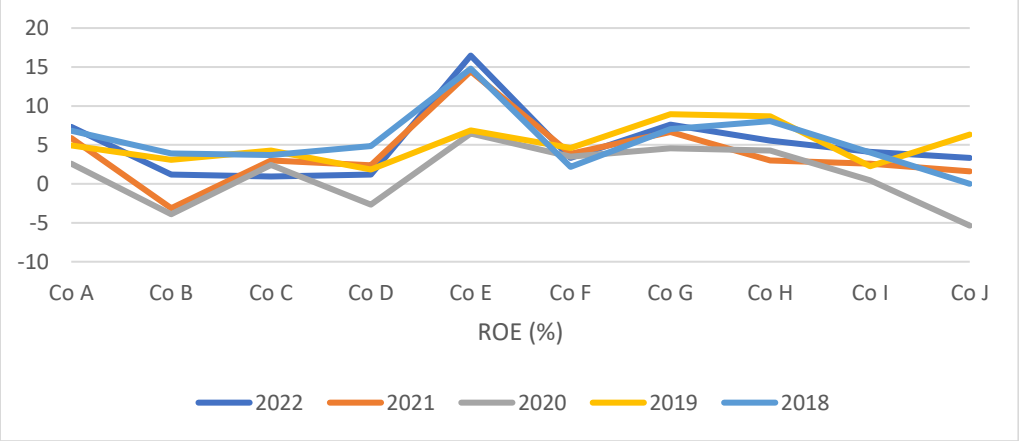


Figure 3 presents the Return on Equity (ROE) for ten companies (Co A to Co J) for five years (2018-2022). One can also observe fluctuations in the performance of ROE in the graph of these companies. The most significant finding is that both inter-firm and inter-annual variation is substantial for ROE. This shows that industry forces, firm-level behavior, and economic factors have significantly impacted shareholders' value. There was consistency in ROE among most of the companies over the analyzed period, as shown in the figure above. There is an inference that steady and sustainable shareholder returns are difficult to achieve in the industry based on economic cycles, competitive pressures, and operations changes. For instance, Co. E had an extraordinarily high ROE in 2022 compared to other firms it competed with. It could result from good strategies invested, good capital management, or pleasant market factors. Industries that record low average ROE, such as Co J, are under pressure to increase shareholders' value. Fig 4 breaks down the trend within each company, and the result

shows that the companies' performances are on different trends. Such strongly fluctuating ROE values existed in some companies, whereas in others, like Co A, they remained within a narrow range. It also shows different activities and organizations' approaches and actions toward external stimuli.

Figure 4: Net Profit Margin (2018-2022)

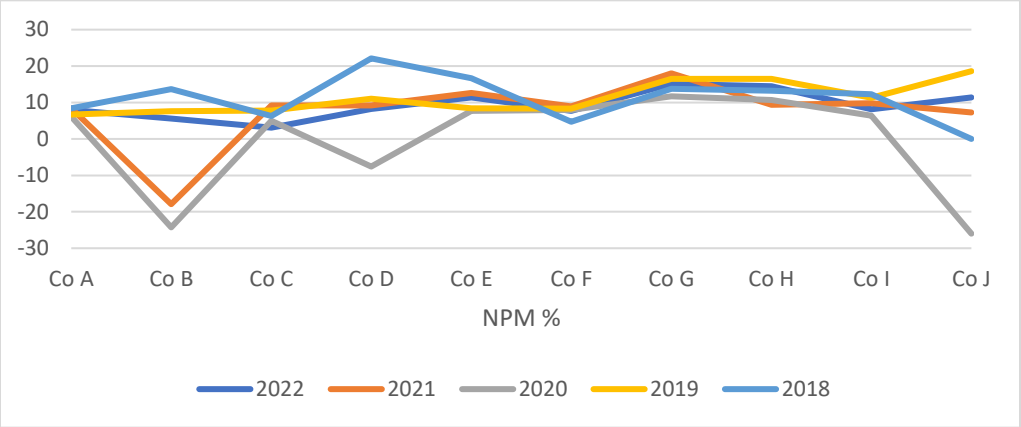


Figure 4 shows the Net Profit Margin (NPM) percentage of Ten Companies (Co A to Co J) in five years. The graph captures variance in NPM performance among companies and the years where performance experiences high volatility in some companies while others record relatively low volatility. The most obvious fact from the above data is that the NPM values vary broadly between companies and over periods. It shows that factors such as the dynamics in the industry, the specifics of the company's management strategies, and the prevailing economic factors have impacted profitability. Most firms displayed variations in the levels of NPM over the analyzed timeframe. It implies variability in making sustained and stable profits in the industry, probably because of economic fluctuations, competition forces, or changes in operation. A few, such as Co. G, realized a relatively high NPM compared to other firms in 2022. It could be due to successful cost control, pricing policies, or the conditions of the marketplace. Organizations with low or negative NPM, like Co J, experience a significant challenge in increasing profitability. Exploring the trends presented within every company, it is possible to conclude that the performance profiles differ. Some companies, such as Co. A showed moderate changes in NPM, while others had higher oscillations in the indicator. It identifies various management strategies and the companies' reactions to external conditions.

Multivariate Analysis

Multivariate regression is designed to analyze the relationship between multiple dependent variables (ROA, ROE, NPM) and one or more independent variables (BDS). By running a multivariate regression, we can simultaneously examine the relationship between the size of the board and each of the three financial performance measures. It will provide a comprehensive understanding of how the board size influences overall financial performance.

Table 1: Multivariate Tests

Effect		Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	.594	19.498[b]	3.000	40.000	.000
	Wilks' Lambda	.406	19.498[b]	3.000	40.000	.000
	Hotelling's Trace	1.462	19.498[b]	3.000	40.000	.000
	Roy's Largest Root	1.462	19.498[b]	3.000	40.000	.000
BDS	Pillai's Trace	.788	2.138	21.000	126.000	.005
	Wilks' Lambda	.366	2.306	21.000	115.409	.003
	Hotelling's Trace	1.323	2.436	21.000	116.000	.001
	Roy's Largest Root	.869	5.212[c]	7.000	42.000	.000

a. Design: Intercept + BDS
b. Exact statistic
c. The statistic is an upper bound on F that yields a lower bound on the significance level.

Multivariate Tests

In Multivariate Analysis, the **Multivariate Tests** table provides multiple test statistics to assess the impact of independent variables on the combination of dependent variables. Pillai's Trace, Wilks' Lambda, Hotelling's Trace, and Roy's Largest Root test the null hypothesis that the mean vectors are equal across groups. If the significance value (Sig.) is less than the level of significance (usually 0.05), you reject the null hypothesis. The significance value of BDS (Board Size) is below 0.05 in all tests, indicating that Board Size has a statistically significant relationship between Board Size and the set of dependent variables (ROA, ROE, NPM) collectively.

Table 2: Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	ROA	84.855[a]	7	12.122	3.369	.006
	ROE	271.050[b]	7	38.721	2.875	.015
	NPM	749.639[c]	7	107.091	1.330	.260
Intercept	ROA	218.287	1	218.287	60.665	.000
	ROE	714.229	1	714.229	53.039	.000
	NPM	2212.429	1	2212.429	27.481	.000
BDS	ROA	84.855	7	12.122	3.369	.006
	ROE	271.050	7	38.721	2.875	.015
	NPM	749.639	7	107.091	1.330	.260
Error	ROA	151.126	42	3.598		
	ROE	565.580	42	13.466		
	NPM	3381.309	42	80.507		
Total	ROA	497.042	50			
	ROE	1738.226	50			
	NPM	7211.131	50			
Corrected Total	ROA	235.981	49			
	ROE	836.630	49			
	NPM	4130.948	49			

a. R Squared = .360 (Adjusted R Squared = .253)
b. R Squared = .324 (Adjusted R Squared = .211)
c. R Squared = .181 (Adjusted R Squared = .045)

Tests of Between-Subjects Effects

This table informs about the significance of each predictor (independent variable) on each dependent variable. For Board Size (BDS):

- ROA: The model is significant (p = .006), suggesting that board size has a significant impact on Return on Assets (ROA).
- ROE: The model is also significant (p = .015), indicating that board size significantly influences Return on Equity (ROE).
- NPM: The model for Net Profit Margin (NPM) is not significant (p = .260), suggesting that board size does not have a significant impact on NPM.

R-squared Values

- The R-squared values for ROA and ROE are relatively low (.360 and .324, respectively), indicating that board size explains only a small portion of the variation in these dependent variables.
- The R-squared value for NPM is even lower (.181), suggesting that board size explains very little of the variation in NPM.

Discussion

The findings from the multivariate tests provide valuable insights into the relationship between board size and financial performance in the Malaysian industrial property sector. The results suggest that board size has a statistically significant effect on some financial performance indicators but not all, and this mixed outcome aligns with prior research on corporate governance.

Impact of Board Size on Return on Assets (ROA)
The analysis shows that board size significantly positively affects Return on Assets (ROA), with a p-value of .006, supporting **Hypothesis 1 (H1)**. The R-squared value for ROA is .360, meaning that board size explains 36% of the variation in ROA. Although this indicates a significant influence, it also highlights that other factors beyond board size contribute to how efficiently a company uses its assets to generate income.

The positive relationship between board size and ROA aligns with prior research, which suggests that larger boards can provide a broader range of expertise and insights that contribute to better resource allocation and decision-making (Coles et al., 2008). In the industrial property sector, where strategic decisions about asset utilization are critical, larger boards may help improve oversight of long-term investments in warehousing, logistics, and industrial facilities. Recent studies also emphasize that larger boards contribute to more robust corporate governance, enhancing operational efficiency (Fitrasari, 2023). However, the relatively modest R-squared value suggests that factors such as market dynamics, industry-specific challenges, and operational strategies are also significant determinants of asset efficiency in this sector.

Impact of Board Size on Return on Equity (ROE)
Board size also significantly positively affects Return on Equity (ROE), with a p-value of .015, supporting **Hypothesis 2 (H2)**. The R-squared value for ROE is .324, indicating that board size explains 32.4% of the variation in ROE. It supports the idea that larger boards can contribute to more effective oversight, particularly ensuring companies use shareholders' equity to efficiently generate profits. This finding is consistent with literature suggesting that larger boards provide enhanced corporate governance and reduce agency costs, which can lead to better financial performance (Abdel-Wanis, 2021). In Malaysia's industrial property sector, where companies typically manage large capital investments, the presence of a larger board can help ensure that these investments are used wisely, particularly in capital-intensive projects. Additionally, a diverse and well-rounded board can contribute to strategic financial decisions that improve ROE. However, as with ROA, the moderate R-squared value suggests that factors such as market conditions, capital structure, and executive decision-making also play critical roles in determining ROE (Tatlı et al., 2023).

Impact of Board Size on Net Profit Margin (NPM)
Interestingly, the analysis reveals no statistically significant relationship between board size and Net Profit Margin (NPM), with a p-value of .260, leading to the rejection of **Hypothesis 3 (H3)**. The R-squared value for NPM is only .181, indicating that board size explains just 18.1% of the variation in NPM. This suggests that board size is not a key determinant of profitability relative to revenue in the industrial property sector.

The lack of a significant relationship between board size and NPM may be attributed to the nature of the sector, where profitability is often more affected by external factors such as economic cycles, demand for industrial space, and fluctuations in construction costs. Larger boards may provide strategic oversight, but their impact on operational efficiencies or cost management, which directly influences NPM, appears limited (Igbinosa et al., 2024). Recent studies have found similar results in other industries, where board size does not significantly influence profitability metrics due to external market conditions and operational factors (Wang et al., 2024). This finding highlights the importance of considering other elements, such as market forces and operational management when analyzing profitability in this sector.

Contribution of the Study
This research enriches the knowledge of corporate governance scholars to extend the analysis of board size and firms' performance within the Malaysian industrial property industry. In opposition to the current research that analyzed more extensive environments, the present work provides relevant data for industries and professionals as well as scholars. Completing the paper that describes the effect of board size on financial measures of performance: Return on Assets (ROA), Return on Equity (ROE), and Net Profit Margin (NPM) in a sector that is central to the growth of Malaysia's economy, this research contributes significantly to the knowledge base that researchers and policymakers can draw from in their attempts at advancing understanding of the relationships between board size, and financial performance. The study adds to knowledge in corporate governance by establishing board size as important for particular financial characteristics but not for all aspects of financial performance. Further, this study contributes to the understanding of emerging markets where the context of governance structures can deviate from the context

of developed countries. In this way, the findings of this research would contribute to the theoretical development by outlining a relatively underexplored sector and region, which would highly prove useful for future studies of governance in a similar context.

Practical Implications

Therefore, the findings of this study are a valuable source of knowledge for practitioners in the Malaysian industrial property sector. First, the top management of these firms should review the size of their boards while they seek to enhance the financial performance in terms of ROA and ROE of the company's assets and equity, respectively. The current research reveals that the size of the board since the boards of larger organisations can improve oversight and strategic decision-making, is vital for the significant investments characteristic of this segment. This is substantiated by the findings of the study, which reveal that there is no difference between board size and profit margins (NPM); hence, companies should not rely on the size of the boards to propel their profit margins ahead. However, such aspects as operations efficiency, cost control, and the state of the market contribute to achieving profitability goals to a much greater extent.

These findings may be helpful for regulators and policymakers to deliberate on corporate governance directions in Malaysia, specifically on board size for companies in the industrial property sector. The research also notes that board diversity cannot be solved while neglecting the concept of efficiency, thus conforming to the idea of compromise of balance.

Limitations of the Study

This study has made the following contributions. However, this research study comes with the following limitations. Firstly, the sample is fixated on the top ten industrial property companies listed in Bursa Malaysia. Hence, the results are not general to all the companies, especially the small and the private companies. The results may not be the same as those of other companies, particularly the small ones or those that have different ownership structures. Second, the study limited the analysis to five years of data from 2018-2022 and may miss long-term changes in the board governance or changes in the financial performance. Furthermore, the study looks at board size as the only measure of corporate governance, while other factors that define the board, such as board diversity, independence of directors, and the existence of sub-committees that can affect financial performance, are not included in the research. Lastly, concern about Malaysia's industrial property sector may restrict the results from generalizing to other sectors or regions. These relationships may also differ across industries and countries; therefore, the study of the latter requires further research.

5. Conclusion and Recommendations

Conclusion

This present research seeks to establish the relationship between board size and companies' performances, specifically with the selected industrial property firms in Malaysia in terms of their ROA, ROE, and NPM. The findings observed that board size has a positive relationship with ROA and ROE but is independent of NPM. This implies that boards of large size are effective in the management of organizational assets and deployment of equity resources without improving the profitability level. The study presents evidence that the configurative dimension of corporate governance, particularly board size, is important in as much as it has implications for particular financial consequences. Although, the results analyzed may differ depending on the other performance indicators involved. From such conclusions, corporate managers and policymakers in the industrial property market of Malaysia can understand and appreciate the relevance of paying attention to the board size and composition in a way that enhances the performance of the business outfits. However, depending upon the various components of financial performance, it is necessary to accept that board size cannot directly theorize overall corporate value and other phenomena must be considered in terms of governance and management.

Recommendations

The next scientific findings allow for recommendations regarding further research and practical usage of the given topic. First, it is possible to define the appropriate board size by balancing the board members' specialization and the speed of making decisions for companies in the industrial property sector. Since board size is positively related to Return on Assets (ROA) and Return on Equity (ROE), greater board size could benefit

firms as it provides an opportunity to add members with specialized knowledge of asset management and capital allocation. This would help companies reduce cost and time when making strategic decisions through efficient functioning of the firm's daily business operations. Therefore, the author recommended that future studies focus on other factors that support the conception that board size does not impact NPM and that companies should focus on functional and effective cost control. This may entail setting up technologies to achieve efficiency within supply chain systems or sometimes improving ways and means of using resources to increase profitability levels without necessarily having to rely more on governance structures. In this case, regulators and policymakers should find it more useful to devise particular governance strategies. Such guidelines should be prescriptive but flexible to acknowledge the fact that the best size for a board depends on the sector. In the case of industrial property, dominance, and relatively large boards that should hopefully enhance oversight and planning could have positive implications. However, the regulations should permit the firms to alter their board size depending on the requirements and surroundings that they find themselves in. Sector-based governance reforms would assist organizations in matching their board structure with the needs of different markets, thus improving their performances.

In future studies, it will be useful to focus on the further analysis of governance factors. Research could investigate other governance factors including the board of directors' independence, mix, and operations of the sub-committees. This would in turn give a better view of the role of corporate governance in effecting financial performance. Further, it would be interesting to analyze the impact of the size of the board in various industries and geographies particularly in emerging economies. To this end, this could assist in establishing the level of generalisability of the findings from this study to other settings. Moreover, future empirical research that aims to establish the short and long-run correlation between board size and financial performance would be useful in elucidating the long-run impacts of board structure especially in industries, that take a long time to complete their investment business cycle like industrial property. This would provide a wider perspective on studying the equilibrium between corporate governance and financial performance within different industries and other variables. Taken from this perspective, these recommendations would assist scholars and practitioners in advancing their knowledge on the contribution of corporate governance towards financial performance in industries that are strategic to creating value in an economy through industrial property.

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The Influence of Prayer, Al-Quran Recitation, Physical Exercise, and Holidays on Positive Thinking: Exploring Stress Coping Strategies for Mental Well-Being

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Abstract: This research delves into how prayer practices and recitation of Al Quran, along with activity and holidays, contribute to nurturing perspectives as ways to deal with stress effectively in the workplace setting where job-related stress can significantly impact both personal well-being and productivity within organizations. It is crucial to comprehend and encourage beneficial coping mechanisms in such scenarios. The study investigates the correlation between these coping strategies and positive thinking, recognized for their role in bolstering mental well-being and stress handling. A quantitative cross-sectional approach was employed for this study. Participants filled out questionnaires to measure how often and how much prayer practices like reciting the Al Quran, engaging in exercise, and holidays influenced their outlook on life. Researchers used linear regression analysis to determine how important each activity was in boosting thinking. The results showed that prayer sessions, physical activity, and spending time with family during holidays positively promoted positivity in individuals' minds; among these activities, holidays seemed to have an effect. However, reciting the Al Quran did not have an impact, based on the analysis of this study. The findings emphasize how adding rituals and hobbies to our routines can boost mental health and help us manage stress better in the long run. This research provides tips for people looking to manage stress and maintain a positive mindset.

Keywords*: Job Stress, Positive Thinking, Coping Strategies, Mental Well-being, Stress Management*

1. Introduction

In today's workplace, more people recognize job stress as a problem. These stresses occur when work demands exceed a person's capabilities or ability to manage them, leading to emotional responses. This stress can enormously affect one's professional and personal life. Stress can present in different forms, including feelings of nervousness and burnout, issues with focus and attention, headaches, and muscle tension.

If job stress is poorly handled, it results in high absenteeism rates, low productivity, and high workplace accidents. It also raises the risks of developing a chronic health condition, including heart disease, diabetes, and a deep feeling of depression. Thus, it becomes vital to identify the symptoms of job stress and learn how to prevent or cope with it. Job stress, defined as a negative reaction to elevated job demands or lack of enough resources, does not only pertain to the individual level; it has a ripple effect on individuals, organizations, and the larger society. This common problem mostly affects the employee, though the impact is broader, leaving ripples that affect different life facets.

Some of the resulting signs, which are physical, include headaches, muscle tension, digestive problems, and compromised immunity. Some studies suggested that chronic work stress is associated with cardiovascular disease, diabetes, sick cancer, etc. (Steptoe & Siegrist, 2002). Daily job stress includes constant pressure and emotional stress, which affects mental health. Another study by (Akerstedt et al., 2004) has revealed that job stress leads to anxiety, depressed mood, and burnout. Such mental disorders can, in turn, worsen the existing physical ailments, which can culminate in a cycle of struggles.

This means that when one is stressed, one will not be able to concentrate, make good decisions, and perform tasks effectively. As supported by (Kelloway & Wright, 1995), this kind of decline in productivity is likely to hurt the worker and the organization. This is so because, with job stress, individual employees experience a negative impact, reducing organizational productivity. Research by Wright and Tetrick (1991) has established that stressed-out employees will likely lead to low organizational production. This means that when employees are chronically stressed at work, they are likely to be more absenteeism due to health issues or even look for a new

job. They highlighted that absence, and turnover rates may lead to severe monetary losses to the organizations by consuming manpower and training costs and eradicating employee morale.

Long-term job stress results in low morale and organizational climate, lack of cooperation, and high staff conflict. As Westman and Haynes (1991) pointed out, this negativity can increase stress levels and thus contribute to a vicious cycle that is often hard to control. Thus, increased cases of job stress mean that society incurs great costs in terms of healthcare expenditure and loss of productivity. New health problems due to stress also result in increased use of healthcare facilities, leading to pressure on facilities. In addition, when people are unable to work to the best of their potential because of job stress, total output in the economy reduces, and this might stunt growth and development.

Given these realities, the search for ways to reduce stress has become even more crucial. This has led to recognizing positive thinking as one of the most effective ways of helping individuals cope with life challenges and enhancing their mental health. Optimism, or having a positive attitude to events in life, reinforcing aspects of solutions rather than dwelling on problems, has boosted psychological well-being and quality of life. Positive thinking is most applicable when people try to make sense of modern-day stressors, which could be at different levels, such as individual, organizational, or general stress. Besides positive thinking, other strategies like prayer, reciting Al-Quran, exercise, and family holidays have also been investigated in terms of self-assertiveness and mental health.

Prayer has been assumed to be a religious activity that yields comfort, tranquillity, and a feeling of association with the divine power, which gives hope for a positive mind. Likewise, in many Muslim societies, reciting the Al-Quran is considered one of the most effective ways to manage stress and ease the mind, buttressing faith, positivity, and sound mental health. Exercise, fundamental to boosting physical health, is equally effective in improving mental 'strength' and optimism. Exercise directly enhances the manufacture of body chemicals that improve moods, thus making it handy to enhance positive mental status when stressed. Finally, general outings, which include family holidays or family trips, provide relaxation, recreation, togetherness, positivity, and, thus, an emotional boost.

This research focuses on these coping mechanisms: prayer, recitation of Al-Quran, exercises, and holidays, as well as how they impact the generation of positive thoughts. Focusing on shifts in an individual's way of thinking due to these practices, this study seeks to contribute towards a better understanding of how various coping strategies can improve one's mental health and attitude to life. The implications of this research will help to increase the knowledge about stress and positive psychology to a significant extent and provide practical recommendations for people who have problems with stress and want to change their attitude to life and possibilities to be content.

Research Objectives

The main objective of this research is to explore the impact of various coping strategies (prayer, Al-Quran recitation, physical exercise, and holidays) on fostering positive thinking. Specifically, the study seeks to achieve the following objectives:

- To examine the effect of prayer on positive thinking.
- To analyze the relationship between Al-Quran recitation and positive thinking.
- To assess the influence of physical exercise on positive thinking.
- To determine the impact of holidays on positive thinking.
- These objectives will help guide the research in understanding how coping mechanisms influence and promote positive thinking, providing insights into effective stress management strategies.

Research Questions

- What is the relationship between prayer and positive thinking as a coping strategy for managing stress?
- How does Al-Quran recitation impact the development of positive thinking in individuals experiencing stress?
- What is the effect of physical exercise on promoting positive thinking in response to stress?
- How do holidays influence positive thinking for stress relief?

2. Literature Review

Positive thinking

Positive thinking is considered a coping strategy for dealing with stress. Developing realistic and health-improving positive thinking is believed to help individuals overcome stress and improve their overall well-being (Bessaraba et al., 2022). Coping with stress involves detecting, appraising, and responding to stressful encounters, and positive thinking is seen as one of the ways individuals vary in their coping responses (Zimmer et al., 2023). Stress arises when individuals interpret a situation as taxing their available resources, and coping strategies can be categorized as emotion-focused or problem-focused (Knapp & Sweeny, 2022). Effective stress interventions often include cognitive-behavioral elements and can be directed toward the individual or the organization (Reif et al., 2021). In the context of hypertension, positive thinking training has been found to significantly reduce stress levels in individuals with hypertension (Aulia & Widyana, 2022). Overall, positive thinking is seen as a valuable coping strategy for managing stress and improving well-being.

Prayer

Prayer is a coping strategy commonly used to deal with academic stress. Several studies have explored the relationship between prayer and stress in different populations. For example, a survey conducted with Chilean students found that prayer was negatively related to stress and positively predicted subjective well-being, especially when students felt a close bond with God (Sari et al., 2023). Another study focused on nurses and found that religious coping, including prayer, was commonly used to reduce work-related stress (Wnuk et al., 2023). Additionally, a scale called the Using Private Prayer for Coping (UPPC) was developed to assess the use of private prayer for coping with crisis or distress, and it showed satisfactory psychometric properties (Nopa et al., 2023). Overall, prayer appears to be a valuable coping strategy for individuals facing various types of stress, including academic stress. Based on the rationale, individuals who frequently engage in prayer may foster a mindset of optimism, hope, and resilience, leading to increased positive thinking. Therefore, the following hypotheses are proposed:

H1: Prayer has a significant positive effect on positive thinking.

Al-Quran Recitation

Reciting the Qur'an is an effective coping strategy for managing stress (Ridzuan et al., 2020; Darwati, 2022; Hasan et al., 2021; Pratiwinata & Tohdeng, 2023). Research by Mahmoud & Saleh (2023) shows that the Al-Quran guides how to deal with stress and offers various coping mechanisms. It emphasizes the importance of sincerity, patience, remembrance of Allah, repentance, prayer, positive thinking, and optimism. Reciting the Al-Quran helps individuals focus and find solace in spirituality. It has been shown to reduce academic stress among students. Memorizing the Al-Quran is also associated with lower levels of psychological stress. The Al-Quran significantly alleviates stress and promotes mental well-being, making it a valuable resource for individuals seeking effective coping strategies. Based on the above discussion, reciting the Al-Quran may help individuals develop a more positive outlook by reinforcing messages of patience, faith, and hope. Therefore, the following hypotheses are proposed:

H2: Al-Quran recitation has a significant positive influence on positive thinking.

Physical Exercise

A cross-sectional study by Pyun et al. (2022) has shown that physical exercise can help manage stress (Zhou et al.,2022). Stress management and enhancement of mental health by exercising physically have also been discovered (Slukhenska, 2018; Popov et al., 2021). Regular physical activity can decrease perceived stress levels and enhance the ability to cope with stress (Ferlazzo et al., 2020). It also helps people to have a better mood, increased self-esteem, and a healthy body. Some hormonal effects include adrenaline, noradrenaline, and cortisol, which are known to be affected by physical activity. They play a role in regulating the body, enabling it to cope with stress and recover from its effects. Thus, exercising can help to reduce stress and is a true medicine for the body and mind. Based on the above discussion, regular physical exercise is associated with mental clarity and emotional well-being, which can foster more positive thinking. Therefore, the following hypotheses are proposed:

H3: Physical exercise significantly contributes to positive thinking.

Tour holiday family trip

Coping with stress during a family holiday trip can involve various strategies and approaches. Recognizing that stress arises when individuals perceive a situation as taxing their available resources (Knapp & Sweeny, 2022). Coping strategies can be problem-focused, emotion-focused, or relationship-focused (Zimmer et al., 2023). Problem-focused coping directly addresses and solves the issues or challenges during the trip. Emotion-focused coping focuses on managing and regulating one's emotions in response to stressful situations. Relationship-focused coping involves managing and preserving relationships while dealing with stress (DeLongis & Newth, 2001). Additionally, coping flexibility, which refers to the ability to adapt one's coping strategies based on the demands of the situation, is crucial for effective coping (Bartram & Gardner, 2008). It is also essential to consider individual differences in coping responses and the potential for resilience and growth following stressful events (Krohne, 1986). Based on the above discussion, relaxing family vacations or holiday trips can reduce stress and promote a positive mindset, providing opportunities for recreation, bonding, and emotional rejuvenation. Therefore, the following hypotheses are proposed:

H4: Family holidays or trips have a significant positive impact on positive thinking.

3. Research Methodology

This study adopts a quantitative cross-sectional design to investigate the relationship between individual coping strategies (prayer, Qur'an recitation, physical exercise, positive thinking, and family holiday trips) and stress reduction. The target population for this study includes individuals who use various coping strategies to manage stress. A sample size of approximately 150-200 participants was selected to ensure the representativeness and statistical power of the findings. A stratified random sampling method was employed to ensure a diverse sample representing different age groups, professions, and religious affiliations. The study used self-administered structured questionnaires to collect data from participants. The questionnaires were distributed via online survey platforms. The anonymity and confidentiality of participants' information were strictly maintained. The data were analyzed using SPSS. Multiple Linear Regressions were conducted to assess the relative contribution of each coping strategy to positive thinking.

4. Data Analysis

Demographic Analysis

Table 1: Demographic Analysis provides a snapshot of the respondent profile.

Indicator	Item	Proportion
Gender	Male	25.2%
	Female	74.8%
Age	Up to 25 years	11.3%
	26 to 35 years	43.5%
	36 to 45 years	17.4%
	46 to 55 years	25.2%
	Above 55 years	2.6%
Marital Status	Single	23.5%
	Married	73.9%
	Divorced	0.8%
	Widowed	1.8%
Educational Qualification	Undergraduate	2.0%
	Professional certificate	5.0%
	Diploma	13.9%
	Bachelor's degree	53.0%
	Masters/PhD degree	26.1%
Job Experience	< 5 years	22.6%
	5 to 10 years	33.0%
	11 to 15 years	16.5%
	to 20 years	5.3%

	>20 years	22.6%
Monthly Income	<RM5,000	51.3%
	RM5,001 to RM10,000	33.9%
	RM10,001 to RM15,000	13.0%
	RM15,001 to RM20,000	1.0%
	>RM20,000	0.8%

The sample is predominantly female, constituting 74.8% of the respondents, while males account for 25.2%. Most respondents fall within the age group of 26 to 35 years (43.5%), followed by 36 to 45 years (17.4%). A relatively smaller proportion belongs to the younger age group (up to 25 years) at 11.3%, while a minimal percentage is above 55 years (2.6%). Most respondents are married (73.9%), followed by single (23.5%). Divorced and widowed individuals represent a small proportion of the sample. The sample is highly educated, with a majority holding a bachelor's degree (53.0%). Masters/PhD degrees account for 26.1%, while diploma holders constitute 13.9%. A small percentage holds professional certificates or undergraduate degrees. Most respondents have job experience ranging from 5 to 10 years (33.0%), followed by those with less than five years (22.6%). A significant proportion also has more than ten years of experience. Most respondents have a monthly income below RM5,000 (51.3%), followed by the RM5,001 to RM10,000 income bracket (33.9%). The higher-income group represents the smallest proportion of the sample.

The demographic profile of the respondents provides valuable context for understanding the research findings. The predominance of females in the sample suggests that the results may be more representative of women's perspectives and experiences. The relatively young age of most respondents implies that the findings might be more applicable to younger working professionals. The high educational attainment of the sample indicates a higher level of awareness and engagement in various aspects of life, which could influence their responses to the study's questions. The income distribution suggests that a significant portion of the respondents belong to the middle-income group, which might affect their consumption patterns and lifestyle choices.

Through the demographic analysis of the respondents, it is possible to gain a broader understanding of the outcomes of the study. This means that the study results may offer a more feminine perspective, as most of the sample comprises females. The fact that most respondents were relatively young indicates that the results might be more relevant to young employees. Therefore, the high educational level of the sample means that the people have a better understanding of different aspects of life, which might affect their answers to the questions posed in the study. This pattern implies that most of the respondents can be considered middle-income earners, which is likely to influence consumption patterns and lifestyle choices.

Multiple Regression Analysis

The results of the multiple regression analysis are presented to examine the relationships between the dependent variable (Positive Thinking) and the independent variables (Holiday, Prayer, Physical Exercise, and Al-Quran recitation). Multiple regression analysis was conducted to determine how these variables predict positive thinking and assess each predictor's unique contribution while accounting for others' influence.

The following sections will provide detailed results on the model's overall fit, the statistical significance of each predictor, and their respective impacts on positive thinking. The discussion will interpret these findings in light of existing research and provide insights into their practical and theoretical implications. The limitations and potential areas for future research will also be considered.

Table 2: Analysis of Variance ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	60.627	4	15.157	16.546	.000[b]
	Residual	100.764	110	.916		
	Total	161.391	114			

a. Dependent Variable: Positive

b. Predictors: (Constant), holiday, prayer, pe, alquran

The analysis of variance (ANOVA) indicates that the regression model is statistically significant, with an F-value of 16.546 and a p-value of 0.000. It suggests that the independent variables (holiday, prayer, PE, and Al-Quran) collectively explain a significant portion of the variance in positive thinking.

Table 3: Coefficients[a]

Model		Unstandardised Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.018	.355		.050	.960
	prayer	.301	.120	.249	2.502	.014
	alquran	.071	.103	.069	.687	.493
	pe	.243	.097	.225	2.511	.014
	holiday	.304	.095	.277	3.206	.002

a. Dependent Variable: Positive

The coefficients table provides detailed insights into the individual contribution of each predictor. The unstandardized coefficient for prayer is 0.301, with a p-value of 0.014, indicating that prayer significantly contributes to higher levels of positive thinking. The unstandardized coefficient for AlQuran is 0.071, with a p-value of 0.493, showing that this predictor is not statistically significant in explaining positive thinking. The coefficient for pe is 0.243, with a p-value of 0.014, suggesting a significant positive relationship between pe and positive thinking. The coefficient for holidays is 0.304, with a p-value of 0.002, indicating that holidays significantly promote positive thinking among individuals.

Table 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.613[a]	.376	.353	.95710

a. Predictors: (Constant), holiday, prayer, pe, alquran

The total Sum of Squares is 161.391, with the regression model explaining 60.627 and the residual sum being 100.764. This demonstrates that the set of predictors included in the model explains a considerable portion of the variability in positive thinking.

Discussion

The multiple regression analysis conducted in this study aimed to examine the combined and individual effects of four independent variables: holiday, prayer, PE (physical exercise), and Al-Quran, on the dependent variable, positive thinking. The goal was to determine which factors significantly influence positive thinking and to quantify their contributions to this psychological construct. The discussion below interprets the statistical results, considers the implications of the findings, and reflects on their broader context considering existing research.

The ANOVA table indicated that the overall regression model was statistically significant ($F = 16.546$, $p = 0.000$), meaning that the independent variables collectively explain a significant portion of the variance in positive thinking. It is an important finding because it supports the hypothesis that multiple aspects of an individual's life, including holiday, prayer, physical exercise (PE), and engagement with Al-Quran recitation, are related to their capacity for positive thinking. The total variance explained by the model, as seen in the sum of squares, shows that 60.627 units of variance are attributable to the regression model. In comparison, 100.764 units remain unexplained, corresponding to the residual. Although the model accounts for a significant portion of the variance, there is still a substantial amount of unexplained variance. It suggests that other factors not included in this analysis may also play an important role in influencing positive thinking, and these should be explored in future research.

The coefficients table provides crucial insights into the contribution of each predictor to the overall model. The unstandardized coefficients (B) show how much positive thinking is expected to change with a one-unit change in each predictor while holding the others constant. The coefficient for prayer was 0.301 with a p-value of 0.014,

indicating that this predictor had a statistically significant positive impact on positive thinking. This finding aligns with the broader literature, which often points to the role of spiritual practices in enhancing well-being and promoting a positive outlook on life. Prayer is likely associated with mental clarity, a sense of purpose, and emotional regulation, all of which contribute to positive thinking. The coefficient for Al-Quran was 0.071, and the p-value of 0.493 indicates that this predictor did not significantly contribute to positive thinking. This non-significant result suggests that, within this sample, engagement with religious texts did not have a measurable impact on positive thinking. The influence of Al-Quran on positive thinking might depend on factors such as the depth of engagement or personal interpretation.

Further research might explore moderating variables, such as religious commitment or frequency of study, to better understand this relationship. The coefficient for PE was 0.243 with a p-value of 0.014, indicating a significant positive relationship between physical activity and positive thinking. This result is consistent with a wealth of research demonstrating the mental health benefits of regular physical activity, including enhanced mood, reduced stress, and improved cognitive functioning. Physical activity likely boosts endorphin levels, contributes to overall well-being, and fosters a sense of accomplishment, all promoting positive thinking. The coefficient for a holiday was 0.304, and the p-value of 0.002 indicates a strong, statistically significant impact on positive thinking. Time spent on holiday or leisure activities has long been associated with mental rejuvenation, relaxation, and a break from the stresses of daily life. The significant positive effect found in this study reinforces the notion that holidays allow individuals to reset mentally, thus fostering a more positive outlook.

The findings from this multiple regression analysis have several practical implications, particularly for mental health practitioners, educators, and policymakers aiming to promote positive thinking and overall well-being. The significant contributions of prayer, PE, and holidays to positive thinking suggest that interventions designed to enhance individuals' spiritual, physical, and leisure experiences could effectively improve their mental health. For those who comprehend the benefits of spirituality, it is possible to help them set a routine of prayer or meditation, as a combination of these two can be strength-building. Spiritual practices may complement what is taught in mental health courses or may be presented as other materials that a learner may find helpful in coping with stress or building up a positive outlook. Both conceptual and empirical evidence of different forms of exercise programs and initiatives for introducing exercise in society can be beneficial in boosting the physical and psychological condition. Corporate programs and institutions such as schools might focus on enforcing more chances for exercise to enhance an individual's mood and, subsequently, their cognition to spread positive thinking. Since holidays positively impact one's thinking, the importance of relaxation can be underlined. Reminding people to take time off work by going on vacation or engaging in properly prescribed leisure activities is necessary within society and for the individual. Such measures, which are better working conditions, adequate paid time off, and the encouragement of employers to take such time off, are crucial to influencing a positive workforce outlook.

5. Conclusion, Limitations and Future Research

While the model provides valuable insights into the predictors of positive thinking, several limitations should be noted. First, the model's relatively modest portion of variance suggests that other unmeasured variables may significantly influence positive thinking. Factors such as personality traits, social support, or life stressors might also play crucial roles in shaping an individual's mindset and could be included in future research. Additionally, the non-significant finding for Al-Quran recitation raises questions about the contextual and individual factors that moderate the relationship between engagement with religious texts and positive thinking. Future research could investigate whether this relationship is stronger in more religiously observant populations or individuals who interpret religious teachings in specific ways. Finally, the cross-sectional nature of the data limits the ability to draw causal inferences. While the analysis suggests associations between the predictors and positive thinking, longitudinal studies are needed to confirm these relationships and explore potential causal pathways.

Conclusion

The multiple regression analysis revealed that prayer, pe, and holidays significantly predictors positive thinking, while Al-Quran recitation did not significantly contribute to this context. The findings underscore the importance of integrating physical, spiritual, and leisure activities to enhance positive thinking and mental well-

being. Individuals and communities can cultivate more positive mindsets by fostering environments that promote regular physical activity, provide opportunities for spiritual reflection, and encourage work-life balance. Future research should continue exploring the complex interactions between various predictors and positive thinking to provide a more comprehensive understanding of what drives this important psychological construct.

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Evaluating the Impact of Workplace Interventions on Employee Stress Management: Insights from Health Awareness Programs, Job Redesign and Recreation Centre Access

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Abstract: Workplace stress is a growing concern, with serious implications for employee well-being and organizational performance. This study examines the impact of various workplace interventions on employees' ability to manage stress, such as health awareness programs, vacation and holiday trips, job redesign, recreation center access, and social support systems. This study used a cross-sectional research design; data were collected through a structured questionnaire and analyzed using logistic regression. The results reveal that health awareness programs and access to recreation centers significantly improve employees' stress management. Job redesign showed a marginally significant effect, while vacation trips and social support systems did not significantly influence stress management. These findings highlight the importance of targeted interventions in supporting employees' mental health and reducing stress, particularly through health awareness initiatives and access to recreational facilities. Organizations should focus on these strategies while further exploring the potential benefits of job redesign and the quality of vacation policies.

Keywords: *Workplace stress management, Health awareness programs, Job redesign, Recreation center access, Employee well-being*

1. Introduction

Stress has emerged as one of the major issues affecting people in workplaces and carries serious consequences on the health of employees and the performance of organizations. Several stressors are apparent today, including high job demands, long working hours, and little recovery time. If not well handled at the workplace, stress leads to both physical and mental disorders such as anxiety, depression, burns, and an increased rate of cardiovascular diseases. In addition, stress that is not managed negatively impacts productivity and job attendance and compromises co-workers' interpersonal relationships in the workplace (Hasin et al., 2023; Vallasamy et al., 2023).

Organizations have realized the need to pay attention to stress to have healthy, motivated, and productive employees. For this purpose, many worksite interventions have been implemented, such as health promotion programs, stress management training, recreation facilities, and job enrichment programs. Such interventions assist the workers in managing stress, hence enhancing worker performance and satisfaction in their work (Joshi et al., 2023). Yet, when performing these strategies, it turned out that many organizations are unable to determine the extent to which these interventions enhance the possibilities of managing stress at the staff level. Understanding how specific workplace interventions influence employees' stress management outcomes is essential. Effective stress management supports employees' physical and mental health and enhances organizational performance by promoting job satisfaction and reducing absenteeism (Yunus & Chaudhary, 2023). With growing awareness of the benefits of proactive stress management, organizations must identify which interventions are most effective in helping employees cope with stress.

Despite the growing emphasis on workplace stress management, there is still limited empirical evidence on the relative effectiveness of different interventions in enhancing employees' ability to manage stress. Many organizations have implemented health awareness programs, vacation and holiday trips, job redesign, and recreational activities. Yet, it remains unclear which interventions have the most significant impact on employee stress management.

This study aims to fill this gap by examining the effects of specific workplace interventions such as health awareness programs, vacation and holiday trips, job redesign, recreation center access, and social support

systems at the workplace on employees' ability to manage stress. Specifically, the study seeks to address the following research question:

Research Objectives

The following were the research objectives of this study.

- To examine the relationship between participation in health awareness programs and employees' stress management.
- To investigate how company trips influence employees' ability to manage stress effectively.
- To explore the impact of job redesign on employees' stress management.
- To assess the role of recreation center access in employees' stress management.
- To analyze the effect of social support systems at the workplace on employees' ability to manage stress.

Research Questions

The following were the research questions for the study.

- What is the relationship between participation in health awareness programs and employees' stress management outcomes?
- How do company trips influence employees' ability to manage stress?
- Does job redesign improve employees' ability to manage stress effectively?
- What is the role of access to a recreation center in enhancing stress management among employees?
- How does a strong social support system at the workplace affect employees' stress management?

2. Literature Review

Job-Stress management strategies

Stress at work can impact employees' well-being, reduce productivity, and create job dissatisfaction in many organizations (Gunasekra & Perera, 2023). Several factors contribute to it, including workload, role conflict, poor working conditions, lack of control, poor relationships with colleagues and supervisors, job insecurity, lack of recognition or rewards, and poor work-life balance (Vallasamy, 2023). Symptoms of job stress include physical, psychological, and behavioral ones, affecting employees and organizations alike (Mitreka Satata et al., 2022). Physical health problems associated with job stress include cardiovascular disease, musculoskeletal disorders, and gastrointestinal disorders (Gunasekra & Perera, 2023; Vallasamy et al., 2023); and psychological disorders like anxiety, depression, and burnout (Leka et al., 2018; Hasin et al., 2023). In the healthcare sector, occupational stress among professionals can lead to physical and mental health issues, work-related delays, and poor quality of care (Joshi et al., 2023). Additionally, job stress can have detrimental effects on mental health, particularly among formal and contractual experts in agricultural organizations. Informal female workers in Lao PDR also experience job stress, which can lead to physical symptoms and mental health stigma (Mamom et al., 2023). These findings highlight the importance of focusing on job stress to promote employee well-being and reduce the adverse effects on physical and mental health (Lisowski & Grajek, 2023).

Dealing with job-related stress can be a real challenge, but there are numerous coping techniques to try out to manage it effectively. Consider taking part in a health and wellness program (Rajuskar, 2023), going on a vacation or a short trip (Deen et al., 2023), exploring job redesign options (Çelik & Köse, 2022), visiting a recreation center (Racu, 2023) and building a supportive social network at work. Integrating these methods into our daily routine can minimize stress and achieve a more balanced work-life harmony.

Stress management

Workplace stress management is vital for employee and organizational performance improvement. Some of these strategies have been highlighted as the best ways to deal with stress that affects employees, including health awareness programs, company trips, job redesign, support systems, and recreation facilities. Promoting more health awareness events can help employees learn how to cope with high stress and improve their coping status (Patil, 2019). Such interventions have included mindfulness and counselling, which have significantly affected occupational stress (Alkhawaldeh et al, 2020). Such leisure trips help unite employees and reduce work-related stress, creating a healthy organizational culture (Panigrahi, 2016). Recreational facilities are found to be synonymous with encouraging people to be physically active, and this is regarded to have positive

effects on mental status (Rodrigues & Gopalakrishna, 2024). Redesigning jobs can include assigning tasks and dividing work, thus reducing stress levels because work becomes feasible (Panigrahi, 2016). Even though peer support and professional counseling are recognized in seconded workers, their support is also required to prevent workplace stress (Awino et al., 2018). Still, to these strategies, it is important to understand that stress reduction is not a top priority in many organizations; therefore, even if such problems exist in an organization, they remain unabated (Patil, 2019).

Taking part in a health and wellness program

Stress is prevalent within numerous employment places, affecting the workers' health, productivity, and moods (Wiharjanto et al., 2024). To Chen et al. (2023), implementing a multimodal HWP, such as exercise classes accompanied by nutrition workshops, enhanced the BMI and blood pressure of the employees. Johnson et al. (2023) examined the correlation between HWP involvement and employee performance. According to them, people who went through the stress management courses demonstrably reported higher productivity levels than those who could not attend the workshop. Work-life balance as an aspect of performance was investigated by Lee et al. (2023) about the effects of HWP participation. Subsequently, through the same survey, they observed that the mindfulness training workshop participants recognized the skills superior to dealing with work stress outside the workplace. Therefore, based on this, the first hypothesis was developed:

H1: Employees who participate in health awareness programs experience better stress management than those who do not.

Going on vacation or holidays

The issue of chronic stress also remains an important problem that hurts the population's health, which is manifested by various less or more severe ill effects on health. Stress management is important at the individual level for enhancing the quality of one's life. This review discusses the literature accumulated so far, such as Deen et al. (2023) work on the benefits of vacations and short trips in alleviating stress. Leisure activities are taken as a break from compelling activities that affect an individual mentally and physically and engage in activities that make them happy. Thus, an ultimate positive impact is promoting healthier ways of dealing with stress in everyday life. Holidays and short breaks help in psychological removal from work and other duties and, thus, provide a form of escape and relaxation. Sonnentag & Fritz (2015) established that people whose ability to disconnect from work whilst on vacation did so tend to reduce stress. Enjoying and having fun by traveling and experiencing different cultures during vacations enhances positive effects and memories to combat stress in the future. Fredrickson (2013) recommends that it is possible to boost the ability to cope with stress through the development of positive emotions. Expeditions, journeys with more than four consecutive days, and trips aimed at rest and leisure may be more beneficial, according to the findings of Boswell & Strahler (2014). De Bloom et al. (2020) also stress the need for personal preferences to be taken when planning vacations to reduce stress. Therefore, this study proposed the following hypothesis.

H2: Employees who take company trips have improved stress management compared to those who do not take time off.

Exploring job redesign options

One potential approach for managing workplace stress is to explore job redesign options, as suggested by Çelik and Köse in a 2022 study. It could involve re-evaluating job tasks, roles, and responsibilities and changing to promote a healthier and more balanced work environment. By addressing the root causes of stress through job redesign, organizations can potentially improve employee well-being, job satisfaction, and overall productivity. Job redesign can increase motivation and job satisfaction but can also lead to dissatisfaction if the new job design does not align with employees' educational backgrounds (Setia Putra, 2022). Barnett et al. (2004) focused on reduced-hours career options for women in the healthcare sector. They found that violations of psychological contracts resulting from reduced hours can lead to turnover intentions among professionals and reduced-hours employees. Yip and Rowlinson (2009) identified job characteristics associated with burnout in the construction industry and formulated job redesign as an intervention strategy to reduce burnout. Holland and Brewster (2021) discussed the importance of job and work design in developing a committed workforce, particularly in the context of the pandemic and the shift to remote work.

H3: Job redesign (e.g., changes in work tasks, role clarity, or flexibility) is positively associated with improved stress management among employees.

Visiting a recreation center

Of all the stress management techniques that have been recommended, one of them is going to a recreation center. That is why it is possible to conclude that the presence of a recreation center can help reduce stress. Recreation centers offer different activities, for instance, games, exercises, gym, saunas, etc, which can enable one to relax and reduce stress (Racu, 2023; Aslakson et al., 2023). It can also stimulate socialization and help use the body, thus enhancing proper mental and physical health (Figueira et al., 2022; Lagunes-Córdoba et al., 2022).

H4: Employees with access to a recreation center report better stress management compared to those who do not have access to such facilities.

Building a supportive social network at work

In particular, social support at the workplace is one of the ways through which people manage stress arising from the various tasks assigned to them in organizations. Developing a positive relationship with colleagues makes them feel like they are part of the community, offers them emotional support, and increases job satisfaction (Gillman et al., 2023; Sari et al., 2023). Co-workers can also offer support to one another in carrying out organizational assignments. These employees can also offload work-related ideas, receive feedback, and gain other perceptions concerning challenging tasks (Kabiri Naeini et al., 2023). Thus, forming a positive social context of work allows for the reduction of the potency of stressogenic factors and increases the level of subject Area on the scale subject-vectors of the well-being of workers.

H5: A strong social support system at the workplace positively affects employees' stress management capabilities.

3. Research Methodology

This study adopted a quantitative, cross-sectional research design to examine the relationship between workplace interventions and employee stress management. A cross-sectional approach was used to gather data from employees across a specific organization at a single point in time. This method allowed for analyzing the associations between several independent variables (workplace interventions) and the dependent variable (stress management) without attempting to establish causal relationships. The target population for this research consisted of employees working in a medium-sized organization, with participants drawn from various departments and job roles. A convenience sampling method was used, and a sample of 115 employees who were accessible and willing to participate in the study was selected. This sample size was deemed appropriate for the analysis based on prior studies with similar objectives. Participation was voluntary, and informed consent was obtained from all respondents.

Data was collected using a structured questionnaire distributed electronically to all participants. The questionnaire comprised binary response items (Yes/No) for the dependent variable, asking whether employees effectively managed stress ("stress management course"). Independent variables were assessed using Likert-type questions that asked participants about their level of involvement in various workplace interventions.

Data were entered into SPSS (Statistical Package for the Social Sciences) for analysis. The statistical techniques employed were descriptive statistics and logistic regression, which were conducted due to the binary nature of the dependent variable (stress management: Yes/No). It allowed the examination of the impact of the independent variables on the likelihood that employees reported effective stress management. An ANOVA test was conducted to assess the overall significance of the regression model, evaluating whether the group of independent variables significantly predicted the dependent variable. The R^2 and Adjusted R^2 values were used to determine the proportion of variance in stress management explained by the independent variables. The F-statistic and its corresponding p-value were used to assess the overall significance of the model. Coefficients (B-values) and their respective p-values were used to evaluate the significance of each independent variable in predicting stress management.

4. Result and Findings

Demographic Analysis

The demographic analysis of the respondents shows that the majority were female (74.8%) and male (25.2%), with age most being between 26 and 35 years old (43.5%), followed by those aged 46 to 55 years (25.2%). Most respondents were married (73.9%), while single individuals comprised 23.5%. In terms of education, more than half of the respondents held a bachelor's degree (53.0%), followed by those with a Master's/PhD degree (26.1%). Respondents were distributed across various levels of work experience, with the largest group having 5 to 10 years of experience (33.0%). A notable portion had less than five years (22.6%) or more than 20 years (22.6%) of experience. Regarding monthly income, the majority earned less than RM5,000 (51.3%), with 33.9% earning between RM5,001 and RM10,000, while a smaller portion earned higher. Overall, this sample reflects a diverse range of respondents regarding gender, age, marital status, education, job experience, and income.

Multiple Regression Analysis

The multiple regression analysis examined the relationship between the independent variables, health awareness programs, vacation and holiday trips, job redesign, recreation center access, and social support systems at the workplace, and the dependent variable, stress management. The overall model was statistically significant, as indicated by the ANOVA test ($F = 12.365$, $p = 0.000$), suggesting that the independent variables, collectively, explain a significant portion of the variation in stress management outcomes. The R^2 value of 0.362 indicates that 36.2% of the variance in stress management can be explained by combining the five independent variables. After adjusting for the number of predictors, the Adjusted R^2 is 0.333, demonstrating a relatively good model fit. These results suggest that the independent variables contribute meaningfully to predicting employees' ability to manage stress.

Further analysis of individual predictors will help identify which variables significantly impact stress management. The coefficients, standard errors, and significance levels for each predictor are discussed in the following sections.

Table 1: ANOVA[a]

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.549	5	1.910	12.365	.000[b]
	Residual	16.834	109	.154		
	Total	26.383	114			

a. Dependent Variable: stressmgtcour

b. Predictors: (Constant), social support system, company trips, recreation center, health awareness, job redesign

The ANOVA results indicate that the regression model is statistically significant overall. The F-value of 12.365, with a p-value of 0.000, suggests that at least one of the independent variables is significantly related to the dependent variable (stress management course).

Table 2: Coefficients[a]

		Unstandardised Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	.005	.074		.068	.946
	health awareness	.281	.091	.293	3.090	.003
	company trips	-.005	.088	-.005	-.052	.959
	job redesign	.169	.093	.174	1.820	.071
	recreation centre	.262	.087	.266	3.021	.003
	social support system	.066	.092	.069	.719	.474

a. Dependent Variable: stressmgtcour

The coefficients table gives insight into the relationship between each independent variable and the dependent variable health awareness programs unstandardized Coefficient (B): 0.281, p-value: 0.003 (significant). Health awareness programs significantly impact stress management, meaning that increasing participation in health awareness programs is associated with better stress management outcomes on company trips. The result of unstandardized Coefficient (B): -0.005, p-value: 0.959 (not significant). Vacation and holiday trips do not significantly affect stress management in this model. Job redesign Unstandardised Coefficient (B): 0.169, p-value: 0.071 (marginally significant). Job redesign has a positive but marginally significant effect on stress management. The effect is positive but not strong enough to be considered statistically significant at the 0.05 level. Recreation center unstandardized Coefficient (B): 0.262, p-value: 0.003 (significant). Access to a recreation center significantly improves stress management, meaning employees with access to these facilities are more likely to manage stress effectively. Social support system Unstandardised Coefficient (B): 0.066, p-value: 0.474 (not significant). The social support system at the workplace does not have a significant effect on stress management in this model.

Table 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.602[a]	.362	.333	.39299

a. Predictors: (Constant), social support system, company trips, recreation center, health awareness, job redesign

Model Summary explains the R^2 value of 0.362 means that approximately 36.2% of the variation in stress management can be explained by the independent variables (health awareness programs, company trips, job redesign, recreation center access, and social support system). The Adjusted R^2 of 0.333 shows that after adjusting for the number of predictors, the model explains about 33.3% of the variance in stress management. The overall model is statistically significant. Health awareness programs and recreation center access significantly positively affect stress management. Job redesign has a marginally significant positive effect. Based on this model, company trips and social support systems do not significantly impact stress management. It suggests that organizations aiming to improve employee stress management should focus on health awareness programs and access to recreation facilities. At the same time, job redesign might also offer benefits but requires further investigation**.**

Discussion

The regression analysis offers significant insights into the factors affecting employee stress management, with varying degrees of impact from the independent variables. This section discusses the key findings in light of the research objectives and hypotheses.

Overall Model Significance

The regression model was statistically significant, as indicated by the ANOVA results ($F = 12.365$, $p = 0.000$), which means that the combination of independent variables—health awareness programs, company trips, job redesign, recreation center access, and social support system—collectively influences employees' ability to manage stress. The model's R^2 value of 0.362 shows that 36.2% of the variation in stress management is explained by the selected independent variables, while the Adjusted R^2 of 0.333 accounts for the number of predictors, indicating a reasonably good model fit.

Health Awareness Programs

The results show that health awareness programs significantly and positively impact stress management ($B = 0.281$, $p = 0.003$). This finding supports the hypothesis that participation in health awareness programs enhances employees' ability to manage stress. Health awareness programs likely provide employees with information, techniques, and resources that help them identify and cope with stressors effectively. This aligns with the existing literature, suggesting that targeted health initiatives can improve mental well-being and reduce workplace stress. Organizations should consider investing in or expanding health awareness programs to improve employee stress management.

Company Trips
Interestingly, company trips (vacation and holiday trips) did not significantly affect stress management (B = -0.005, p = 0.959). It was unexpected, as previous research has often emphasized the importance of time away from work in reducing stress. However, the lack of significance could be due to several reasons: the quality or frequency of the trips might not have been sufficient, or employees might not fully utilize these trips for rest and recovery. Further research could explore whether the type or duration of vacations affects stress management outcomes.

Job Redesign
Job redesign positively but marginally significantly impacted stress management (B = 0.169, p = 0.071). This result indicates that while job redesign may improve stress management, the effect is not strong enough to be conclusively significant at the 5% level. However, the positive trend suggests that modifying job roles to better-fit employees' skills, reducing job ambiguity, or providing more flexibility could enhance their ability to cope with stress. The marginal significance points to potential benefits but also highlights the need for further investigation into how specific types of job redesign influence stress management outcomes.

Recreation Centre Access
Access to a recreation center significantly and positively impacted stress management (B = 0.262, p = 0.003). This finding supports the hypothesis that employees with access to recreational facilities are more likely to report effective stress management. Recreation centers may provide employees with opportunities to engage in physical activity or relaxation techniques, which are known to alleviate stress. Organizations should consider providing such facilities or encouraging their use, as they play a critical role in helping employees manage stress effectively.

Social Support System
Surprisingly, the social support system at the workplace did not significantly affect stress management (B = 0.066, p = 0.474). The literature has widely recognized social support as a critical factor in mitigating stress. The lack of significance in this study may suggest that formal social support systems within the organization are either not effectively utilized or not perceived as helpful by employees. It highlights an area for organizations to investigate: are the social support systems adequately addressing employees' needs, or are cultural or organizational barriers preventing their practical use?

Implications for Practice
The findings of this study provide several actionable insights for organizational leaders. Invest in health awareness programs: Since these programs were shown to have a significant positive impact, organizations should ensure that health-related initiatives are accessible to all employees and continuously improved to address evolving needs. Next, provide access to recreation centers: The significant impact of recreation centers on stress management suggests that companies should either invest in on-site facilities or provide external ones. Encouraging their use for physical activity and relaxation can benefit employee well-being. Thirdly, although job redesign showed only marginal significance, it still holds promise as a potential method to reduce stress. Employers should explore ways to realign roles with employees' capabilities, provide more autonomy, or offer flexible working conditions. Fourthly, the non-significant impact of vacation and holiday trips raises questions about how these are implemented. Organizations may need to ensure that employees take enough time off and use it effectively for recovery. Finally, the lack of significance in this area suggests that formal support systems may not meet employees' expectations or needs. Companies should assess whether these systems are visible, accessible, and useful to employees.

5. Conclusion

This study aimed to assess the impact of various types of organizational interventions on controlling stress at the workplace, particularly regarding health promotion programs, company trips, job redesign, recreational facilities, and social support at the workplace. Based on the above findings, it can be proved that management-provided health awareness and recreation facilities positively enhance employees' ability to manage stress, endorsing the importance of mental health and minimizing stress in the workplace. As for job redesign, it obtained a marginally significant and positive coefficient, meaning that efforts to redesign jobs may reduce

stress. However, company trips and social support systems did not significantly moderate stress, implying the importance of more support and research to understand the quality of the interventions.
Thus, such findings support the necessity of improving the worksite health promotion with a more precise and individual approach – using health education and recreation to support the workforce and prevent stress. These strategies should be considered a priority for organizations, although further ideas can be considered to enhance job redesign and vacation policies to meet employees' stress. Future studies should incorporate more cross-sectional studies and other variables, including leadership behaviors and work-life balance. By incorporating these stress management programs primarily based on research evidence, these organizations can increase employees' health, productivity, and happiness.

Limitations of the study

While this study provides valuable insights into the factors affecting stress management in the workplace, several limitations must be acknowledged:
The use of a binary dependent variable (i.e., "Yes" or "No" responses for stress management) simplifies the complexity of stress management, which is typically a more nuanced and continuous variable. The binary nature of the data may not fully capture the range of stress experiences among employees. Future studies could use a Likert scale or other continuous measures to assess varying levels of stress management effectiveness more accurately. This study employed a cross-sectional research design, meaning data was collected simultaneously. While the analysis highlights relationships between variables, it does not allow for causal inferences. Stress management may influence participation in health programs or access to recreation centers rather than the other way around. Future research could use a longitudinal design to track changes over time and establish clearer cause-and-effect relationships.

The sample for this study may not represent all organizations or industries. The findings are influenced by the specific context in which the data was collected, such as the type of company, its culture, or location. Future research should aim to include a more diverse range of participants from different industries, organizational sizes, and geographical regions to improve the generalizability of the findings. The data was collected via self-report, which can introduce bias due to social desirability or inaccurate recall. Employees may overestimate their participation in health programs or how well they manage stress. Future research could incorporate objective measures, such as performance records, absenteeism data, or physiological stress indicators (e.g., cortisol levels), to complement self-reported data.

Although this study focused on independent variables (e.g., health awareness programs and recreation center access), other relevant factors that might influence stress management were not considered. The analysis did not include variables like work-life balance, job security, leadership style, and personal coping mechanisms, but it could have important effects. Future studies should explore a more comprehensive range of predictors to understand stress management's complexity better.

Future Research

Future studies should investigate other potential predictors of stress management, such as work-life balance initiatives, organizational culture, leadership support, and personal coping mechanisms. Incorporating these variables may provide a more holistic understanding of how employees manage stress. Long-term studies would be beneficial in exploring how stress management evolves and how workplace interventions (e.g., health programs and job redesign) impact stress management in the long run. Tracking employees over months or years would allow researchers to identify trends and potential long-term benefits of workplace initiatives. While this study used a quantitative approach, future research could benefit from a mixed-methods design. Qualitative interviews or focus groups could provide deeper insights into how employees perceive the effectiveness of interventions like health awareness programs and recreation center access. Such qualitative data could complement the quantitative results and explain why certain variables (e.g., social support systems) were not found to be significant.

Future research could delve into the quality and frequency of workplace interventions. For instance, it would be useful to explore whether the intensity or frequency of health awareness programs and vacation trips influences stress management outcomes. Additionally, research could examine whether certain features of job redesign (e.g., autonomy, flexibility) are more impactful than others. Stress management factors may vary

significantly across industries. Future studies should aim to compare stress management practices and outcomes across sectors such as healthcare, education, technology, and manufacturing. It would help identify industry-specific interventions that are more effective for managing stress.

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Leadership Soft Skills, Perceived Trustworthiness and Structural Empowerment: A Correlation

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Abstract: To generate trust inside organizations, administrators with soft skills must build relationships and alliances with their staff, as well as create work conditions that empower employees to carry out their responsibilities. Administrators must essentially boost perceptions of trustworthiness. To solve this shortcoming, educational administrators must be informed and cautious about the notions of soft skills, dependability, and structural empowerment. This article investigates the relationship between each component of leadership soft skills, structural empowerment, and perceived trustworthiness. The mediating function of structural empowerment in the link between leadership soft skills and the perceived trustworthiness of the Head of Faculty was also investigated. This study collects its quantitative data using a survey questionnaire. The survey included 225 respondents who worked as administrative professionals in clerical and office assistant positions at three major campuses of Malaysian public higher education institutions in Malaysia's northern state. The study found that perceived trustworthiness and structural empowerment were substantially connected to all eight components of leadership soft skills. However, structural empowerment did not act as a bridge between leadership soft skills and perceived trustworthiness.

Keywords: *Leadership Soft Skills, Perceived Trustworthiness, Structural Empowerment, University Administrators, Malaysian Higher Education Institutions*

1. Introduction

The business of operating and managing Higher Education Institutions (HEIs) in the twenty-first century is getting more complex (Harun & Ahmad, 2022). Thus, HEI leaders must get the trust of their employees because it helps to build a strong team spirit, build support in achieving the organization's mission, and open higher-level goals and opportunities. According to Caldwell and Ndalamba (2017), successful leaders must foster greatness in organizations by cultivating relationships and proving their suitability as leaders, fostering genuine concern for others, embracing integrity, imparting knowledge, and easing the integration of such attributes. Therefore, in today's rapidly changing society, HEI administrators need to have the ability to practice their leadership styles in an environment that is characterized by unparalleled complexity and trust. Leaders must cultivate the confidence of their employees by being accessible and providing constructive feedback, as trust is vital for fostering employees' loyalty, contentment, and performance (Md. Shahid *et al*., 2018). In light of this, the research focused on the three aspects of trustworthiness that people most often cite as reasons to put their faith in a person: their competence, their generosity, and their honesty (Colquitt *et al*., 2007; Gefen, 2002) As the focus of the study.

Subsequently, as HEIs continue to undergo dynamic and revolutionary changes, educational institutions' leaders must have good interpersonal skills (Aldulaimi, 2018). This is because governance structure influences the performance of the organization (Chang *et al*., 2020). Therefore, organizations depend on the calibre of their leaders since they help to motivate employees to perform well at work, recruit and keep top performers who are the source of future competitive advantage and motivate them to contribute to the organization (Naile & Selesho, 2014). Achieving these goals requires good leadership and the leader's ability to collaborate, connect, and work together with people at all levels. A humble leadership style benefits businesses by fostering a humble culture and increasing the well-being of employees (Afshan *et al*., 2021). Thus, having a directive element with leadership soft skills is critical for an organization's morale and success. Concerning this, the eight components of leadership soft skills for administrators such as collaboration and teamwork, communication skills, initiative, leadership ability, people development and coaching, personal effectiveness, personal mastery, planning and organizing, and presentation skills (Sadq, 2019) will also be the focus of the study.

In addition to the above, the effects of workplace empowerment were also reported as the enabling factor that allows employees to carry out their work in meaningful ways. Leaders who can inspire their followers profoundly may do so through either cultural or personal methods of empowerment (Ahmad *et al*., 2023). According to Kanter (1977), through empowerment, leaders can organize people, inspire and create opportunities for others. Hence, successful organizations need leaders who can formulate genuine ideas for the future, motivate them to provide guidance and support, and cultivate and sustain fulfilling connections with their employees, thereby fostering a sense of worth for the organization they aspire to lead (Longenecker, 2010). Thus, the six components of structural empowerment such as opportunity, information, support, resources, formal power, and informal power (Kanter, 2001) will also be analyzed as part of the variable of this study.

2. Literature Review

Chiaburu and Lim (2008) highlighted that trustworthiness is a sign of a secure atmosphere that can lead to great possibilities, which can positively encourage employees to trust their managers and reciprocate accordingly. Otherwise, any distinct trust beliefs between the superior and members of the organization might adversely impact their acceptance, tolerance, and relationship terms and quality (Wilson & Cunliffe, 2022). Hence, leaders should strengthen trusting connections by showing trustworthy behaviors as it can augment their beliefs of integrity. Employees are expected to take part in organizational development if they perceive that taking part in visible and non-visible work-related values, such as working environment, workplace values, and the cost-to-benefit ratio, is advantageous (Radi Afsouran *et al*., 2022). Alternatively, positive trust beliefs can also be built by being approachable and capable of offering constructive feedback, which in turn will increase employees' loyalty and job satisfaction (Chiaburu & Lim, 2008). Insufficient trust in leaders and job dissatisfaction among employees are likely to result in their departure from the organization, therefore diminishing the overall efficacy of the operation (Md. Shahid *et al*., 2020).

Historically, the so-called "hard skills" were the focus of managers and leaders in the past. Which, technical abilities are crucial skills and were the main priority of the organization in ensuring the organization functions smoothly. The situation has however changed in today's environment where leaders nowadays must have essential soft skills (AbuJbara & Woley, 2018). Thus, soft skills are now becoming the main components in a high-performance workplace and the new focus for future leaders. An investigation undertaken by the National Higher Education Research Institute (IPPTN, 2008) has further emphasized the significance of soft skills. The study suggests that the selection criteria for Head of Faculty should encompass strong leadership abilities (both academic and scholarly) as well as effective management skills (including decision-making, communication, problem-solving, and interpersonal skills). The Head of Faculty must have proficient soft skills to excel as a leader and manager, capable of effectively guiding and overseeing individuals for the improvement of Higher Education Institutions. Especially in adapting to the current changes happening in the workplace, which have shifted from a service-oriented to a customer-oriented business approach that requires the Head of Faculty to be involved in face-to-face communication with internal and external stakeholders.

Additionally, Young-Ritchie et. al (2009) proposed that perceived emotional intelligence leadership (part of leadership soft skills) behavior also needs to be in practice as it has a significant impact on structural empowerment and affective commitment (outcomes of perceived trustworthiness). This signifies the importance of leaders in creating a quality workplace for their employees as a means of achieving important organizational outcomes. Kanter (2001) emphasized that an organization that provides supportive and encouraging workplace environments such as providing employees access to information, support, and resources to accomplish work, as well as providing ongoing opportunities for employees' development will foster a climate of trust as well as an increased level of organizational commitment, feelings of autonomy and self-efficacy, which ensued employees to be more productive and effective in meeting organizational goals. Organisations that do not empower employees are likely to create mistrust which will in turn hinder people from working together, causing serious implications for organisational performance.

This study aims to accomplish the following objectives to address the aforementioned problem:

- To investigate the correlation between individual dimensions of leadership soft skills and structural

empowerment.

- To investigate the correlation between each element of leadership soft skills and the perception of trustworthiness.
- To investigate the mediating function of structural empowerment in the correlation between leadership soft skills and perceived trustworthiness.

3. Methodology

The survey questionnaire was used to gather quantitative data for this study. According to Zikmund *et al.* (2010), a survey research method is a suitable tool for collecting, gathering, and compiling primary data as it allows the study to directly examine the characteristics of a large population. Using Cochran's (1977) correction formula, the sample size for this study is 225 respondents from a total population of 543. The respondents were comprised of administrative personnel within the clerical and office assistant positions at three main campuses of Malaysian public higher education institutions located in the northern state.

The stratified probability sampling method was utilized in this study as it allows the researcher to obtain a more efficient sample compared to if it were taken using simple random sampling (Zikmund *et al*., 2010). This method enables the selection of subsamples from the defined group or subgroups within distinct strata that have similar specific characteristics. Moreover, the approach was used to guarantee that the sample would provide a correct representation of the population according to the specific criterion or criteria used for stratification. This research sampling strategy is efficient in providing more information within a certain sample size (Zikmund *et al.,* 2020). The survey questionnaire was distributed in both English and Bahasa Malaysia to guarantee an unambiguous understanding of the statement by the respondents.

The survey questionnaire contained 124 questions and is divided into four sections A, B, C, and D. Section A consisted of 80 items developed to measure the eight components of leadership soft skills derived from Crosbie's (2005) model of leadership soft skills, which are collaboration or teamwork, communication skills, initiative, leadership ability, people development or coaching, personal effectiveness or personal mastery, planning and organizing, and presentation skills. The instrument had undergone a strict validation process by a panel of experts in the area of leadership, management, language, and statistics and was deemed valid and reliable in measuring the components. A six-point Likert scale ranged from 1 to 6, with 1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often, 5 = Very Often, and 6 = Always, were used to measure the respondents' agreement levels.

Section B of the questionnaire is used to measure the support staff's perceptions of their access to the six components of workplace structural empowerment which are access to opportunity, information, support, resources, informal power, and formal power as proposed by Kanter (1977). Laschinger *et al.* (2001) Conditions of Work Effectiveness Questionnaire-II (CWEQ-II) was adapted to measure the items. A five-point Likert scale ranging from 1 to 5 with 1 = None, 3 = Some, and 5 = A Lot, was used to measure the respondents' agreement levels, with higher levels of empowerment indicated by higher scores on the scale.

Section C of the questionnaire consists of 17 items and was used to measure the support staff's perceptions of their leaders' trustworthiness based on the components proposed by Mayer and Davis (1999) which include ability, benevolence, and integrity. Although many different components of trustworthiness have been proposed in the past, Mayer *et al*. (1995) argued that the three components parsimoniously encompass the important features of the expectation about others' intentions and behaviors. The perceived trustworthiness items were measured using a five-point Likert scale, ranging from 1 to 5, where 1 = Disagree Strongly, 2 = Disagree, 3 = Neither Agree nor Disagree, 4 = Agree, and 5 = Agree Strongly.

Demographic information was collected in Section D of the questionnaire, including details about the respondents' backgrounds such as their faculty or school affiliation, Higher Learning Institutions, gender, age, period of service, position, and academic qualification.

4. Analysis

The Pearson-Moment correlation was utilized to ascertain the relationship among the variables in this study. Table 1 presented the Pearson correlation coefficients between the eight components of leadership soft skills with structural empowerment and perceived trustworthiness. The results presented in Table 1 suggest that the correlation between the eight components of leadership soft skills and structural empowerment was significant ($p < .01$), moderate to substantial and positive. The main findings suggest that among the eight components of leadership soft skills, people development or coaching has the strongest association with structural empowerment ($r = .436$; $p < .01$). On the contrary, collaboration or teamwork, had the weakest ($r = .333$; $p < .01$) relationship.

In contrast, the correlation analysis revealed a statistically significant relationship ($p <.01$) between the eight components of leadership soft skills and trustworthiness. The degree of this association ranged from significant to extremely high and favorable. Personal effectiveness or personal mastery was shown to have the highest correlation with perceived trustworthiness over the eight components of leadership soft skills ($r =.702$; $p <.01$), while cooperation or teamwork had the least correlation with perceived trustworthiness ($r =.628$; $p < 0.001$).

Table 1: Correlation Coefficients between the Eight Components of Leadership Soft Skills with Structural Empowerment and Trustworthiness

Components of Leadership Soft Skills	Structural Empowerment *r* value	Trustworthiness *r* value
Collaboration and Teamwork	.333**	.628**
Communication Skills	.393**	.692**
Initiative	.385**	.642**
Leadership Ability	.356**	.678**
People Development and Coaching	.436**	.689**
Personal Effectiveness and Personal Mastery	.408**	.702**
Planning and Organising	.386**	.687**
Presentation Skills	.393**	.673**

** Significant at .01

In analyzing the mediating function between the variables, this study concurs with the recommendation of Baron and Kenny (1986), whereby the mediating function can be analyzed using multiple regressions. As such, in this study, multiple regression was utilized to examine the mediating role of structural empowerment (SE) on the relationship between leadership soft skills (LSS) and perceived trustworthiness (PT).

The regression analyses involve three steps: Step 1, with structural empowerment (SE) as the mediator, and leadership soft skills (LSS) as the independent variable (predictor); Step 2, with perceived trustworthiness (PT) as the dependent variable and leadership soft skills (LSS) as the independent variable (predictor); and Step 3, with perceived trustworthiness (PT) as the dependent variable and structural empowerment (SE) as the mediator and leadership soft skills (LSS) (predictor) as the independent variables. In the estimated regression equation of the first step, Path A, which is regressing the mediator (SE) on the independent variable (LSS), the unstandardized coefficient of leadership soft skills (LSS) ($B = .335$) was significant at .01 ($t = 8.074$, $p < .01$), implying that leadership soft skills (LSS) had a positive impact on structural empowerment (SE). This showed the existence of Path A.

In the estimated regression equation of the second step (Path C), which is regressing the dependent variable (PT) on the independent variable (LSS), the unstandardized coefficient of leadership soft skills (LSS) ($B = .587$) was significant at .01 ($t = 19.392$, $p < .01$), meaning that leadership soft skills (LSS) had a positive impact on perceived trustworthiness (PT). This proved the existence of Path C. In the estimated regression equation of the third step (Path B and C) which is regressing dependent variable (PT) on both the mediator (SE) and independent variable (LSS), the unstandardized coefficient of structural empowerment (SE) ($B = .043$) was not significant at .01 ($t = .996$, $p > .01$). This means that structural empowerment (SE) did not affect perceived trustworthiness (PT). Therefore, the existence of Path B was not proven.
However, the unstandardized coefficient of leadership soft skills (LSS) ($B = .573$) (path C) remained significant

at .01 (t = 17.038, p < .01), meaning that leadership soft skills (LSS) had a positive impact on perceived trustworthiness. This again proved the existence of Path C but did not establish the existence of Path B. Therefore, it is concluded that structural empowerment did not function as a mediator between leadership soft skills and perceived trustworthiness. In other words, structural empowerment (SE) did not mediate the relationship between leadership soft skills (LSS) and perceived trustworthiness (PT).

Table 2: Summary Statistics of Regression Analysis to Test for the Mediating Role of Structural Empowerment (SE) on the Relationship between Leadership Soft Skills (LSS) and Perceived Trustworthiness (PT)

Step	B	Std. Error	β	t	p-value
Step 1 (Path A)					
Mediator: SE	.335**	.041	.434	8.074	.001
Predictor: LSS					
Step 2 (Path C)					
Predicted: PT	.587**	.030	.757	19.392	.001
Predictor: LSS					
Step 3 (Path B & C)					
Predicted: PT	.043	.044	.043	.996	.320
Mediator: SE	.573**	.034	.738	17.038	.001
Predictor: LSS					

** Significant at .01

Discussion

The findings of this study have several consequential ramifications for scholars and researchers. This statement holds particularly true as it allows for a deeper comprehension of the functions that leadership soft skills and empowerment can have in enhancing the belief of trustworthiness for achieving organizational excellence. The findings of this study indicate that the empowerment of administrative personnel was principally moderately associated with people development and coaching, and least moderately associated with collaboration and teamwork. These findings indicate that administrators should enhance people development and coaching by promoting collaboration and teamwork, therefore empowering their employees in the workplace. This is consistent with the published results of Ahmad et al. (2023), which suggest that leaders should take into account the well-recognized principles that underpin strategies of empowerment. In this regard, administrators may require the capacity to understand and oversee their personnel by directing their attention away from rigid control and toward the synchronization, integration, and facilitation of their staff's tasks (Kanter, 2001). This could be done by increasing their people development and coaching by increasing support to their staff such as providing tools necessary for them to be effective, expressing confidence in their staff, and giving prompt feedback or guidance needed by their staff.

Furthermore, administrators could enhance collaboration and teamwork by allocating time to establish connections with their staff, being physically there for their staff, attentively listening to and being sensitive to their staff's needs, freely speaking with their staff, and establishing positive relationships with their staff during difficult periods. The extent to which the leadership style and the organization's potential for growth are complementary to one another (Radi Afsouran *et al.,* 2022). Thus, to promote collaboration and teamwork, administrators may need to cooperate and work together and may need to make relationships a top priority so that staff feel comfortable and secure working with them. Subsequently, the moderate relationships between staff empowerment and all the components of leadership soft skills highlighted in this study signify that administrators may need to increase their overall leadership soft skills as an important strategy in enhancing staff empowerment.

This study contributed to the existing body of knowledge by elucidating the crucial role of the perceived trustworthiness of the administrator in relation to their leadership soft skills practices. The collected results also showed a considerable, positive, and robust correlation between perceived trustworthiness, personal

effectiveness, and personal mastery. This statement elucidates that administrators who supported a personal and active dedication to continuous learning were regarded as more dependable by their employees. The conclusions of this study are dependable as administrators showed a strong dedication to ongoing education and personal growth to still be current and excel in their abilities, particularly in advancing their careers as Heads of Faculty. Increased perceptions of trustworthiness in administrators' implementation of personal effectiveness and personal mastery are significant as reduced perceptions of administrators' trustworthiness may hurt the effectiveness and efficiency of the staff and the organization. Afshan *et al.* (2021) suggested that to keep employees engaged and healthy, it is imperative to establish well-being policies and provide stress reduction training, employees should not be held accountable after work, and the company should, if necessary, reward such conduct.

Additionally, the results of this study revealed that collaboration and teamwork have the least significant correlation with perceived trustworthiness. Thus, administrators may have to enhance and fortify collaboration and teamwork to be seen as more reliable by their personnel. To enhance and fortify collaboration and teamwork in the workplace, administrators should establish relationships and connections through high-quality interpersonal contacts, promote teambuilding whenever feasible, exhibit mutual concern, honor diversity and inclusion, and distribute authority among their staff. The robust correlation between perceived trustworthiness and all the elements of leadership soft skills implies that the belief of trustworthiness is intricately linked to the administrator's direct engagements with their subordinates.

The results obtained also provide evidence that structural empowerment did not function as a mediator between leadership soft skills and perceived trustworthiness. This shows that administrators' perceived trustworthiness as the outcome is directly related to leadership soft skills and is not mediated by structural empowerment. Therefore, administrators need to consider the importance of empowerment as a mediating role that affects perceptions of trustworthiness. This finding may imply that administrators may have to provide opportunities for staff to grow and develop, as well as share information with their staff to show that they trust their staff, as trust is crucial for empowerment. In addition, administrators may also need to create autonomy so that each member of staff can feel that his or her contribution is valuable. This also means that every effort must be made by administrators to increase structurally empowering work environments, providing the necessary resources for their staff in their jobs to influence perceptions of trustworthiness. This is critical as supporting staff in their work environment is an important component of workplace empowerment which increases staff's perception of trustworthiness and enhances organisational effectiveness and performance.

Therefore, administrators with soft skills must establish relationships and alliances with their staff and build work conditions that empower people to accomplish their tasks to cultivate trust inside organizations. Administrators must in essence enhance the perception of trustworthiness. On this deficiency, educational administrators should possess expertise and maintain a state of alertness regarding the notion of soft skills, trustworthiness, and structural empowerment.

5. Managerial Implications, Limitations and Future Research

This research adds to the existing information and literature on leadership soft skills, empowerment, and perceived trustworthiness for educational leaders, namely in higher educational institutions in Malaysia and leaders in organizations in general. Furthermore, this study aims to deliver a benefit to administrators by easing the development of high-quality interpersonal relationships with individuals they interact with and associate with, therefore fostering a favorable working atmosphere. In addition, the study aims to ensure that the results can sufficiently equip administrators with the essential leadership soft skills needed to empower and establish trusted connections with their personnel. Mainly, this study aims to provide administrators with a set of guidelines to develop into proficient leaders with strong interpersonal abilities in the professional environment.

Conclusively, the growing importance of leveraging the potential of human resources in the workplace has been fairly recognized. Therefore, this study can be regarded as making a crucial contribution to organizations and administrators in the endeavor of cultivating high-quality human resources. In Higher Education Institutions

and other organizations, this is especially correct, as the success of organizations relies heavily on the individuals within the organization. Considering this, the fundamental components of leadership in the twenty-first century will persist as soft skills, empowerment, and trust.

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The Influence of Proactive Personality, Social Support and Self-Esteem Towards Career Adaptability Among Full Time Postgraduate Business Faculty Students

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Abstract: This paper studies the relationship between proactive personality, social support and self-esteem on career adaptability among postgraduate business students, in a public university in Malaysia. The study used the quantitative approach and online survey questionnaires to collect data from the business doctoral students. Regression analysis was used to determine the relationship between proactive personality, social support and self-esteem with career adaptability among postgraduate students. The study collected from 214 postgraduate students reported that proactive personality and social support are significant in explaining career adaptability while self-esteem was found not significant in explaining career adaptability. This study sheds light on the factors contributing to postgraduate students' career adaptability. The main challenge lies in adjusting to the work environment, which is influenced by the workplace and the support from employers, especially the Human Resource (HR) teams. HR can develop strategies to help these students better adapt to their new roles, making their transition into the professional world smoother and more successful.

Keywords: *Proactive Personality, Social Support, Self-Esteem, Career Adaptability (concern, control, curiosity and confidence)*

1. Introduction and Background

The modern work environment has become increasingly challenging, particularly for fresh graduates. The continuous introduction of new skill sets, higher expectations, and more complex tasks has made it difficult for these individuals to adapt to the demands of the professional world. The global economic downturn, exacerbated by the COVID-19 pandemic, has intensified competition for job positions, including in countries like Malaysia (Li, Guan, & Wang, 2020; Spurk & Straub, 2020). Career adaptability, a critical construct in the modern workplace, comprises a combination of attitudes, skills, and behaviors that individuals employ to navigate and succeed in their professional environments. It involves the resources necessary for effectively managing both current and unforeseen career transitions (Zacher & Rudolph, 2021). These resources function as self-regulating strategies, enabling individuals to develop, refine, and implement their professional identities within occupational roles (Ohme & Zacher, 2021). Career adaptability is thus essential for individuals to formulate and execute strategies that help manage career-related tasks and challenges (Guan et al., 2020).

In Malaysia, the issue of graduate unemployment is complex, with various factors contributing to the problem. Recent studies indicate that many Malaysian graduates face significant challenges in adapting to the workplace. A lack of essential communication skills hinders their ability to work effectively in teams, and their limited knowledge in their chosen fields often delays their adaptation to the work environment (Douglass et al., 2021). To improve their employment prospects, graduates must demonstrate a willingness to learn and adapt to the evolving demands of the job market (Yu, Guan, & Wang, 2020). However, the inability to adapt sufficiently poses a significant barrier to sustained employment, particularly in a highly competitive and narrow labor market. Thus, it is crucial to explore the relationship between self-esteem, proactive personality, and social support to career adaptability among postgraduate students, considering both personal and contextual factors (Spurk et al., 2020).

The dynamic nature of work structures and environments, coupled with the continuous introduction of new skills and knowledge requirements, highlights the need for advanced career resources. These resources are essential for managing changes effectively in an increasingly competitive labor market (Ohme & Zacher, 2021). The evolution of the labor market and the economy necessitates the development of new skills, appropriate characteristics, and professional adaptability, aligning with individual goals and strengths in a knowledge-driven economy where technology and global services are paramount (Zacher & Rudolph, 2021). Thus, this

study aims at exploring the relationship between proactive personality, social support and self-esteem on career adaptability among postgraduate business students, in a public university in Malaysia.

2. Literature Review

Career Adaptability (Concern, Control, Curiosity and Confidence)

Career adaptability is a dynamic and multifaceted construct, integrating various individual metrics and dimensions. Hirschi (2009) describes it as an evolving configuration rather than a static one. This concept includes four critical dimensions: concern, control, curiosity, and confidence (Savickas & Porfeli, 2012). Recent studies underscore that these dimensions help individuals maintain a future-oriented perspective, prepare strategically for career challenges, and develop a hopeful outlook toward their professional futures (Rossier et al., 2022). Additionally, career adaptability involves exploring potential career paths and adapting to various roles and scenarios. Professional trust, defined as the ability to effectively tackle and overcome career obstacles, is also essential for career adaptability (Kudisch & Miller, 2023).

The first dimension is concern characterized by an opportunity-oriented mindset, where individuals anticipate and plan for their career future. Those with high levels of concern engage in proactive career planning and are more likely to develop effective strategies for achieving their career goals. Recent literature reinforces that a strong sense of concern is associated with enhanced future orientation, job satisfaction, and both emotional and normative commitment to organizations (Kordy, 2021; Lee et al., 2022). The second dimension is control involves characteristics such as proactive decision-making, responsibility, and self-management. Recent studies show that control is positively associated with work satisfaction, life satisfaction, and overall well-being, while high control is linked to better subjective well-being and lower levels of negative emotions (Diener, 2021; Zhang et al., 2022). The third dimension of career adaptability is curiosity. This dimension reflects an individual's professional curiosity and their tendency to engage in activities that explore various career opportunities. Recent research suggests that curiosity is particularly linked to entrepreneurship and is less associated with a stable organizational role (Bimrose & Hearne, 2021; Zhang et al., 2023). The fourth dimension of career adaptability is confidence, which involves believing in one's ability to achieve career goals (Savickas & Porfeli, 2012). Recent studies indicate that confidence is positively associated with career satisfaction, employability, job performance, and work engagement (Ng et al., 2023; Zhang & Liu, 2022).

Proactive Personality and Career Adaptability

Proactive personality is defined as a dispositional trait that reflects an individual's tendency to take initiative in influencing their environment and enacting change. Individuals with a proactive personality are self-starting, change-oriented, and persistent in overcoming obstacles. They are inclined to anticipate and act on future opportunities and challenges rather than reacting to events after they occur (Zacher & Rudolph, 2021; Li et al., 2020). Recent studies indicate that individuals with a proactive personality are more likely to engage in career development activities and exhibit greater career initiative. This includes participation in job fairs and involvement in professional networks and societies (Guan et al., 2020; Zacher & Rudolph, 2021). Moreover, proactive individuals are more inclined to engage in networking behaviors, such as organizing motivational discussions with industry experts to enhance career development among students (Ohme & Zacher, 2021). Due to these proactive behaviors, individuals with strong proactive personalities tend to develop higher levels of career adaptability, a relationship that is well-supported by empirical studies. Research consistently demonstrates a positive correlation between proactive personality and career adaptability (Yu et al., 2020; Spurk et al., 2020; Zacher, Robinson, & Rudolph, 2021).

H1: *There is a relationship between proactive personality and career adaptability among postgraduate students.*
H1a: There is a relationship between a proactive personality and a concern
H1b: There is a relationship between a proactive personality and a control
H1c: There is a relationship between proactive personality and curiosity
H1d: There is a relationship between proactive personality and confidence

Social Support and Career Adaptability

Recent research underscores the critical role of social support and relationships in shaping young people's career development. For instance, perceived social support has been identified as a valuable resource that assists individuals in making informed decisions regarding their professional future (Guan et al., 2020; Zacher

& Rudolph, 2021). Social support is grounded in the Social Cognitive Career Theory (SCCT), which explains how social factors such as support systems influence career adaptability, particularly during transitional periods, like the shift from university to the workforce (Douglass et al., 2021; Ohme & Zacher, 2021). During this transition, students often encounter uncertainties and mixed perceptions about social support, which significantly impact their professional decisions and adaptability (Zacher & Rudolph, 2021). Empirical studies have demonstrated a positive relationship between social support and career adaptability. Social support is significantly correlated with enhanced career exploration and adaptability, helping recent graduates navigate the challenges of entering the workforce (Douglass et al., 2021; Spurk et al., 2020). Specifically, research on recent Chinese university graduates found that social support significantly improves career adaptability, underscoring its importance in career development (Yu et al., 2020).

H2: *There is a relationship between social support and career adaptability among postgraduate students.*
H2a: There is a relationship between social support and concern
H2b: There is a relationship between social support and control
H2c: There is a relationship between social support and curiosity
H2d: There is a relationship between social support and confidence

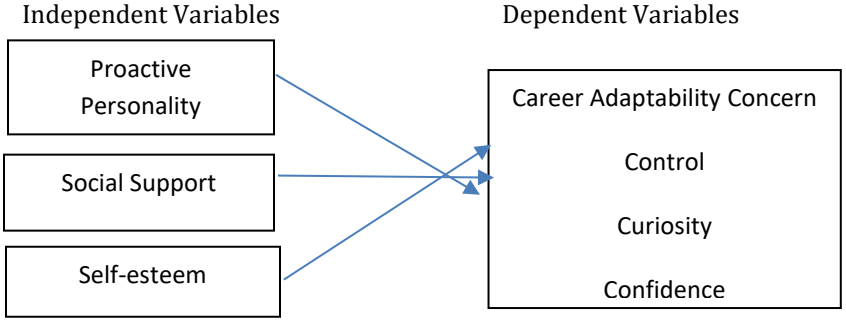
Self-Esteem and Career Adaptability

Self-esteem is the way individuals perceive themselves, encompassing perspectives such as self-approval, self-dismissal, and self-judgment concerning their capabilities and worth (Orth & Robins, 2022). It is often described as a socially constructed feeling that reflects various self-perceptions, shaped by intellectual needs for approval and acceptance within a group (Guan et al., 2020). These perceptions influence how individuals see themselves, which in turn impacts their confidence and ability to function effectively in challenging work environments. Recent research has established a positive correlation between self-esteem and career adaptability. Studies have shown that higher self-esteem is associated with greater career adaptability, as individuals with positive self-perceptions are better equipped to handle career transitions and challenges (Kim, Jang, & Lee, 2021; Spurk & Straub, 2020). Conversely, low self-esteem has been found to negatively impact career adaptability, suggesting that individuals with diminished self-worth may struggle to navigate their careers effectively (Yu et al., 2020; Zacher & Rudolph, 2021). Furthermore, it has been observed that career adaptability is enhanced when individuals possess high self-esteem, particularly in the context of economic uncertainty and labor market competition (Spurk et al., 2020; Douglass et al., 2021).

H3: *There is a relationship between self-esteem and career adaptability among postgraduate students.*
H3a: There is a positive relationship between self-esteem and concern
H3b: There is a positive relationship between self-esteem and control
H3c: There is a positive relationship between self-esteem and curiosity
H3d: There is a positive relationship between self-esteem and confidence

Based on the literature discussed above, the researchers have proposed a research framework as per Figure 1, which further explains the relationship between proactive personality, social support, self-esteem and career adaptability among postgraduate students.

Figure 1: Research Framework



3. Research Methodology

A quantitative research study was conducted to collect primary data from postgraduate students at UiTM Shah

Alam. The study utilized a probability sampling method to ensure representative data from this population. Data were gathered through an online survey, which employed a self-administered questionnaire. The survey link was distributed via email, WhatsApp, and other social media platforms to reach the target respondents. The questionnaire is structured into several sections. Section A collects demographic information such as age, gender, year of study, and faculty. Section B assesses students' proactive personality and self-esteem concerning career adaptability. Section C explores the influence of social support on career adaptability, while Section D focuses on the career adaptability scale, measuring dimensions including concern, control, curiosity, and confidence. A 5-point Likert scale is employed throughout the study ranging from 1 = "strongly disagree" to 5 = "strongly agree". All data was collected and analyzed using the Social Science Statistics Package (SPSS) version 26. Data analysis began with the characteristics of demographic data through descriptive analysis such as percentage, mean, frequency, and standard deviation. In this study, multiple regression analysis is used to determine the predictive values of social support, positive personality, self-esteem, and career adaptability.

4. Results and Discussion

Demographic information of the participants was analyzed through frequency analysis. Among the total 214 participants, 97 (45.3%) were female and 117 (54.7%) were male. Regarding age, 56 (26.2%) participants were below 24 years old, while the majority, 79 (36.9%), fell within the 25-29 years age bracket, with only 7 (3.3%) participants aged 40 years and above. Regarding academic programs, 66 (30.8%) students were enrolled in the Master of Human Resource Management program, while 32 (15%) were in the Master of Office System Management program. The majority, 132 (61.7%), were full-time students, with the remaining 82 (38.3%) being part-time students. Semester distribution showed that 58 (27.1%) students were in semester 3, whereas the fewest, 31 (14.5%) students, were in semester 5. All participants reported involvement in student activities during their study period, and the most influential figure in their studies and careers was identified as their parents by 109 (50.9%) students. The demographic details are summarized in Table 1.

The study utilized a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Descriptive statistics reveal that career adaptability and social support had the highest means, at 4.29 and 4.30 respectively, while proactive personality and self-esteem had means of 4.13 and 3.72 respectively. Career adaptability comprises four dimensions: concern, control, curiosity, and confidence. Skewness and kurtosis values were examined to assess the distribution of responses. Concern, control, curiosity, and confidence dimensions of career adaptability all exhibited negative skewness values (-2.07, -2.16, -1.91, and -1.90 respectively) and high kurtosis levels (7.77, 8.00, 7.87, and 8.00 respectively), indicating non-normal distributions.

Table 1: Participants' Demographic Profile

Demographic Characteristic		Frequency	Percentage (%)
Gender	Male	117	54.7
	Female	97	45.3
Age	Below 24 years old	56	26.2
	25-29 years old	79	36.9
	30-34 years old	57	26.6
	35-39 years old	15	7
	40 years old and above	7	3.3
Semester	Semester 2	44	20.6
	Semester 3	58	27.1
	Semester 4	48	22.4
	Semester 5	31	14.5
	Semester 6	33	15.4
CGPA	3.00-3.25	34	15.9
	3.26-3.50	59	27.6
	3.51-3.75	69	32.2
	3.76-4.00	52	24.3

Proactive personality had a standard deviation of 0.44, with skewness and kurtosis values of -1.99 and 7.84 respectively, suggesting a distribution that is too peaked. Similarly, social support had a standard deviation of

0.89, with skewness and kurtosis values of -1.69 and 5.67 respectively, indicating a highly peaked distribution. In contrast, self-esteem exhibited a standard deviation of 0.56, with skewness and kurtosis values of -0.27 and -0.57 respectively, indicating a more normally distributed response pattern.

Table 2: Results of Normality Test for Independent and Dependent Variables (n=214)

Variables	Skewness	Kurtosis
Career Adaptability		
Concern	-2.07	7.77
Control	-2.16	8.00
Curiosity	-1.91	7.87
Confidence	-1.90	8.00
Proactive Personality	-1.99	7.84
Social Support	-1.69	5.67
Self-Esteem	-0.27	-0.57

Cronbach's Alpha was employed to assess the reliability or internal consistency of career adaptability, proactive personality, social support, and self-esteem. As indicated in Table 5, all Cronbach's Alpha coefficients fell within the range of .66 to .92, surpassing Nunnally's (1978) minimum threshold of .60. The reliability coefficients for the four dimensions of career adaptability, concern, and control were both 0.84. Similarly, confidence and control demonstrated reliability values of 0.81 and 0.80, respectively. Each of these dimensions comprises six items. Regarding the independent variables—proactive personality, social support, and self-esteem—their reliability values ranged from .80 to .89. Proactive personality and social support exhibited identical reliability values of 0.89, while self-esteem had a reliability coefficient of 0.80.

The descriptive analysis in Table 4 includes mean and standard deviation scores. Control and social support have the highest mean scores, while self-esteem has the lowest mean scores among all variables. Overall, the variables fall within the moderate range on a scale of 4. Concern scored a mean of 4.30 (SD=0.54), control scored 4.31 (SD=0.54), curiosity scored 4.27 (SD=0.53), and confidence scored 4.30 (SD=0.51). Proactive personality scored a mean of 4.13 (SD=0.44), and social support scored 4.31 (SD=0.49). Lastly, self-esteem scored a mean of 3.72 (SD=0.56).

Table 3: Reliabilities (Cronbach Alpha) of the measures: (n=214)

Scales	Original Items	Reliability Cronbach Alpha (n=214)
Career Adaptability		
Concern	6	0.84
Control	6	0.84
Curiosity	6	0.81
Confidence	6	0.80
Proactive Personality	17	0.89
Social Support	12	0.89
Self-Esteem	10	0.80

Table 4: Descriptive Statistic of All Study Variables (n=214)

Variables	Mean	Standard Deviation
Career Adaptability		
Concern	4.30	0.54
Control	4.31	0.54
Curiosity	4.27	0.53
Confidence	4.30	0.51
Proactive Personality	4.13	0.44
Social Support	4.31	0.49
Self-Esteem	3.72	0.56

The results in Table 5 reveal strong positive correlations between proactive personality and the dimensions of career adaptability: confidence ($r = 0.76$, $p < 0.01$), control ($r = 0.79$, $p < 0.01$), curiosity ($r = 0.82$, $p < 0.01$), and concern ($r = 0.83$, $p < 0.01$). Similarly, social support shows strong positive correlations with concern ($r = 0.66$, $p < 0.01$), confidence ($r = 0.67$, $p < 0.01$), control ($r = 0.76$, $p < 0.01$), and curiosity ($r = 0.76$, $p < 0.01$), with particularly strong associations with control and curiosity. In contrast, self-esteem demonstrates moderate positive correlations with concern ($r = 0.40$, $p < 0.01$), control ($r = 0.35$, $p < 0.01$), curiosity ($r = 0.37$, $p < 0.01$), and confidence ($r = 0.31$, $p < 0.01$), indicating weaker relationships compared to proactive personality and social support. Additionally, proactive personality is strongly correlated with social support ($r = 0.77$, $p < 0.01$), and moderately correlated with self-esteem ($r = 0.40$, $p < 0.01$). Social support and self-esteem also show a moderate positive correlation ($r = 0.40$, $p < 0.01$). Overall, proactive personality and social support have strong positive relationships with career adaptability dimensions, whereas self-esteem's correlations are more moderate.

Table 5: Pearson correlation analysis of the variables

	Dependent Variable Career Adaptability						
Independent Variables	**Concern**	**Control**	**Curiosity**	**Confidence**	**Proactive Personality**	**Social Support**	**Self-Esteem**
Concern	1						
Control	.824**	1					
Curiosity	.728**	.778**	1				
Confidence	.753**	.783**	.773**	1			
Proactive Personality	.762**	.793**	.816**	.825**	1		
Social Support	.662**	.759**	.762**	.667**	.770**	1	
Self-Esteem	.395**	.349**	.385**	.306**	.396**	.399**	1

(*p<0.05; **p<0.001)

Table 6: Regression Analysis

	Dependent Variable Career Adaptability (β)			
Independent Variables	**Concern**	**Control**	**Curiosity**	**Confidence**
Proactive Personality	.60**	.51**	.56**	.77**
Social Support	.16*	.36**	.32**	.09
Self-Esteem	.09	00	.04	-.04
F Value	105.42**	150.69**	172.48**	151.70**
R square	.60	.68	.71	.68
Adjusted R square	.60	.68	.71	.68

The study found that proactive personality has a significant positive relationship with all four dimensions of career adaptability: concern, control, curiosity, and confidence. Specifically, proactive personality was strongly related to concern (β = .60, p <0.01), control (β = .51, <0.01), curiosity (β = .56, <0.01). Overall, these findings highlight the important role of a proactive personality in enhancing career adaptability across these four key dimensions. Therefore, H1a, 1b, 1c and 1d are supported.

The results also show that social support showed a positive relationship with all four dimensions of career adaptability: concern, control, curiosity, and confidence. Specifically, social support showed a significant positive relationship with concern (β = .16, <p 0.01), control (β = .36, <p 0.01), curiosity (β = .32, <p 0.01), confidence but weaker (β = .09, p <0.01). Overall, the findings suggest that social support plays an important role in enhancing career adaptability across these four dimensions, though its influence varies in strength. Therefore, H1a, 1b, 1c and 1d are supported

Self-esteem does not have a significant relationship with any of the four dimensions of career adaptability: concern, control, curiosity, and confidence. Specifically, there was no significant relationship between self-esteem and concern ($\beta = 0.09$, $p<0.01$), control ($\beta = 0.00$, $p <0.01$), curiosity ($\beta = 0.04$, $p <0.05$) and confidence ($\beta = -0.04$, $p< 0.05$). Overall, these findings suggest that self-esteem does not play a significant role in enhancing career adaptability across these dimensions. Therefore, H1a, 1b, 1c and 1d are not supported

Discussion and Implications

The study investigates the relationships between proactive personality, social support, self-esteem, and career adaptability among postgraduate students, with a focus on research conducted from 2020 onwards. This study hypothesizes that proactive personality is positively related to all four dimensions of career adaptability: concern, control, curiosity, and confidence. The result indicates that hypothesis H1 on the relationship between proactive personality and career adaptability was found to be fully supported. This is because a proactive personality has a positive significant relationship with all the dimensions of career adaptability. Hence, all the hypotheses were supported. The proactive personality of graduates is more adept at anticipating and adapting to unexpected career challenges, as demonstrated by recent findings (Fiori, Bollmann, & Rossier, 2020; Rudolph et al., 2020). Specifically, a proactive personality was found to have a positive relationship with concern. Concern refers to the degree to which people are chance-oriented, have career-related thoughts, and strategize for upcoming career tasks, changes, and challenges (Savickas & Porfeli, 2012; Zacher, 2014). This trend aligns with findings that proactive individuals are more successful in adapting to changes and challenges throughout their career trajectories (Hirschi et al., 2021; Lee et al., 2023). The second dimension of career adaptability is control. Control allows people to feel in control for self-governing and creating their careers.

This is supported by research that indicates proactive students, in particular, show greater resilience in overcoming challenges and exercising control over their career trajectories (Ohme & Zacher, 2021; Spurk et al., 2020). Curiosity, which drives the exploration of future career opportunities and engagement in opportunity-focused activities, is another dimension positively influenced by proactive personality. Lastly. A proactive personality was tested to have a positive relationship with confidence. Confidence, reflecting individuals' optimism in their ability to achieve career goals, is also positively associated with a proactive personality. This trait enables individuals to maintain a positive future orientation and self-assurance, critical for navigating career challenges (Guan et al., 2020; Rudolph et al., 2020).

The finding related to social support and career adaptability indicates that the hypothesis on the relationship between social support and career adaptability was found to be supported as social support has a positive relationship with all the four dimensions of career adaptability which are concern, control, curiosity, and confidence. Firstly, social support was tested to have a positive relationship with the first dimension of career adaptability which is a concern. When these postgraduate students feel supported by others, most especially parents, siblings and friends, they will be motivated to make the right career decision as a result of career exploration, as they will gain confidence and properly explore their career options, resulting in a high level of career adaptability. This is supported by previous research by Li, Guan, & Wang (2020), which found that individuals who feel supported by family and friends demonstrate more informed and confident career decision-making (Li, Guan, & Wang, 2020). Secondly, based on the result, social support was found to have a positive relationship with the second dimension of career adaptability which is control. This is aligned with research by Perera & McIlveen (2020); and Douglass et al., (2021), that individuals with robust social networks are better equipped to take charge of their career paths and make effective decisions (Perera & McIlveen, 2020; Douglass et al., 2021). Thirdly, based on the result, social support also has a positive relationship with career adaptability which is curiosity. This is supported by Yu, Guan, & Wang (2020); Zacher & Rudolph (2021) stated curiosity is positively influenced by social support, with those having strong social connections more likely to explore potential career opportunities and maintain an inquisitive outlook towards their future. Lastly, there is a positive relationship between social support and the fourth dimension of career adaptability, which is confidence. This result is supported by previous research according to Guan et al., (2020); Yu et al., (2020). Confidence is reinforced by social support, with supported individuals better able to face the competitive labor market with self-assurance and resilience.

The final result of hypothesis H3 on the relationship between self-esteem and career adaptability was found to be not supported as in this study, social support has no positive relationship with the four dimensions of career

adaptability which are concern, control, curiosity, and confidence. Self-esteem traditionally plays a crucial role in shaping individuals' perceptions of their abilities and value, the ongoing impacts of the COVID-19 pandemic have disrupted this relationship. The pandemic has led to significant stress, anxiety, and disruptions to daily routines, negatively affecting self-esteem. This decline in self-esteem has, in turn, hindered individuals' career adaptability, as they struggle to maintain motivation and meet career-related challenges (Kim et al., 2021; Li et al., 2020; Spurk & Straub, 2020). Consequently, the study concludes that self-esteem does not significantly influence the four dimensions of career adaptability in the current context. On trust, the study finds no positive relationship between self-esteem and career adaptability. Despite the importance of self-esteem in shaping individuals' perceptions of their capabilities, the COVID-19 pandemic has adversely impacted many people's self-esteem. The shift to remote work and online learning, along with the disruption of daily routines, has led to increased stress, anxiety, and a decline in self-confidence. As a result, self-esteem did not significantly influence the four dimensions of career adaptability in this study.

5. Conclusion

In a nutshell, the study is done to determine the relationship between proactive personality, social support self-esteem and career adaptability (concern, control, curiosity, confidence) factors. Data collected from 214 postgraduates reveal that productivity personality and social support are significant with career adaptability, while self-esteem is not significant toward career adaptability. To enhance and sustain a proactive personality, it is essential for career counselors, academic staff, and human resource professionals to actively engage in career education and extracurricular activities. These stakeholders should facilitate opportunities for postgraduate students to engage in proactive behaviors that foster anticipation of their career and future professional environments. Moreover, the integration of career education and counseling services can significantly benefit postgraduate students by fostering supportive interpersonal connections, guiding them to avoid detrimental social comparisons, and providing targeted activities that enhance career-related competencies.

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The Impact of Self-Efficacy on Performance Management in Malaysia's Public Sector

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Abstract: This study investigates the impact of self-efficacy on performance management within Malaysia's public sector. Grounded in goal-setting theory, which posits that specific and challenging goals enhance motivation and performance, this research examines how self-efficacy—the belief in one's ability to execute tasks, influences performance outcomes. Conducted through qualitative in-depth interview sessions with selected participants who are from Tier 1 and Tier 2 staff of the Federal Government of Malaysia, this study provides an in-depth analysis of the relationship between self-efficacy and performance management practices. The study examines how self-efficacy influences performance management in Malaysia's public sector. Several key findings have arisen from merging the High-Performance Cycle model with Bandura's self-efficacy theory. The findings emphasize the importance of self-efficacy in improving performance management strategies. Integrating self-efficacy with the High-Performance Cycle model yields concrete solutions for increasing leadership effectiveness and organizational performance. Investing in self-efficacy through focused interventions, coaching, and self-care can greatly improve performance management and help organizations reach their goals more efficiently.

Keywords: *Self-efficacy; High-Performance Cycle model; performance management; public sector; Malaysia*

1. Introduction

Performance management is a critical activity that improves organizational success by aligning individual performance with strategic objectives. To ensure the swift and efficient accomplishment of organizational goals, this organized strategy involves the creation of objectives, tracking progress, and evaluation of outcomes (Armstrong, 2010). Effective performance management is especially important in Malaysia's public sector due to obstacles such as complicated bureaucratic processes, limited resources, and the need to provide high-quality services while adhering to strict accountability standards (Rahman & Aminuddin, 2020). Bandura (1997) proposed the notion of self-efficacy, which refers to an individual's belief in their ability to successfully do specified activities. This notion has a major impact on several elements of performance, including goal planning, motivation, and persistence. Individuals with high self-efficacy are more likely to pursue difficult goals, persevere, and achieve better results. Self-efficacy's significance in performance enhancement has been thoroughly documented in both the private and educational sectors (Schunk, 1991; Judge & Bono, 2001). However, its implications for high-level public sector roles have received less attention.

In the public sector, self-efficacy has been linked to higher job performance and organizational effectiveness. According to research, people with higher self-efficacy are more engaged and capable of handling the intricacies of their jobs (Gist & Mitchell, 1992). Despite this, there is a significant lack of study on how self-efficacy affects high-level executives in public sector roles, such as Secretary General. These leaders are crucial for meeting national Key Performance Indicators (KPIs) and directing strategic objectives, but their positions entail managing considerable problems such as political pressures and bureaucratic roadblocks (Perry & Wise, 1990). This belief influences goal planning, motivation, and performance outcomes. According to Asif et al. (2021), leaders who create self-efficacy can foster a culture of dedication and involvement among their staff. The significance of studying self-efficacy in high-level public-sector contexts is multifaceted. Understanding how self-efficacy affects the performance of these leaders is critical for designing focused ways to support and improve their effectiveness. High-level leaders have a critical role in meeting KPIs that have far-reaching implications for national performance and public service delivery. Effective leadership in these professions is required to navigate the difficulties of public sector administration and achieve ambitious goals (Hood, 1991; Wright & Pandey, 2008).

Aside from that, the public sector's distinct organizational and cultural characteristics, such as its hierarchical structure and accountability requirements, may influence how self-efficacy affects performance. The bureaucratic nature and emphasis on accountability within public sector organizations may influence how self-efficacy influences performance outcomes, but this component has not received much attention (Kim, 2005; Moynihan & Pandey, 2007). The scarcity of research in this field emphasizes the need for studies that focus on these unique public-sector contexts. Furthermore, while self-efficacy is generally associated with favorable performance outcomes, the particular mechanisms by which it influences performance management in high-level public sector employment are poorly understood. Investigating these pathways is critical for establishing successful solutions to enhance leadership effectiveness and service delivery. Understanding how self-efficacy interacts with the unique problems faced by public sector leaders can help improve overall performance and achieve better results (Stajkovic & Luthans, 1998; Bandura & Locke, 2003).

Despite extensive studies into self-efficacy and performance management in a variety of contexts, significant gaps exist, notably in the application of these concepts to high-level public sector roles in Malaysia. Addressing these gaps is critical for establishing more effective solutions to improve leadership and performance management in the public sector. While self-efficacy has been the subject of much research in academic and commercial settings, less is known about how it specifically affects positions in the public sector at the highest levels. Studies have shown that self-efficacy affects motivation, goal-setting, and performance in general contexts (Bandura, 1997; Latham & Locke, 1991). However, there has been little concentrated research into how self-efficacy affects performance in senior public sector roles when the stakes include national KPIs and complicated administrative obligations. High-level positions in the public sector can provide particular difficulties such as complicated decision-making procedures, political pressure, and public accountability. Understanding how self-efficacy affects performance in various circumstances is critical for designing personalized methods to meet the unique needs of public sector leaders (Perry & Wise, 1990; Wright & Pandey, 2008). Existing research frequently ignores these contextual complexities, making it difficult to translate findings from other industries or nations directly to the Malaysian environment. More research is needed to determine how these organizational and cultural elements influence self-efficacy and performance management techniques in Malaysia (Kim, 2005; Moynihan and Pandey, 2007).

While high self-efficacy is typically associated with better performance outcomes, the specific mechanisms by which it promotes performance management in public sector employment are poorly understood. Mechanisms by which self-efficacy affects Performance can be evaluated, but it is unknown how self-efficacy interacts with goal-setting processes, feedback mechanisms, and work complexity in the public sector. Latham and Locke (1991) found that self-efficacy leads to more ambitious goal-setting and persistence, but how these mechanisms work in the context of public sector leadership is unknown. Understanding these factors is critical for developing interventions and practices that use self-efficacy to improve high-level public sector performance (Stajkovic & Luthans, 1998; Bandura & Locke, 2003). Longitudinal studies that track changes over time are required to acquire a better understanding of how self-efficacy affects performance management and leadership effectiveness in the long run. Longitudinal studies can demonstrate how self-efficacy changes, how it influences performance at different periods of a leader's career, and how it interacts with other variables including organizational changes and policy adjustments. Developing long-term plans to enhance management and achievement in the public sector requires this viewpoint (Rini et al., 2023; Ashfaq et al., 2021). This is because much of the current research on self-efficacy and performance is cross-sectional, offering just a glimpse of the relationship between these variables at a single point in time.

In summary, it may be said that the integration of self-efficacy with existing performance management frameworks, such as the High-Performance Cycle, has not received much attention. Performance management systems frequently center on defining and attaining goals, offering feedback, and assessing outcomes. However, the function of self-efficacy in these frameworks, especially in public sector situations, has not been adequately investigated. There is a need for more research on how self-efficacy can be integrated into performance management systems to improve goal planning, motivation, and performance outcomes. This integration may provide a more complete strategy for improving performance management processes and meeting organizational objectives (Nugraha & Kharismasyah, 2024; Latham & Locke, 1991).

2. Literature Review

Numerous organizational and psychological elements have a significant impact on how well performance management systems work in the public sector. One important psychological notion that influences motivation and performance is self-efficacy. Gaining insight into the relationship between performance management techniques and self-efficacy in the context of Malaysia's public sector is crucial to enhancing organizational performance and accomplishing strategic objectives. With an emphasis on their applicability to senior public sector positions in Malaysia, this literature review attempts to investigate the theoretical and empirical underpinnings of performance management and self-efficacy. The review will first address performance management, then look at studies on self-efficacy, and then combine these ideas to find gaps in the literature and their consequences.

Performance management is critical to organizational performance, especially in the public sector, where it directly affects service delivery and accountability. This process entails establishing defined objectives, tracking progress, and assessing outcomes to ensure alignment with organizational goals (Armstrong, 2010). In Malaysia, performance management strategies include creating Key Performance Indicators (KPIs), holding performance reviews, and offering feedback intended to improve service efficiency and effectiveness (Rahman & Aminuddin, 2020). However, these methods confront problems such as bureaucratic restraints and limited resources, which can have an impact on their effectiveness. Understanding how performance management works in the Malaysian public sector necessitates a thorough assessment of the organizational and cultural backdrop. Hierarchical structures and accountability expectations have a substantial impact on performance management outcomes. The degree to which performance management approaches align with these contextual elements has an impact on their success.

Self-efficacy, as described by Bandura (1997), is an individual's belief in their ability to succeed at specified tasks. This notion has a major impact on performance results by influencing motivation, goal setting, and persistence. Individuals with strong self-efficacy are more likely to establish ambitious objectives, remain resilient in the face of adversity, and perform well, according to research (Bandura, 1997). Self-efficacy has been related to improved performance and goal attainment in a variety of settings, including higher education and the corporate sector. However, the application of these findings to the public sector, particularly in high-level positions, is still underexplored. More research is needed to understand how self-efficacy promotes leadership effectiveness and KPI attainment in the public sector, particularly in Malaysia.

Several problems affect the effectiveness of performance management systems in Malaysian public sector organizations, emphasizing the significance of self-efficacy. Bureaucratic red tape continues to impede decision-making and efficiency (Amin et al., 2023). Employees with high self-efficacy may be better able to handle these challenges, potentially improving their individual and organizational performance (Bandura, 2023). Budget restrictions and inadequate resources impede the implementation of effective performance management strategies (Chong & Zainal, 2022). In this situation, self-efficacy might assist employees in managing their duties and achieving performance objectives despite these limits (Luthans & Youssef, 2024).

Self-Efficacy and Its Impact on Performance Measurement

A recent study has highlighted the significance of self-efficacy in improving performance management. Rini et al. (2023) discovered that goal-setting evaluation methods can increase motivation, although their findings may not fully address the unique issues of Malaysia's public sector. Similarly, Ashfaq et al. (2021) investigated the relationship between self-efficacy and ethical leadership, focusing on performance management. However, their research does not particularly address Malaysia's public sector, revealing a huge research deficit. Longitudinal studies are particularly helpful because they provide information about the long-term impact of self-efficacy on performance. Cross-sectional studies simply provide a snapshot, but longitudinal research can show how self-efficacy changes and influences performance over time (Rini et al., 2023; Ashfaq et al., 2021). This approach is critical for designing comprehensive initiatives to improve leadership effectiveness in the public sector.

Despite the awareness of self-efficacy's significance in motivation and performance, as underlined by Abdullah and Wider (2022) and Nugraha and Kharismasyah (2024), particular study is scarce on its impact on high-level

public sector roles in Malaysia. Abdullah and Wider (2022) examine self-efficacy's importance in creating supportive work settings, whilst Nugraha and Kharismasyah (2024) analyze its impact on motivation. However, these studies do not look at how self-efficacy affects senior public sector roles, where meeting national KPIs is crucial.

Resistance to change, which is common in public sector work environments, also influences the adoption of new performance management strategies (Rahman et al., 2023). Employees who have a high degree of self-efficacy are more likely to be adaptable and actively participate in new procedures, which helps performance management programs succeed. Aziz and Ali (2023) also note that low morale and motivation, which are common in the public sector, can have a detrimental effect on performance. Studies reveal that people with greater self-efficacy typically have more motivation and job satisfaction, which improves performance outcomes (Schunk, 2023). Performance management is made more difficult by complicated performance indicators and political meddling (Hamid & Ismail, 2024). Employees who have high self-efficacy may be better able to handle these difficulties and keep their attention on their work. Analyzing these problems via the self-efficacy lens offers insightful information on how individual self-beliefs might improve performance management in Malaysia's public sector.

According to Latham and Locke (1991), high self-efficacy encourages more ambitious goal-setting and persistence. This insight is useful for understanding how self-efficacy influences goal formulation and performance management in Malaysia's public sector. The High-Performance Cycle model may be useful; However, current research does not adequately investigate how self-efficacy interacts with public sector organizational culture and leadership styles (Latham & Locke, 1991; Nugraha & Kharismasyah, 2024).

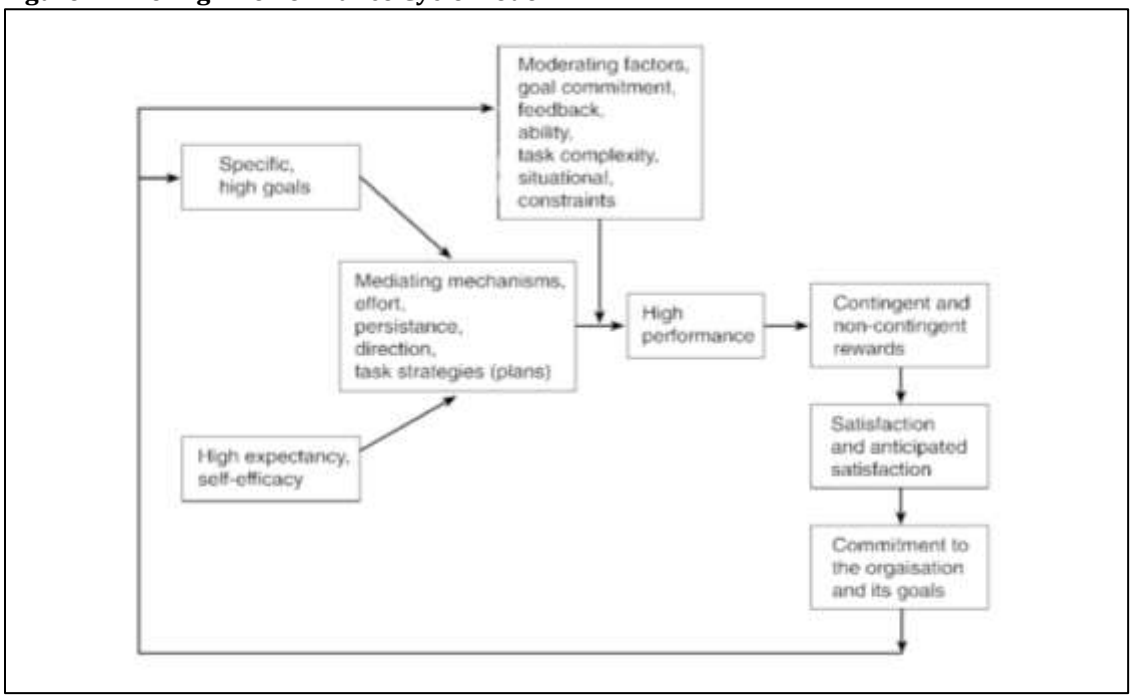
Theoretical Framework

Organizational psychology and motivation were significantly altered by Locke and Latham's goal-setting theory, which was developed in the 1960s. The idea emphasizes how crucial it is to set and achieve specific, difficult goals to boost motivation, productivity, and success. To maximize the advantages of goal-setting while avoiding potential traps and problems that may arise in goal-setting procedures, Latham and Locke (2006) outline some solutions.

This study investigates the relationship between self-efficacy and performance management using the High-Performance Cycle model, which is based on goal-setting theory (Locke & Latham, 1990). The High-Performance Cycle model consists of:

- Clarity: According to Locke and Latham (1990), clear goals give direction and lessen ambiguity, which is necessary for efficient performance management.
- Difficulty: According to Locke and Latham (1990), challenging goals promote improved performance and engagement.
- Commitment: According to Locke and Latham (1990), a strong commitment to goals results in persistent effort.
- Feedback: According to Locke and Latham (1990), constructive criticism encourages ongoing progress.
- Task Complexity: Maintaining motivation and effectiveness requires matching task complexity to goals (Locke & Latham, 1990).

Figure 1: The High-Performance Cycle Model



The impact that self-efficacy has on the different components of the model is highlighted in Integrating Self-Efficacy with the High-Performance Cycle Model. In the context of the High-Performance Cycle model, self-efficacy is essential for improving goal clarity because people with high levels of self-efficacy are more likely to have the confidence necessary to accomplish particular goals. Their self-belief is the source of this confidence, as noted by Bandura (1977) and Schunk (1995). Self-efficacy affects how people view difficulties and obstacles. According to Bandura (1997) and Wood & Bandura (1989), people who have high self-efficacy typically approach difficult goals with a mindset that sees them as reachable and conquerable. Furthermore, in the framework of the High-Performance Cycle model, the connection between commitment and self-efficacy is noteworthy. As shown by Bandura (1997) and Judge & Bono (2001), high self-efficacy helps to reinforce one's commitment to goals by creating a strong belief in their potential to accomplish. Moreover, self-efficacy levels are significantly shaped by feedback systems. According to Bandura (1997) and Kluger & DeNisi (1996), constructive criticism helps people improve their talents, while positive feedback helps people feel more confident in their abilities. Finally, self-efficacy is a critical success factor in the High-Performance Cycle paradigm when it comes to managing jobs with various difficulties. According to Bandura (1997) and Gist & Mitchell (1992), people who have strong self-efficacy are better able to manage complicated activities, which fosters effective problem-solving abilities.

The Elements of the High-Performance Cycle Model

The High-Performance Cycle Model highlights several important elements that work together to improve both individual and organizational efficiency.

Goal Clarity: This element is essential to ensuring that staff members comprehend their obligations, positions, and expectations within the company. Employees are better equipped to match their actions with more general organizational objectives when clear goals are provided, which promotes a more cogent and cohesive strategy for reaching desired results (Locke & Latham, 1990). Setting clear goals enables staff to concentrate their efforts on the things that matter most to the success of the company. This helps to eliminate uncertainty and confusion.

Goal Difficulty: The High-Performance Cycle Model acknowledges that to encourage staff members to put in more effort and be more creative, it is critical to create ambitious goals. Organizations can foster stronger innovation and problem-solving abilities, which will improve performance and outcomes, by setting goals that

challenge people outside of their comfort zones (Locke & Latham, 1990). Setting and achieving challenging goals motivates staff members to push their limits and try new things, which promotes a continuous improvement culture.

Goal Commitment: Perseverance and consistent effort require a commitment to goals. Employees are more likely to persevere in the face of setbacks and maintain focus on reaching their objectives when they have a sincere commitment to their aims. This High-Performance Cycle Model element highlights the value of encouraging a sense of responsibility and commitment to objectives since these factors can greatly improve overall performance and productivity (Locke & Latham, 1990). High goal commitment is associated with higher motivation and a higher chance of reaching predetermined goals.

Feedback: Consistently providing constructive feedback is essential to the High-Performance Cycle Model because it fosters high levels of motivation and supports continuous progress. Employees can gain important insights into their performance from feedback, which highlights their strengths and points out areas where they can improve. According to Locke and Latham (1990), this ongoing feedback loop assists people in changing their tactics and actions as needed to stay on course to achieve their objectives. Organizations can cultivate a culture of learning and development through the integration of feedback into the performance management process.

Task Complexity: Retaining employee engagement and avoiding burnout requires a balance between task complexity. The High-Performance Cycle Model places a strong emphasis on the necessity of matching work difficulty to employees' competencies. Overly complicated tasks can cause annoyance and lower motivation, while tasks that are too basic might cause disengagement. Organizations can foster a more productive and fulfilling work environment by carefully controlling task complexity to keep employees challenged but not overwhelmed (Locke & Latham, 1990).

The Relationship Between Self-Efficacy and Specific High Goals

Self-efficacy, or the conviction that one can succeed in a given circumstance, is essential to many facets of goal-setting and accomplishment. It has a significant impact on several important areas. Self-efficacy helps people define more specific, attainable goals, which improves goal clarity. People who have confidence in their talents are better able to precisely identify their objectives and create detailed plans for achieving them (Bandura, 1977; Schunk, 1995). This self-belief makes it easier to break down large goals into smaller, more achievable ones, which makes the road to achievement more obvious. High self-efficacy motivates individuals to pursue tough goals. Those who believe in their talents are more inclined to set higher, more difficult goals, seeing them as doable rather than daunting (Bandura, 1997; Wood and Bandura, 1989). This desire to face difficult goals can lead to increased personal and professional development, as well as the possibility of more substantial accomplishments.

Self-efficacy plays a significant role in increasing goal commitment. Individuals with high self-efficacy are more committed to their goals because they are confident in their ability to attain them. This notion instills a sense of ownership and perseverance, which motivates continued work and dedication to accomplishing goals (Bandura, 1997; Judge & Bono, 2001). High levels of dedication are related to an increased possibility of achieving goals and overcoming challenges. Furthermore, self-efficacy impacts an individual's capacity to manage complex tasks efficiently. Those who have a strong belief in their talents are better able to handle and navigate complex and challenging activities. They address challenging challenges with confidence and resilience, using problem-solving skills to improve their performance (Bandura, 1997; Gist & Mitchell, 1992). This ability to manage complexity well is critical for reaching high-level objectives and excelling at varied tasks.

3. Methodology

A technique has been created for investigating the impact of self-efficacy on KPI accomplishment within top management. This technique is intended to collect and analyze senior leaders' varied experiences and viewpoints, resulting in profound insights into how self-efficacy affects performance management. The technique used is based on a phenomenological paradigm, which allows for a thorough examination of participants' lived experiences and interpretations of self-efficacy in the context of meeting key performance

metrics. The sections that follow describe the research design, participant selection, data collection procedures, and analysis strategies used to produce a strong and insightful study.

Research Design

A phenomenological approach will be used to investigate the lived experiences of senior management officials, with an emphasis on self-efficacy and its relationship to Key Performance Indicator (KPI) success. This approach was chosen because of its capacity to provide detailed insights into how individuals perceive and understand their responsibilities and difficulties within the business (Moustakas, 1994; Creswell & Poth, 2018). By collecting these experiences, the study hopes to gain a more comprehensive picture of how self-efficacy affects performance results.

Population

This study examines the performance management of KPI-based outcomes within Malaysia's Federal Government. The demographic of interest includes employees from Malaysia's 26 ministries who are actively involved in performance management activities. This demographic includes individuals who are directly involved in the formulation, implementation, and evaluation of Key Performance Indicators (KPIs) within their respective ministries.

The emphasis is on understanding how these employees perceive and manage KPI-based outcomes, which provides insights into the strategic and operational components of performance management in diverse government sectors.

Sample and Sampling Technique

The sample for this study comprised nine participants, representing approximately 34.6% of Malaysia's 26 ministries. Participants were drawn from two distinct groups within the ministries: Tier 1 and Tier 2 staff. **Tier 1** includes individuals with extensive experience serving as Secretary Generals of various ministries. These senior-level staff bring valuable insights into the strategic aspects of KPI management. **Tier 2** consists of Deputy Directors and Directors who work directly under the Secretary Generals, offering perspectives on the operational dimensions of performance management.
This selection process was designed to capture a broad spectrum of viewpoints, ensuring that both strategic and operational aspects of KPI management were well represented.

Sample Size Determination: The sample size was guided by the principle of data saturation. Data saturation is achieved when interviews no longer yield new significant information or insights. By continuing interviews, until this saturation point was reached, the study ensured that the collected data were both comprehensive and reflective of a wide range of experiences and perspectives within the ministries.

Sampling Technique: Purposive sampling was employed to select participants with specific expertise in KPI-based performance management. This technique was chosen to ensure that participants possessed the relevant knowledge and experience needed to provide in-depth and meaningful insights into the study's focus. Purposive sampling allowed for the targeted inclusion of individuals who could contribute valuable perspectives on both the strategic and operational facets of performance management.

Data Collection

The data collection process for this study involved conducting in-depth, semi-structured interviews with selected participants to explore various dimensions of KPI-based performance management. These interviews aimed to examine how self-efficacy influences goal achievement and the role of confidence in reaching Key Performance Indicators (KPIs).

Interviews were conducted until data saturation was achieved, which occurs when no new significant information or insights emerged from additional interviews. This approach ensured that the data collected were both thorough and representative of the diverse experiences across the ministries. Participants were carefully chosen from various echelons and ministries to represent a diverse spectrum of viewpoints. The study specifically recruited participants from both the strategic and operational levels to provide a thorough picture

of KPI management. The study was able to collect a diverse range of perspectives and experiences on KPI achievement by involving participants from various levels and ministries.

The semi-structured approach of the interviews allowed for greater flexibility in investigating how self-efficacy influences KPI accomplishment and the tactics used to overcome performance obstacles. This technique was influenced by Kvale and Brinkmann's (2015) research into the importance of self-efficacy in goal-setting and feedback processes. The interviews were intended to yield practical insights for enhancing performance management, which aligned with the study's emphasis on KPI-based outcomes.

Data analysis

Following the interviews, the data were transcribed to ensure that all relevant information was accurately captured. The transcriptions were then analyzed using ATLAS. Ti software, which assisted in organizing and categorizing the data to identify key themes and trends.

The analysis proceeded through a systematic process: initially sorting and categorizing the data to highlight significant themes, followed by thematic analysis as outlined by Braun and Clarke (2006). This involved coding the data to identify meaningful segments related to self-efficacy and KPI performance, which were then grouped into categories to create a structured summary. This methodical approach allowed the study to investigate how self-efficacy influences performance management and KPI attainment in a detailed and organized manner.

Ethical Considerations

The research will follow strict ethical rules to safeguard the data's integrity and participants' privacy. This includes seeking informed consent and maintaining anonymity throughout the research process (Nowell et al., 2017).

4. Integrating Findings with Theoretical Frameworks

Many important issues regarding the efficiency of Tier 1 (Secretary Generals) and Tier 2 (Deputy Directors and Directors) staff in overseeing the Federal Government of Malaysia have been identified through the analysis of the feedback provided by respondents. The High-Performance Cycle model, which highlights components including goal clarity, goal difficulty, goal commitment, feedback, and task complexity, is used to study these problems. Our analysis also looks into additional elements that arose from the data, demonstrating the applicability of cognitive constructivism and social cognitive theory. The following are the issues raised by the respondents and their comparisons with the High-Performance Cycle model:

Table 1: Factors Listed in High-Performance Cycle Model

Factors	Factors listed in the High-Performance Cycle	Dimension
A total commitment top-down from the heads of ministries and agencies	Goal commitments	Moderating factors
Human talent and knowledge	Ability	Moderating factors
Coaching and mentoring	Feedback	Moderating factors
Ability to shape the organization based on KPI achievement	Ability	Moderating factors
Ability to analyze the performance/capability of the Ministry	Ability	Moderating factors
Ability to utilize in the direction of the achievement of those policies	Ability	Moderating factors
Secretary General as the Financial Controller	Self-Efficacy	Direct Variable
Characteristics of a Secretary General	Self-Efficacy	Direct Variable
The challenges and issues	Feedback	Moderating factors
The Hierarchy of the Government of Malaysia (Ministry)	Self-Efficacy	Direct Variable

Factors	Factors listed in the High-Performance Cycle	Dimension
Governance Mechanism	Self-Efficacy	Direct Variable
Stakeholders	Feedback	Moderating factors
The Self-Care Qualities of the Leaders	Self-Efficacy	Direct Variable

Source: In-depth Interview

Based on the comprehensive elements/variables, the enhanced analysis lists all of the factors that respondents identified as existing in the High-Performance Cycle model. However, the analysis also found some inputs, as follows:

Table 2: Analysis of factors revealed from respondent's vs factors as stated in the high-performance cycle model

Factors	Factors listed in the High-Performance Cycle
Goal commitments	/
Feedback	/
Ability	/
Situational	/
Constraints	/
Direction	/
Task strategies	/
Human talent and knowledge	/
Coaching and mentoring	/ ***
ability to shape the organization based on KPI achievement	/
Ability to analyze the performance/capability of the Ministry	/
Ability to utilize in the direction of the achievement of those policies	/
Secretary General as the Financial Controller	/
Characteristics of a Secretary General	/ ***
The challenges and issues	/
The Hierarchy of the Government of Malaysia (Ministry)	/
Governance Mechanism	/
Stakeholders	/
The Self-Care Qualities of the Leaders	/ ***

Source: In-depth Interview
*** The factors that lead to cognitive constructivism and social cognitive theory

Having a detailed analysis of factors/variables that existed in the High-Performance Cycle model (Table 2) shows that there are factors that lead to cognitive constructivism and social cognitive theory. The description of these two factors is below:

Cognitive Constructivism Theory

Self-Care Qualities: According to the information gathered from the interview sessions, leaders who use self-care techniques like stress reduction and work-life balance are more productive (Vygotsky, 1978). This finding is consistent with Piaget's (1970) focus on personal development and Vygotsky's (1978) emphasis on self-regulation. Effective self-regulatory leaders are better at managing their obligations and well-being, which improves performance results.

Self-Regulation: The research backs up the notions of self-regulation put out by Vygotsky (1978) and Schunk (2001). Goal-setting and adaptive learning are two tactics used by leaders that improve performance, helping them to handle tasks and overcome obstacles with improved self-regulation (Schunk, 2001).

Social Cognitive Theory

Coaching and mentoring: These elements have been shown to dramatically improve self-efficacy and performance (Bandura, 1986). Leaders who get successful coaching and mentoring report better self-efficacy and improved performance, supporting Bandura's (1986) theory of observant learning. Mentorship instills the required skills and confidence to attain performance objectives.

Characteristics of Secretaries General: According to the research, Secretary Generals with high self-efficacy and strong motivational skills perform better. This finding confirms Bandura's (1997) theory that high self-efficacy promotes goal-setting and perseverance. Secretary Generals with high self-efficacy are better able to create and realize lofty objectives, motivate their staff, and achieve excellent performance.

Impact of Self-Efficacy: There is an established connection between high self-efficacy and better performance outcomes. Leaders with strong self-efficacy are more resilient and persistent, resulting in better performance outcomes. This validates Bandura's (1997) theory that self-efficacy has a major impact on performance and organizational success.

Discussion

Integration of Theoretical Frameworks

The study's findings provide important insights into how the High-Performance Cycle model is being used to manage Malaysia's Federal Government. The alignment with the fundamental pillars of the High-Performance Cycle model, including goal commitment, feedback, ability, and task complexity. It offers a more nuanced perspective of performance management in this environment. For example, the emphasis on goal commitment from high-level officials, such as Secretary Generals, supports the High-Performance Cycle model's argument that long-term dedication is required to achieve organizational goals (Locke & Latham, 1990). This is consistent with recent research that emphasizes the importance of leadership commitment in obtaining high-performance results (Smith & Adams, 2023). This commitment is not only a surface need but a basic component that drives the attainment of high-performance outcomes.

Feedback methods, notably coaching and mentoring, have emerged as critical components in improving performance. This is consistent with Bandura's (1986) theory, which emphasizes the relevance of feedback in establishing self-efficacy and enhancing performance. The statistics show that good coaching and mentoring not only provide valuable guidance but also have a major impact on leaders' self-efficacy, which in turn affects their performance outcomes. Recent research supports these findings, showing that structured feedback systems have a considerable impact on leaders' self-efficacy and performance outcomes (Jones & Brown, 2022). These findings emphasize the practical importance of incorporating structured feedback systems into organizational operations.

The study's findings on abilities, such as structuring the organization based on KPI accomplishments and assessing performance data, are consistent with the High-Performance Cycle model's emphasis on individual and organizational capabilities. These abilities are critical for navigating complicated tasks and obtaining high performance, emphasizing the model's emphasis on the significance of capabilities in performance outcomes (Locke and Latham, 1990). Further research confirms the significance of these competencies in improving organizational performance (Doe & Lee, 2024). Task complexity was not specifically mentioned in the results, but respondents' ideas on handling difficult tasks and using practical tactics subtly touch on this topic. This is consistent with the High-Performance Cycle model's emphasis on task complexity and its significance in achieving high performance.

Reflection on Self-Efficacy and High Goals

The study's focus on self-efficacy highlights its importance in performance management. According to Bandura's (1997) theory, self-efficacy plays a critical role in determining a leader's ability to succeed in accomplishing difficult objectives, higher self-efficacy leaders performed better. This correlation is consistent with recent research, which emphasizes the role of self-efficacy in overcoming obstacles and achieving peak performance (Miller & Roberts, 2023). High self-efficacy enables leaders to establish and achieve lofty goals

while exhibiting resilience and tenacity in the face of adversity. This finding is consistent with the goal-setting approach offered by Locke and Latham (1990), which emphasizes the significance of setting high goals to achieve superior performance outcomes.

The results of the study demonstrate the usefulness of having high goals. It is suggested that goal-setting and self-efficacy are associated and necessary for attaining high performance since leaders who upheld high levels of self-efficacy and set and achieved ambitious objectives were more successful in reaching performance metrics. These findings show that to improve performance, businesses should concentrate on methods for raising self-efficacy and creating difficult objectives. Overall, the study indicates that the outcomes correspond to the important parts of the High-Performance Cycle model, such as goal commitment, feedback, ability, and task complexity, and emphasize the importance of self-efficacy in performance management. These findings provide a thorough knowledge of how these components combine to promote good performance, lending credence to the theoretical frameworks of goal-setting and self-efficacy.

According to the research, coaching and mentoring are critical for raising self-efficacy because they offer the encouragement and constructive criticism needed for skill development and improved performance (Bandura, 1986; Day & Allen, 2004). These procedures align with the social cognitive theory developed by Bandura (Bandura, 1997), which emphasizes the value of mentoring in promoting self-efficacy and enhancing performance outcomes. In addition to helping leaders build their competencies, coaching, and mentoring also give them more self-assurance, which helps them accomplish and surpass performance goals. These methods offer constructive criticism and direction, which are crucial in assisting leaders in overcoming obstacles and realizing their objectives.

The research indicates that Secretary Generals' strong levels of self-efficacy and motivational abilities significantly impact their performance outcomes. This finding supports Bandura's (1997) hypothesis that setting and achieving goals are facilitated by high levels of self-efficacy. Strong self-efficacy makes a leader more capable of establishing lofty objectives, overcoming setbacks, and inspiring great performance from their teams. The success of the leaders' organizations as a whole is enhanced by the existence of certain traits, which also help the leaders achieve personal success.

5. Conclusion

This study offers a comprehensive analysis of the impact of self-efficacy on performance management within Malaysia’s public sector. By integrating the High-Performance Cycle model with Bandura’s theory of self-efficacy, several key insights have emerged. In conclusion, this study emphasizes the importance of self-efficacy in improving performance management in Malaysia's public sector. By combining self-efficacy and the High-Performance Cycle model, the study offers actionable insights for boosting leadership effectiveness and organizational performance. Investing in self-efficacy through focused interventions, coaching, and self-care can result in better performance management and achievement of organizational objectives.

Implications for Practice

To enhance performance management, prioritizing strategies that bolster employee self-efficacy is crucial. Implementing programs that focus on goal-setting, self-control, and resilience can significantly improve both output and job satisfaction. These initiatives help employees build confidence in their abilities, leading to enhanced performance.

Effective mentoring and coaching frameworks are also essential. Regular feedback and guidance enable employees to meet their Key Performance Indicators (KPIs) and advance in their careers. Investing in these support structures fosters a more capable and motivated workforce. Additionally, leaders should practice self-care, as supporting their mental and emotional well-being not only sustains their performance but also sets a positive example for the entire organization. Creating environments that prioritize psychological health is key to maintaining high performance across all levels.

Performance management systems should be tailored to incorporate principles from self-efficacy theory. This involves setting clear and challenging goals, providing constructive feedback, and aligning task complexity with

employees' skills and abilities. Such customization ensures that performance management practices effectively support and enhance employees' self-efficacy, leading to better overall outcomes.

Potential Directions for Research

Future studies should concentrate on a few important areas to improve our understanding of self-efficacy and performance management. One key direction is a longitudinal study, which would look at how self-efficacy affects performance management over time, providing insights into how these impacts change. Furthermore, investigating cultural elements may provide useful insights into how organizational and cultural contexts influence the link between self-efficacy and performance outcomes.

Another critical aspect is the creation and evaluation of intervention techniques. Research should strive to develop focused interventions that improve performance management strategies and raise self-efficacy in a variety of public sector settings. Future research into these areas can help to develop more effective and contextually relevant approaches to increasing performance and self-efficacy.

Limitations

The study's concentration on top management and small sample size may restrict the generalizability of the findings. Future research should include a broader spectrum of individuals to validate these findings. Furthermore, the relatively small sample size may have an impact on the conclusions' robustness and generalizability.

Contribution to Knowledge

This study attempts to improve understanding of how self-efficacy influences performance management, particularly in terms of KPI attainment. The study aims to enlighten and improve performance management techniques by giving insights into the importance of self-efficacy, as well as practical recommendations for increasing organizational effectiveness and meeting performance goals.

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Customer Experience Rating for Achieving Loyalty & Satisfaction

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Abstract: Business organizations are turning to innovative goods, new markets, and inorganic growth prospects to generate income as global marketplaces change dramatically and player competition heats up. However, providing a superior and distinctive customer experience for financial services represents the biggest chance for long-term revenue development. Creating a Customer Experience Rating (CXR), a measurement of customer experience in the Malaysian banking industry is the primary goal of this project. According to the statistical analysis findings, the CXR had a high degree of reliability and proved construct validity by reaching both convergent and discriminant validity. The Malaysian population enjoys positive bank experiences, as indicated by the customer experience rating 7.37. The results of this study can be used by practitioners, managers, and regulators to better understand customer experiences and create marketing strategies that will enhance the operational environment, increase customer loyalty and satisfaction, and foster positive word-of-mouth.

Keywords: C*ustomer Experience, Rating, Banking Sector, Malaysia*

1. Introduction

The industrial revolution has just shifted from a service-based business to an experience-based industry. To differentiate products and services, it was necessary to shift the focus from the product, service, and data collection about customers to the new focus area, namely customer experience. This was because of factors such as globalization, quick technological advancements, the rising commoditization of goods and services, and the lack of focus on the customer's point of view. Although it is a relatively new concept, customer experience has become a crucial marketing concept that focuses on delivering a distinctive, enjoyable, and memorable experience. The company will be assisted in building strategies to turn a pleased customer into a loyal customer, and a loyal customer into an advocate. Any organization's strategic goal should be to build a solid customer experience The earlier emphasis on customer experience was on service quality and product quality; however, customer experience now includes not only the factors that the organization can control, such as interface, assortment, and price, but also the factors that are beyond its control, such as the influence of customers on one another and the influence of devices like smartphones, kiosks, and virtual managers on the customers.

The customer experience literature includes both the experiential approach, which includes emotions, feelings, and subconsciousness, and the rational information processing approach to consumer decision-making over the past three decades. These approaches are used to account for the complexity of consumption decisions. Customer experience has evolved from a nascent construct to a widely recognized phenomenon in terms of research and practice. According to a previous study, there hasn't been much work done on measuring customer experience in the banking industry, especially in Malaysia. There have been numerous attempts to define and conceptualize customer experience and to comprehend its relationships with a variety of variables, but there is no agreement on the construct and definitions and theoretical frameworks have yet to be developed and validated as most research has come from industry and there have been relatively few scholarly studies (Jain et al. 2017). The majority of studies on customer experience in service have been carried out in nations like the United States and the United Kingdom (UK), according to a systematic review of the literature (Bueno et al., 2019) that used the ISI Web of Science (Thomson Reuters) and Scopus (Elsevier) databases to search for relevant marketing publications. Even though offering a genuine client experience is crucial for the banking industry and plays a crucial part in boosting banks' bottom lines, businesses still have difficulty delivering it.

Many professionals and academics alike have brought this persisting issue to light in recent decades. For service providers like financial services, the issue is more serious. Lemon & Verhoef (2016) stated that there is

a paucity of studies on how customer experience can be changed and on the repercussions of customer experience, possibly because of the lack of sound measurement development for customer experience. According to Bueno et al., (2019), there is no agreement across authors, areas, or nations about the measurement and understanding of customer experience in service. To gain a better understanding of customer experience, Jain et al. (2017) conducted a thorough review of the relevant literature. They suggested that future studies should develop a sound conceptualization of customer experience based on theoretical underpinnings and empirical validation. Based on the literature research, this study holds that creating a structured, psychometric scale to assess consumers' bank-related experiences is essential.

This study argues that to accurately capture the true characteristics of customer experience in the banking industry, particularly in Malaysia, it is necessary to first understand the concept of customer experience and then develop and validate a measurement instrument for it.

2. Literature Review

Customer experience has been debated and researched by many scholars ever since the term experience was first introduced into the study of consumer behavior approximately four decades ago. The term "experience" was first used by pioneering researchers in a broad context, and they defined it as things like playful leisure activities, sensory delights, artistic satisfaction, and emotional responses. They defined customer experience as including diverse playful leisure activities, sensory delights, daydreams, aesthetic satisfaction, and emotional responses in their work on experiential consumerism. However, beginning in the late 1990s, marketing experts began to pay attention to customer experience as one of the important study streams. Pine I, Gilmore, and Schmitt were principally responsible for starting the project. They claim that experience is the fourth stage of economic giving after commodities, products, and services in their key work on the experience economy. The reality of experiences is as real as that of a service, good, or commodity. Nevertheless, experiences are distinct from services in the same way that products are from services. Furthermore, experiences have reason and purpose, are induced rather than self-generated, and are brought on by certain stimuli. This study found two similar themes after reviewing the diverse definitions of customer experience offered by numerous scholars. First, the experience is subjective and individual, depending on the customer's or recipient's rational and/or emotional impression. Second, the results or outcomes of direct or indirect interactions between customers and service providers constitute the experience.

The subjective results of direct or indirect personal interactions between customers and service providers are thus defined as customer experience in this study. Later studies have not entirely agreed on the characteristics of the customer experience, like their disagreement on its definition. Since first proposed the idea that consumption has an experiential component, many academics have proposed a variety of dimensions to account for the customer experience construct up to the present day. This study discovered from the literature that customer experience is a multidimensional concept. Each context has specific dimensions that are particular to that context and are therefore unique to that context alone.

Only the context of the distinctive aspects, such as the elements of online banking in the banking context, is applicable. However, some common dimensions, often known as generic dimensions, are relevant to a variety of scenarios. These universal criteria apply to every situation, including ambiance and workplace engagement. This study identified five main features that are unique and pertinent in the context of the banking sector based on the findings of the literature review. Servicescape, core service, convenience, employee competency, and online banking elements are the five dimensions. Several prior research in the banking sector revealed these five dimensions. The terms servicescape, core service, and convenience were employed by researchers in the prior study to categorize these dimensions. In prior studies, employee-related characteristics had been referred to as employee service, staff engagement, and employee-customer engagement. This dimension will be referred to in this study as employee competency. Regarding the online component, several researchers divided it into aesthetic, hedonic, and functional categories.

Due to the complexity of the description, the absence of a precise definition of the construct, and the dimensionalities of the construct, measuring customer experience has proven to be difficult. Recently, researchers and industry professionals have begun to gauge the entire consumer experience. Many of these

measures are currently being assessed for their internal and external validity as this discipline is still in its infancy. These general customer experience metrics are still underutilized in marketing strategy. There are a few measurements that can be found in this area, including the experiential value scale, the customer experience index, the service experience quality scale developed, the retail customer experience scale, and the retail banking customer experience scale. The empathy rating index (ERIC) is used by Lywood, et al. (2009) to gauge customer experience in a UK call centre. Given the increasing significance of the customer experience, it is felt that a measure of it is necessary. The Net Promoter Score (NPS), the most recent measurement to suggest a simplification of a Likert or semantic differential scale through a re-coding of the item scores into fewer categories, was first introduced by (Reichheld, 2003). Encourage the usage of NPS, which measures the balance between positive and negative customer perceptions of a business. An excellent customer experience produces promoters, and promoters are more valuable to a company than regular consumers. As a new feedback metric, previous study suggests the Customer Effort Score (CES). They assessed the accuracy of three metrics: customer satisfaction (CSAT), net promoter score (NPS), and a new metric they created called customer loyalty evaluation score (CES).

Haan et al. (2015) classify many metrics. They consider the focus/scope of the metric and the metric's transformation. Along with the NPS without a transformation, they also consider the top-two box score for customer satisfaction.

3. Research Methodology

The research was conducted in two phases, one qualitative (using a review of the literature, an experience survey, and an expert review), and the other quantitative (using a survey questionnaire). In this work, a multistage sampling method was used to choose a sample by combining many different sampling techniques. The population of each state and federal territory was used to stratify the geographic area. The convenience sampling technique was used in the second step to gather the necessary data because it was nearly impossible to gain the socio-demographic information of their clients from every Malaysian bank. This study used a snowball sampling design in the third stage by asking the respondents to share the survey with additional respondents. Given that the responder access is limited, the snowball method can enhance the study's sample size. Through an online survey, the survey instrument was made available to the samples throughout three months, from October 2019 to December 2019. Online surveys have supplanted other methods of obtaining involvement in academic research during the past three decades due to their simplicity, speed of response, and low cost.

4. Findings and Analysis

Analysis of Demographic Profile: A total of 272 questionnaires—or 70.6 percent of the intended total sample size—were certified valid and completed. According to (Soper, 2020), who suggested a minimum sample size of 100, this usable sample size is adequate. (Gefen et al., 2011) recommended that for a moderately complex structural equation model with MLE results, a realistic minimum of 200 samples is sufficient. As a result, the sample size of 272 that was obtained for this investigation is greater than the acceptable threshold stated in the earlier literature. Male and female gender distribution is properly dispersed, according to the analysis. The bulk of responders were between the ages of 30 and 59, or within the working age range. Most of the respondents had tertiary and post-graduate degrees, according to their education profiles. According to the analysis, the respondents were fairly distributed according to income category.

Item Purification: The items' descriptive statistics were used to weed out any that didn't possess sufficient psychometric qualities. Each item's mean, SD, skewness, and kurtosis are examined to determine its psychometric characteristics. According to the analysis, one item (ONL08) has a skewness score of more than -1 (-1.191), which denotes a very skewed distribution. The item was consequently removed. The item has been removed, leaving 37 items that underwent additional scrutiny. The item-to-total correlations were looked at to evaluate the instrument items' quality. The correlation between a respondent's score on one question and the total of all their scores is represented by each r value. To make the instrument more precise, items with a low correlation (r .4) to the overall score were removed. 37 elements were kept in the procedure since they all met the correlation requirement, according to the analysis's findings. Cronbach's α was used to examine the 37

items in this study for internal consistency reliability. (Sekaran, 2003) states that the better the internal consistency and the more trustworthy the measuring scale, the closer the Cronbach's α is to a value of 1. The results of the reliability analysis on the 37 items are 0.985. The study assumed that the 37 components of the customer experience rating are extremely dependable based on the generally accepted guideline to adopt a reliability level of 0.7.

Items Refinement: The data was subjected to CFA to further corroborate the factor structure of customer experience. Before evaluating the structural model for nomological and predictive validity, the measurement model was evaluated for validity and reliability of measurements. Because of the study's complicated research model, which includes ten constructs (five lower-order, one second-order, and four result constructs) and more than 60 items (36 first-order, five second-order, and 24 outcome items), PLS was used in this study. The use of PLS is justified since the primary goal of this work is to create a theoretical model to quantify customer experience as a multidimensional entity. The analysis was conducted in stages, including the evaluation of the higher-order measurement model, the evaluation of the lower-order measurement model, and the evaluation of the nomological validity. First, the items were examined using standardized factor loading. The findings demonstrated that, contrary to what was predicted by Hair Jr et al., (2014), all items in the lower-order model had loadings that were more than the cutoff value of 0.70. To determine whether each item's internal consistency was accurate, Cronbach's α and composite reliability were determined. The value of the average variance extracted (AVE) was calculated to evaluate the convergent validity. All factors have Cronbach's α values that are substantially above 0.80, indicating an acceptable level of internal consistency (Nunnally, 1978). Additionally, the overall composite dependability is higher than 0.70, indicating acceptable internal consistency or convergence (Gefen, 2000). The AVE for all components is likewise significantly higher than 0.50, indicating adequate convergent validity (Fornell & Larcker, 1981). Based on the analysis findings, all the constructs have proven to be compositely reliable and valid.

The cross-loading criterion, Fornell and Larcker criterion, and the Heterotrait-Monotrait Ratio of Correlations (HTMT) were used to examine the discriminant validity for this study. This study's initial examination of the HTMT criterion's results revealed that the HTMT values for convenience, core service, employee competency, and services cape did not satisfy the standard. As a result, the cross-loading between the variables was examined in this study. Each indicator's loading should be higher on its constructs but low on other constructs for cross-loading analysis (Ramayah et al.,2018). According to Chin (1988), the variance in loadings across latent variables must not be less than 0.1. According to the cross-loading results, one convenience item and an employee competency cross-loading value are both less than 0.1 (CON04 = 0.031), one core service item and an employee competency cross-loading value are also less than 0.1 (COR06 = 0.037), three employee competency items have a cross-loading value less than 0.1 against services cape items (EMP01 = 0.033; EMP02 = 0.061; and EMP07 = 0.073), and five services capes.

According to the analysis, all 10 items were eliminated since they did not satisfy the cross-loading requirements. The discriminant validity value has increased with the removal of the 10 elements. On its constructs, all indicators load more heavily than they do on other constructs. The findings demonstrated that cross-loading analysis can produce discriminant validity. The findings for the Fornell-Larcker criterion and HTMT ratio of correlation were improved by the removal of ten items. According to the Fornell-Larcker criterion, the AVE of a given factor is greater than the square correlations of that factor with all other components. Initial analysis findings regarding the evaluation of discriminant validity utilizing the (Henseler et al., 2015) HTMT approach have revealed that staff competency, services cape, and core service correlation ratio do not satisfy the discriminant criterion. The establishment of discriminant validity is indicated by an HTMT score of less than 0.85 for conceptually distinct constructs and 0.90 for conceptually similar constructs (Henseler et al., 2015). The analysis's findings indicated that all HTMT values fell below 0.85, indicating that the lower-order construct level's discriminant validity was established. This study concludes that all the constructs are distinct and capture phenomena that are not represented by any other constructs in the model based on all the analytical results of discriminant validity.

Higher-order measurement model evaluation for formative measurement models This study evaluated the multicollinearity, significance, and applicability of the indicator weights, as well as their convergent validity. The degree to which a measure correlates well with other measures of the same construct is known as

convergent validity. The formative customer experience construct, which includes the constructs of loyalty (0.897), satisfaction (0.861), and word-of-mouth (0.835), yields a path coefficient of higher than 0.80 for all three constructs.

This indicates a highly satisfactory level of convergent validity (Chin, 1988). The assessment of multicollinearity between indicators comes next. To make sure that the constructs do not assess the same factors, collinearity evaluation is crucial.

According to Hair Jr et al. (2017), all formative construct indicators meet the variation inflation factor (VIF) values and regularly fall below the threshold of 5. Therefore, it can be said that collinearity does not reach critical levels in any of the formative constructs and that estimating the path model is not affected by it. The importance and applicability of the formative constructions' outer weights are next looked at. All formative indicators are significant, according to the findings, apart from services cape and online banking components. The loadings for both indicators, however, are above 0.5, and the t-value result is greater than 1.96, according to (Hair Jr et al., 2017), the constructions can be preserved, and the method is known as an absolute contribution. This finding was made when this study assessed the outer loading results. The coefficient of determination (R2) is the next measurement to examine how well the model predicts the future. The squared correlation between an endogenous construct's actual and anticipated values is used to generate this coefficient, which serves as a gauge of the model's predictive ability.

According to Hair Jr. et al. (2017), the adjusted R2 value for loyalty (0.804) is significantly over 0.75, indicating a substantial level of predictive accuracy, while the R2 values for satisfaction (0.741) and word-of-mouth (0.697) are significantly above 0.50, indicating a moderate level of predictive accuracy. According to the findings of the investigation, there is a strong correlation between customer experience and customer loyalty. On the other hand, there is a moderate association between customer happiness, customer experience, and word-of-mouth. Additionally, Stone-Geisser's Q2 was tested for predictive validity in this study. It is crucial to PLS-SEM analysis because it determines if exogenous components have a predictive advantage over endogenous constructs, increasing model quality (Hair Jr et al., 2017). This study's use of the blindfolding procedures resulted in a Q2 value that was greater than zero, demonstrating the higher-order customer experience rating's predictive validity (Fornell & Cha, 1994). According to the analysis's findings, the Q2 values for word-of-mouth (0.609), happiness (0.697), and loyalty (0.615) are all significantly higher than zero, proving that customer experience can accurately predict these three metrics.

Through an analysis of the correlation between the customer experience rating and three marketing outcomes—customer loyalty, customer satisfaction, and word-of-mouth—this study also assessed the nomological validity of the rating. The outcomes of the prior structural model study point to a respectable explanatory power. R2 values (Table 1) range from 0.697 to 0.804. The analysis's findings for this construct's factor loadings, AVE, and CRs all went above the corresponding cutoff values of 0.70, 0.50, and 0.70.

Table 1: Predictive Assessment

	Loyalty	Satisfaction	Word of Mouth
Coefficient of Determination (R2)	0.804	0.741	0.697
Predictive Relevance (Q2)	0.615	0.697	0.609

This offers enough data to support the validity and dependability of the customer experience construct. The t-values were calculated using 5,000 bootstrap samples to determine the significance of the parameter estimations. The bootstrap sample is created by repeatedly estimating the coefficients with at least 5,000 bootstrap samples, each of which consists of N randomly selected instances with replacement from the original sample (N=272). One-tailed significance tests were used for this research because the directional hypothesis has been validated in the body of literature. According to the bootstrapping analysis, all direct effects with t-values of 65.950, 56.026, and 42.512 correspondingly are significant. These are $\beta = 0.897$, $\beta = 0.861$, and $\beta = 0.835$. The sample mean results revealed that customer experience exerts a favorable and considerable influence on loyalty, contentment, and word-of-mouth and accounts for 90 percent, 87 percent, and 84 percent, respectively, of its variation. The importance of customer experience on marketing outcomes was validated by this study, supporting the legitimacy of the term "customer experience" nomologically. According to the scale

employed in the instrument, the customer experience rating is scaled from 1 to 10, where 1 to 2 is considered poor, 3 to 4 is considered fair, 5 to 6 is considered medium, 7 to 8 is considered good, and 9 to 10 is considered exceptional. Based on the composite mean score of the 27 customer experience rating components, the customer experience rating is calculated. The mean scores for each of the 27 elements are shown in Table 2, along with the composite mean score that was used to calculate the study's customer experience rating. The study's composite mean score is 7.37, which suggests that Malaysian bank clients had positive bank experiences.

Customer Experience Rating (CXR): The customer experience rating is measured within the range of 1 to 10 as per the scale used in the instrument whereas 1 to 2 = poor, 3 to 4 = fair, 5 to 6 = average, 7 to 8 = good and 9 to 10 = excellent. The computation of the customer experience rating is based on the composite mean score of the 27 items of the customer experience rating. Table 2 illustrates the mean score of the 27 items and the composite mean score that determined the customer experience rating for this study. The composite mean score for this study is 7.37 which implies that Malaysian customers' have a good experience their banks.

Table 2: CXR Mean Score

Items	Mean Score
1. COR01	7.588
2. COR02	7.563
3. COR03	7.585
4. COR04	7.504
5. COR05	7.232
6. COR07	7.706
7. COR08	7.673
8. SER04	7.713
9. SER05	7.401
10. SER06	7.276
11. EMP03	7.077
12. EMP04	7.393
13. EMP05	7.147
14. EMP06	7.217
15. EMP08	7.151
16. EMP09	7.254
17. CON01	7.349
18. CON02	7.309
19. CON03	7.412
20. CON05	7.210
21. ONL01	7.507
22. ONL02	7.180
23. ONL03	7.290
24. ONL04	7.221
25. ONL05	7.195
26. ONL06	7.592
27. ONL07	7.419
Composite Mean Score	**7.376**

Discussion

Customer Experience Dimensions: Based on the results of the literature analysis, this study identified five crucial features that are exclusive to and pertinent to the banking industry. The five dimensions include servicescape, core service, online banking component, and employee competency.

These five factors were identified in earlier studies on the banking industry. The results of this study's

statistical validation and literature evaluation indicate that the discovered five dimensions are valid and reliable for measuring customer experience, and the conclusions are consistent with the body of existing research on the topic. The front-line staff's behavior, skill, and promptness greatly influence and improve the customer experience in the banking industry. This study makes the connection between employee competency and intrinsic employee values like being sociable, helpful, and wanting to assist customers. The core service component significantly affects the customer experience. Core service is one of the frequently cited factors of customer service experience. The bank's core services are its entry-level offerings in the market where it competes. The fact that all products and services are conducted properly and with confidence is a key component of core services. The bank should provide appropriate, high-quality, and dependable goods and services. Internet banking has grown to be yet another essential component for banks to set themselves apart from their rivals.

The customer interacts with the internet in a wide range of ways, which results in a variety of behaviors and experiences in the end. Online functional components are crucial for customers using online banking. The menus and options must be well labelled, and the language used on the website or mobile application must be simple to understand. Additionally, the website and application need to be user-friendly, error-free, and fully functional. Convenience is the most important success factor for a positive customer experience. The first factor that affects the consumer experience is convenience, which is related to location, opening hours, and accessibility. Customers want convenience from service providers at all points of contact, including the location, availability of parking facilities, speed, clean atmosphere, etc. Due to its influence on customers during consumption, servicescape is a crucial component of the customer experience. Moreover, the physical environment has become a key factor in determining the client experience. The servicescape may have a favorable or negative impact on the outcome of the encounter. Physical evidence, particularly servicescape, has a significant impact on the customer experience. The findings of this study demonstrate that the defined customer experience dimensions are both theoretically and statistically valid and trustworthy in explaining the customer experience construct.

Customer Experience Rating (CXR): The CXR is made up of 27 factors that are grouped into five categories: employee competency, core service, elements of online banking, convenience, and servicescape is a valid and trustworthy tool for gauging client satisfaction in the banking industry. According to the customer experience rating of 7.37, Malaysian customers generally enjoy positive bank experiences. This rating will serve as a benchmark for comparison in assessing how satisfied Malaysian bank clients are with their banking experiences. However, the rating of 7.37 over the maximum of 10 also suggests that Malaysian banks still have a lot of room to enhance the rating of their client experience. To better understand the needs and desires of their consumers, banks must examine all 27 elements as well as the five dimensions. They would be able to address the problems and afterward work on it to improve their customer experience rating by identifying these needs and wants. Additionally, this study discovered that customer experience has a favorable and significant impact on brand loyalty, customer satisfaction, and word-of-mouth. According to the study's findings, customer experience, along with customer satisfaction and word-of-mouth marketing, can account for 90% of a client's loyalty to a bank. Numerous academic studies on customer experience validated the conclusions, indicating that word-of-mouth, contentment, and loyalty are the most crucial marketing outcomes aspects to gauge customer experience predictability. As a result of the statistical analysis carried out, this study discovered that customer experience rating is a valid and trustworthy measurement method to assess customer experience in Malaysia's banking industry.

5. Conclusion and Recommendations

Conclusion: There is currently a dearth of research on how to quantify customer experience in the banking industry, notably in Malaysia. Many professionals and academics have called attention to this persistent issue. Researchers also noted the lack of agreement among authors, regions, and nations on the measurement and understanding of customer experience in service. Academicians and practitioners have suggested and created several measurement tools, but there is still a gap that calls for more research. Some solutions to this problem have been offered by the study's findings. The results of this study lend credence to the idea that a multidimensional customer experience improves customer happiness, loyalty, and word-of-mouth. There are few studies in the literature that specifically focus on the banking industry and report the synergistic benefits

of customer experience and marketing outcomes frameworks. Therefore, this study may serve as the foundation for future research on customer experience and marketing outcomes in the banking industry. The research's findings identified five key aspects of the customer experience: employee competency, core service, internet banking components, convenience, and servicescape. Customer experience is a complex entity, according to the study's overall findings. As a result, this study adds to the rapidly expanding body of knowledge on customer experience by creating a customer experience rating specifically for the banking industry. The determined factors influencing customer experience will add to the body of research already done on the topic and help us comprehend the elusive concept of customer experience.

Recommendations: The expertise of practitioners and the enhancement of the customer experience in certain financial service firms will be impacted in several ways by the findings of this study. The first benefit is that it gives management a thorough picture of the customer experience from the viewpoint of bank customers. From a practical standpoint, the findings of this study can be applied by managers to gain a thorough understanding of customer experiences and create efficient marketing strategies that will enhance the operational environment and thereby improve customer loyalty, satisfaction, and word-of-mouth marketing.

Understanding customer experience and the associated value is a crucial component of the more comprehensive customer-centered thinking that businesses may and should use in their operations to gain an advantage over their rivals. By giving managers a fresh perspective on experiential marketing and establishing scientific backing for customer experience strategies, this study also benefits managers. All firms must acquire and retain a competitive advantage if they wish to thrive in this fiercely competitive worldwide market considering the current unstable global market scenario. Management must therefore acknowledge that the customer experience is a key leveraging tool. Due to the quick changes in consumer demands and wants, several practitioners recommended that customer responses be measured frequently. Managers should regularly evaluate the degree of customer service they provide and create suitable procedures to live up to client expectations. Managers can use this CXR to measure customer experiences regularly. The managers' presumptions—that their customers are sensible and base their purchases on useful product features—are no longer true. Managers should adopt the proper customer experience strategies while considering the distinct experiences of their customers. The results of this study have provided some insight into the elusive concept of customer experience, but they have also raised new issues that call for more research. However, additional studies might be carried out in various industries, such as telecommunication, health services, hospitality, and tourism, or in the same industry but in several nations or various financial services sub-sectors.

To determine the general outcome of the model suggested in this study, the findings should be compared. Future studies might also examine the relationship between customer experience and other marketing outcomes like customer effort, trust, loyalty, brand equity, or business performance characteristics like corporate reputation and financial performance. Other mediation or moderation constructs like the zone of tolerance, memorability, perceived usefulness, and expectation confirmation should also be considered in future studies to understand how they influence the connection between the customer experience and the marketing outcomes construct. If data from a different demographic reveals the same aspects of customer experience in the banking industry as this study, it will be interesting to see. Future research should be done to include more experiential characteristics that were not covered in this study to better understand the consumer experience. An in-depth investigation is also needed into the distinctions between traditional and Islamic banking clients, as well as between business-to-business (B2B) and business-to-consumer (B2C) relationships.

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The Adoption of Green Practices in the Manufacturing Industry

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Abstract: The integration of green practices within the manufacturing sector holds significant importance since the manufacturing industry has contributed to the country's economic development. Any adverse environmental impacts stemming from this sector not only affect the ecosystem but also pose risks to human well-being. Green practices, designed to mitigate such impacts, strive to minimize environmental harm, conserve resources, and enhance production efficiency, all while prioritizing worker and public safety and health. Despite their potential benefits, the adoption of green practices remains relatively low among organizations. In addition, previous research has addressed aspects of green practices in other industries. This study uniquely focuses on identifying the key elements and success factors associated with the adoption of these practices in the manufacturing industry. Hence, this study aims to explore the various green practices prevalent in the manufacturing industry, clarifying their success factors and outcomes. Employing a qualitative content analysis approach, the research identifies key elements discussed in prior studies about green practices. Additionally, it investigates the factors influencing the adoption of these practices and their resultant effects. The analysis reveals three prominent categories of green practices: green manufacturing, green supply chain management, and green logistics. This conceptual study provides insight into the adoption of green practices in Malaysia, emphasizing the drivers behind successful adoption and examining their associated benefits.

Keywords: *Green Practices, Green Manufacturing, Green Supply Chain Management, Green Logistics, Manufacturing Industry*

1. Introduction

The industry's adoption of green practices has caught the attention of industry players. The elements of green activities in the industry have been extensively discussed, which has increased the interest of organizations in adopting green activities in their operations. The benefits of green practices to organizational performance, especially in terms of environmental, social, and economic aspects, are encouraging more organizations to explore the beauty of green practices. Studies have demonstrated the benefits that common green practices like green construction, green building, and green accounting bring to their respective industries. However, the discussion on green activity in the manufacturing industry has not been well explored, even though the manufacturing industry is synonymous with the growth of the economy of the country. Therefore, this paper explores the adoption of green practices in the manufacturing industry.

Green practices in the manufacturing industry have a significant impact on manufacturing performance. The study of Ramayah et al. (2013) on small and medium enterprises (SMEs) in developing countries has shown that the implementation of green practices in the input and production stages of the manufacturing life cycle has a significant impact on manufacturing performance. The application of various green practices in manufacturing, such as green manufacturing and green logistics, ensures optimal efficiency by improving various features such as durability, maintenance, reuse, refurbishment, and recycling (Umar et al., 2021). Conding et al. (2012) emphasized that incorporating green practices into sustainability efforts allows organizations to move beyond compliance to cost savings, competitive advantage, and improved profitability while optimizing environmental performance.

The manufacturing sector in Malaysia plays a crucial role in the country's overall development and economic growth. This industry also plays a crucial role in promoting sustainable economic growth and acts as a fundamental component of the economy (Jaeger & Upadhyay, 2020). The manufacturing industry accounted for 23.4 percent of the country's gross domestic product (GDP) in 2022. In July 2023, the Department of Statistics Malaysia (DOSM) released a report stating that the value of sales in the Manufacturing sector had

climbed by 5.1% from 2022, reaching RM741.2 billion by the end of May 2023. The substantial growth rate of the industry demonstrates its major contribution to the overall development of the country.

In 2025, the economic contribution of the manufacturing sector in Malaysia is expected to increase by 54% to RM 392 billion (Jamil et al., 2021). This forecast underscores the pivotal role of the manufacturing industry as one of the primary drivers of economic growth worldwide. Supported primarily by advanced technologies and efficient processes, the manufacturing sector significantly influences the development of the global economy and is poised to continue doing so in the years ahead (Ghadimi et al., 2020). Given that the manufacturing process entails converting inputs into outputs through various transformation processes (Heizer & Render, 2016), the selection of appropriate technologies and methods is crucial for enhancing productivity and averting potential issues.

The manufacturing industry's advancement and contributions have been pivotal to the country's development, driving significant economic growth. The expansion of this sector necessitates the integration of green practices, not only to sustain growth but also to effectively manage environmental impacts. Embracing green practices in manufacturing is essential for maintaining the balance between economic progress and the well-being of both the ecosystem and the population, ultimately supporting the country's long-term sustainable development.

The existing literature reveals a significant gap in research focused on green practices within the manufacturing industry, highlighting the necessity for more in-depth exploration of this critical area. As the manufacturing sector continues to be a driving force in economic growth, the integration of green practices is becoming increasingly essential. This paper aims to address the gap by thoroughly investigating the key green practices that are currently gaining traction in the industry.

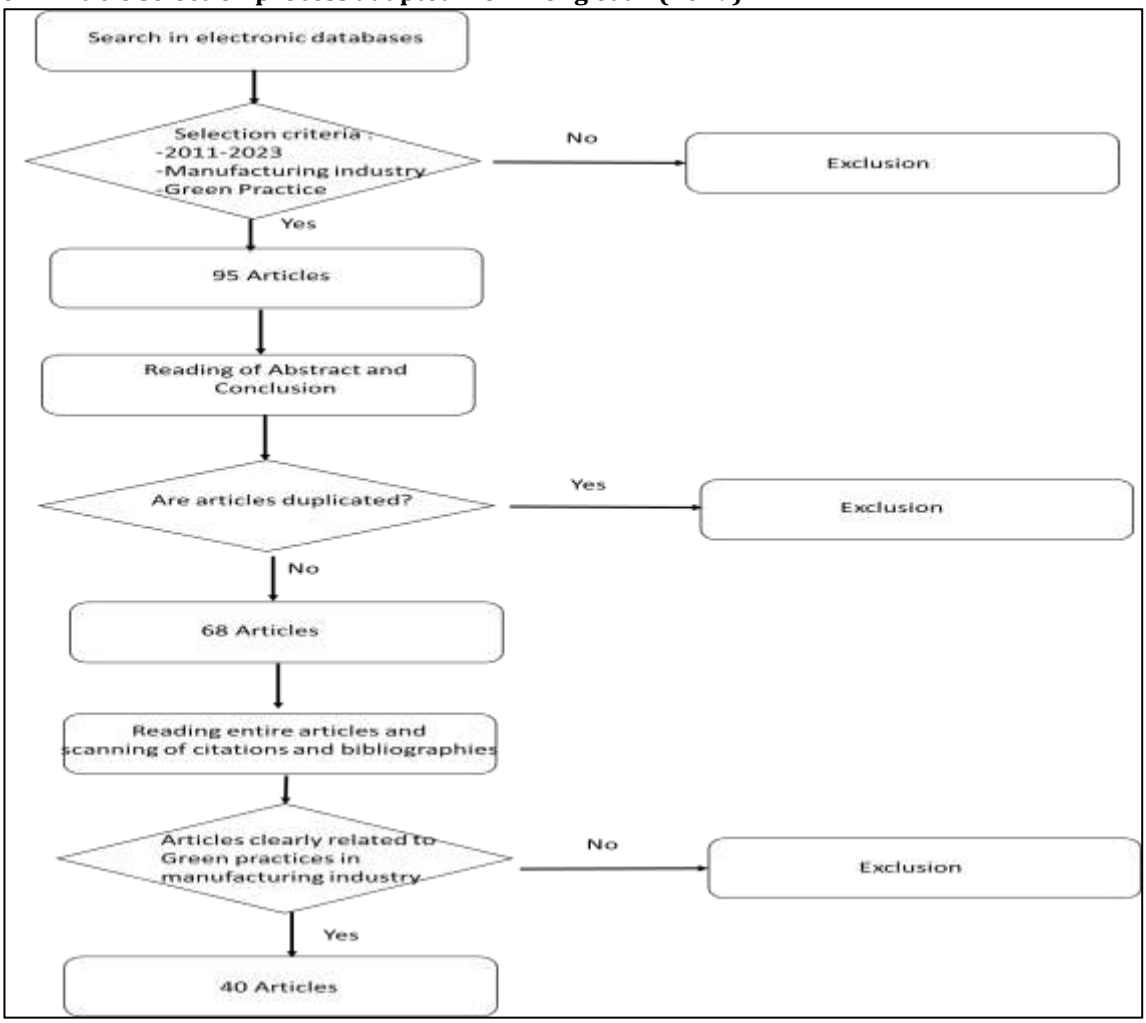
In addition to identifying these practices, the study explores the various factors that encourage their adoption. By analyzing these antecedents, the research seeks to provide a comprehensive understanding of what motivates manufacturing companies to implement green practices. **Through this investigation, the paper aims to deepen the understanding of the determinants that drive the adoption of green practices within the manufacturing industry, contributing to the broader discourse on green practices in the manufacturing industry.

This article is organized into several sections, as follows: Section 2 elaborates on the methodology utilized in this study, detailing the approach taken to gather and analyze data. Section 3 presents the core findings, focusing on the most prominent green practices observed within the manufacturing industry. Following this, the factors that drive the adoption of these green practices in the manufacturing sector are discussed. Subsequently, the tangible impacts of incorporating these practices into manufacturing operations are explained. Finally, the conclusion and suggestions for future research directions aim to contribute to the ongoing discourse on sustainability in the manufacturing sector.

2. Methodology

This paper utilized a categorization-based content analysis approach to examine a literature review, aiming to explore diverse perspectives on green practices. To ensure the discussion of the findings is reliable, the article selection approach adopted the techniques used by Yong et al. (2019), as shown in Figure 1. This study has established a range of publication dates for the journal articles between 2011 and 2023 to confirm the collected and reviewed information is current and relevant for exploration. This selection of articles from these years allows the study to focus on recent, relevant, and manageable literature that reflects current trends and developments in green practices. In addition, this study utilized multiple online databases, including prominent platforms like Emerald Insight, ScienceDirect, SpringerLink, Taylor & Francis, Wiley Online Library, and SAGE Publications. This database online was used based on the scope and coverage of the journal, which is known for its extensive coverage in a wide range of fields such as social science, humanities, and management. This research also employed Google Scholar to comprehensively identify current and relevant literature about green practices.

Figure 1: Article selection process adapted from Yong et al. (2019)



The first step of article selection started with searching for the article using specific keywords such as "green practices," "green practices in the manufacturing industry," "sustainable manufacturing," and "green manufacturing." All articles published in prominent academic journals between 2011 and 2023 were considered. The initial outcome had a total of 95 articles. The next process involved skimming the abstracts to assess the relevance of journal articles to green practices. To maintain a constant focus and minimize bias, articles that appeared unrelated to this study have been removed, including any duplicate publications, to avoid redundancy in the analysis. Based on the listed criteria, a total of 40 articles for review were selected, which led to the next phase of the analysis process to achieve the research objectives.

3. Findings

The adoption of green practices was one of the few sustainable manufacturing techniques that were presented in earlier studies (Wang et al., 2015). These practices addressed one or two aspects of sustainability. According to Wang et al. (2022), green practices are a method that is friendly to the environment and helps lessen the adverse effects that humans have on the ecosystem. Through the framework of the Green Technology Master Plan Malaysia 2017–2030, one of the execution techniques that enables manufacturers to reorganize value chain activities gradually is the implementation of green processes inside corporate operations. The green process may involve transitioning to more environmentally friendly production, cutting down on waste, recycling, reusing resources, and offering incentives to suppliers, partners, consumers, and staff to ensure that they follow a shared path.

Implementing green practices within the organization is voluntary and requires the commitment and cooperation of the organization's top management. Stakeholder pressure is another factor that aids an organization in implementing green practices. In particular, green or sustainable business practices that focus on three aspects of performance—namely, the environment, society, and the economy—have the potential to reflect an organization's performance and productivity, which includes safety. Green practices are designed to minimize the negative consequences that are caused to the environment, reduce the amount of resources that are consumed, and maximize the efficiency of production while simultaneously protecting the health and safety of both employees and the general public. Evidence suggests that businesses with environmentally responsible practices also tend to have better safety and overall performance. The study by Duric and Topler (2021) showed that environmentally friendly business practices help realize various value-adding benefits, including protecting workers' rights and the general public's well-being.

Green Practices in the Manufacturing Industry

Several green practices have been highlighted by past researchers. The dominant findings related to green practices in the manufacturing industry were identified in the areas of green manufacturing, green logistics, and green supply chains. Table 1 shows the green practices used in the manufacturing industry.

Table 1: Green Practices Elements in The Manufacturing Industry

No	Elements	Author(s)
1.	Green supply chain management practices, green Lean Six Sigma, and green balanced scorecard	Conding et al., (2012)
2.	Green Manufacturing	Ramayah et al., (2013)
3.	Green manufacturing, green warehousing, green packaging, and green distribution	Wang et al., (2013)
4.	Green Manufacturing	Sangwan and Choudhary, (2018)
5.	Green supply chain which includes green transport, green purchasing, green IT and reversed logistic	Dorantes et al. (2019)
6.	Green Manufacturing	Afum et al., (2020)
7.	Green supply chains include green design, green manufacturing, green logistics, reconditioning and core disposal	Sahar et al. (2020)
8.	Green manufacturing and green logistics	Umar et al., (2021)
9.	Green Manufacturing	Wang et al., (2022)

Three key green practices have been extensively studied, which include green manufacturing, green supply chain, and green logistics. What makes it even more interesting is that several green practices can stand independently, such as green logistics and green manufacturing (Umar et al., 2013; Afum et al., 2020; Ramayah et al., 2013). In addition, other researchers are investigating the inclusion of green logistics and green manufacturing in the field of green supply chain management practices (Sahar et al., 2020). In another perspective, a study by Dorantes et al. (2019) discovered various components of green supply chains from multiple perspectives. These components include green transportation, green purchasing, green information technology (IT), and reverse logistics. The upcoming exposition will cover the concept of green practices, their execution, and the benefits that result from their implementation.

Green Manufacturing

The term green manufacturing (GM) refers to a manufacturing approach that focuses on implementing efficient production processes characterized by reduced material consumption, streamlined processes, and the use of safe manufacturing practices. Following the Green Practices Guideline for Manufacturing Sector 2022, GM demonstrates an innovative manufacturing paradigm that incorporates various environmentally friendly techniques and strategies (including technological advances and innovations). These methods aim to increase operational efficiency by implementing practices that minimize negative environmental impacts, promote

productivity while reducing waste and pollution, and take a comprehensive approach to reduce the generation of harmful waste during the manufacturing process.

Other than that, GM attempts to conserve resources and energy, eliminate the utilization of hazardous materials, reduce waste, and strive to minimize environmental consequences across the entire life cycle of products (Sunmola et al., 2024). This statement is corroborated by Haleem et al. (2022), who conducted a study on green manufacturing, also known as green production. Furthermore, the adoption of green practices not only supports sustainable manufacturing methods but also improves worker, community, and product safety (Amornkitvikai et al., 2024). Therefore, green manufacturing concerns target not only environmental issues but also other areas that need improvement. The GM approach differs from traditional methods in its primary goals of reducing the use of natural resources and introducing energy- and material-efficient manufacturing processes as mentioned by Barzegar et al. (2018), the GM approach aims to minimize the negative impacts of waste and pollution, thereby reducing negative externalities.

Green manufacturing methods are one of the practices that are emerging as a solution to the constraints of industrialization (Ahmad et al., 2019). The concept of green manufacturing includes improving production processes as opposed to controlling technology, substituting finite resources with renewable resources, adopting recycling practices among employees, and strategic decision-making by companies regarding internal production or external procurement of the product (Maruthi & Rashmi, 2015). Organizations are increasingly adopting practices such as reuse, remanufacturing, and recycling of used items as part of their commitment to the environment and ecological responsibility. This is particularly evident among manufacturers of electrical appliances, as highlighted by Paul et al. (2014).

To broaden the visibility and accessibility of green manufacturing practices, Haleem et al. (2023) emphasized an extensive variety of strategies that are intended to cultivate a sustainable environment. These methods, as depicted in Figure 2, are designed to encourage environmentally favorable manufacturing operations and ensure that they are consistent with the industry's overall sustainability goals. The implementation of these strategies by organizations can make a substantial contribution to the global initiative to mitigate the environmental impact of industrial activities.

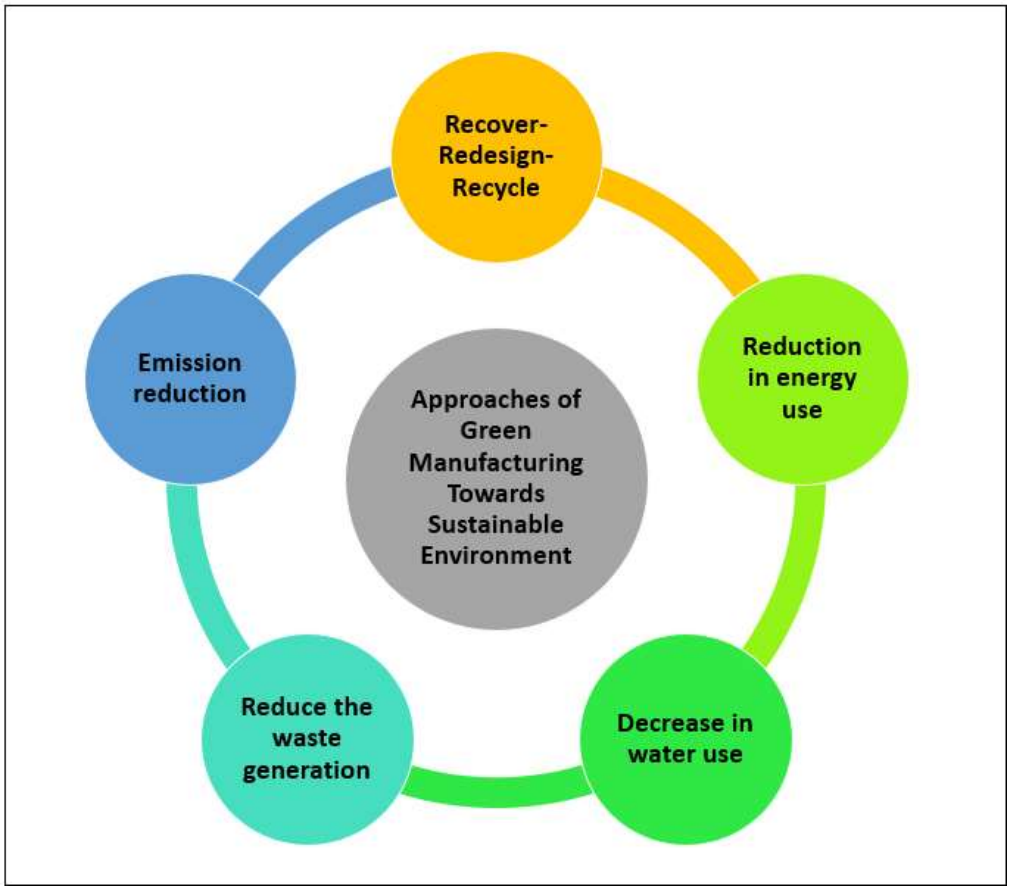
Smart and energy-efficient measures are among the most critical components of these green manufacturing techniques. These measures must be implemented not only to reduce the environmental impact of manufacturing processes but also to optimize resource utilization. For instance, the implementation of cutting-edge technologies that decrease energy consumption can result in substantial cost reductions while concurrently reducing greenhouse gas emissions, thereby aiding in the mitigation of climate change.

In addition to energy efficiency, these methods underscore the significance of minimizing water consumption in manufacturing processes. The conservation of water is indispensable for sustainable development, as it is a critical resource in numerous industrial processes. Water-saving technologies and practices can be implemented by manufacturers to reduce their reliance on this essential resource, minimize effluent generation, and safeguard local ecosystems.

Furthermore, the necessity to reduce waste generation during the production process is also addressed by green manufacturing techniques. Not only does waste reduction alleviate the burden on landfills and the environment, but it also improves the efficacy of manufacturing operations. To achieve more sustainable operations, manufacturers can substantially reduce the amount of waste produced by implementing practices such as recycling, repurposing materials, and optimizing production processes.

These green manufacturing techniques are also essential for reducing emissions. In addition to contributing to environmental degradation and global warming, the manufacturing sector is a substantial source of greenhouse gas emissions and air pollution. By instituting emission control technologies, improving process efficiency, and utilizing renewable energy sources, manufacturers can mitigate their environmental impact and aid in the development of a more sustainable and healthier future.

Figure 2: Approaches of Green Manufacturing Towards Sustainable Environment



The use of green manufacturing in businesses yields numerous benefits. One of the notable benefits of green manufacturing is the reduced consumption of materials and energy, which results in cost savings for the organization. At the same time, the implementation of green manufacturing practices allows the organization to effectively reuse and recycle the waste generated during the production process, using it as a source of energy that can subsequently be used in the production cycle.

Green Supply Chain Management

Green Supply Chain Management (GSCM) is described as educating partners about their green commitments throughout the supply chain, including suppliers, manufacturers, customers, and reverse logistics (Ye et al., 2023). Consequently, the implementation of GSCM is an expression of an organization's desire to work with various stakeholders to improve the environmental performance and sustainability of its supply chains (Toktas, 2021). According to Khan et al. (2019), implementing green supply chain practices can effectively improve organizational performance and provide a competitive advantage in the global market. The main objective of implementing a green supply chain is to effectively manage and contain waste materials within the manufacturing process, thereby minimizing waste generation, conserving energy resources, and preventing the release of pollutants into the environment (Bhool & Narwal, 2013).

Chatzoudes and Chatzoglou (2022) mentioned that the integration of environmentally friendly practices into the supply chain is influenced by a combination of internal factors, such as comparative advantage and entrepreneurial orientation, as well as external drivers, such as stakeholder pressure and customer demands. These findings suggest that both organizations and stakeholders, such as societies, can influence existing manufacturing practices, potentially facilitating changes toward more sustainable approaches. In addition, the findings by Hebaz et al. (2024) show that organizations are more likely to improve their efforts in GSCM if they

are under institutional pressure and also the successful implementation of GSCM depends on management commitment and support, especially in terms of regulatory compliance, which is recognized by many stakeholders (Sahar et al., 2020).

GSCM practices include a range of measures. In a study conducted by Ninlawan et al. (2010), four green activities were identified in the context of the green supply chain. These activities include green procurement, green manufacturing, and green distribution, which include specific components such as green packaging, green logistics, and reverse logistics. In the study by Çankaya and Sezen (2019), eight GSCM dimensions were identified. These dimensions include green purchasing, manufacturing, distribution, packaging, marketing, education, internal environmental management, and investment recovery. In the past, the study of GSCM was conducted as a single functional dimension. However, over the decade, activities for GSCM practices have expanded to include product design, material procurement and selection, manufacturing processes, product delivery, and product end-of-life management phases (Çankaya & Sezen, 2019).

Green Logistics

The concept of green logistics (GL) refers to the systematic assessment, examination, and eventual reduction of the environmental impacts associated with logistics operations (Blanco & Sheffi, 2017). GL received considerable attention within a specific timeframe, although it was integrated into the GSCM framework (Baah et al., 2020). GL involves incorporating sustainable practices into both forward and reverse logistics operations to achieve a well-rounded performance improvement, with a particular focus on social, environmental, and economic aspects. It is critical for managers to prioritize the implementation of GL to maintain their competitive advantage in the market, improve public safety, meet regulatory requirements, ensure customer satisfaction, and increase profitability (Agyabeng-Mensah & Tang, 2021). Not only that, a study by Maji et al. (2023) highlighted that GL techniques can enhance a business's reputation as an environmentally responsible brand and as a result, this leads to a rise in customers' loyalty, brand trust, and business profit.

The main goal of green logistics is to address the environmental impacts associated with the logistics process. This goal can be achieved through several strategies, such as optimizing routes, increasing transportation capacity, minimizing fuel consumption, and reducing emissions (Sahar et al., 2020). A recent study by Baah et al. (2020) examined a specific GL practice for small and medium logistics companies in Ghana. The study identified several key elements that have been implemented in GL activities, including the adoption of sustainable transportation methods, the use of reusable and recyclable materials, the incorporation of green materials for inner and outer packaging, the promotion of improved sharing of environmental information within the logistics network, and the establishment of monitoring and evaluation mechanisms for environmental policies and practices. In a study conducted in Ghana, Agyabeng-Mensah et al. (2020) found that the manufacturing, logistics, and entertainment sectors had comparable GL practices. In addition, these industries employed additional practices, including reverse logistics, the implementation of green reward systems and compensation, participation in green training for employees and stakeholders, and the use of green information processing and distribution.

The antecedents of green practices in the manufacturing industry

The implementation of green practices in the manufacturing industry can be associated with several factors. Since the manufacturing industry is known as an industry that contributes greatly to the numerous pollutions that lead to environmental degradation, organizations strive to identify the best methods to mitigate this issue. A study by Sunmola et al. (2024) identified a growing demand for manufacturers to integrate green practices into the various stages of product development and manufacturing to eliminate non-value-added activity in the manufacturing process, which leads to more efficiency and higher productivity. Together with the commitment and efforts of the top management, the adoption of green practices became effortless for organizations. The study by Lin and Sheu (2012) showed that organizational influence was particularly beneficial to the adoption of GSCM techniques, with institutional pressure influencing green supply chain practices that further enhance manufacturing performance. At the same time, competent authorities also play an important role in ensuring that environmental regulations are met. Although this study focused on three different green practices, it can be concluded that the antecedents for the practices were similar. Two main factors were identified, namely the environment and the employees who are responsible for implementing green practices in the organization.

Environmental forces

As mentioned earlier, the environmental problems caused by the manufacturing industry are the main reason for adopting green practices in the organization. This environmental problem causes shareholders to be concerned about the organization's image and performance, while stakeholders are concerned about their welfare. The manufacturing industry is facing increasing pressure from stakeholders due to the negative environmental impacts caused by the sector's activities over a long period (Kannan et al., 2022). Findings by Barzegar et al. (2018) have shown that the adoption of green practices in manufacturing systems within the organization was necessary due to the harmful environmental impacts associated with certain production methods. From different perspectives, the automotive industry in China is adopting a wide range of sustainable manufacturing methods, such as green manufacturing, due to pressure from the government, regulators, international customers, and stakeholders (Wang et al., 2015). Moreover, the use of green practices by companies can effectively mitigate their potential environmental pollution through the utilization of safe materials, recycling of disposable parts, and appropriate management of worn-down equipment (Wang et al., 2018).

The study by Singh and Singh (2024) in the Indian manufacturing industry identified several manufacturing companies in India that believe adopting environmentally friendly practices will enhance their business opportunities. By implementing sustainable practices and developing environmentally friendly products, these companies aim to adhere to demanding global environmental regulations and achieve a competitive advantage which is helping these Indian firms to broaden their operations into nations with rigid environmental laws. In response to stakeholders' environmental expectations and the imperative to ensure human safety, numerous organizations have integrated environmentally sustainable practices into their logistical operations, leading to the emergence of what is referred to as GL (Agyabeng-Mensah et al., 2020). Wang (2018) asserts that the logistics industry is actively adopting environmentally friendly measures to effectively address and mitigate environmental issues.

Employees' Concerns

Adopting green practices within the organization demands a comprehensive approach beyond addressing environmental issues. To optimize the advantages of these practices, it is essential to incorporate them into broader organizational initiatives, particularly those connected to employee involvement and productivity. By actively engaging workers in the production process, organizations may establish a work environment that is more inclusive and responsive. This not only improves productivity but also cultivates a sense of ownership and dedication among employees.

Engaging employees in green practices directly and positively affects the entire operation of the firm. When employees actively participate in environmentally sustainable practices, they are more prone to support these initiatives, resulting in improved efficiency and effectiveness in production processes. For example, when employees receive training on how to maximize resource utilization, minimize waste, and adhere to sustainable methods, they help to reduce operational inefficiencies and improve overall productivity. This engagement also fosters creativity at the operational level, where employees who have the most access to the manufacturing processes may provide practical insights and suggestions to enhance sustainability initiatives.

Moreover, the acknowledgment by management that the business can only accomplish its objectives by actively engaging its employees is a crucial element in the successful implementation of green practices. By recognizing the significance of employee involvement in sustainability initiatives, management establishes the foundation for a workforce that is more committed and enthusiastic. This acknowledgment serves to enhance the bond between management and staff, while also ensuring that the organization's environmental aims are in line with its operational goals. When employees see that they are appreciated and actively included in the organization, they are more inclined to demonstrate dedication to their achievements, resulting in enhanced performance and a more robust organizational culture.

The active involvement of management in encouraging green practices conveys a strong message that the organization appreciates its employees and is committed to establishing a safe, healthy, and sustainable work environment. The implementation of green practices in manufacturing ensures the safety and health of employees, as these practices effectively mitigate potential hazards in the production process. The study

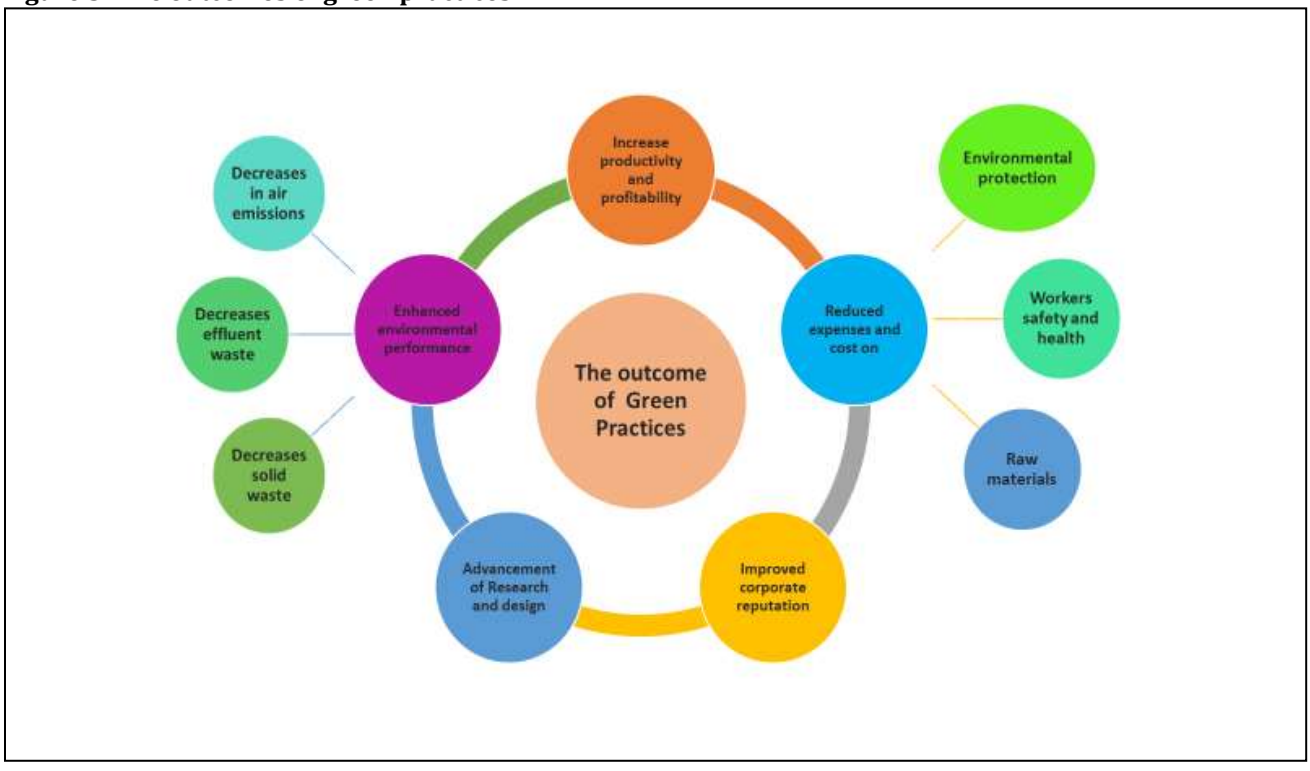
conducted by Barzegar et al. (2018) found that workers actively support the implementation of green practices in manufacturing systems within the organization. This is mainly due to the potential hazards that could arise for the health and safety of employees. This statement is also in line with the study by Jamil et al. (2021), which found that manufacturers tend to adopt green manufacturing practices due to their employees' reactions to the environment. Bhool and Narwal (2013) found that employee motivation, safety, and health play a critical role in the adoption of GSCM in the Indian two-wheeler manufacturing industry. This finding suggests that prioritizing employee safety can significantly improve the successful implementation of green practices in organizations, thereby promoting the progress of the industry.

Overall, the organization should view the adoption of green practices as a comprehensive approach that includes concern for environmental performance, active employee involvement, and top management's commitment to employee safety, well-being, and productivity improvement. The organization's sustainability and performance rely on management's unwavering dedication to these policies, which prioritize employee well-being and environmental impact.

The outcomes of green practices

Implementing green practices offers a wide range of benefits for both the organization and its surrounding environment. Previous research on green practices in the manufacturing industry has identified several positive outcomes, particularly in terms of sustainability, which encompasses environmental, economic, and social dimensions. Sezen and Cankaya (2013) highlighted that green practices significantly enhance both environmental and social performance. Building on this foundation, the present study delves into the specific advantages of adopting green practices within the manufacturing sector. The three green practices explored in this study share common benefits, including increased productivity and profitability, cost reduction, improved corporate reputation, advancements in research and development, and enhanced environmental performance. These benefits, as illustrated in Figure 3, underscore the substantial value that green practices bring to manufacturing operations, driving both organizational success and sustainable development.

Figure 3: The outcomes of green practices



The outcomes of green practices can increase the productivity and profitability of an organization. The application of green practices allows the organization to reduce unnecessary processes in manufacturing that do not add value to the production process. In a study by Atlas (1998), it is mentioned that the implementation of GM technology is associated with many benefits, such as increased production efficiency. These benefits include better organizational productivity in terms of financial gains and efficiency, as well as the ability to identify patterns in organizational growth (Sahar et al., 2020). Not only that, by implementing a green approach, firms have the potential to gain a competitive edge and enhance their profitability (Waqas et al., 2023). Therefore, profitability can be increased through organizational cost savings (Hasan et al., 2019).

Second, the expenses and costs associated with the manufacturing process are reduced when green practices are implemented. This occurs because of reduced material consumption in the production process and reduced environmental and safety expenditures (Atlas, 1998), as well as reuse or recycling. Similar benefits were also found by Al-Hakimi et al. (2022). The adoption of green manufacturing methods has the potential to yield several benefits, including reduced environmental and worker safety expenditures and lower raw material costs. Costs associated with worker safety, such as accident costs and insurance claims, can be reduced by adopting green practices. In addition, green practices can reduce product development costs and shorten the life cycle of a product (Paul et al., 2014). In the field of logistics, Hasan et al. (2019) mentioned that waste generation in logistics was reduced through green practices, and organizations were able to minimize operating costs through this reduction. The study on green supply chains by Ghadimi et al. (2020) also highlighted that adopting green practices resulted in cost savings in manufacturing and facilitated the establishment of a robust green supply chain within the organization's operations.

The implementation of green practices significantly enhances an organization's reputation and image, as demonstrated by Hakimi et al. (2022), and fosters positive public perceptions, as noted by Maruthi & Rashmi (2015). This improvement in reputation stems from the organization's visible commitment to environmental protection and public well-being, which resonates with increasingly eco-conscious consumers and stakeholders. However, the widespread adoption of green practices remains limited, primarily because the tangible benefits often take time to materialize. Despite this, organizations that do embrace green practices not only demonstrate environmental responsibility but also open the door to greater creativity in managing and mitigating environmental risks, as highlighted by Baah et al. (2021). Their research shows that the implementation of green production practices has a profound and favorable impact on both the firm's reputation and its environmental performance.

Moreover, integrating green practices into business operations serves as a catalyst for innovation in production and product development. When organizations strategically plan and execute green practices, they are more likely to invest in research and design initiatives that drive sustainable advancements. Maruthi & Rashmi (2015) emphasize that a well-thought-out strategy for production and product development not only enhances environmental performance but also spurs progress in research and design, leading to the creation of more sustainable products and processes. As a result, organizations that effectively implement green practices position themselves as industry leaders in sustainability, gaining a competitive advantage and fostering long-term growth in a market.

Last but not least, the benefit of green practices is improved environmental performance (Maji et al., and Sahar et al., 2020). The adoption of green techniques is expected to lead to improved environmental performance, as evidenced by reductions in air emissions, effluents, solid wastes, and the use of harmful materials (Green et al., 2012). A study in Indonesian SME manufacturing companies by Dzikriansyah et al. (2023) highlighted companies that adopting green supply chain management would be able to improve environmental performance through government regulations as an external factor. Not only that, Manufacturers in Bangladesh engage in partnerships with suppliers and customers to develop environmentally friendly products, thereby improving environmental performance and reducing pollution. In addition, the manufacturers also engage in partnerships with downstream stakeholders to enhance their environmental performance in distributing their products (Al-Karim et al., 2024).

In summary, the adoption of green practices significantly enhances production efficiency, profitability, corporate reputation, and environmental performance. By streamlining production processes and reducing

operational costs, these practices provide companies with a competitive edge in the marketplace. Moreover, green practices foster a culture of environmental innovation and creativity, further elevating an organization's public image and reputation. Reducing emissions, waste, and the use of toxic materials not only improves environmental performance but also aligns companies with global sustainability goals and regulatory standards. By integrating green practices into their operations, companies demonstrate a strong commitment to environmental stewardship, positioning themselves for sustained success in an increasingly eco-conscious world.

5. Conclusion

After thoroughly examining existing research on green practices within the manufacturing industry, it is evident that three key practices stand out as the most widely implemented: green manufacturing, green supply chain management, and green logistics. Many organizations have integrated these practices into their strategies, directly enhancing productivity and profitability. Green manufacturing, for instance, focuses on minimizing waste, optimizing energy use, and incorporating sustainable materials, all of which lead to a more efficient production process. Beyond the manufacturing activities, green supply chain management maintains sustainability throughout the entire supply chain, from sourcing raw materials to delivering finished products. Green logistics further complements these practices by streamlining transportation and distribution processes, reducing fuel consumption, and lowering carbon emissions. Collectively, these initiatives not only contribute to cost savings and increased efficiency but also play a crucial role in improving environmental performance.

The increasing adoption of these environmentally friendly practices indicates that organizations are becoming more aware of the significance of environmental sustainability and this situation attracts the interest of consumers, investors, and other interested parties. Furthermore, these practices prioritize employee safety and health by creating a cleaner and safer working environment. This dual focus on environmental and employee well-being helps to build a positive corporate image and strengthens the organization's reputation in the marketplace. Companies that successfully integrate green practices often enjoy increased customer loyalty, enhanced brand value, and a competitive edge in their industry.

Incorporating green practices is not just a matter of environmental responsibility; it is also a strategic move that supports the broader pillars of sustainability—environmental, social, and economic. By aligning their operations with these pillars, organizations can achieve long-term success and resilience in an increasingly sustainability-conscious world. This study underscores the significant potential of green practices to enhance organizational performance, driving growth while simultaneously addressing critical sustainability challenges. However, the limitations of this research should be acknowledged, especially its reliance on content analysis, which could restrict the generalizability of these findings in various contexts. Future research should aim to address these limitations by exploring the levels of acceptance and challenges that organizations encounter when adopting green practices in the manufacturing sector. Additionally, there is a need for more nuanced investigations into the various sub-sectors within Malaysia's manufacturing industry, each of which may present unique challenges and opportunities related to green practices. Understanding these sector-specific dynamics enables future studies to provide more targeted recommendations and uncover additional benefits that green practices may offer to different areas of the manufacturing industry.

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Use and Adoption of Website and Social Media Marketing: Insights from Homestay Business Owners

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Abstract: This qualitative inquiry delves into the transformative impact of digital technology adoption, specifically websites and social media, on the operational and promotional strategies of homestay business owners in Negeri Sembilan within the burgeoning technology-driven tourism sector. It critically examines the integration of these digital tools into marketing and communication frameworks, evaluates their role in enhancing business visibility and shaping public perceptions, and offers comprehensive insights into the associated benefits and challenges. Initial results indicate that the adoption of websites has significantly redefined marketing paradigms by broadening customer outreach and intensifying engagement, while social media has been instrumental in increasing visibility and improving interactive communications with prospective clients. However, this digital transition also poses challenges, including the need for continuous content development and bridging the digital skills gap.

Keywords: *Website Adoption, Social Media Marketing, Homestay Tourism, Business Owners, Heritage*

1. Introduction and Background

Tourism in rural areas is inextricably linked to community-based tourism (CBT), a model that hinges on active community involvement to flourish. To catalyze industry growth, it is critical to integrate local community initiatives, such as homestay programs, that tap into the indigenous potential of these areas. Recognizing this potential since 1995, the government has championed homestays as a key sustainable economic driver, necessitating a synergistic effort from interconnected stakeholders to ensure its enduring success (Mapjabil & Che Ismail, 2012; Higgins-Desbiolles & Bigby, 2022; Kumar, 2024).

This investigation, therefore, scrutinizes the deployment of Information and Communication Technology (ICT) within one of Malaysia's eminent CBT offerings – the homestay program. Officially designated as the Malaysian Homestay Experience Program and inaugurated by the Ministry of Tourism, Arts, and Culture (MOTAC) in 1995, this initiative aligns with the broader CBT framework. The program's raison d'être is to galvanize rural community engagement in tourism ventures and to curb the rural-to-urban migration trend (Fresnoza, 2021). Moreover, Nor and Burridge (2020) highlight the program's strategic focus on promoting the distinctive cultural and heritage tapestry of Malaysia to a global audience.

Homestays are esteemed for their long-term viability as rural tourism offerings, fostering a sense of community integration and cultural immersion among tourists. Despite the absence of a universally accepted definition, homestays are commonly depicted as accommodation where tourists are lodged within resident homes, enabling authentic encounters and interactions with the host community, thus providing guests with a genuine sense of inclusion, familial engagement, and cultural exposure at an economical rate (Kuhzady et al., 2020; Kulshreshtha & Kulshrestha, 2019). In essence, as defined by Ngo & Pham (2023), a homestay experience involves a guest residing with a local family, facilitating an intimate understanding of the locale's way of life.

Problem Statement

Information and Communication Technology (ICT) harbors the capacity to substantially broaden opportunities for local communities by enhancing tourism resources, catalyzing new business ventures, fostering product innovation, augmenting tourist inflow and foreign income, and contributing to overarching economic development (Choi & Sirakaya, 2006; Cavalheiro et al., 2020; Gong et al., 2023). Despite this, the nuanced dimensions of homestay branding, the nexus between homestays and entrepreneurship, ICT proficiency among homestay proprietors, and training in sustainable operational practices are markedly underexplored in the prevailing academic discourse, particularly within the Asia Pacific context (Janjua et al., 2021).

This scholarly deficit necessitates a methodical empirical examination of community informatics utilization

among homestay operators. The study advocates for an evolved paradigm grounded in community informatics theory, which postulates the Internet's role as not merely an informational nexus but also a critical instrument for transformation. This research endeavors to dissect various facets: the technologies employed by homestay proprietors, their motives for technology adoption, the consequent impact on their enterprise, the hurdles encountered in technology utilization, and the influence of technology on consumer bookings. Moreover, it investigates who stewards their web presence and social media, identifies the pivotal features or tools within their digital arsenal, and delineates how they gauge technological efficacy in business enhancement.

Such an inquisition is pivotal, as there is an observed scarcity of scholarly inquiry focusing explicitly on community informatics application by operators within the Malaysian Homestay Tourism Programme (HTP). A profound comprehension of the tribulations homestay operators face in adopting and leveraging community informatics via ICT could yield multifaceted benefits. The study's outcomes aspire to extend beyond academic enrichment by amplifying the extant literature; they are posited to impart tangible advantages to homestay operators and governmental frameworks alike. Thus, this study's purview encompasses both theoretical expansion and practical application, each of which merits exploration and discussion. Consequently, this research articulates the following queries: What are the perceptions of business owners regarding website adoption and social media usage within the Negeri Sembilan homestay sector? Additionally, what are the observed ramifications of such digital integration on the homestay businesses therein?

2. Literature Review

Homestay Tourism

The concept of a rural homestay is distinguished as an alternative form of accommodation, offering tourists the unique opportunity to reside within host communities during their visits to rural locales. Scholarly attention has been directed towards the effects and perceptions of both guests and homestay operators, encompassing aspects such as service quality, destination activities, cultural exchange, culinary experiences, and infrastructural elements.

Utami et al. (2023) propose that variables like leadership acumen, community support, and entrepreneurial skillsets are crucial in the development of community-based tourism in rural settings, necessitating robust backing from both local stakeholders and government entities to drive the success of rural homestay tourism. This community engagement is fundamental to the tourism dynamic, as posited by Simarmata & Wijaya, (2024), hence a significant focus is placed on enhancing homestay services to bolster rural tourism.

From a Malaysian perspective, the Homestay Program (HP), initiated in 2014, is designed to propagate the concept of homestays across the nation expansively. Managed by the Ministry of Tourism and Culture Malaysia (MOTAC), this program aspires to immerse visitors in the day-to-day culture and lifestyle of local communities. It is tailored for diverse traveller demographics, encompassing families, students, and corporate groups, offering a more personalized travel experience compared to other countries (Malaysia Homestay Experience, 2014). Moreover, Ramli et al. (2015) examined the sustainability criteria of Malaysia’s rural homestay program, finding that operators should concentrate on developing capabilities, and leadership qualities, and harnessing community resources to achieve and maintain sustainability.

Social Media Marketing of Homestay

The utility of social media in contemporary organizational marketing is pivotal for profitability enhancement. Defined as a multifaceted Internet communication tool, social media facilitates market interaction, and information dissemination, and harnesses collective intelligence through crowdsourcing (Sivarajah et al., 2020). Platforms like Twitter, Facebook, TikTok, and YouTube are prime examples of social media's capacity for relationship-building and marketing outreach.

In the context of high-end brands and services, social media's pervasiveness has revolutionized the marketing paradigm from traditional methodologies to a digitalized marketing approach (Ndirangu, 2023). The tourism industry is no exception, with social platforms enabling content sharing among users, thus enhancing brand visibility and information exchange (Moche, 2023). As elucidated by Sfetcu (2024), the instantaneity of text, image, audio, and video transmission via social networks, photo-sharing sites, online communities,

microblogging tools, and video-sharing services epitomizes social media's versatility. However, a deficit in awareness, information, and proficiency can mitigate expected business outcomes, highlighting the necessity for incentive programs that bolster social media skills for promotion and sales (Dimitrova, 2024).

Perception and Attitude of Using Social Media

Homestay operators' social media use is influenced by both internal and external factors. Notably, positive engagement with social media can foster business growth, while misuse could potentially lead to business decline. Evans et al. (2021) identified key factors such as perceived usefulness, ease of use, trust, and overall attitude towards social media, which influence homestay operators' intentions to integrate these platforms into their business strategies in Malaysia.

The inaugural determinant in the adoption of social media by homestay operators is trust: there exists a consensus among them that the platforms are secure and safeguarded for use. This foundational trust is imperative for operators who must feel confident in the digital environment in which they promote their services. The second determinant is usability; operators commonly perceive social media as user-friendly and effortless to navigate. This ease of use is crucial, as it reduces the barrier to entry for homestay proprietors engaging with digital marketing tools. However, it is underscored that adequate training and support are essential to empower them to proficiently manage their social media accounts and capitalize on the platforms' full potential.

The third determinant is the perceived utility of social media in enhancing business operations. Homestay operators contend that leveraging social media significantly improves various facets of their job performance, from marketing to customer interaction. This perceived utility underscores the multifaceted role of social media as a tool not only for promotion but also as an integral component of operational efficiency in the homestay sector.

Website Adoption

Websites serve as quintessential marketing tools, delivering comprehensive branding, product descriptions, and customer-centric information. In the era of the Internet of Things (IoT), technological engagement in media has become vital for promoting rural homestay tourism. Local community involvement is instrumental in elevating their homestay offerings as desirable tourism destinations (Pradhan, 2021).

Razamin Ramli et al. (2019) introduced a novel web system termed the Collaborative-Based Web Recommender System (CBWRS), amalgamating community-based tourism with the tourism supply chain system. This collaborative venture aims to amalgamate individual homestay websites, thereby amplifying their service visibility on an international scale. The research by Razamin Ramli et al. (2019) asserts that such an integrated website is pivotal within the Community-Based Tourism Supply Chain (CBTSC), offering rural homestay operators and users a strategic tool that influences user engagement and decision-making processes.

3. Methodology

This inquiry utilized a qualitative research methodology, anchoring its approach on semi-structured interviews with homestay owners from Negeri Sembilan engaged with the *'Jom Poei Homestay Negeri Sembilan'* Program. This program, under the auspices of MOTAC, informed the random selection of ten participants for the study. The interview framework was partitioned into four critical segments: (1) respondents' narratives, (2) website utilization, (3) social media engagement, (4) the consequential effects of digital tool adoption, and (5) the challenges identified by homestay owners in applying marketing and communication technologies.

These interview sessions were conducted through Google Meet and phone calls throughout May 2023. Questions were curated for clarity and ease of comprehension, with NVIVO software employed to ensure precision in data analysis.

Research Design and Data Collection

The qualitative nature of the study is oriented towards eliciting a profound comprehension of the contextual realities through narrative sharing, as opposed to a quantitative cause-and-effect analysis (Mirhosseini, 2020;

Ruffa & Evangelista, 2021). Data were collected through interviews, using a multi-source approach to corroborate findings. Traditional document analysis supplemented the verbal data. Each participant engaged in one interview session, lasting about one hour, with a combination of structured and open-ended questions, all intended to illuminate the research questions through comparative analysis of the respondents' experiences.

Interviews

As suggested by Adeoye-Olatunde and Olenik (2021), interviewing serves as a pivotal method for validating observational data. Patton (1990) delineates six question types contributing to comprehensive research understanding: experiences/behaviors, opinions/values, feelings, knowledge, sensory responses, and demographic backgrounds. These diverse questioning strategies are employed to facilitate participants' detailed perceptions regarding the adoption and impact of websites and social media on their businesses.

The study's cohort comprised ten homestay business proprietors from Negeri Sembilan, representing a mixture of community and private homestays. Snowball sampling was utilized, including an equitable gender distribution. There were five male and five female homestay owners participated in the study. Respondent demographics included owners from various local homestays, with the interviews being facilitated through Google Meet and direct phone calls. Four respondents from Lonek homestay. Two are homestay owners from Sungai Buluh homestay including respondents from Pachitan, Lenggeng Riverside, Klawang, and D'Pelandok Best homestay.

Research Procedures

Initial participant selection was guided by snowball sampling due to the anonymity of potential respondents. The interview process, conducted both online and via phone, involved both structured and unstructured dialogue. All conversations were recorded to maintain data integrity, with each respondent contributing a single session of insights.

Data analysis, an integral component of qualitative research, began with verifying the accuracy of interview transcripts against original audio recordings. Coding was undertaken extensively, with the constant comparative method (Naeem et al., 2023) employed to systematically evaluate the data. Analysis revolved around the research questions, focusing on respondents' experiences and opinions related to digital tool adoption. The research team meticulously assessed the interviews and supporting data to discern patterns and discrepancies, ultimately synthesizing the findings to present a nuanced understanding of the digital implementation's positive and negative impacts on business operations.

4. Research Findings

This investigation sought to discern homestay business owners' perceptions of the impact resulting from the adoption of websites and social media for their enterprises. The study reveals that technology adoption is largely influenced by operators' experiential narratives and examines both the facilitative and inhibitory effects of digital tools on business operations.

The synthesized data culminated in the identification of five predominant perceptions among homestay owners regarding the adoption of digital platforms: Information Service, Connectivity, Target Market, Accessibility, and the Management of Over-Expectations and Negative Feedback. It was observed that these perceptions manifested both positively and negatively in the business context.

Two distinct impact categories emerged regarding technological integration into business practices. The positive influences include enhanced customer service, digital tools serving as potent influencers, and the promotion of professional business image. Conversely, the negative ramifications entail a deficit in expertise, an increased temporal investment in content management, and unsystematic information dissemination.

Information Service: The provision of information services emerged as a highly acknowledged benefit by the majority of respondents. The pivotal role of this service lies in its capacity to efficiently disseminate business-related information to the public, aiding in achieving market penetration goals. Despite a variation in the valuation of digital tools, with a preference for websites over social media by some respondents, the consensus affirms the necessity of an online presence. The data indicates that websites are deemed indispensable for business operations, engendering customer trust and acting as an authoritative source of information about homestay offerings.

"I see the use of websites as a must for businesses to provide information about their products or services"
"The use of a website to deliver information because the functions are easy to access".
"I agree to have a website managed by the government to convince guests that my homestay is registered and active. Other than that the website can be used to give information about my homestay".

Three out of ten respondents use social media for their homestay business. According to them, the use of social media like Facebook, Instagram, and TikTok will give more benefits and are much easier to manage compared to complicated websites or platforms.

"I prefer social media to create awareness among social media users about my homestays".
"I realize that social media has become an important and useful platform for information search and virality".
"Social media is the great influence tool for business use" "am using social media to advertise and promote my homestay. Social media has proved great digital marketing to build social networks, accessible, and quick information transfer".
"I can see the difference when I am using social media to promote my homestay continuously and it reaches more audience engagement and fast information delivery".
"I agree to have a website managed by the government to convince guests that my homestay is registered and active. Other than that, the website can be used to give information about my homestay".

Accessibility: Respondents unanimously acknowledged the value of digital tools' accessibility. This characteristic permits information retrieval at any time and place, catering to the modern reliance on smartphones and apps for information. Digital accessibility thus empowers business owners to consistently update information, engage in promotional activities, and cultivate customer interactions, consequently expanding their business reach. Most of the respondents acknowledge that the accessibility of digital tools ensures they frequently update information, conduct advertising, improve interaction and achieve target market. This allows them to expand their business.

"From the information obtained on the website, I am confident it can attract customer interest to stay in my homestay".
"I saw today that digital devices are commonly used by people of all ages; this creates opportunities for me to approach the target market and to get involved in digital tools for my business promotion and advertising".
"Social media is accessible and functional to use. The system meets people's requirements from time to time and is easy to access on all devices. There are many attractive functions on social media. This is a factor that attracts people to use the apps".

Connectivity: Connectivity was acknowledged as a beneficial attribute of digital tool adoption, enabling accessibility across various devices and fostering the creation of social communities. The omnipresence of connectivity not only simplifies information procurement for customers but also facilitates the formation of global relationships through interactive engagements.

"The connectivity function can maintain the use of it among the organization, business and personal. I saw today that use is widely used from all ages".
"It was a quick communication, information, and advertising function. Social media allows me to respond fast to any inquiry or comment".
"In marketing, social media can reach out to a bigger audience which gives high potential to achieve market

target. In communication strategy, the useful of social media for me to interact and reply to the audience fast".

Homestay Tourism Target Market: The strategic deployment of technology in business is predominantly aimed at capturing the homestay target market. Operators posited that the use of websites and social media significantly elevates service awareness, acting as a catalyst for business enhancement through creative and interactive content dissemination.

"Social media success creates awareness about homestay and attracts guests to stay".
"Using social media will help to create awareness about my service (homestay). That causes the sharing of content from us to followers and from followers to others. This gives a high chance to attract potential guests".
"To create awareness among media social users about my homestays. Social media is seen as a great influence tool for business use". The special function tools in social media give opportunities for respondents to create creative and attractive content and posting."

Managing Expectation: The study uncovered the double-edged sword of using technology to shape customer expectations. While digital content effectively captures audience interest, it can also spawn over expectations, posing challenges for business owners in managing customer perceptions.

"Using social media will help to promote and advertise my homestay. This gives a high chance to attract potential guests. But sometimes the use of it also causes over-expectation among customers about the homestay".
"This is a bit of a challenge for us to make them understand. However, I always try to achieve customer expectations".

Controlling Negative Feedback: An unanticipated challenge that emerged was the management of negative feedback across digital platforms, which can markedly affect business reputation and customer decision-making. Most respondents said that controlling negative comments is hard and causes bad impacts on the business.

"The serious negative impact is to control the negative comment".
"The possibility to influence other people is higher. However, it is hard to avoid negative comments".
"This is a bit of a challenge for us to make them understand. However, I always try to achieve customer expectations".

Impacts of Technology Use on Homestay Business

Influential Digital Tools: Digital tools, notably social media, have been recognized as influential factors in business promotion and visibility, providing rapid and cost-effective avenues for customer engagement. All respondents agreed the use of social media can gain more advantages in time and save cost.

"A huge social network can be created in social media. The delivery and sharing of information, promotion and advertising are efficient for the business. The zero cost to open a social media account saves a lot of business financials to focus on other parts".
"Social media is known as the domain influence tool nowadays. it can influence people with content upload. The business became visible and from that the business received more booking orders, especially on public holidays".
"The customer engagement in social media also became a factor homestay social media can influence the audience".
"Yes. I need to be active in social media by creating and uploading content and adding more friends to increase my social media engagement. High engagement will help me brand my homestay".

Enhancing Customer Service: The study indicates that technology serves as a conduit for improved customer service, providing barrier-free communication channels for pre-, during, and post-stay interactions. While using social media, the audience can put their inquiry in a comment session or personal direct message (DM).

"Direct online communication allows two-way communication that can save time and cost and manage a discussion on the spot".

"The interaction allows me to manage social customer service and build good relationships with potential customers".

Professionalism: The utilization of technology is also indicative of a business's professionalism, with websites and social media serving as proxies for showcasing business experience and credibility.

"Because the use of websites is still relevant for future business. It shows the business professionality and experience to convince guests".
"Yes, it is very important because active homestay social media can show the audience that the homestay is active, and experienced and can convince guests about the business".
"Homestay operators who have been running this business for a long time agree that the use of websites and social media can maintain their business in this field".

Challenges in Technology Adoption

Expertise Deficit: A significant barrier identified was the lack of expertise in technology utilization, resulting in suboptimal management and performance of digital platforms.

"Next is a lack of knowledge about the social media function. As we know every year they change or upgrade functions to better use experience for social media apps. It is very challenging to keep track of the change due to the age factor".
"The lack of information will give a bad interpretation about homestay even though the homestay has made a lot of improvement".

Time Investment for Content Management: Respondents articulated the heightened time investment required for content creation and management, particularly for visually compelling materials like videos.

"It takes a long time for me to create video content because it needs proper editing".
"The other factor is that because of their permanent work, they need more time to upload content".
"The problem I face is the consistency in creating and uploading new content due to my other permanent work. The higher time spent for creating content will affect the social engagement for the homestay business owners who use social media in particular compared to website".

Systematic Discrepancies: Instances of unsystematic information handling were noted, particularly when homestay operations were managed by third-party or government platforms (Agoda, Trivago, Booking.com, etc), leading to booking overlaps and miscommunications.

"Development of a website needs someone who has knowledge and experience to handle it. That is because the lack of knowledge is unable to align the system properly".
"The website use has contributed to the homestay guest increase, because of that the website should be managed well".
"The nonuniform system website development may hurt booking such as inaccurate information and the system shut down".
"The government-managed websites are good. But there is a lack of information on the website such as the homestay room has been added now and has not been updated. Another is the overlapping booking order because miscommunication with homestay owners sometimes happens".

Discussion of Findings
This study sought to conduct an empirical investigation into the utilization of community informatics by homestay operators and to propose a strategic approach grounded in community informatics theory. This approach reconceptualizes the Internet as a multifunctional tool, extending beyond mere information dissemination to a pivotal instrument for business growth.

Through interviews with homestay owners, the study aimed to extract and analyze the resultant data for substantive findings. It emerged from the study that websites remain a critical and enduring asset for

businesses looking to the future. This perspective was embodied by one of the respondents, who underscored the intrinsic value of websites in nurturing customer relationships and facilitating business expansion. Websites serve as a digital narrative space, allowing homestay owners to showcase their accommodations and affirm their presence in the market. Moreover, websites deliver multidimensional benefits not only to the owners but also to prospective guests by providing a plethora of informative and interactive sections. The availability and detail of such information influence guests' decisions, potentially leading them to opt for the homestay experience, thereby bolstering business growth and online visibility.

Furthermore, the research revealed the economic feasibility of website adoption for homestay owners. There is an emerging trend among some operators to independently create websites or to participate in collective development efforts, often supported by governmental training and workshops. These cost-effective strategies allow owners to harness the benefits of online presence without substantial financial outlay. The research quotes a respondent, reflecting on the utility of free website versions that offer both convenience and functionality without incurring costs, highlighting the financial prudence of such platforms.

In the realm of professionalism, the study delves into the critical importance of professional input in website businesses and its correlation with meeting guest expectations. Professionalism, as reflected through well-crafted websites, establishes a trusting rapport with potential guests and communicates a commitment to quality service provision. A respondent suggested that a professional website is not just a business tool but a symbol of business acumen, indicative of the homestay's dedication to delivering an exceptional guest experience.

Simultaneously, the discussion touches upon the challenges homestay operators may face in managing online bookings and content, particularly when reliant on third-party or governmental platforms. The potential for booking overlaps and the dynamic nature of content necessitate vigilant management and timely updates to maintain accuracy and prevent miscommunication. Importantly, the findings underscore the complex yet rewarding nature of digital integration within the homestay industry. Websites and social media emerge as dual pillars supporting the structure of modern homestay marketing and guest engagement strategies. Simultaneously, the study acknowledges the intricate challenges that accompany digital adoption, emphasizing the need for expertise, time, and systematic approaches to leverage technology effectively within the tourism domain

5. Managerial Implications, Recommendations and Conclusion

The integral role of website development and social media in the realm of homestay businesses has been unequivocally affirmed. Websites, as the linchpin for information dissemination and reservation facilitation, coupled with the dynamic and interactive capabilities of social media platforms, constitute essential facets of modern homestay business operations. These digital tools enable homestay entities to fortify their online presence, enhance guest engagement, amplify booking opportunities, and secure a competitive edge in the hospitable industry. The adoption of digital strategies and keeping pace with technological evolution emerge as pivotal elements for sustained growth and prosperity in the homestay sector.

Technology, beyond its capability to vividly showcase products and services economically, plays a pivotal role in capital accumulation, advancing the quality of scientific research institutions, and boosting international competitiveness, as articulated by Çalışkan (2015). Moreover, technology acts as a catalyst for cultural development within communities. This investigation was steered to discern the perceptions of homestay business owners in Negeri Sembilan on the impact wielded by website integration and social media utilization. It offers an in-depth exposition of the business owners' perspectives on digital adoption and delineates the dualistic impact—beneficial and adverse—on their ventures.

Data gleaned from ten diverse homestay operators, acquired through meticulous snowball sampling and analyzed via interviews conducted via Google Meet and phone, unveiled that while digital adoption amplifies customer service and projects professionalism, it also brings challenges such as skill deficiencies, time investment, and unsystematic information management.

This research underscores the necessity for a multifaceted data collection approach in qualitative studies, potentially informing policy development for the Malaysian government, particularly the Ministry of Tourism, Arts and Culture (MOTAC), and Tourism Malaysia. The insights may catalyze enhancements in the tourism sector's performance, with a focus on Negeri Sembilan's homestay tourism, and by extension, the broader Malaysian context.

The study successfully met its objectives, elucidating the significance of social media in targeting and engaging desired demographics, notably Gen X, Millennials, and Gen Z. The potent connectivity fostered by social media is an indispensable asset for marketing, branding, and promotion in the homestay industry, enabling businesses to cultivate meaningful relationships with potential guests and effectively navigate the competitive market landscape.

Anticipating that this study will contribute pragmatic marketing insights to homestay operators, the expectation is that such strategies will enhance tourist arrivals, both domestic and international. Moreover, the implications of this study should be acknowledged by governmental and tourism entities, as they bear the potential to elevate tourists' experiences within Malaysia. Future inquiries may delve into evaluating the effectiveness and satisfaction levels of tourists concerning digital platforms, examining whether enhancements made by homestay operators based on these findings will streamline reservation processes and attract a larger influx of guests to homestays

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Factors Influencing Work-Life Balance: Mediating Role of Telecommuting

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Abstract: This study examines the role of telecommuting on work-life balance (WLB) in the information technology (IT) sector at Bank Rakyat. The objective of this study is to examine the effect of workload (WL), work flexibility (WF), and core self-evaluation (CSE), and the role of telecommuting in mediating the achievement of work-life balance (WLB). The study recognizes the difficulties that arise from a higher volume of work during the shift to remote employment, especially in the challenging field of information technology. Gaining a comprehensive understanding of the intricate connection between workload and work-life balance is crucial for formulating efficient telecommuting rules. The main issues discussed involve the possible disadvantages of a heavier workload and the necessity for customized telecommuting guidelines to guarantee a harmonious work-life balance. This investigation was grounded in the Job Demand Resources Model. Data was obtained from 181 employees of Bank Rakyat's headquarters using the purposive sample technique, specifically junior IT executives. In addition, a two-stage structural equation approach was employed to evaluate the validity and reliability of the data, as well as the influence of underlying variables. Research indicates that telecommuting has a good impact on work-life balance, particularly by improving work flexibility and core self-evaluation. Nevertheless, it was determined that workload does not exert a substantial impact on work-life balance in the context of IT staff working in Bank Rakyat. This study is important because it provides insight into the complex connections between workload, work flexibility, core self-evaluation (CSE), and work-life balance (WLB). It also offers an understanding of the fundamental mechanisms of telecommuting that help junior executives at Bank Rakyat headquarters in Malaysia achieve a balance between their work and personal lives.

Keywords: *Workload, work flexibility, core self-evaluation, work-life balance.*

1. Introduction and Background

Work-life balance pertains to the state of equilibrium that individuals endeavor to attain between their occupational obligations and personal lives. It entails efficiently handling job responsibilities while also dedicating time and effort to personal and family commitments, hobbies, and overall health. Attaining a harmonious equilibrium between job and personal life is crucial for sustaining overall life contentment, diminishing stress, and averting exhaustion. According to Employer Brand Research conducted in 2021, a survey of over 9,000 workers in the United Kingdom revealed that 65% of job seekers consider work-life balance to be more important than wages and benefits. In line with the findings of FlexJobs' 2022 Career Pulse Survey, a significant majority of the 4,000 participants (63%) expressed a preference for seeking employment that provides flexibility and improved work-life equilibrium, rather than greater compensation. Work-life balance is defined as more than simply dividing time evenly between work and personal life (Lonska et al. 2021). It also involves the capacity to have flexibility in one's professional work while still having sufficient time and energy to devote to one's personal life. When individuals experience dissatisfaction with their employment, it often leads to a decline in their performance, which hampers their capacity to reach their full potential. Conversely, contented individuals who derive a sense of satisfaction from their work are significant resources for the firm, exhibiting exceptional levels of performance (Mani et al., 2020).

The banking industry worldwide has experienced substantial repercussions due to the extensive influence of COVID-19 (Luo, 2022). Bank Rakyat, one of Malaysia's leading savings banks, has not been exempt from these effects. Therefore, the concentration on the Information Technology (IT) department has become an essential element in banking, intricately intertwined with many banking operations (Global Banking & Finance Review, 2021). The COVID-19 pandemic has resulted in the emergence of new projects and improvements in various fields, as a consequence of the new-normal lifestyle. Therefore, junior IT executives at Bank Rakyat diligently and exhaustively fulfill the bank's objective of accelerating digital transformation and enhancing customer

experience, resulting in a heavy workload and significant responsibility. However, following the endorsement from Bank Rakyat's senior management to introduce telecommuting in 2020, all divisions and departments at the main office are now more inclined to possess the assurance and competence to work autonomously and efficiently manage their schedules, particularly benefiting junior executives. Bank Rakyat has allocated a substantial amount of resources to supply junior IT executives with new computers, aiming to enhance mobility and improve the working environment and accessibility for smooth operation. As a result, the junior IT executives have been assigned crucial duties to ensure the continuous operation of the bank around the clock.

Telecommuting, commonly referred to as remote work or telework, is the act of working from a non-traditional office location, typically one's home. The impact of telecommuting on work-life balance has emerged as a prominent subject of discourse, particularly due to the growing prevalence of remote work arrangements in numerous organizations. Junior IT executives at Bank Rakyat have a crucial responsibility in providing support for the bank's operations and systems. Given the nature of their job, individuals frequently need to work during non-conventional business hours, which affects their work-life balance and personal well-being. Due to the flexibility of remote work, the IT departments may need to work during late hours, to achieve business objectives. While telecommuting enhances flexibility in work arrangements and reduces conflicts between work and family responsibilities, the utilization of telecommuting by managers can result in excessive work hours, so negatively impacting the balance between work and personal life (Sarbu, 2018). The workload in the IT business has increased over time, resulting in a high-pressure workplace characterized by demanding deadlines, intricate regulations, and a rapid speed of change (Khan & Kiran, 2021). Furthermore, core self-evaluation (CSE) plays a pivotal role in influencing the way younger executives perceive and react to job expectations and resources (Srivastava & Singh, 2019). Individuals' self-efficacy, which encompasses their self-perceived competence, talents, and capabilities, plays a vital role in their entire well-being, including achieving a balance between work and personal life (Aloulou et al., 2023).
This research is essential for comprehending the consequence of work-life balance among executives in the IT department of Bank Rakyat and establishing the correlation with other variables through telecommuting. Therefore, this study aims to investigate the influence of workload, work flexibility, and CSE on the work-life balance of IT executives and the mediating role of telecommuting towards the relationship between workload, work flexibility, CSE, and work-life balance. The findings aim to provide significant insights for the IT department of Bank Rakyat, who are interested in improving employee work-life balance within their organizational culture.

2. Literature Review

The review will center on the elucidation of work-life balance and telecommuting, examining the advantages and disadvantages of telecommuting, and investigating the correlation between telecommuting and work-life balance. This section will also review the theory that relates to the study.

Job Demand Resources Model (JD-R): The Job Demands-Resources (JD-R) model elucidates the correlation between job demands and job resources and their influence on employee engagement and well-being (Bakker & Demerouti, 2017). As per the paradigm, job demands refer to the physical, psychological, social, or organizational components of a job that necessitate effort and are linked to negative consequences, such as stress or burnout. According to the JD-R model, job resources can assist employees in managing heavy workloads and reducing the adverse effects on employee outcomes (Bakker & Demerouti, 2017). Moreover, the JD-R model can serve as a valuable framework for comprehending the correlation between telecommuting and aspects such as workload, work flexibility, and CSE, and how this influences work-life balance (Aloulou et al., 2023). Telecommuting offers employees increased autonomy over their work surroundings and decreases the time spent on commuting, hence reducing stress levels and enhancing work-life equilibrium (Colaço, et al., 2024).

Work-Life Balance: Attaining a work-life balance relies on sustaining a suitable degree of involvement in different life responsibilities. The establishment of this equilibrium enables people to efficiently handle their job and personal obligations, resulting in heightened commitment and efficiency (Alzadjali & Ahmad, 2024). The notion of work-life balance stems from the clash between personal and professional spheres encountered by individuals, entailing the quest for a harmonious allocation of time between work and personal life (Abioro,

Oladejo, & Ashogbon, 2018). Establishing a work environment that promotes work-life balance serves as a motivation for organizations to improve employee performance (Mattarelli et al., 2024). The concept of work-life balance is supported by two interrelated principles: accomplishment and happiness, both of which are crucial for general welfare (Palumbo, 2020). Merely achieving prosperity in terms of monetary assets does not ensure contentment; a gratifying domestic existence is as essential. Telecommuting is a potential aspect that can contribute to achieving work-life balance. Telecommuting is a feasible alternative work arrangement that allows individuals to perform their tasks outside of the conventional workplace environment. It involves using digital tools to interact with colleagues, both within and outside of their organization (Shirmohammadi et al., 2022; Ramadani et al., 2021).

Workload: The influence of workload on employees' well-being is significant in causing job stress, and effectively addressing this issue necessitates a thorough comprehension of its implications (Oderinde et al., 2024). Good workload management can not only increase productivity but also give employees tasks that are clear and can be handled efficiently, encouraging efficiency in carrying out work (Ranggu et al., 2024). Workload indicators, such as work standards, targets, and working time, have a substantial effect on work-life balance, suggesting that working conditions directly influence work-life balance (Goh et al., 2015). In addition, previous research done in banking institutions in Indonesia argued that workload had a significant negative effect on work-life balance (Tresna et al., 2024). Hence, this issue holds a significant impact when examining the Bank Rakyat IT sector, due to the heightened workload associated with the process of digitalization transformation. An intricate comprehension of the effect of workload on employees' well-being is crucial for tackling the difficulties linked to increased workload levels (Hasin, Hussain, Nordin, Jamil, & Johari, 2023). It is crucial to understand the working circumstances and how workload affects work-life balance. The following is the hypothesis for the study, which examines the correlation between workload and work-life balance:
H1: The relationship between Workload and Work-Life Balance in Bank Rakyat's IT sector is statistically significant.

Work Flexibility: The ability to have flexible working hours has a beneficial effect on employees. According to Jung et al., (2024), flexible working hours grant employees the ability to decide the timing, location, and duration of their employment. This adaptability empowers people to accomplish success in both their professional and personal spheres, ultimately resulting in the achievement of work-life equilibrium and overall heightened job contentment. Flexible working hours have a substantial impact on work-life balance and overall employee satisfaction, as demonstrated by the research of Mughal and Rani (2024). Nevertheless, it is crucial to oversee the execution of adaptable working hours to prevent potential challenges in the workplace. Moreover, the adoption of adaptable work schedules has a favorable and substantial impact on employee satisfaction with their employment and the balance between their professional and personal life (Rawashdeh et al., 2016). Given the viewpoints of these specialists, the researcher posits that flexible working hours have a favorable impact on work-life balance. Bank Rakyat has successfully adopted telecommuting, allowing for work flexibility and the adjustment of fixed working hours to flexible working hours. Nevertheless, telecommuting has also created the belief that employees are constantly accessible and may work from any location. Therefore, additional research is necessary to understand the correlation between job flexibility and work-life balance. Therefore, the hypothesis for this investigation is outlined below:
H2: The relationship between Work Flexibility and Work-Life Balance in Bank Rakyat's IT sector is statistically significant.

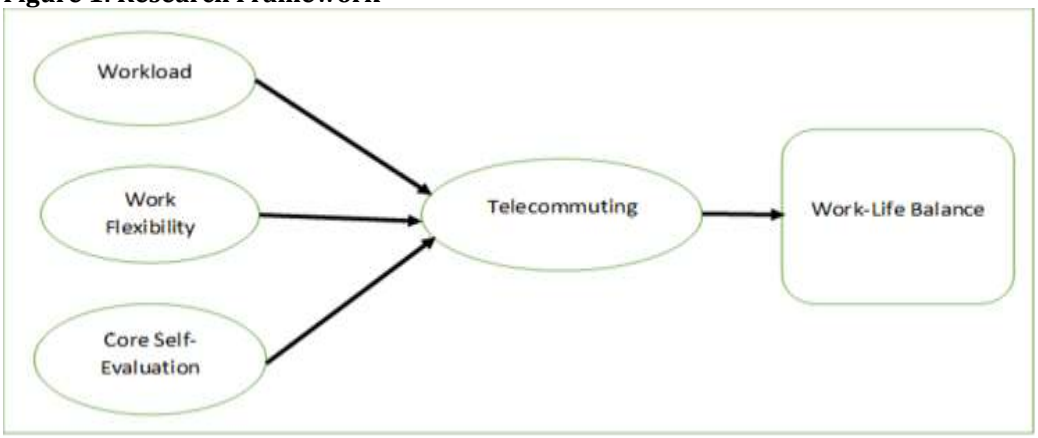
Core Self-Evaluation: Work-life balance is attained when individuals possess ample personal resources to fulfill the requirements of their job and family responsibilities, allowing for effective engagement in both domains (Brough et al., 2020). Positive core self-evaluation (CSE) is linked to work engagement, characterized by employees being actively and joyfully absorbed in their work. These employees successfully handle their job and family obligations by making use of the educational possibilities and assistance they receive in both their professional and personal lives. According to Aloulou et al., (2023), employees who possess positive CSE exhibit efficient handling of their job and family obligations, displaying traits such as enthusiasm and commitment. While there is a lack of specific studies investigating the correlation between CSE and work-life balance, there are justifiable reasons to elucidate this connection. Based on resource theory, a high level of CSE can enhance emotional stability and self-assurance, enabling individuals to exert greater influence over their everyday pursuits, such as achieving a better balance between work and personal life (Aloulou et al., 2023).

Thus, CSE can serve as an inherent catalyst for teleworkers, aiding them in enhancing their work-life equilibrium. Individuals with favorable self-assessments are more inclined to achieve a superior equilibrium between their professional and personal life. Hence, it is crucial to include this element in the research inquiries disseminated to IT Junior Executives. The purpose of this study is to obtain a deeper understanding of employees' perceptions of working in the Bank Rakyat setting, specifically focusing on its well-established telecommuting work culture. CSE, which refers to individuals' evaluations of their value, competence, and capacities (Nwanzu & Babalola, 2024), is identified as a potential personal asset that can impact work-life balance. Therefore, the hypothesis on the correlation between CSE and work-life balance is outlined below:
H3: The relationship between CSE and Work-Life Balance in Bank Rakyat's IT sector is statistically significant.

Telecommuting as mediator: Telecommuting is praised by both employees and employers for enabling a more favorable equilibrium between work and personal life (Sandoval-Reyes et al., 2021). This work arrangement enables employees to fulfill their responsibilities in a non-traditional office environment, providing them with increased autonomy and the opportunity to manage their work and personal commitments effectively. Telecommuting has the effect of improving work-life balance and fostering diversity in the workforce (Chung & Van der Horst, 2017). Furthermore, studies suggest that the decrease in stress levels among remote workers can be due to an increase in working autonomy. Research has specifically demonstrated that as telecommuters acquire more independence in their work, their levels of stress tend to diminish in direct proportion (Sandoval-Reyes et al., 2021). While telecommuting offers benefits such as flexibility, it can also lead to burdensome workloads and stress, especially for individuals who struggle to comply with regular working hours. The study by Matli and Musengi, (2020) indicates that certain telecommuters tend to work more hours than their colleagues who work in traditional office settings, which raises worries about their well-being. This research project investigates the influence of telecommuting on job flexibility, providing insights into the advantages and challenges faced by teleworkers during the COVID-19 epidemic. This underscores the necessity for organizations to adapt to the changing work landscape and provide remote employees with freedom. While remote work offers flexibility, it also presents challenges in maintaining a work-life balance and managing household responsibilities (Matli & Musengi, 2020). Academic research shows a connection between core self-evaluations and work-life balance, indicating that individuals with higher core self-evaluations are more likely to achieve a better balance between their work and personal life when working remotely. Core self-evaluations, referring to an individual's inherent beliefs about their competence and worth, significantly impact the work-life balance and job satisfaction of telecommuting employees in Saudi Arabia (Aloulou et al., 2023). Consequently, it is necessary to examine the factors of workload, job flexibility, and core self-evaluation in telecommuting workers to elucidate their substantial influence on work-life balance. The following hypothesis is proposed to examine the mediating impact of telecommuting on the connection between workload, work flexibility, and core self-evaluation on work-life balance:
H4: The relationship between Telecommuting and Work-Life Balance in Bank Rakyat's IT sector is statistically significant
H4a: Telecommuting mediates the relationship between workload and work-life balance in Bank Rakyat's IT sector is statistically significant.
H4b: Telecommuting mediates the relationship between work flexibility and work-life balance in Bank Rakyat's IT sector is statistically significant.
H4c: Telecommuting mediates the relationship between core self-evaluation and work-life balance in Bank Rakyat's IT sector is statistically significant

Hence, Figure 1 shows the research framework of this study:

Figure 1: Research Framework



3. Research Methodology

The primary objective of the study is to analyze the impact of telecommuting on the work-life balance of employees in the Bank Rakyat Information Technology sector. Collected data was obtained by administering a standardized questionnaire to the participants of the study. The questionnaire was developed by adopting and adapting methods from previous research articles (Aydin, 2016; Wu et al., 2018; Matli, 2020) but certain terms and language have been modified to ensure clarity and ease of understanding for the respondents. The questionnaire is divided into three distinct parts, with the first part specifically addressing inquiries related to work-life balance. The second section of the questionnaire includes questions about the independent variables, which include workload, work flexibility, and core self-evaluation. The third segment consists of items that examine the characteristics of the survey participants. The initial and subsequent sections of the questionnaire utilize a Likert scale consisting of five possible response choices. A score of 1 represents a strongly disagree, while a score of 5 represents a strongly agree. The exogenous components, which encompass workload engagement, job flexibility, and core self-evaluation, were measured using a total of 23 items. The endogenous variable, which is work-life balance, was assessed with a collection of 5 items. A digital questionnaire was disseminated to a total of 181 individuals. The participants for this study were chosen using purposive sampling. The researcher bears the task of choosing appropriate respondents to represent the companies (Awang, Afthanorhan, & Asri, 2015). The study's data collection spanned from October to December 2023.

The study specifically targeted the Junior Executives working in the IT department of Bank Rakyat. This survey obtained feedback from all 181 individuals who hold the position of Junior executive in the IT department. The model illustrated in Figure 2 was created using SmartPLS 4, a software that specializes in modeling and bootstrapping approaches (Sarstedt, et al., 2022). The partial least squares (PLS) analysis comprises two distinct phases: the structural model and the measurement model. An evaluation of the validity and reliability of the measurement model is essential. The measurement model's validity is evaluated by analyzing its convergent and discriminant validity, while the model's reliability is tested using the Composite Reliability Index (CR). After developing the measurement model, a total of 5000 resamples were used in a structural model test to investigate the relationship between workload, work flexibility, core self-evaluation, and work-life balance.

4. Results

Profile of Respondents: The research includes a total of 181 participants, with an age distribution showing that 45% are 40 years or older, 42% are between 26 and 39 years old, and 13% are less than 25 years old. The data reveals that 28% of the participants identify as female, while 72% identify as male. This highlights the significance of doing analyses that take into consideration gender sensitivity. The marital status breakdown is as follows: 47% of individuals are married, while the remaining 53% are unmarried. The participants in Bank Rakyat exhibit a diverse range of experience levels. Specifically, 50% of them hold a duration of two to four years of experience, 38% have accumulated more than four years of experience, and the remaining 12% have

less than two years of experience. Table 1 summarizes the characteristics of the total sample of Junior Executive IT in Bank Rakyat who participated in the study.

Table 1: Demographic Profile of Junior Executive IT in Bank Rakyat

VARIABLE	ITEM	FREQUENCY	PERCENTAGE (%)
Gender	Male	130	71.8
	Female	51	28.2
Age	Below 25	23	12.7
	26 to 39	76	42.0
	40 and Above	82	45.3
Marital Status	Single	96	53.0
	Married	85	47.0
Years of Experience in Bank Rakyat	Less than 2 years	23	12.7
	2 – 4 years	90	49.7
	More than 4 years	68	37.6

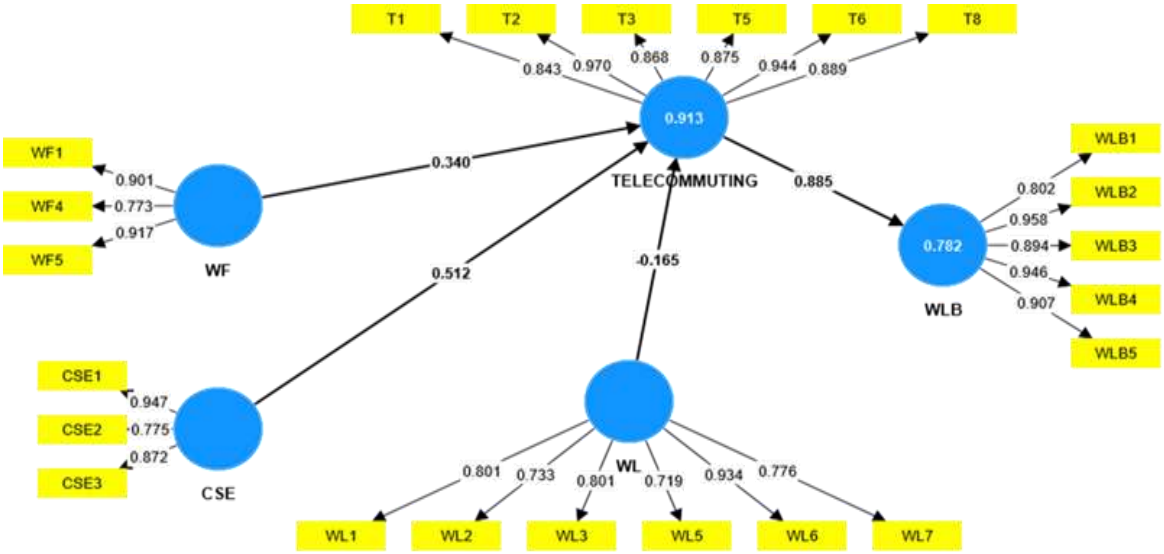
Partial Least Square – Structural Equation Modeling (Measurement Model): Confirmatory factor analysis (CFA) was utilized to assess the reliability, discriminant validity, and convergent validity of the measures. When evaluating convergent validity, it is crucial to incorporate factor loadings (Hair, Sarstedt, Hopkins, & Kuppelwieser, 2014). Convergent validity can be evaluated using composite reliability (CR) and average variance extracted (AVE). The majority of the item loadings have values exceeding 0.5, indicating statistical significance at a p-value below 0.01. In addition, all of the average extracted variances (AVE) are higher than 0.5, as seen in Table 2. In addition, Ramayah, Cheah, Chuah, Ting, and Memon (2018) revealed that the composite dependability (CR) of all variables is higher than 0.7.

Table 2: Discriminant Validity

Variables	Items	Loading	CR	AVE
Workload	WL1	0.801	0.892	0.635
	WL2	0.733		
	WL3	0.801		
	WL5	0.719		
	WL6	0.934		
	WL7	0.776		
Work Flexibility	WF1	0.901	0.901	0.750
	WF4	0.773		
	WF5	0.917		
Core Self-Evaluation	CSE1	0.947	0.869	0.753
	CSE2	0.775		
	CSE3	0.872		
Telecommuting	T1	0.843	0.955	0.809
	T2	0.970		
	T3	0.868		
	T5	0.875		
	T6	0.944		
	T8	0.889		
Work-Life Balance	WLB1	0.802	0.95	0.816
	WLB2	0.958		
	WLB3	0.894		
	WLB4	0.946		
	WLB5	0.907		

Partial Least Square – Structural Equation Modeling (Structural Model): The R^2 score of the endogenous variable quantifies the proportion of variance that can be accounted for. An R^2 coefficient of more than 0.60 indicates a significant value, whilst a range of 0.30 to 0.60 indicates a moderate value. A value below 0.30 indicates a low value (Sandin, Sanchez-Arribas, Chorot, & Valiente, 2015). According to the information provided in Figure 2, the R^2 value suggests that the collective impact of external factors (workload, work flexibility, and core self-evaluation) might explain 91.3% of telecommuting. Furthermore, the R^2 value suggests that telecommuting might explain 78.2% of the variation in work-life balance.

Figure 2: Measurement Model



Each of the connections between two components in the structural model represents a hypothesis. The researcher conducted a structural model analysis to examine and disprove each hypothesis, while also measuring the degree of correlation between the independent and dependent variables. The path coefficients of all the variables were evaluated by comparing the beta (β) values in the route model. The conclusion is based on the observation that higher values suggest a more pronounced link between the foreign constructs and the endogenous construct. The strength of the correlations between the independent and dependent variables was assessed by analyzing the output of the Smart PLS. To assess the level of significance in partial least square structural equation modeling (PLS-SEM), t-statistics were computed for each path utilizing the PLS-SEM bootstrapping technique. The significance level of each association has been established using the t-statistics result. Table 3 presents the path coefficients, observed t-statistics, and significance levels for all of the projected courses. The research conducted by Hair, Sarstedt, Hopkins, and Kuppelwieser (2014) suggests that the appropriate t-values for determining the level of significance in a two-tailed test are as follows: 1.28 (for a significance level of 10% with $p<0.10$), 1.96 (for a significance level of 5% with $p<0.05$), and 2.33 (for a significance level of 1% with $p<0.01$).

Based on the analysis of the path coefficients in Table 3, it was found that 2 out of 7 paths did not support the hypothesis. These data suggest a combination of positive and negative results. Most of the t-values were lower than the critical threshold of 0.01 or 1%, which is the lowest value needed for statistical significance (Hair, Sarstedt, Hopkins, & Kuppelwieser, 2014). The fundamental idea of work-life balance (WLB) is closely and significantly associated with job flexibility (β=0.301, t=11.530, $p<0.01$), core self-evaluation (β=0.453, t=4.436, $p<0.01$), and telecommuting (β=0.885, t=25.275, $p<0.01$). Based on the evidence, three hypotheses (H2: the correlation between WF and WLB in Bank Rakyat's IT sector is statistically significant), (H3: the correlation between CSE and WLB in Bank Rakyat's IT sector is statistically significant), and (H4: the correlation between telecommuting and WLB in Bank Rakyat's IT sector is statistically significant) have been confirmed. Nevertheless, the workload (β=-0.146, t=1.235, not statistically significant) has no substantial impact on work-life balance. Thus, there is no statistical evidence to support the hypothesis that there is a significant

relationship between workload (WL) and work-life balance (WLB) in the IT sector of Bank Rakyat. Furthermore, the examination of the role of telecommuting in mediating work-life balance revealed that Teleb (β=0.340, t=11.390, p<0.01) and Telec (β= 0.512, t=4.383, p<0.01) possess the capacity to impact WF and CSE respectively, thereby providing support for H4b (telecommuting acts as a mediator between WF and WLB) and H4c (telecommuting acts as a mediator between CSE and WLB). Nevertheless, the hypothesis H4a, which suggests that telecommuting acts as a mediator between workload (WL) and work-life balance (WLB), is not substantiated

Table 3: Result of hypotheses tests based on the path coefficients, t-statistics, p values, and Confidence Interval

Hypothesis	Relationship	Beta	Std Error	T statistics	P values	LL	UL
H1	WL -> WLB	-0.146	0.118	1.235	0.217	-0.408	0.076
H2	WF -> WLB	0.301	0.026	11.530	0.001	0.247	0.351
H3	CSE -> WLB	0.453	0.102	4.436	0.001	0.231	0.641
H4	TELE -> WLB	0.885	0.035	25.275	0.001	0.805	0.943
H4a	WL->TELE ->WLB	-0.165	0.130	1.268	0.205	-0.442	0.088
H4b	WF->TELE ->WLB	0.340	0.030	11.390	0.001	0.282	0.399
H4c	CSE->TELE ->WLB	0.512	0.117	4.383	0.001	0.252	0.726

Note: two-tailed: p <0.01 (t ≥ 2.33). WL=Workload, WF=Work Flexibility, CSE=Core Self-Evaluation, TELE=Telecommuting, WLB=Work-Life Balance

Discussion

The statistical analysis reveals that the outcomes of Work Flexibility and Work-Life Balance in the IT sector of Bank Rakyat are highly significant. This discovery indicates a direct relationship, implying that junior executives who possess increased job flexibility experience a more advantageous equilibrium between their professional and personal lives. The result aligns perfectly with the theoretical framework described in the paper, which draws on past research highlighting the positive effects of flexible work arrangements on work-life balance (Mughal & Rani, 2024). These agreements improve individuals' overall well-being by giving them more independence to manage their work and personal lives (Sirgy & Lee, 2017). Hence, the significant impact of Work Flexibility on the prediction of work-life balance closely corresponds to the anticipated theoretical outcome. The practical ramifications of this research highlight the strategic importance of providing work flexibility to junior executives in the IT sector of Bank Rakyat, which in turn promotes greater work-life balance and overall job satisfaction.

Contrary to the null hypothesis, the analysis results demonstrate a statistically significant link between CSE and work-life balance among Junior Executives in the IT sector. These findings indicate a direct relationship between higher levels of CSE and improved work-life balance among junior executives in the IT sector of Bank Rakyat. This discovery aligns perfectly with the theoretical framework outlined in the research, which is based on previous studies indicating a connection between positive CSE and increased levels of energy, enthusiasm, and a perception of work as challenging (Nwanzu & Babalola, 2024). The aforementioned attributes contribute to the enhancement of both overall life happiness and work engagement (Aloulou et al., 2023).

5. Conclusion and Recommendations

Ultimately, this study investigates the relationship between telecommuting and work-life balance in the IT industry at Bank Rakyat, uncovering the diverse effects of contemporary work arrangements on the overall welfare of employees. The study highlights the strong beneficial relationship between telecommuting and enhanced work-life balance. Granting employees, the opportunity to work remotely enables organizations to cultivate a more harmonious and less taxing work atmosphere.

Moreover, the significance of core self-evaluation (CSE) in improving work-life balance is remarkable.

Employees with elevated levels of CSE exhibit improved work-life balance, indicating that implementing personal development initiatives focused on enhancing self-esteem and resilience may provide positive outcomes. This is especially pertinent in the demanding atmosphere of the IT industry. The study conducted by Kittinger et al. (2020) discovered a positive correlation between Core Self-Evaluations (CSE) and both job satisfaction and performance. This relationship indirectly affects an individual's capacity to maintain a healthy work-life balance. There is a favorable relationship between CSE and work-life balance, which can be attributed in part to the superior ability of persons with greater CSE to manage stress and employ effective coping techniques (Zhu et al. 2021).

Ultimately, the positive impact of work flexibility, such as remote working, requires a reevaluation of traditional work models. Based on the results of this study, increased flexibility can lead to higher levels of job satisfaction and better integration of work and personal life. Furthermore, it has been discovered that flexible work arrangements have a substantial impact on the well-being of employees, as well as their personal and professional performance, and overall motivation. Dizaho et al. (2017) emphasized the significance of flexible working hours, together with other motivational variables, in enhancing the overall level of employee work-life balance. In a study conducted by Davidescu (2020), the correlation between work flexibility and work-life balance was examined. The findings revealed that when employees have control over their professional lives in terms of temporary and local work flexibility, it enhances the connection between their paid work and personal life, ultimately resulting in an improvement in work-life balance. According to Lee et al. (2022), having flexible work arrangements can result in increased job satisfaction, reduced burnout and stress levels, improved employee health, better work-life balance, and a positive work-family relationship. The findings of these studies are particularly significant, as they investigate the correlation between job flexibility and work-life balance, which is one of the focal points of this research.

While this research does not consider workload as a major factor in work-life balance, prior studies have emphasized the connection between heavy workload and diminished work-life balance. This suggests that it is crucial to implement techniques for distributing workload and providing support systems. For example, the IT industry might use project management systems to enhance task and deadline management, hence mitigating the likelihood of staff exhaustion (Chowhan & Pike, 2023). The absence of a substantial mediating effect of telecommuting on workload and work-life balance suggests that remote work arrangements may not have a considerable impact on the link between workload and the ability to balance work and personal life. Various factors, such as miscommunication or challenges in teamwork, can result in a greater workload, so negating any advantages. Insufficient technology infrastructure can impede the efficacy of remote work, resulting in heightened stress and pressure instead of enabling a more favorable work-life balance. Furthermore, the insignificance of telecommuting on work-life balance can be influenced by organizational culture and cultural norms. In certain industries, there may be an expectation for people to work long hours, regardless of their location, which diminishes the potential good impact of telecommuting.

Hence, it is imperative to comprehend the particular circumstances, internal workings of the organization, and personal inclinations to accurately interpret why telecommuting may not be serving as a mediator between workload and work-life balance as anticipated. It's also vital to understand that the success of telecommuting might vary across different industries, job roles, and corporate cultures. Optimizing the benefits of remote work in achieving work-life balance may require adjusting policies, communication tactics, and support mechanisms.

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The Field of Science and Technology (S&T): The Representation of Women in Online Resources

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Abstract: The younger generation has lost interest in science and technology **(**S&T) as it is viewed as boring, mundane, technical and lacking in excitement. It is important to evoke interest among the young in the field of S&T as this will help the country to produce more specialists, scientists, engineers, and other professionals. Inventions such as solar energy, hybrid automobiles, green buildings and inventions are a few examples of how S&T can help build a more sustainable future. This study focuses on whether men and women are adequately portrayed in online resources as this will affect readers mainly the younger generation. Various articles from online resources were analyzed using Critical Discourse Analysis (CDA) to examine language and images to raise awareness about issues of importance of this research. The findings show that there is an unequal representation of men and women in the field of S&T. Thus, necessary steps need to be taken to ensure that there is equal representation of both genders in the S&T field in online resources as this will only lead to positive effects to the society, the nation, and the world as well. Social media has the power to highlight important issues as different sectors of society are brought together through social media. It is hoped that this study will encourage others to acknowledge the countless contributions of women in the S&T field and to focus more attention on the rights of women to be given due recognition for their intelligence and abilities.

Keywords: *Equality, online, gender, representation*.

1. Introduction

In the past, women were left behind in almost all aspects of life be it economic, and social and it was a rare sight to see any woman being highly educated, wealthy, and holding a high position (Lagarde, 2019) However, fast forward to the present it is evident that this is no longer true for most of the female population. In the past, the fairer sex was mainly relegated to menial work and were at the mercy of the men in their lives. According to the Global Gender Gap Report (2022) presently, there is a steady progression of women being educated at the tertiary level which leads them to be independent and capable of owning property and wealth. What exactly has led to this positive change for females? Generally, when education is being provided to everyone and they are being offered the same opportunities, anyone has the chance to achieve success and become an important pillar of society in the process. Women just like men have the same capacity for success and when the same opportunities for self-development are provided, positive change is inevitable for the former (Seehus, 2021).

Statistics have shown a vast difference in the number of women who attained higher education and have important posts. According to the World Bank, the labor force participation rate in Malaysia among females is 51.6%, and among males is 78% for 2023. Female labor force participation has steadily increased since 1990. There are 167.8 million people in the labor force at present and it is projected to rise within the next 7 years to 169.6 million (Ferguson, Shrove & Lucy, 2023).

If more female students see more exemplary role models of their gender in science and technology, it might trigger a spark of interest in this field (Gonzalez et al, 2020). The younger generation has lost interest in Science & Technology (S&T) or science, technology, engineering, and mathematics (STEM) as it is viewed as boring, mundane, technical, cut and dry, lacking in excitement, and so forth (Harun & Sallehuddin, 2024). Other causes for the lack of interest and participation in STEM include girls having less exposure to activities related to STEM,

underestimating their abilities in this field, and having the fear of being a minority in a field dominated by men. In addition, problems such as brain drain whereby more specialists are going abroad due to a lack of opportunities have led the government to offer lucrative pay to foreign experts (Amir, 2022). Consequently, our country is falling behind in technological advancements and innovations. The question is "Why is it important to evoke interest among the young in S&T?"

It is of the utmost importance to stop the dependence on foreign experts and technology. Instead, the country should aim to produce more specialists, scientists, engineers, and those in the related field, as they are the ones who will come up with great ideas, innovations, and inventions that have a lasting positive impact on the country and the world. Inventions such as solar energy, hybrid automobiles, and green buildings are mere examples of how S&T can help build a more sustainable future for the years to come. Besides that, creating patents for scientific innovations and inventions will also benefit the nation in the long run. Moreover, serious issues looming ahead which include global warming, depletion of natural resources such as fuel, pollution, and so forth require immediate action. Hence, it is apparent to produce more S&T experts in the country. A driving force for national and global economic development is the emphasis on science, technology, engineering, and mathematics (STEM). Hence, everyone must play their role. However, 33% of researchers worldwide are women (UNESCO, 2021). Nonetheless, Table 1 shows a steady rise in registered female STEM professionals but the percentage is relatively low. Table 2 illustrates an increase in the number of higher education students enrolled in STEM studies.

Table 1: Number of Female Registered STEM Professionals

	2014	2015
Dentists	3,670	4,010
Doctors	16,976	17, 468
Engineers	17,690	20, 512
Quantity Surveyors	1,036	1,114

Source: MoWFCD, 2015

Table 2: Number of Higher Education Students Enrolled in STEM-related Disciplines

	2015
Science, Mathematics &Computer Science	25,656
Engineering, Manufacturing & Construction	23,605
Agriculture & Veterinary	3,327
Health & Welfare	24,960

Source: MoHE, 2015

This study is conducted to identify the gender representation in online resources in the S&T field as this will affect readers mainly the younger generation. They will not be interested in this field and this will be a huge loss as social media will only amplify and reinforce gender stereotypes that women are not as capable as men. When there is a lack of gender representation, it will eventually lead to gender disparities resulting in the emergence of numerous issues which include lack of recognition. This lack of recognition is in terms of the awards, and grants, being awarded to women (Rodriguez & Clancy, 2020). According to the United Nations report (2023), the lack of gender representation will inadvertently hurt the career trajectories of women.

The findings show that there is unequal representation of women in the field of S&T. Ultimately this unequal representation of women will lead to various problems such as the lack of participation of capable and qualified individuals, loss of opportunities for women, intentional discrimination against women, lack of recognition for the meaningful contributions made by women and other adverse effects. Thus, necessary steps must be taken to ensure equal representation of both genders in the S&T field in online resources as this will only lead to positive effects to society, the nation, and the world as well. Park et al (2023) stated that at present, it is dishearteningly apparent that compared with men and boys, women and girls experience and face different harms online. The negative online experience includes online advertising content and algorithmic targeting sexist stereotyping, idealized images of women which lead to negative body images, misogyny, and gender-based abuse, technology-facilitated coercive control, economic and political marginalization, and side-effects of the dehumanization and degradation of women in misogynistic pornography. Among the most disturbing

findings include how women are subjected to being reduced to mere objects and having to experience image-based sexual abuse and silenced in public debate. Moreover, women are also being targeted and judged on their appearance just because of their gender (Park et al., 2023).

2. Literature Review

Many studies regarding gender and social media show certain similar characteristics such as discrimination, enforced stereotypes, hate speech, sexual harassment, negative judgments of women, being victimized, objectifying women, expressing stigmas and stereotypes, sexist hate speech used to bully women into silence and to maintain men's privileges and other negative consequences. According to Vlasceanu & Amodio (2022), gender inequality within a society is further amplified with the widely used internet search algorithm.

In a study by Power, Rak & Kim (2020), the findings showed that women were underrepresented in leading North American business magazines. This underrepresentation is due to lower levels of visibility and this may perpetuate long-standing gender status beliefs as it can be considered as a metric of women's lower social status or influence. According to Demirhan & Demirhan (2015), their study found that the patriarchal discourse on the social roles of women is being perpetuated on Twitter. In this study, the patriarchal discourse is categorized into four aspects: the definition of domestic roles for women (being good wife, mother, and housekeeper); the definition of professional roles for women (having an occupation, earning for family, having pink-collar jobs, being well educated and skilled, having intellectual capacity); the definition of physical beauty for women (being beautiful, strong, keeping healthy, having a good appearance and attraction, good clothing); and the definition of moral values for women. Meanwhile, according to Liu & Chai (2023), the images shown of men are more positive than women and the results of their study showed men as professional and knowledgeable while women are depicted as less professional. Moreover, the findings showed that men are objective, independent, creative, initiative, authoritative, and often connected with power and technology, which sees men as order-givers and decision-makers.

Another study found that career women were represented as different than men, whereby the former were victimized, and they were presented as unable to succeed both at work and at home simultaneously. Furthermore, they were also depicted as passive, emotional, and insecure (Galsanjigmed & Sekiguchi, 2023). In addition, according to Lomotey (2020), the complex role of humor in social media jokes only enhances the subtle yet dangerous power of this media in emphasizing traditional gender stereotypes and ideologies.

According to Ostreika et.al. (2021), the young generation finds that study programs in STEM fields are mundane and lacking in excitement. As a result, this led to their lack of participation in STEM disciplines. The waning interest and achievements in STEM subjects among children in K-12 educational settings is a critical stage (Kennedy et al., 2014; Prendergast et al., 2014). Although in modern societies today, there is an increasing need for more people to possess capabilities and skills in science, technology, and engineering it is most unfortunate and disheartening that most Australian students do not have much interest in these areas (Newhouse, 2017). Based on the research by Martínez-Borreguero et.al (2019) due to the lack of a conducive learning environment, secondary school students have negative emotions towards STEM disciplines as these subjects are viewed as uninteresting. The study by Tomperi et.al. (2022) suggests that the low exposure to STEM professions at school and the pervasive stereotypical beliefs that these professions are boring have an impact on the interest of students in these disciplines.

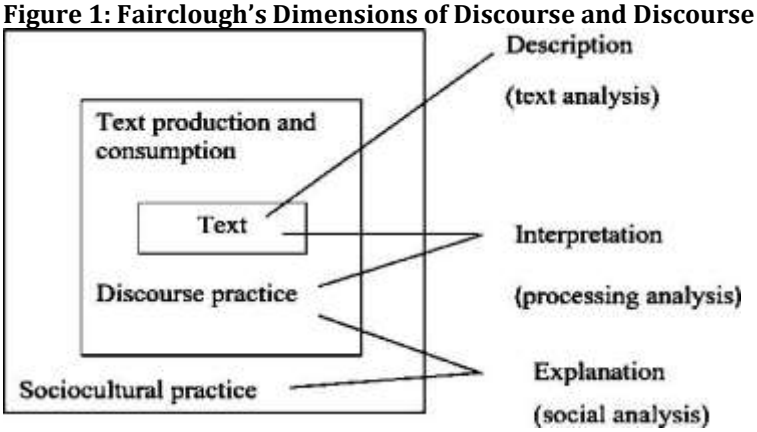
Stereotypes and lack of relevance are the predominant causes that lead to the perception among female students that STEM subjects are boring. The study by Burns, Lesseig & Staus (2016) suggests a waning interest in STEM disciplines among female students particularly in analytical subjects such as physics. According to the research by Desy, Peterson & Brockman (2011), there is a startling difference in attitudes among female students in middle and high school toward science whereby they find STEM subjects to be dull and uninteresting. According to Mayakis and Robinson (2018), female students lack the confidence to pursue a career in STEM disciplines as they perceive them to be male-dominated workplaces. Moreover, as a result of societal stereotypes and self-assessment of achievement they find STEM subjects to be boring. As a result of lower confidence and lack of preference, the majority of female students view STEM subjects to be less engaging

and they generally have a negative attitude towards mathematics as opposed to their male counterparts (Lu, 2019).

Even with the passing of time and the advent of new technology, sexism, and gender domination are still rampant and appear to be ubiquitous. Unfortunately, this has repercussions on women in terms of mislabelling women as weak, inefficient, incapable, and other degrading and dehumanizing aspects that only demoralize women in general. There are negative repercussions that will directly impact opportunities for women in their careers due to societal biases and gender stereotypes. Employers may have unconscious biases that make them less favorable towards female candidates than male ones. Even in the West where women are supposed to be independent and given the freedom to do whatever they want women are still being underestimated and looked down as incomparable to men in terms of intelligence and capabilities.

3. Research Methodology

Figure 1: Fairclough's Dimensions of Discourse and Discourse Analysis



Source: Janks (2005)

This study employs the Critical Discourse Analysis (CDA) based on Fairclough's theoretical framework to analyze language and images of various articles from online resources to raise awareness about issues of importance of this research. Critical Discourse Analysis (CDA does not limit its analysis to specific structures of text or talk) as it is also an application of discourse analysis. Critical Discourse Analysis (CDA) describes a series of approaches by researchers to reveal connotations and draw out the larger cultural narratives that these connotations support by critically analyzing texts and cultural artifacts. Based on Figure 1 above, according to Fairclough (2005), the discourse will be examined in three stages: description, interpretation, and explanation. In addition, this study also uses a purposeful sampling technique whereby the researcher focuses more detail on a certain issue, subject, or phenomenon when a sample is purposefully chosen (Patton, 2002). Participants are not randomly selected as it is also known as selective sampling. The articles are determined based on the content mainly about the success achieved by women in the S&T field. Besides that, since the study focuses on online articles this sampling technique is ideal (Gee, 2005). In addition, the number of online articles to be analyzed will be narrowed down by using this sampling technique.

Moreover, language in verbal or written language (which includes images, symbols, documents, face-to-face talk, and non-verbal interaction) within a particular social context will be analyzed in discourse analysis. Recursive analysis of the online articles particularly on the textual and visual representation will be conducted several times to closely preserve the dynamic and static contents and interconnectivity of the original, "online" advertisement by creating an "offline" copy of an advertisement as the textual and visual representations of online advertisement which are saved in HTML (hypertext markup language) and screen captures (Bergman & Meier, 2004). Furthermore, Fairclough (2001) states that discourse analysis is related to studying a language using a set of theories and methods within a specific context. CDA primarily links to the following aspects: intertextuality (the shaping of text's meaning is shaped by another text), interdiscursivity (borrowing of features of discourses or genres in text or talk), and socio-historical context of formation and interpretations of texts/discourses (Bhatia, 2010).

These categories were chosen as they are related to the field of S&T and are generally associated with men and women in that respective field. Previous research employing CDA often involves a detailed examination of visual aspects (e.g., images, graphics, and multimedia) and textual features. This shows that the analysis of these aspects occurs concurrently. Based on Table 1, a combination of language and images based on the process and societal levels of Fairclough's theoretical framework will be the basis of the interpretation and conclusions drawn (Fairclough, 2001). As one of the pioneering figures in the CDA domain, Fairclough has expanded and developed the theoretical framework of CDA and has several applications in education. He mainly focused on analyzing discourse in the light of sociocultural change and he considers discourse as a social practice to interact actively in social life.

An analysis of printed online advertisements aggregated electronically is conducted by assessing the textual and visual representations (Hartley & Morphew, 2008). These textual and visual representations are maintained by saving them in HTML (hypertext markup language) and screen captures. In this way, this will help preserve the dynamic and static contents and interconnectivity of the original, "online" advertisement by creating an "offline" copy of a commercial whereby a recursive analysis can be conducted several times (Bergman & Meier, 2004). Studies on CDA often involve the simultaneous analysis of the written or textual elements and visual elements (i.e. images, graphics, and multimedia) (Kress &Van Leeuwen, 2006). By using a combination of language and images an accurate interpretation and conclusions can be drawn based on the process and societal levels of the theoretical framework by Fairclough.

Figure 2: Study Distribution by Online Articles

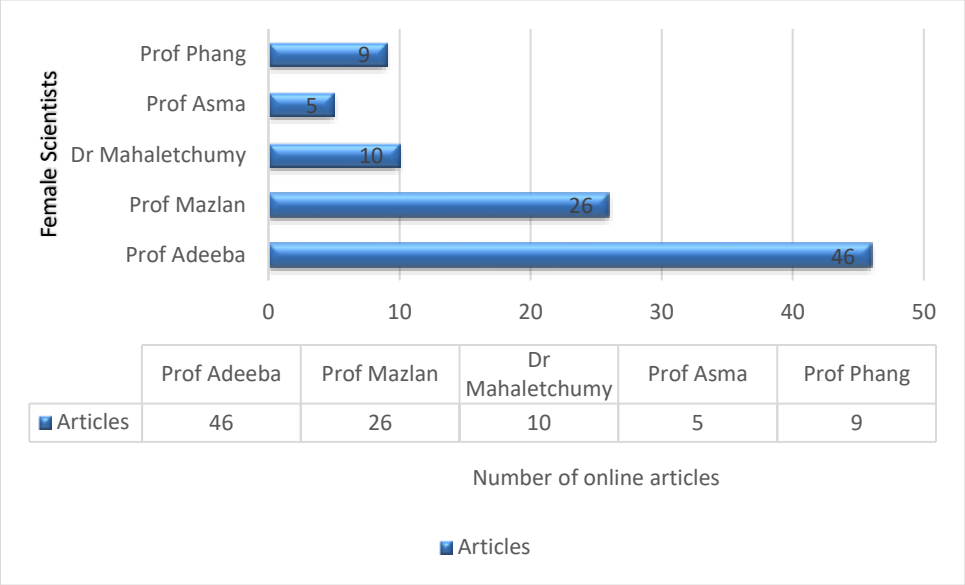


Figure 3: Study Distribution by Article Coverage

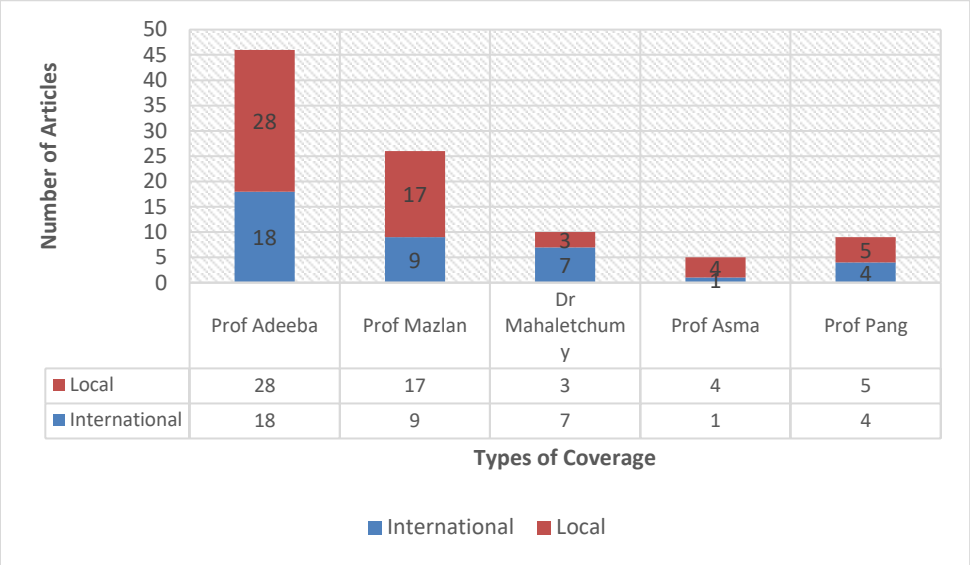


Table 3: Malaysia's Top Research Scientists 2021

Gender Representation	Female	Male	Total
Number of Research Scientists	6	16	22

Source: (NST online, 29 Sept 2021)

Figure 4: Renowned Female Scientists in Malaysia



Source: (Google.com)

4. Research Findings

The findings show that there is an unequal representation of men and women in the field of S&T. When there is an unequal representation of gender, it could lead to basic stereotypes being reinforced, lesser opportunities for women, lack of participation of women in the field, a loss of manpower, and it will eventually lead to a loss

of opportunities for women. Based on the online search, in Malaysia, there were less than 10 women found to be outstanding and have made their mark in the field of S&T. According to Malaysia Scientists Rankings in Malaysia 2021 there are currently 22 top scientists in Malaysia whereby the majority were men (Table 3) Among the female scientists in Malaysia chosen in this study include Professor Adeeba Kamarulzaman, Emerita Professor Tan Sri Dr. Mazlan bt Othman, T.S Dr. Mahaletchumy Arujanan, Prof. Datuk Dr. Asma binti Ismail, Professor Phang Siew Moi (Figure 4). Since only 6 were women, this study faces certain resource constraints. The low number of female experts in Malaysia involved in this field is proof that there exists gender disparity. According to Malaysia Scientists Rankings in Malaysia 2024 there are currently 10 top scientists whereby all of them are men.

By utilizing the available information online, it was evident that all these female scientists although each one of them has greatly contributed to the nation. However, there was inadequate coverage of them online. According to Ross (2022), a lack of voice could have a disproportionate effect on women, minorities, and foreign-born scientists. There are clear consequences for the retention and promotion of women in the field of science as there is a well-documented gap in the number of scientific works by women and men in science. Ross (2022) also stated that this is possibly due to the lack of recognition of the contributions of women in science. Unfortunately, men are more likely to be credited with authorship than women in science (Ross, 2022).

However, the male scientists in the world are being given worldwide coverage online and this was mainly because they are the majority as compared to their female counterparts. Hence, the latter will generally be sidelined and not be provided with the necessary coverage about their accomplishments as they will undoubtedly be overshadowed by the remaining majority: the male scientists. According to the Best Scientists in the World 2023 Ranking, out of 30 best scientists in the world only one female scientist was mentioned and ranked number 7 in the world (“Ir.Ts.Dr. Bernard", 2023). In Malaysia, the same scenario repeats itself. In Malaysia, women remain the minority in science and technology. In 2021, there were only a few female scientists listed in Malaysia ("Malaysia's Top Research", 2021). In 2023, the Top Research Scientists Malaysia 2023 (TRSM) by the Academy of Sciences Malaysia was awarded to Ir Ts Dr Bernard L H Saw from the Department of Mechanical and Material Engineering in the Lee Kong Chian Faculty of Engineering and Science. Research scientists in Malaysia whose work has been nationally and internationally recognized and possess outstanding achievements in Science, Technology, Innovation & Economy (STIE) are presented with this award (“Ir.Ts.Dr. Bernard",2023). However, the recognition of being the leading scientist in 2024 according to the AD Scientific Index was awarded to Prof. Saidur Rahman, Head of the Research Centre for Nano-Materials and Energy Technology (“Congratulations to Prof. Saidur”, 2024).

Women are not proportionally represented by the online media as often as men. Generally, men are far more likely than women to be portrayed by the media. In addition, women are only featured in a quarter of television, radio, and print news as subjects of news or information. Women represent only 19% of experts featured in news stories and 37% of reporters write stories globally based on a 2015 report (Rattan et. al. 2019). According to Santaniccolo et.al (2023), a gender-imbalanced picture of society will result in this underrepresentation of women.

Today, merely 25% of women are involved in professions related to science, engineering, and ICT. Moreover, there are only about a third of women researchers and students enrolled in STEM fields, with even fewer in the Asian region and the Pacific (Michael, 2024). The participation rate of women in the labor market remains unfortunately low, despite the efforts Malaysia has made to promote women's economic inclusion and to bridge the gap of gender inequality (Low & Loh, 2021). In Malaysia, men who are STEM graduates are more likely to be employed in STEM-related jobs than their female counterparts. However, ironically, in the local tertiary education institutions, women make up a larger proportion of STEM graduates (Michael, 2024).

As society becomes more techno-savvy, public images are being shaped by online media as this medium plays a significant role in shaping these images. Unfortunately, based on the findings of this study female scientists are being underrepresented in the online media. In Figure 2, it is depicted that only a small percentage of articles were written about female scientists. In this study, five renowned female scientists in Malaysia were chosen based on their accomplishments in the field of science and technology and include Professor Adeeba Kamarulzaman (46 news online articles), Emerita Professor Tan Sri Dr. Mazlan bt Othman (26), T.S Dr.

Mahaletchumy Arujanan (10), Prof. Datuk Dr. Asma binti Ismail (5), Professor Phang Siew Moi (9). From Figure 2, it is apparent that female scientists are the minority which explains the low number of online articles related to them.

As illustrated in Figure 3, the stark contrast between the number of local and international online coverage given to these female scientists was indeed evident with a total of 57 and 39 respectively. These female scientists were given more local coverage online than internationally. The study on images of women by Brenner (1999), Yulindrasari & McGregor (2011), Supratman (2012), Su & Asyiek (2015), and Sandhy and Dwiningtyas (2016) (as cited by Gusti, 2022) mainly focused on images of women on popular media, including the concept of beauty, women empowerment, women parenting, motherhood and fatherhood while neglecting more academic and professional areas such as science and technology. Generally, the mass media has consistently marginalized women and often represented men as superior to women (Rattan et.al. 2019).

Although the findings revealed the pictorial representation, visibility, and some activities and roles of both genders possess a certain degree of equality, the fact that male scientists outnumber their female counterparts does lead to an underrepresentation portrayed in online media in terms of social status, achievements, power, and dominance as illustrated in Figure 2. According to Malaysia Scientists Rankings in Malaysia 2021, there are currently 22 top scientists in Malaysia whereby only 6 were women while the majority were men (Table 3). Besides that, the recipients of Malaysia's Rising Star Award for obtaining the top 1% of the Highly Cited Papers published worldwide were 14 national researchers. The information was extracted from the Essential Science Indicators (ESI) from 2005 to 2014 by Thompson Reuters. Articles by the award recipients have been frequently referred to by researchers worldwide in a broad range of fields. However, it is revealed that out of 14 only 2 were female (Figure 4).

Thus, the online media, the government, and the public must make a concerted effort to create more positive images of women in the realm of gender. Since online media also maintains male dominance implicitly as well as explicitly, this will inevitably lead to gender discrimination in the long term with dire consequences to society and women. Hence, necessary measures need to be taken to ensure an equal proportion of representation in online media. This can be realized by highlighting the accomplishments of female experts in S&T and providing ample exposure in the online media.

5. Implications For Future Research

To foster innovation and diversity in academic and professional fields, it is vital to involve women in STEM (Idris et. al., 2024). Varied perspectives and approaches to a problem are due to this diversity as it enhances problem-solving and creativity. Besides tapping into a pool of fresh and undiscovered talent, women will also bring a fresh viewpoint when they are included in traditional domains dominated by men.

Numerous measures can encourage more women to become involved in STEM such as the following: the Education Ministry and related organizations can promote STEM in schools and facilitate mentoring programs and direct interactions between female STEM experts and students, implementing appropriate policies to promote STEM, doing regular monitoring, providing quality education, having positive role models that serve as an inspiration, and ensuring that the media actively represent the successful female scientists and experts. All of these measures need the concerted effort of those involved to ensure that female students are exposed to the STEM fields and are encouraged to learn more about these fields.

By implementing these necessary measures several important issues will be addressed such as bridging the gender disparity, fostering gender equality, and lifting the socio-economic status of women while empowering them in the process. Including women in numerous STEM fields will greatly benefit the nation as it is a strategic move towards making great strides in sustainability, innovation, and national development. To create more equal opportunities for women in STEM, the nation should strive to raise the number of women in this field.

Conclusion

In conclusion, this study has found inadequate coverage by the news portal on female scientists. It is strongly recommended that more positive portrayals be used and reflected in these news articles which will inadvertently provide the recognition these women rightly deserve for their unwavering commitment and contribution to the society at large. Furthermore, by implementing appropriate policies, the number of women participating in the S&T field not just locally but also globally will rise as it has been promoted as an exciting career opportunity filled with endless possibilities. Gender equality will lead to a better economy. Policymakers need to identify and make the appropriate and necessary changes that could improve the lives of society and not focus too much on gender differences. Societies that value women and men as equal are more productive, prosperous, safer, and healthier as gender equality is a fundamental human right Hence, online media should strive to create a favorable impression of women which will ultimately break down the conventional view about the status and role of women in the society which denies them their rights and recognition for their dedication by using friendly and neutral text to end stigma and stereotypes attached to victims of sexual harassment once and for all.

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Competency-Based Framework Development and Implementation: Current and Future Perspectives

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Abstract: A competency-based framework (CBF) is a standardized metric facilitating various HR functions including recruitment, assessment, training, performance evaluation, and career development. This paper aims to investigate the process of developing CBF, the benefits and the challenges associated with its development and implementation. The paper explores some of the key issues encountered and lessons learned from the practical application of competency frameworks within organizational settings. This paper offers recommendations to guide practitioners and researchers in navigating the complexities associated with CBF implementation. It also guides those endeavoring to develop competency-based frameworks, offering a comprehensive step-by-step process. The focus is on fostering stakeholder engagement, aligning frameworks with organizational objectives, and leveraging technological advancements to enhance integration and effectiveness within the evolving landscape of digital transformation and innovation driven by AI. Additionally, future research opportunities are highlighted to assist organizations in navigating the changing dynamics of the digital era.

Keywords: *AI, Competency-based Framework, Competency Models, Human Resources, Assessment.*

1. Introduction and Background

Competency-based frameworks (CBF) are recognized as effective tools for identifying, developing, and managing work performance efficiently. They serve various purposes including: facilitating the recruitment and selection of new employees through assessments and selection procedures (Bartram et al., 2002); aiding in the training of employees through tailored courses focused on competency development; managing employee information by utilizing competency models to document and store employee skill, training, and job experience data (Campion et al., 2011); structuring pay differences between jobs or evaluating employees for pay increases (Zingheim et., 1996); evaluating employee performance by aligning the appraisal instrument with competencies (Posthuma & Campion, 2008); establishing promotion criteria based on competencies (Morgeson et., 2009); and guiding career development by using competency models to inform job assignments and other career decisions (Groves, 2007).

Competencies, in organizational contexts, encompass a combination of skills, knowledge, and attributes crucial for successful job performance. They are characterized by observable behaviors demonstrated in the workplace (Benayoune, 2017; Beardwell & Holden, 2011; Holt & Perry, 2011). They are often developed to distinguish top performers from average performers and are defined as "winning behaviors" driving individual and organizational performance (Spencer & Spencer, 1993). McClelland (1973) emphasizes the significance of evaluating competence based on demonstrated behaviors and skills relevant to real-world performance, advocating for a shift away from reliance solely on measures of general intelligence. While McClelland's research initially targeted the educational sector, it sparked greater interest and applicability in business and industry contexts (Rothwell & Lindholm, 1999). Sadvika (2024) reported that several competency models and frameworks have been used in various industries to assess competencies, enhance employee retention, and address unique challenges faced by businesses. Today, nearly every organization employs some form of competence-based management, particularly those with dedicated human resource departments. The simplicity and clarity of competencies serve as a universal language within the organization, making them comprehensible to all employees regardless of their position or educational background (Skrinjaric, 2022).

Competencies are categorized into core competencies, job family competencies, technical or functional competencies, and leadership competencies, each serving distinct organizational functions (Bartram et al., 2002) as shown in Figure 1. Competency typically comprises a title, definition, proficiency levels, and behavioral indicators (Benayoune, 2017; Draganidis & Mentzas, 2006). Whereas, a competency profile, which consists of a collection of competencies defining critical behaviors for effective job performance, is essential for competency-based frameworks (Lucia & Lepsinger, 1999). Campion et al. (2011) noted that a competency

library facilitates the efficient development of competency profiles by providing organizations with a standardized repository of competencies to draw from. Benayoune (2017) highlighted the motivation behind the introduction of CBF in organizations is driven by the anticipated benefits, which include:

- Shifting the focus of employee promotions from seniority alone to performance-based criteria.
- Aligning job requirements with organizational strategic goals.
- Establishing a clear roadmap for employee development and career planning.
- Fostering a common language and shared understanding of the behaviors necessary to achieve organizational objectives.
- Reducing training costs by accurately identifying real training needs through the identification of competency gaps.

While the competency approach is widely regarded by many researchers, practitioners, and consultants as an effective tool for enhancing organizational performance, there are some skeptics within the academic discourse. Sparrow (1995) critically reviewed attempts at integrating competency-based approaches within organizations and observed that these efforts have lagged behind advances in strategic human resource management, suggesting a need to shift towards more future-oriented and strategic contexts. Mirabile (1997) cautioned that while competency models offer valuable information, their effectiveness hinges on the presence of a coherent and systematic implementation strategy to leverage this information effectively. This entails having the right content, processes, and support structures in place. Garavan and McGuire (2001) argued that while competency-based approaches possess strengths, they also exhibit weaknesses. Despite substantial investments by organizations in competency frameworks, they have not consistently yielded the anticipated outcomes.

Despite this skepticism, competency development has garnered significant attention across various industries, leading organizations across various industries, and prompting organizations to embrace CBF to enhance organizational performance (Benayoune, 2017). Drawing from the author's extensive experience in developing CBF across diverse sectors including energy, banking, and utilities, this paper aims to discuss the process of CBF development, highlighting challenges and practical issues encountered during competency development and implementation. CBF can be effectively applied across a wide range of industries, including banking, energy, education, healthcare, and logistics. The objective is to provide valuable insights to HR managers and practitioners for effectively developing and implementing competency-based management practices, while also offering researchers and educators avenues for further exploration. The research objectives encompass:

- Examining the Process of CBF Development and Implementation
- Exploring key issues and lessons learned at both the development and implementation phases.
- Providing recommendations for practitioners and researchers to navigate the complexities associated with CBF implementation.
- Discuss AI-Driven Competency Frameworks and their implications for future directions.

2. Competency-Based Framework Development Process

This section outlines the systematic approach required to effectively manage a typical CBF project, including stakeholder engagement, framework design, implementation, and evaluation. The project methodology is based on the author’s personal experience in the development of competency-based framework projects within organizational contexts. It is essential to acknowledge that the insights presented in this paper are primarily experiential rather than empirically derived. They are derived from the author's extensive engagement with various organizations and supplemented by relevant literature. Furthermore, the discussion is confined to a specific cultural context, and the inherent limitations of this approach are duly acknowledged.

Stakeholder Engagement

Effective Stakeholder Engagement is crucial for the success of competency development initiatives. Key stakeholders involved in competency management, including employees, managers, HR professionals, and organizational leaders, must be identified, clarifying their roles, responsibilities, expectations, and objectives regarding competency development.

Engaging diverse stakeholders with differing perspectives, expectations, and priorities is a challenge, requiring

effective communication and collaboration. Understanding stakeholders' perceptions of the importance of competency management to organizational success and anticipating potential challenges is essential for effective engagement. Ultimately, this engagement leads to more effective implementation and sustained support for competency initiatives.

The result of this phase is the development of a stakeholder communication plan. This plan entails categorizing stakeholders based on their level of influence, involvement, or the potential impact of change on them. Workshops are conducted to ensure that all relevant stakeholders receive the necessary information to effectively implement each stage of the competency project.

Industry Benchmarking

This phase involves conducting a best practices analysis and benchmarking with similar industries. This entails reviewing pertinent research articles, and case studies related to competency frameworks and talent management. Benchmarking with similar industries allows for a comparison of best practices and lessons learned, providing a deeper understanding of effective competency-based initiatives across various organizational contexts. This process enables the identification of industry standards and innovative approaches that can be adapted to meet the specific needs of the organization. However, adapting these practices to meet the specific needs of the organization requires careful consideration and may pose challenges in terms of feasibility and applicability.

Framework Development

The decision on whether organizations should utilize generic competency models or develop their own is a critical one. Given the lengthy and complex nature of developing a competency framework, many organizations choose to leverage existing on-the-shelf competency libraries. They then proceed to tailor these frameworks with the assistance of consultants to better suit their specific environment and align with their unique business objectives. This approach combines the advantages of established models with the flexibility to adapt and customize as needed, ensuring a more efficient and targeted implementation process.

This phase also involves defining core competencies required for various roles and levels within the organization, considering both technical skills and behavioral attributes at five levels. The process of customization and data gathering involves several key steps:

Structured Interviews: Top managers are interviewed to gather insights into the strategic direction of the organization and to ascertain their comprehension of the objectives of the CBF project, as well as their expectations from the initiative. This also includes identifying key managerial and leadership competencies along with critical behavioral indicators across all five proficiency levels.

Desktop Analysis: Key competencies are identified by reviewing documents such as job descriptions, KPIs, staff performance reviews, and the strategic plan. This phase also includes analyzing job roles, tasks, and responsibilities to determine the essential skills and knowledge required for effectively performing the job.

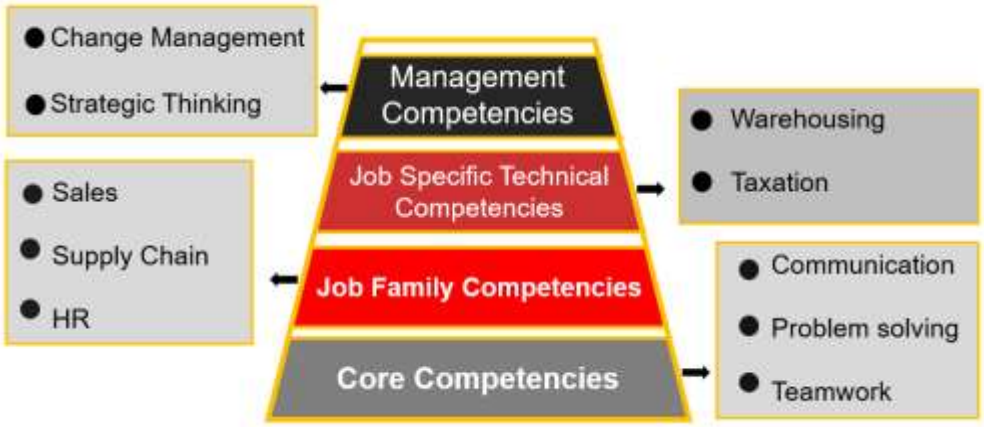
External Benchmark Data: Data from similar organizations is compared using existing competency libraries to inform the process.

Focus Groups: Subject matter experts (SMEs) familiar with job families and roles provide input through focus groups. These SMEs may include experienced job incumbents, managers of job incumbents, and human resources personnel. Drafts of competencies and competency profiles are reviewed by SMEs before focus groups, and revisions are made based on their feedback. This ensures that each job in the organization has its competency profile tailored to its specific tasks.

The framework is tailored to meet the specific needs of the organization while also reflecting industry best practices and standards to ensure the competency framework effectively supports talent management and organizational development initiatives. Subsequently, this information is presented to the subject matter expert panel. The panel engaged in structured review sessions using a technique of opinion convergence, where they discussed and adjusted their opinions based on input from others. This phase focuses on mapping

identified competencies to specific job roles and functions to establish clear expectations and performance criteria. A sample of CBF for the logistics sector is shown in Figure 1.

Figure 1: Sample of CBF for the logistics sector



Determining Optimal Competency Quantity for Job Profiles: Determining the ideal number of competencies per job profile is a common doubt among organizations, and while there's no one-size-fits-all answer, several experts offer valuable insights. Boyatzis (1982) suggests that a competency profile should ideally contain no more than 12 competencies to maintain manageability. Exceeding this threshold can make the framework cumbersome to utilize and administer. Schippmann (2010) further notes that, depending on the nature of work and organizational context, a job typically requires a group of 7 to 9 total competencies. A high number of competencies can complicate evaluation processes.

However, there's a common misconception that a detailed model with numerous competencies is superior. This belief often results in the identification of an excessive number of competencies, leading to an unwieldy and convoluted framework where the significance of competencies becomes blurred. The challenge extends beyond determining the appropriate number of competencies; it also involves the number of behavioral indicators describing each proficiency level. The author has encountered instances where job profiles contained up to twenty-five competencies, each with four or five behavioral indicators per proficiency level, resulting in over a hundred criteria for rating individuals in a single role. This complexity leads to lengthy and burdensome assessments.

For practicality, it is imperative to simplify and reduce the number of competencies to a manageable level. An excess of competencies makes it difficult for employees to recall them, let alone remember the associated behavioral indicators. Streamlining the framework ensures its effectiveness and usability in evaluating employee performance accurately.

Competency Assessment

This phase involves developing assessment tools, such as competency-based interviews, behavioral assessments, and 360-degree feedback mechanisms, to evaluate employee proficiency against defined competencies. By so doing, organizations can ensure that employees understand what is expected of them and how their performance will be evaluated. Additionally, these assessment tools provide valuable insights into employees' strengths and areas for development, enabling targeted interventions to support their growth and success within the organization. Importantly, each identified competency is linked to relevant training courses or on-the-job training initiatives aimed at bridging competency gaps effectively. However, ensuring alignment between assessment outcomes and targeted interventions for employee development can be challenging, particularly when addressing complex competency gaps or diverse learning needs across the workforce.

Training and Development Programs

This stage of the process involves communicating to all employees how the organization intends to utilize the competency framework as a multifaceted tool for training, career development, remuneration, and more. This

phase encompasses developing a comprehensive communication program aimed at ensuring all employees are informed about the purpose, significance, and practical applications of the competency profiles within the organization. This plan outlines strategies for effectively disseminating information, providing training sessions, and facilitating discussions to promote understanding and engagement among employees at all levels.

This stage also focuses on designing and implementing training and development programs tailored to address competency gaps identified through assessments. It includes providing employees with opportunities for skill development, learning, and career advancement aligned with organizational competencies and strategic priorities. These programs also serve to empower employees and increase retention rates by demonstrating a commitment to investing in their continuous development and career progression within the organization. However, allocating sufficient resources, including time, budget, and personnel, for the development and implementation of training and development programs can be challenging. Balancing competing priorities and ensuring adequate support for ongoing learning initiatives amidst other organizational demands requires strategic planning and effective resources.

Integration with HR Systems and Processes

Despite the meticulous process involved in creating competency-based frameworks (CBFs), their true value lies in their accessibility and integration within organizational systems. This step involves integration with HR systems and processes, focusing on seamlessly incorporating the competency framework into various HR systems and processes, including recruitment, performance management, succession planning, and talent development. Integration ensures that the competencies identified and defined in the framework are effectively utilized throughout the employee lifecycle, from recruitment to career development. It also involves ensuring alignment with existing HR practices and policies to facilitate smooth implementation and adoption across the organization, streamlining talent management practices, enhancing decision-making related to employee selection and development, and fostering a culture of competency-based performance evaluation and continuous improvement.

One potential mistake is when organizations postpone this phase until the end, only to realize the challenge of integrating the system with existing organizational systems, potentially resulting in project failure.

Establishing Effective Performance Metrics for Competency Framework Evaluation

It is essential to establish metrics and key performance indicators (KPIs) to evaluate the effectiveness of a competency framework in driving organizational outcomes. These metrics and KPIs should align with organizational goals and objectives, reflecting the impact of the competency framework on key areas such as employee performance, talent development, and organizational productivity. For instance, KPIs related to employee performance could include a percentage increase in productivity, a reduction in performance issues, or an improvement in employee satisfaction scores. In terms of talent development, KPIs might include the percentage increase in employees participating in competency-based training programs or the reduction in turnover rates among high-potential employees. For organizational productivity, KPIs could encompass metrics such as revenue growth attributed to improved employee competencies or the reduction in errors and defects in processes.

Regular monitoring and evaluation of these KPIs are imperative to accurately assess the competency framework's effectiveness. This involves soliciting feedback from stakeholders at various levels of the organization and making necessary adjustments to enhance efficacy. Additionally, fostering a culture of continuous improvement is essential by actively seeking opportunities to refine and optimize the competency framework based on evolving organizational needs and external trends. Organizations must ensure that the competency framework remains relevant, impactful, and aligned with organizational goals over time. Figure 2 provides a concise overview of the key phases involved in developing and implementing a CBF within an organizational context.

Figure 2: Competency-Based Framework Development Process and Implementation



3. Key Issues and Lessons Learned

Consultants and HR practitioners acknowledge that while some organizations successfully develop Competency-Based Frameworks (CBFs), they often face challenges in implementing them effectively. One major issue is the lack of integration with other talent management systems. Successful implementation requires addressing technology and infrastructure issues, competency foundation requirements, and organization/people concerns. Typically, competency libraries, job profiles, and assessment data are not stored in the core Human Resource Management System (HRMS), as it is usually obtained from different vendors. To ensure data synchronization, organizations need to ensure that the application they plan to use can be fully integrated with their HRMS. Additionally, the lack of integrated competency-related data makes analysis and utilization difficult (Benayoune, 2017; Stone, Webster, & Schoonover, 2013).

Another issue is the lack of an appropriate level of specificity in competencies. Some competencies are too broad to be effectively measured or communicated, while others are overly detailed and overwhelming for users. Consequently, organizations may need to revise and simplify competencies to gain employee acceptance.

Based on the author's experience, additional implementation issues include competencies not being fully explained and understood by employees, a lack of resources, and no designated champion for the project. Questions also arise regarding the clear process for updating and maintaining the CBF as the organization evolves, as well as how to measure the success of CBF implementation.

Furthermore, many Subject Matter Experts (SMEs) do not see a direct link between competency improvement and job performance, questioning whether enhancing competency levels directly leads to improved job performance. While existing research claims such a link exists, empirical data supporting this claim is limited. Therefore, further investigation into this issue is necessary (Benayoune, 2017).

Developing a CBF also involves navigating various challenges and complexities inherent in organizational change. Some key challenges and issues include:

Resistance: Resistance during the development phase must be anticipated, as observed in the author's experience. Like other change management projects, some level of resistance is to be expected. Lucia &

Lepsinger (1999) categorize resistors in Competency-Based Framework (CBF) projects into two groups: active and passive resistors. Active resisters may strongly oppose the project by withholding cooperation, delaying actions, or refusing to supply necessary information or personnel. On the other hand, passive resisters may superficially comply with project requirements while subtly undermining its progress. Overcoming this resistance requires effective communication and change management strategies to garner buy-in and facilitate adoption.

Through interactions with managers, Subject Matter Experts (SMEs), and employees involved in various competency projects, the author has noted a prevailing perception among key stakeholders that competency-based frameworks are primarily an HR initiative, a sentiment echoed in Stone's findings (Stone et., 2013). Consequently, these employees may not fully engage in the process. To mitigate this resistance, the competency project team must underscore in every project stage that it is an organizational strategic initiative and business imperative rather than solely an HR project. Involving other departments from the project's inception can help alleviate this resistance and foster broader organizational buy-in.

Resource Constraints: Limited budgets and insufficient personnel allocation pose significant challenges in developing and implementing a CBF. The HR department, often tasked with this responsibility, may face constraints in terms of financial resources and dedicated staff, hindering the framework's development and management.

Stakeholder Engagement: Engaging key stakeholders across various organizational levels is essential for the CBF's success. However, difficulty in securing involvement from senior managers or line managers in defining competencies or providing feedback can impede progress. Establishing clear communication channels and emphasizing the framework's benefits are crucial in fostering stakeholder buy-in and participation.

While competency-based approaches are often considered effective, there remains skepticism among scholars and practitioners regarding their application within organizational contexts (Sparrow, 1995; Mirabile, 1997). Criticisms typically center around the necessity of a coherent and systematic implementation strategy to effectively leverage competency models (Lucia & Lepsinger, 1999).

Before implementation, the legal considerations surrounding the application of a competency-based Framework must be addressed. When these frameworks are used for employment decisions, such as hiring, promotions, compensations, terminations, and certifications, they must adhere to rigorous standards. The organization's ability to defend these decisions relies heavily on the reliability and validity of the competency model, and it may be required to demonstrate adherence to acceptable professional standards (Marrelli et., 2005).

4. AI-DRIVEN Competency Framework

The landscape of work, the workforce, and the workplace has been dramatically reshaped by technological advancements such as chatbots, self-service platforms, and HR service centers. Among these innovations, artificial intelligence (AI) has emerged as a transformative force, revolutionizing various aspects of workforce development and rapidly reshaping HR functions (Gaikwad & Khang, 2023; Benayoune et al., 2022).

Digitalization has also fundamentally changed how organizations collect, store, and analyze vast amounts of data related to employee performance, skills, and competencies. This data-driven approach enables organizations to more effectively identify and assess competency gaps, tailor training programs to individual needs, and make informed decisions about talent management and development strategies.

AI is expected to automate repetitive and routine tasks, thereby enabling employees to concentrate on higher-value activities that demand critical thinking, creativity, and problem-solving skills. Consequently, certain competencies may become obsolete. AI technologies, including machine learning algorithms, offer great potential to enhance competency assessment. AI-powered tools can analyze extensive datasets to identify patterns and trends in employee performance, predict future skill requirements, and offer personalized recommendations for skill development and career advancement. AI-enabled platforms streamline

competency assessment processes by automating tasks like competency mapping, assessment scoring, and feedback generation, improving efficiency, reducing bias, and ensuring consistency in evaluation procedures.

According to a survey conducted by the author as a part of a competency-based assessment project, HR professionals indicated that AI could potentially replace human judgment in competency assessment and provide valuable insights into employee performance and potential. AI could also accurately assess the competencies of job applicants and help reduce human biases. Participants agreed that the benefits of using AI in competency assessment outweigh the potential risks.

However, respondents highlighted several challenges associated with the use of AI in competency assessment. These include a lack of transparency and interpretability of AI models, risks of bias in the data used to train AI models leading to biased competency assessments, difficulties in ensuring the ethical and responsible use of AI, and a lack of technical skills among HR practitioners and managers to effectively understand and use AI in competency assessment. Furthermore, there is a lack of regulation and standards for the use of AI in competency assessment.

5. Conclusion and Recommendations

Based on the findings and insights presented in this paper, several recommendations can be proposed for practitioners, HR managers, researchers, and educators:

- Actively involve key stakeholders throughout the CBF development and implementation process. Ensure clear communication channels, foster collaboration, and garner support for the initiative.
- Ensure that competencies identified in the framework are closely aligned with organizational objectives and strategic priorities.
- Embrace technological advancements, particularly within the realm of digital transformation and AI-driven innovation, to optimize competency selection and assessment.
- Offer comprehensive training and development programs to employees to enhance their understanding of competency frameworks and their relevance to their roles and career development.
- Integrate competency frameworks seamlessly into existing HR systems and processes, including recruitment, performance management, succession planning, and talent development. This integration ensures that competencies are effectively utilized throughout the employee lifecycle and contributes to strategic workforce planning and development initiatives.
- Anticipate and address implementation challenges proactively, including resistance to change, resource constraints, and the lack of specificity in competencies. Develop change management strategies, allocate sufficient resources, and revise competencies as needed to ensure successful implementation.
- Refine and optimize the competency framework based on evolving organizational needs and external trends. Regular monitoring, evaluation, and feedback from stakeholders help in identifying areas for improvement and ensuring the framework's ongoing relevance and effectiveness.

Conclusion

Competency-based frameworks are important tools for enhancing various HR functions within organizations, including recruitment, training, performance evaluation, and career development. This paper has discussed the complex process of developing CBFs and has explained the challenges encountered during their development and implementation phases. The paper has explored key issues and lessons learned from the practical application of competency frameworks within organizational settings. It was found that organizations that actively involved key stakeholders reported greater success in aligning competency frameworks with organizational objectives and garnering support for their adoption. Regular communication with stakeholders is crucial to ensure a common understanding of competencies and their significance. Additionally, organizations should allocate adequate resources and designate a champion responsible for overseeing the development, implementation, and maintenance of the CBF. Clear processes for updating and reviewing the framework should be established to accommodate organizational changes and ensure its relevance over time. Furthermore, efforts should be made to bridge the gap between competency improvement and job performance through empirical research and data analysis, providing evidence of the effectiveness of CBFs in driving organizational outcomes. The paper acknowledges the transformative impact of digitalization and AI

on competency-based frameworks. Digitalization has revolutionized data collection and analysis, enabling organizations to identify competency gaps and tailor training programs more effectively. AI technologies offer immense potential to enhance competency assessment and development processes, streamlining assessment procedures and providing personalized recommendations for skill development. However, organizations must also address challenges associated with AI-enabled platforms, including data privacy concerns and ethical implications. Further research in this area is required to comprehensively investigate these issues.

It is important to highlight that the insights and challenges presented in this paper are primarily experiential rather than empirically derived. They stem from the author's extensive engagement with various organizations and are supplemented by relevant literature. Furthermore, it is essential to note that the discussion is confined to a specific cultural context, and the inherent limitations of this approach are duly acknowledged.

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Safety and Security Concerns in Nigeria's Tourism Sector: The Issue of Geotourism Destinations

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Abstract: Safety and security have become a source of concern for tourism stakeholders and beyond, due to their role in destination attractiveness and their capacity to affect tourists' intent to travel. Unfortunately, insecurity appears to be a common feature in many emerging economies like Nigeria, where herdsmen,religious and political violence, kidnapping, etc. affect tourism development and growth. This study aims to: comprehend the safety and security features of Ogbunike Cave; second, identify the challenges to safety and security in the cave; and third, document ways to ensure sustainable safety and security in the cave. Using in-depth interviews and secondary data, the study showed poor safety and security measures for visitors in the cave. The implication of this is that visitors' safety is not guaranteed, and this may likely affect the attractiveness of the cave and cause limited patronage. The study, woven from the perspective of protection motivation theory (PMT), suggests that the protection of visitors in tourism destinations like caves should be paramount. A safe and secure destination remains attractive, with highly competitive value; therefore, police posts, first aid boxes, emergency numbers, and log books appear useful for sustainable safety and security measures in caves. The study is novel, it appears to be the first to discuss the safety and security of Ogbunike Cave, and the implications may extend to other caves in the state and beyond. The suggestions are invaluable to tourism planners and stakeholders.

Keywords: *Destinations, Geotourism, Ogbunike, Security & Safety*

1. Introduction and Background

Safety and security, hereinafter referred to as S&S, are major variables that affect destination attractiveness and competitiveness due to their ability to affect tourists' decisions in choosing destinations (Santana-Gallego et al., 2019). But where S&S is ignored, the destination is bound to lose or be edged out in the ever-competitive tourism market (Badiora et al., 2022). S&S in tourism has also become a source of concern to tourism stakeholders across the globe, causing it to appear in the AfricaUnion Agenda of 2063 with the interest of making Africa a preferred destination. Both are major factors that influence tourist's decisions (Chili, 2018; Ayorekire, 2017) towards visiting destinations. This entails that the S&S of a destination has a likelihood of determining its success or failure (Owiyo & Mulwa, 2018). Therefore, being a reoccurring debate in scholarship, it becomes necessary to look at theS&S of tourist destinations like caves in Nigeria, using Ogbunike cave as a case study. The cave was selected since it seems to be the only cave with both local and international attention and is currently on the tentative list of United Nations Educational, Scientific, and Cultural Organizations (UNESCO) world heritage lists in Nigeria.

Ogbunike cave is located in Ogbunike community in Anambra State, and the state has other caves, butthe majority of these caves are not fully developed; some attract visitors, while others appear to be less attractive (Odum, 2019) due to the government's limited attention to tourism in the region (Odum, 2020). Conversely, caves in Nigeria may have been affected by issues of S&S in the nation generally due to incessant security threats and challenges—religious crises, ethno-religious riots and killings, and kidnapping, among others—that seem to be affecting the tourism sector (Abdullahi et al., 2016). S&S is a vital element for any destination to remain competitive, attract investment, and have a positive image as a destination for travelers or tourists (Manjunatha, 2022). This makes it important for academic investigation, especially in emerging economies where tourism is listed as an agent of economic emancipation (Manjunatha, 2022).

This study is anchored on S&S in caves, using Ogbunike Cave as a case study. This study has become imperative due to little or no study addressing S&S concerns around the destination—Ogbunike cave—despite the cave receiving enormous attention in scholarship. The cave's tourist/visitor profile has been classified (Odum, 2019), its attractiveness evaluated (Odum, 2020), etc. And the literature seems silent on the issue of S&S in the cave. While a destination's S&S are vital concern to travelers and affects tourists' intent to travel, especially overseas and unfamiliar destinations (Reisinger & Mavondo, 2005, as cited in Zou & Yu, 2022; Chili, 2018), It is a

current issue within tourism scholarship due to its impacts on revenue generation, image, and economic growth in most countries (Manjunatha, 2022; Manrique-de-Lara-Penate et al., 2022) that seem to perceive tourism as a means of boosting the economy, such as Nigeria (Odum, 2024). Given this backdrop, there is a need to look at available S&S features in destinations like caves in Nigeria and what the likely implications are. This is a path scarcely explored but needs to be explored for STDs, especially in ecotourism destinations in emerging economies using a destination like Ogbunike Cave. The first objective of the study is to look at S&S measures available in Ogbunike cave for visitors (geo-tourists), while the second objective is to list the challenges of S&S for visitors (geo-tourists) in the cave, and lastly, identify ways for sustainable S&S measures for visitors (geo-tourists) in the cave.

This study is essential and timely in Nigeria, as tourist' centers have become no-go areas in recent years (Ayatonye, 2022) as a result of ethnic clashes, religious extremism, kidnapping, armed robbery, and ritual killings (Umeakuka, 2022). Therefore, there is a need to look at S&S concerns around caves as part of tourist destinations in Nigeria. This has become imperative as understanding the available S&Sfeatures of ecotourism destinations is cardinal to increasing the competitiveness and attractiveness oftourist destinations (Amaro et al., 2023) such as Ogbunike Cave. This study is new concerning Ogbunike cave, and probably one of the first studies to explore S&S issues in speleological studies in the southeastern region of Nigeria. The implications of the study for issues of S&S in STDs in emergingeconomies cannot be overemphasized. Given the inestimable value of S&S in tourism destinations, especially in the area of image-making and generating tourist traffic with economic gains, among others, a study of this nature is needed, and the value of tourism scholarship cannot be overemphasized. Moreover, the results are of practical relevance to tourism planners and stakeholders, especially in the area of planning for a destination and preparing destinations like caves for competitiveness. Therefore, in studying S&S around caves such as Ogbunike, protection motivation theory (PMT) is highly invaluable due to its ability to assess and prepare people for risk management. This article starts with a review of the literature on the concept of S&S and studies on S&S surrounding the tourism sector in Nigeria, followed by previous studies on the Ogbunike cave, highlighting the research gap for this study. The research methodology, results, discussion, and conclusions, along with the limitations of the study, were presented lastly, along with the need for further studies.

2. Literature Review

Safety and Security (S&S): S&S are interrelated since they connote different things (Cró et al. 2020). Meanwhile, it is worth to distinguish between the two. In the words of Nas (2015, p. 53), safety is "the state of being away from hazards caused by natural forces or human errors randomly. The source of hazards is formed by natural forces and/or human errors." Nas further defined security as "the stateof being away from hazards caused by the deliberate intention of humans to cause harm, and the source of hazards is posed by humans deliberately" (Nas, 2015, p. 53). Within the tourism context, some scholars made some clarifications. Scholars like Mansfeld and Pizam, who construed security to essentially mean the personal security of tourists and their property (i.e., belongings) against an external or intentional threat (such as crimes, terrorism, or wars), then said safety entails protection from the unintentional consequences of an unintentional act(s) (Mansfeld & Pizam, 2006, as cited in Kaszas & Keller, 2022). As stated earlier, it seems safety and security are related, as the two concepts cannot be separated (Kaszás & Keller, 2022). Therefore, it becomes a bit easy to say that safety and security entail shielding tourists or visitors from any form of danger, irrespective of whether the danger is natural, human, intentional, or unintentional, to return home holistically the way, he or she started the travel. Moreover, both S&S affect tourists' decisions in choosing a destination, especially indeveloping regions like Sub-Saharan Africa and beyond (Zou & Yu, 2022; Chili, 2018). Although the interest here is to look at safety and security in a geo-tourism destination—Ogbunike Cave in AnambraState, Nigeria, West Africa.

Types of safety and security dangers in the natural environment: Herzog & Smith (1988) think that there are two types of S&S dangers associated with natural settings, namely, social and physical dangers. The latter comprises person-to-person attack, while the latter is danger from the physical structure or features of the [natural] environment, such as an attack by [wild] animals or the impact of weather (Poku & Kwaku, 2019). The concern of the study will not be to look at S&S issues around the cave from a non-humanactor perspective, but rather the availability of S&S features that will give visitors a sense of S&S to consider Ogbunike Cave as a safe destination for a visit and probably recommend it to others and repeat visits. Therefore, we need to look

at S&S of Nigeria as a destination.

Security and safety in tourism in Nigeria: S&S is a basic concern for any tourist; they influence travelers' decisions and intentions (Kaszás & Keller, 2022) for travel plans. This means promoting tourism in Nigeria requires an adequate S&S network around tourist facilities to protect visitors. Unfortunately, some West African nations, including Nigeria, are experiencing insecurity. Boko-haram is a major security threat to tourism in the northern region of Nigeria, ethnic-related violence in Plateau, Adamawa, and Taraba, among others; unwanted killing and kidnapping, especially of students at the University of Nigeria, Nsukka (Umeakuka, 2022); and recently, in August 2024, reports of kidnapped twenty (20) medical students filled the internet (Sunday PUNCH, 2024). All these unpleasant news and images may affect Nigeria negatively, making it look unsafe for tourists, and this has some implications. Some scholars observed that "when safety and security cues are lacking or failto meet expectations, tourists generally view a destination as less safe" (Zou & Yu, 2022, P.1).

Similarly, there are pockets of insecurity in Anambra State, making S&S in the state appear compromised. For instance, a civilian governor in Anambra State was kidnapped in broad daylight (Anedo & Anedo, 2019). If a governor was kidnapped, what would happen to citizens and non-citizens, especially visitors? While this seems like rhetoric, it is worrisome for a state and nation that want to develop sustainable tourism. Although some scholars proffered ways out of the situation, Akingbohungbe (2024) suggested the need to dialogue with terrorist groups in Nigeria, though in a careful manner. Collaboration with neighboring countries and international partners can be an effective means of reducing and disorganizing transactional criminal networks involved with kidnapping and integrating security studies into the national educational curriculum, starting from the primary to the tertiary stage.

Summarily, it is evident with copious evidence of insecurity of life and property in Nigeria. Despite government-conducted efforts, insecurity thrives. This probably affects tourism and ancillary services enormously. While different studies have tried to pigeonhole these challenges and offer solutions, these issues persist. Meanwhile, the present study tries to mirror the general outlook but shifts focus to a particular destination—Ogbunike Cave—and explores S&S concerns around it with attendant implications for similar destinations.

Previous studies on caves and Ogbunike cave: Within the southeastern region of Nigeria, caves have attracted a lot of scholarship. Enugu State has different caves, such as the Agu-Owuru cave in Ezeagu. Its tourism and tourism merits were explored using SWOT analysis. The cave has the potential to create job opportunities, improve the standard of living of the host community, and attract infrastructural development (Okonkwo et al., 2017). Onualor cave in the Ojebe-Ogene area was explored for the possibility of palaeo-environmental change in the vegetation of the site (Daniel & Ibeanu, 2020). Okpatu Cave in Udi Local Government Area (LGA) is located in Amaagu village, Ibite- Okpatu. Given the size of the entrance, evidence from oral tradition doubts if people lived in the cave, but it was used as a shield for children during the Nigerian genocide of 1967–1970, tagged the Nigeria-Biafra war (Okpoko et al., 2016). Ebonyi State has Nkpurukem and Amanchor caves. Nkpurukem cave is poorly developed or unharnessed, and visitors deface the cave, which is a grave threat to the heritage (Emeafor, 2016), Amanchor cave is equally undeveloped and lacks infrastructure due to the poor or limited political will of the government. Although the locals are highly interested in seeing the cave develop and are ready to partner with the government for such (Emeafor& Odum, 2019), this will ensure sustainability. Ogbunike Cave, located in the Ogbunike community in Anambra State, has attracted local, national, and international attention. The cave is listed on the UNESCO tentative list, making it a potential heritage site in Anambra State. The Nigeria Tourism Development Corporation (NTDC) has visited the cave several times, and it is listed as one of the natural heritages in Nigeria, while the Anambra governmenthas shown some efforts to develop the cave. Scholars have studied the cave from different perspectives: theattractiveness of the cave as a potential tourist attraction (Odum, 2017); public-private partnership (PPP) as a means of developing the cave (Odum et al., 2018); traditional conservation measures as a way of conserving the cave (Odum, 2019); sectoral performance and development of rural communitiesin Africa, using Ogbunike cave as a case study (Oriaku, 2021).

The list of studies stated above is anchored mainly on the need to harness caves, including Ogbunike Cave, and how best to develop them to reap the full benefits of tourism, employment, and income for host communities. Conversely, none of these studies looked at the S&S dimensions of Ogbunike Cave concerning the afore-written

objectives. S&S seems to concern all tourism stakeholders, including tourists (Abukhalifeh & Chandran, 2020), and it influences the decision of tourists to visit a destination or not (Chili, 2018), which means it is a cardinal component of STD in tourism destinations.

Security and safety concerns and facilities in eco-tourist destinations: Literature outside Africa showsthat European Union (EU) member states are taking the issue of S&S in tourism destinations seriously; there is a positive relationship between S&S and the success of tourism destinations in Europe (Kaszás & Keller, 2022). Within emerging economies, scholars like Manjunatha list the following: intentionally dressing as the locals, the availability of local police stations and security officers, the availability of information booths and police booths, tourist offices kept open 24/7, helpline centers, security patrolsat night, and security checkpoints, among others, as a means of S&S for foreign tourist's satisfaction ina destination, using the Karnataka region of India (see Manjunatha, 2022). The availability of these factors is meant to guarantee the S&S of tourists in a tourist destination, and this is likely to affect tourists' decisions. There are studies on the impact of S&S on the attitude of consumers (including tourists), and empirical evidence suggests there is a positive correlation between the S&S of a destination and the tourists' behavior, especially with an interest in making a demand for such safe and secured destinations. Based on this premise, Chili used South African townships (i.e., Cape Town) in his study and showed that 'tourists as consumers regard their safety and security as a factor that derives the choice of their destination, and it is undebatable that the demand for any destination depends squarely on how tourists as visitors perceive it in terms of safety and security' (Chili, 2018, p. 10). This shows how indispensable S&S is in the marketing and promotion of tourist destinations, of which ecotourism destinations in emerging economies like Nigeria need to assure their visitors and tourists, and makes a study of this nature in Nigeria very important for STD.

Within Nigeria, some ecotourism destinations seem to fall short in providing S&S for tourists and visitors. Badiora et al. (2022), in their study of the Osun-Osogbo geopark, revealed the insufficient status of the S&S architecture in the destination. This situation was a result of the management's reliance on a record of no threat to S&S at the destination. A similar incident was recorded in the Gurara tourist center in Niger State. Using empirical evidence from the Gurara tourist center and reviewedliterature, Hayes made the following remarks: "Most tourist centers in Nigeria have not been fully designed with consideration for security and safety" (Hayes, 2021, p. 81). Given this scenario, there is a need to look at S&S facilities in Ogbunike cave to plan for STD and how data from the destination can be used for sustainable S&S planning for eco-destinations like caves within and outside Nigeria. This will be done through the lens of protection motivation theory (PMT).

Protection Motivation Theory (PMT): Protection motivation theory is credited to Rogers R.W. in 1975 and was later revised in 1983 in a bid to explain and discuss the "impact of persuasive communicationon behavior, with an emphasis on cognitive mechanisms underpinning the rational to follow or not to follow a recommended behavior" (Marikyan & Papagiannidis, 2023, p.1). Essentially, it was one of the first theories focused on the psychological conditions explaining and discussing the tendency of people (including travelers and tourists) to protect themselves (Marikyan & Papagiannidis, 2023) from danger or unsafe locations or environments. The theory of PMT fits into this study because S&S is about perception, and where S&S seems to be low or fall short of the standard, tourists tend to view thedestination as being less safe (Zuo & Yu, 2022), exposing visitors to danger or threat. Meanwhile, PMT is applied where a threat exists (Rogers, 1983), though initially construed to comprehend the relationship between fear and change in attitude (Rogers, 1975). According to Oakley, Himmelweit, Leinster, and Casado (2020), PMT has two main stages, which comprise threat appraisal, which has to do with the perceived risk of the threat. Here, it is composed of two elements: perceived vulnerability (the possibility of the threat occurring?) and perceived severity (how unpleasant will the impact of thethreat be?). (Oakley et al., 2020). In the context of this study, it becomes relevant to ask: what is the likely possibility of a danger like a tourist falling and hitting their head on the cave wall or being kidnapped or attacked by humans or animals while visiting a destination, and what are the implications?

The answer to the above question links to the second stage, which is coping appraisal. The coping appraisal has three (3) components: response efficacy (what or how effective will a response be?), self-efficacy (how can one respond to it?), and response cost (what will a response look like?). (Oakley et al., 2020). What it implies is that there is a need to prepare for a response in case of danger in the cave. Simply put, the availability of coping (S&) mechanisms tends to look at S&S facilities in the destination. Rezende, Gosling, and Castro (2023) explained

TMP as a spectrum to understand how attitudes and behaviors may change when individuals (i.e., tourists) see themselves in the face of threats. PMT, when applied in tourism studies, appears as a predictive model to assess risks and prepare for them. It has been used in tourism studies in recent times, where Wang, Liu-Latres, Ritchie, and Mills (2019) explored how travelers will protect themselves during travel; Wenjia, Sanghoon, and HakJun (2020) applied PMT to understand international tourists' behavioral intentions under the threat of air pollution: A case of Beijing, China, among others. Application of PMT in ecotourism studies seems scarce, and it is ideal for this study due to the risks and possibility of dangers associated with insecurity in Nigeria, the Ogbunike community, and the cave itself; it shows the need for proper S&S features for the protection of visitors.

3. Research Methodology

A qualitative approach was used in this study, the reason being that it is "an umbrella term covering an array of interpretive techniques that seek to describe, decode, translate, and otherwise come to terms with the meaning, not the frequency, of certain more or less naturally occurring phenomena in the social world" (Van Mannen, 1979, p. 520). Furthermore, Denzin (1989) argued that a qualitative (interpretative) research approach produces a thick (detailed) description of participants' feelings, views, and knowledge and explains the intents of their actions. Conversely, it is a method that tends to be all-inclusive in understanding human experience in particular settings (Rahman, 2016). An in-depth interview was used to get details from respondents. The respondents were mainly staff of the Department of Tourism, Anambra State Ministry of Entertainment, Culture, and Tourism, six (6) innumber. The six respondents include the Director of Tourism and five senior tourism officers. Male respondents constitute 67%, while female respondents are 33%; this is a mere representation of the staff that was available on the scheduled date of the interview. Meanwhile, a similar study using a smallnumber of participants (10) has been carried out in Ghana (Noble et al., 2022). The implication of this is that S&S studies concerning caves are still limited in emerging nations like Nigeria. Secondary: it shows limited manpower working in government tourism units or departments.

The study was supported with secondary data, mainly journal publications, conference proceedings, online national daily publications, and publications of international organizations. Essentially, secondary is used in this study because it is usually used to validate data mainly collected from primaryquantitative research and helps in strengthening, testing, and refuting previously collected data (Bastis, 2020). The results were presented and discussed thematically.

4. Results

This section presents the results based on the listed objectives, and the presentation is in prose form with thematic headings. Although the male respondents were large in number, due to the poor number of respondents during the interview, there are no observable differences in the responses of differentsexes; the responses were sorted into themes for easy comprehension below.

Safety and security measures for visitors in Ogbunike Cave

Ogbunike Cave has tour guides on the spot who take care of visitors. The tour guide gives visitors instructions on what to do and how to behave within and around the cave. It was reported that there has not been any known danger associated with and around the cave for visitors. When visitors choose to swim, they are always escorted to the area where they will swim; likewise, when they want to go inside the cave, the tour guide goes in with them. There is a staircase leading to the cave, and moving down to the cave is easy.

Tour guides are indigenes of the community; they guide visitors on where to follow and give directions on what to do to avoid stumbling or getting hurt while in the cave and its water. The cave is deified, sothey direct visitors to what to do to avoid incurring the wrath or anger of the deity associated with thecave. For example, ladies in their menstrual period are forbidden from entering the cave.

Visitors on no account constitute harm to another visitor in or around the cave. There is a written penalty for such an act; nevertheless, fighting has not been heard of in the cave. The tour guide(s) on the spot and Ogbunike community vigilantes are part of the major security network within and aroundthe cave. Essentially, before

entering the caves, there is a need for lighting, which is provided by the visitor or the tour guide. Beyond this, there are no other physical S&S features in Ogbunike Cave.

Challenges of safety and security measures for geo-tourists in Ogbunike Cave

The major challenge of safety and security measures in Ogbunike Cave is the lack of a first-aid box in case of emergency. There is no first-aid box in situ within or around the cave; rather, emergencies require that visitors be taken out of the cave to a nearby clinic or hospital.

There is no equipped security unit or department apart from tour guides, who are indigenes of Ogbunike. Kidnappers can capitalize on a lack of such an ambush for both the visitors and tour guides that went down to the cave with visitors.

There are no safety measures for visitors or tour guides against snake bites or bee stings. Moreover, there is no helmet for visitors or tour guides to protect them from falls from the cave. This is linked to limited funding for the cave, as most administrations in the state have given meager attention to the cave and concentrated on building physical features like shopping malls, conveniences, and seats for visitors.

The above implies that, in the eventuality of an accident in the cave, there is no known immediate response. This does present the cave well as an attractive destination, as S&S is a cardinal feature for any STD, and safety includes being protected from risk or injury (Zou & Yu, 2022).

Sustainable safety and security measures for geo-tourists in the Ogbunike cave

Police post in the cave: The presence of a police post will likely help to deter kidnappers, Fulani herdsmen, ritualists, and other criminal elements from attacking visitors who visit the cave; to some extent, tour guides need to be protected. The presence of the Nigeria Police Force (NPF) will make bothlocal and international visitors feel safer within and around the cave. This aligns with the suggestions of previous studies in India (Manjunatha, 2022).

First aid and clinic: a miniature clinic will be useful around Ogbunike Cave. It will be ideal to have one and station health personnel therein, as some of the respondents admitted that, in case of emergency, a nearby clinic will be of immense value. They explained that the tour guide knows nothing concerning health; they can only make calls, and something that requires a professional touch to save lives will take longer, especially if people are in the lower section of the cave. In such a situation, any time wasted maylead to death. For instance, high blood pressure due to the stress of going down and coming up can cause a fall that will need to be handled immediately to avoid excessive bleeding if there is a cut on thetourist. The role of the clinic in Ogbunike Cave cannot be overemphasized, especially in emergencies. The clinic can be useful to the host community as well. This position was recorded in the literature (Manjunatha, 2022; Badiora et al., 2022).

Emergency number and log book: there is a need to have emergency numbers written boldly on signposts in the cave. This number will be needed in case of any danger or threat so that visitors can know how to navigate and stay away from danger or threat pending the arrival of the rescue team.

Secondly, there is a need to log people in and out of the cave. When people come for a picnic, they are usually large in number, like over fifty (50) people. There is a need to have a book where they will writetheir numbers, names, and contact information in case there is a need. This log book will need to be signed out by each visitor in such a manner that there will be no case of a missing person or loss that isunrecorded.

5. Discussion and Conclusion

Ogbunike Cave is one of the natural attractions in Anambra State; it has generated local, national, and international attention over the years. Scholars have explored different aspects of the cave, but none have focused on S&S, a gap covered in this study with attendant implications for STDs in Anambra Stateand beyond.

There is this belief that the cave is not generally under any known threat beyond the common fear of Fulani herdsmen and kidnapping, which is not peculiar to the cave. Although the S&S in the cave appears not to be

sufficient, it is assumed that the tour guides, who are Indigenous, also protect visitors coming to the cave. There is this general belief that there are no serious S&S issues associated with the cave. This observation is similar to the studies of a natural destination in Osun State, the Osun-Oshogbo sacred grove, where the management believed there was no recorded threat to S&S and relied on their record of not having any threat (Badiora et al., 2022); a similar result was recorded in a related study on S&S in a monkey sanctuary in Ghana (Noble et al., 2022). Such a position needs to be reviewed, as caves can crumble and cave in with high chances of injuring visitors. Besides, an accident can happen, and that explains why it is an accident because it is not planned. Negative word-of-mouth (WOM) by visitors about the absence or limited S&S measures will affect the cave's attractiveness. Because WOM has a serious impact on consumer attitudes and, to some extent, decisions (Xu et al., 2020), there is a need to upgrade the S&S in Ogbunike Cave.

There is no safety measure for visitors and tour guides concerning using helmets to cover the heads of visitors and tour guides in this cave. Caves are open to shock or hazard where there is a case of weathering of sand and large chunks of cave walls or as a result of denudation (Onwudufor & Odum,2015). The chances of hitting a visitor are high, but unfortunately, there is no human control over suchoccurrences, making helmets a necessity for tourist safety. Meanwhile, the National Speleological Society advised that a helmet is one of the key items to be in the travel box of visitors going to caves (Jones, 2016), and this is meant to be compulsory, especially for visitors, to maintain safety and security in the cave. Because any case of death in the cave might affect the cave and its number of visitors. Nevertheless, this lack of or poor S&S in tourism destinations appears to be a recurring incident within tourist destinations in Nigeria. Hayes (2021) reported a similar observation in the Gurara tourist center of Niger State. He went further to say, “Most tourist centers in Nigeria have not been fully designed with consideration for security and safety” (Hayes 2021, p. 81). The implication of this limited attention to S&S is that most tourist destinations are open to any form of danger, and this is a negativeimplication for a nation that wants to develop tourism, especially emerging economies like Nigeria.

It is quite commendable that personal hygiene is encouraged in the cave, as it is boldly written at the entrance that women in their menstruation should not visit the cave. This may have a relationship with the socio-cultural value attached to the cave because the cave is a deity. Disobedience to the written instructions might attract consequences for visitors and the Ogbunike community at large. Moreover, adherence to traditional rules tends to ensure S&S, as the traditional rules are part of the conservation measures of the cave (Odum, 2019). A rule of this nature might protect the cave from unforeseen consequences due to its deified status, but such rules need to be reviewed as female tourists may, in some cases, be unable to predict when the menstruation cycle will start. Additionally, there is a need for a first-aid box and clinic for visitors in tourism destinations like Ogbunike Cave, as trainedpersonnel will be the first to attend to emergencies before taking any injured visitor(s) to the hospital.

There is a need for proper funding as it has a way of maintaining S&S in the cave. Funding will likely give room for the tour guide and cave security to have helmets for visitors and get ‘clocking in and out’devices. Possibility: A circuit-camera television (CCTV) will go a long way toward monitoring visitors from a distance and identifying threats to visitors on time. An emergency telephone line for emergencies was lacking. This is similar to the findings of Badiora et al., where similar equipment was lacking in the geopark in Osun State. The absence of such equipment as CCTV and emergency lines maynot be unconnected to a lack of funds as a result of limited government attention to the destination, the Ogbunike cave. Similar studies of S&S in the Karnataka region of India and a Nigerian geopark (Osun- Oshogbo site) suggested the need to improve the S&S situation in destinations using equipment like CCTV (Manjunatha, 2022; Badiora et al., 2022). Equipment of such nature can record events both day and night and help in planning security measures in the cave.

Conclusion

This is a preliminary investigation into S&S concerns in Ogbunike Cave, looking at the availability of S&S features, the challenges of using such features if they are available, and sustainable S&S measures in the cave. Summarily, there is a need to look at S&S features in Ogbunike Cave comprehensively, as it seems to be abysmally poor or limited, although it appears to be a common observable scenario in other tourism destinations in Nigeria and her neighbors like Ghana (see Noble et al., 2023). While Ogbunike Cave is just a destination that cannot be generalized, it offers a glimpse of S&S measures available in emerging economies, and this may not be unconnected to the challenges facing the tourism sector in developing nations, such as underfunding, centralized management design of the sector, poor collaboration with stakeholders, etc.

(Lambulira & Bello, 2022), specifically, government attention to tourism in the southeastern region of Nigeria appears limited, indicating why tourism development in the region is still between the exploration stage and the development stage of Butler's tourism area life cycle (TALC) model. Conversely, using PMT, it becomes relevant to factor in protective measures for visitors to tourism destinations like caves, as S&S is vital for any meaningful and beneficial STD plans.

As observed in the literature, S&S are major factors that affect the decisions of travelers and also affect travel in tourism (Santana-Gallego et al., 2019); therefore, poor S&S in Ogbunike cave may have the possibility of affecting its attractiveness, in as much as Nigeria is facing a myriad of insecurity challenges. S&S concerns in Ogbunike Cave are surmountable whenever the government (state and federal government), NTDC, and the National Commission for Museums and Monuments (NCMM) show concerted effort in developing and promoting the cave.

Limitations and the need for further studies

Nigeria has innumerable and yet-to-be-identified caves; therefore, using just one cave to make general postulations on issues of S&S may not be feasible; rather, it gives a perspective that is likely obtainable in other caves, which requires further studies. Probably, a study of S&S issues in caves within the six (6) geopolitical zones in Nigeria. Secondly, the government ministry in charge of tourism in Anambra State has a limited number of staff in the tourism department of the afore-written ministry. The views expressed are from the supply side of tourism, besides the limited number of staff. The views of related ministries, such as the environment, need to be explored. This implies there is a need to explore other studies from the demand side, especially geo-tourists, who can give their views on the issue of S&S as tourists decisions are usually influenced by S&S in tourist destinations (Abukhalifeh & Chandran, 2020; Chili, 2018), including caves.

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Factors Influencing Innovative Work Behavior among Academicians at Politeknik Tuanku Sultanah Bahiyah, Kulim, Kedah

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Abstract: Compared to any other field, the research on the Innovative Work Behaviour (IWB) among academicians has been a neglected area. Therefore, the purpose of this study is to investigate the determinant factors influencing IWB among academicians at Politeknik Tuanku Sultanah Bahiyah (PTSB). Social Exchange Theory (SET) was underpinned to determine the relationship between training, reward, knowledge sharing and IWB. Additionally, this study also included work engagement as a mediating variable in the relationship between training, reward, knowledge sharing and IWB. IWB can be defined as the intentional generation, promotion, and realization of new ideas within a work role, workgroup, or organization. It is important to analyze how these dimensions tend to influence the IWB. Data for this study was collected from 118 academicians at Politeknik Tuanku Sultanah Bahiyah (PTSB), Kulim, Kedah and the collected data was analyzed by using Smart-PLS. The findings revealed that two dimensions, which are training and knowledge sharing have a significant relationship with IWB whereas reward has an insignificant relationship with IWB. Furthermore, work engagement was found to be significant in mediating training and knowledge sharing, however, work engagement was found to be insignificant in mediating reward and IWB. As a result, it is suggested for institutions and the Ministry of Higher Education (MoHE) to appropriately apply relevant specific tactics to enhance those components as well as IWB. Future research is suggested to replicate this study to other institutions. Next, it is suggested to test other independent variables and mediating variables to deeply understand other determinants that influence IWB.

Keywords: I*nnovative work behavior, training, reward, knowledge sharing.*

1. Introduction and Background

Innovation has a vital role in creating new opportunities that contribute to the growth of the national economy and overall societal well-being (Aziz, Abdullah & Hanapiyah, 2022). In Malaysia, innovation plays a crucial role in advancing the nation's development agenda, as it enhances efficiency and competitiveness while promoting inclusivity (Aziz, Abdullah & Hanapiyah, 2022) and Choi (2019) stated that innovation is crucial for organizations to exert significant influence on the future trajectory of their sector. In contrast to other sectors such as business firms, the academic arena needs innovation to enhance competitiveness and gain a competitive edge (Zreen et al., 2021).

Malaysia is aligning with The National Transformation 2050 to transition into an advanced knowledge-based economy and achieve developed nation status. This transformation emphasizes innovation and recognizes the education sector as a key driver of economic growth and development in Malaysia. However, Dixit and Upadhyay (2021) found that there have been few efforts to investigate the characteristics that contribute to innovative work behavior (IWB) in higher education institutions as highlighted by Fussy (2018). The study of the IWB of academic staff has been overlooked, leading to a significant question as to what elements can assist universities in becoming more innovative and providing improved services to the nation (Zreen et al., 2020).

Therefore, this study identifies several gaps in the field of IWB among academicians. Firstly, many scholars identified the antecedents of IWB at the level of industrial workers such as in the hotel industry (Zainal & Lata, 2021), finance (Chua & Ayoko, 2021), electrical and electronic SMEs (Yusof, 2016) and telecommunications (Harun et al., 2022), however, very few in the academic sector especially in Malaysia. Secondly, although many researchers have conducted IWB studies, nevertheless, determinants of IWB are undetectable (Carlucci, Mura & Schiuma, 2020), fragmented and inconsistent (Bos-nehles, Renkema & Janssen, 2017). Thirdly, work engagement as a mediating variable towards IWB is paucity and requires additional exploration as suggested by Ibus et al. (2020).

This study contributes to the existing literature in many folds. Firstly, this study provides academics with useful insights for underpinning the Social Exchange Theory (SET) by explaining determinant factors (training, rewards and knowledge sharing) that influence IWB. Secondly, this study enhances the body of knowledge regarding the mediating role of work engagement between training, reward, knowledge sharing and IWB especially for the population of academicians at Politeknik Tuanku Sultanah Bahiyah, Kedah, Malaysia. From a managerial perspective, this study will provide useful insights to MOHE on how to apply specific tactics to enhance and encourage IWB by considering the factors that are included in this study.
Hence, this study attempts to investigate the relationship of selected factors namely training, rewards, knowledge sharing and work engagement as mediating variables towards IWB among academicians at Politeknik Tuanku Sultanah Bahiyah to fill the gap with the current situation demands.

2. Literature Review

Innovative Work Behaviour (IWB): Researchers have provided various definitions for Innovative Work Behaviour (IWB). IWB is defined as the behaviors that relate to the generation and implementation of novel and creative ideas (Sheeba & Christopher, 2020). The process of IWB involves multiple stages (Bos-Nehles, Renkema & Janssen, 2017). The three stages of IWB are acknowledged by Janssen (2000) namely idea generation, promotion, and realization. Firstly, idea generation means that employees create new ways to solve problems such as new ideas or solutions must be created to enable innovation. Secondly, idea promotion refers to building coalitions and finding support for innovation by presenting the success and benefits to potential allies as well as seeking sponsors (De Jong & Den Hartog, 2010; Janssen, 2000; Scott & Bruce, 1994). Finally, idea realization requires the development of a sample or model of a new product, system or process (Janssen, 2000) that can be applied as part of regular processes (De Jong & Den Hartog, 2010).

Training and IWB: Training refers to a methodical and organized set of activities that aim to improve skills, knowledge, and competency (Nassazi, 2013). Every work performed by individuals requires a set of skills and current knowledge to be executed effectively and efficiently (Sheeba & Christopher, 2020). As tasks and vocations get increasingly intricate and convoluted, there arises a necessity for training and development (Sheeba & Christopher, 2020). Training and development facilitate the utilization of IWB by both personnel and organizations. Regrettably, firms fail to adequately prioritize training and development, focusing solely on tools and processes, which proves inadequate for fostering innovation. Past studies have argued that not all training and development programs have a significant relationship with IWB (Stankevičiūtė, Staniškienė & Ciganė, 2020; Veenendaal & Bondarouk, 2015; Jiang, Wang, & Zhao, 2014). In contrast, Aziz, Abdullah, and Hanapiyah (2022); Odoardi, Cangialosi & Battistelli (2022); and Al Wali et al. (2021) analyzed the significant relationship between training and IWB. Thus, the researcher derived the first hypothesis as below.
H1: There is a significant relationship between training and IWB.

Reward and IWB: According to Chen and Hsieh (2006), rewards include everything that employees recognize as a fair return in exchange for the efforts and time spent at work. According to Bos-Nehles, Renkema and Janssen (2017) and Veenendaal and Bondarouk (2015), rewards can take the form of monetary compensation, such as salary, bonuses, or a share of the company's profits; alternatively, rewards can take the form of non-monetary benefits, such as time off or recognition of accomplishments. However, despite the attention that human resource practices have gained concerning IWB, the role of reward in promoting creativity and innovation also remains less investigated (Mascareño, Rietzschel, & Wisse, 2020). On top of that, the findings of reward influencing IWB are inconsistent (Diehl & Seeck, 2017) Bysted and Jespersen (2014). The findings from Dixit and Upadhyay (2021) and Volery and Tarabashkina (2021) found an insignificant relationship between rewards and IWB whereas others have found a positive impact (Aziz, Abdullah & Hanapiyah, 2022; Saaondo & Ashwe, 2018). Thus, the researcher derived the second hypothesis as below.
H2: There is a significant relationship between reward and IWB.

Knowledge Sharing and IWB: According to Chaudhary et al. (2023), knowledge sharing is the practice of employees exchanging information, skills, and expertise with one another. Knowledge sharing is further divided into two subcategories namely knowledge donating and knowledge collecting. Knowledge donating is referred to as "the communication between individuals that is based upon an individual's wishful transfer of intellectual capital", whereas knowledge collecting is defined as "an attempt to convince other organizational

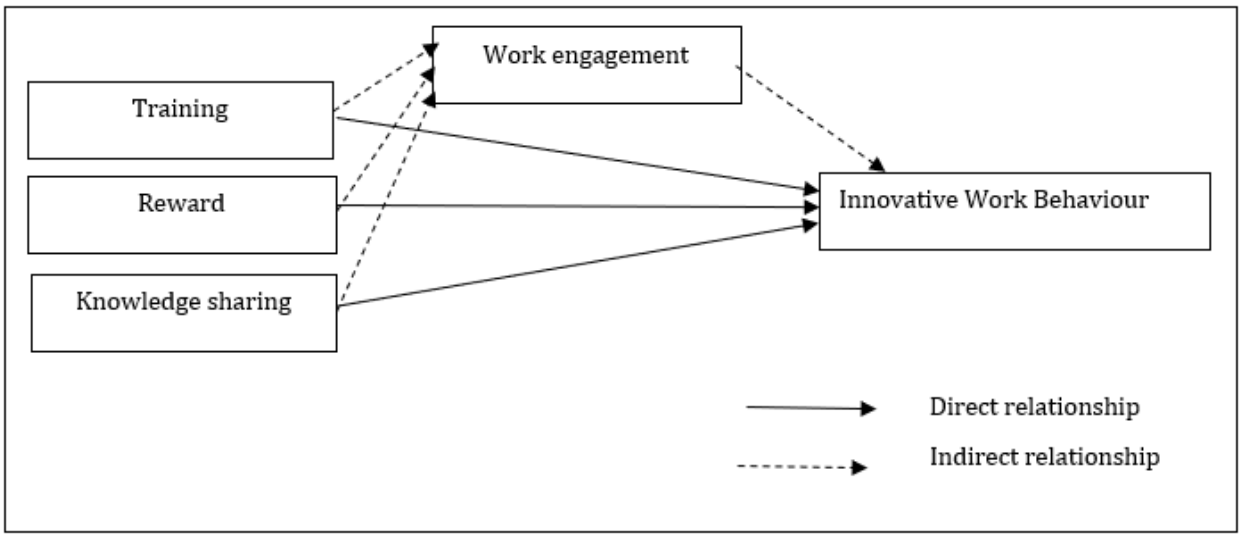
members to share what they know" (Van Den Hooff & De Ridder, 2004). Knowledge sharing fosters innovation at both the organizational and individual levels when "people who possess knowledge are willing to transfer their work experience, techniques, and opinions to others in a concrete manner and expect that others will practically apply such knowledge at work" (Yu, Yu & Yu, 2013) and this creates organizational-level and individual-level innovation (Pittino et al., 2018). To be more precise, people who participate in the knowledge-sharing process help their colleagues develop the competencies that are necessary for creative activity (Anser et al., 2022). Most of the previous studies revealed that knowledge sharing has a significant relationship with IWB (Nguyen, Nguyen & Do, 2019; Kmieciak, 2021). Nonetheless, according to Vandavasi et al. (2020) and Rahman et al. (2021), there is a need to identify mechanisms and conditions between knowledge sharing and IWB. Thus, the researcher derived the third hypothesis as below.
H3: There is a significant relationship between knowledge sharing and IWB.

Work Engagement: According to Anggritantyo and Lo (2022), work engagement refers to actively participating and being fully involved in one's workplace. As to Saks and Gruman (2017), work engagement refers to a favorable mental state when individuals experience satisfaction and connection to their work and are characterized by qualities such as vigor, dedication, and absorption. Vigour, as defined by Schaufeli et al. (2002), encompasses having abundant energy and mental strength while working, being eager to put effort into one's work, and demonstrating persistence in the face of challenges. Dedication is closely associated with emotions of significance, passion, motivation, and satisfaction towards one's work, as well as a deep engagement with one's work. Absorption occurs when an individual is completely engrossed in their work, dedicating their time and effort to their professional activities (Schaufeli, 2017; Schaufeli et al., 2002). Several research has shown a strong correlation between work engagement and innovation (Agarwal et al., 2012). Furthermore, scholars have placed greater emphasis on studying the factors that influence IWB. Thus, the researcher derived the fourth, fifth and sixth hypotheses as below.
H4: Work engagement mediates the relationship between training and IWB
H5: Work engagement mediates the relationship between reward and IWB
H6: Work engagement mediates the relationship between knowledge sharing and IWB

Social Exchange Theory: Social Exchange Theory (SET) is a highly influential framework for understanding workplace behavior, particularly about IWB and it is widely used in the field of organizational or workplace behavior. SET pertains to the deliberate activities of persons who are motivated by the anticipated benefits they may receive as a consequence of their behaviors toward others (Blau, 1964). The notion posits that the relationship between two parties is founded upon reciprocity and trust. Employees are more inclined to establish a trusting rapport with their leader when they have a favorable perception of their leader (Ahmad et al., 2019). Consequently, they will feel compelled to reciprocate the servant leader's activities with productive work outcomes (Aboramadan et al., 2022). Employees who exhibit reciprocation tendencies are more likely to exert greater effort in their work (Saks, 2006), which in turn motivates them to engage in additional job-related activities (Ahmad et al., 2019), such as IWB and creativity (Aboramadan et al., 2022)

Research Framework

Figure 1: Research Framework



3. Research Methodology

This study applied quantitative research and the data was collected via an online survey from 118 academicians from Politeknik Tuanku Sultanah Bahiyah. A stratified random sampling technique was used to segregate the population based on the department followed by simple random sampling. Participants were asked to rate the degree to which they agreed with each of the statements using a 6-point Likert scale. In total, 41 items were used to measure five variables. Data were analyzed using structured partial least squares modeling (PLS-SEM), and Smart PLS version 4 statistical software was used for the data analysis. This study adopted measurement questions from previous research and adapted them based on the suitability of this study. Six-point Likert scales ranging from strongly disagree to strongly agree were used to measure the variables in this study. Chomeya (2010) stated that to emphasize discrimination and reliability, the researcher should use the 6-point Likert scale to help the respondents choose the answer, as there is no neutral point. The training was measured by using the scale by Pingel and Kroon (2020) and Sun, Aryee and Law (2007) whereas rewards and knowledge sharing were measured by Abdullah (2019).

4. Findings and Discussion

Profile of Respondents: There were 118 total respondents involved in this study. Table 1 shows that 56.78% of the respondents are male, and the other 43.22% are female. In detail, most of the respondents are between 41 to 50 years old (56.78%), another 27.12% are between 31 to 40 years old, and the remaining 16.10% are between 51 to 60 years old. Furthermore, the majority of the respondents have served between 11 to 20 years (45.76%), another 38.98% have served between 21 to 30 years and the remaining 15.25% have served less than 10 years. The academicians from the Jabatan Kejuruteraan Mekanikal had the highest number of respondents in this study, which was 19.49%, followed by the Jabatan Pengajian Am (18.64%), the Jabatan Kejuruteraan Awam (16.95%), the Jabatan Kejuruteraan Elektrik (15.25%), the Jabatan Matematik dan Sains Komputer (15.25%), the Jabatan Perdagangan (13.56%), and others (0.85%).

Table 1: Respondent's background and profile

VARIABLES	DESCRIPTIONS	FREQUENCY	PERCENTAGE
Gender	Male	67	56.78 %
	Female	51	43.22 %
	Total	**118**	**100 %**
Age	31 - 40 years old	32	27.12 %
	41 - 50 years old	67	56.78 %
	51 - 60 years old	19	16.10 %
	Total	**118**	**100 %**
Service period	0 - 10 years	18	15.25 %
	11 - 20 years	54	45.76 %
	21 - 30 years	46	38.98 %
	Total	**118**	**100 %**
Department	Jabatan Perdagangan	16	13.56 %
	Jabatan Kejuruteraan Mekanikal	23	19.49 %
	Jabatan Kejuruteraan Elektrik	18	15.25 %
	Jabatan Kejuruteraan Awam	20	16.95 %
	Jabatan Pengajian Am	22	18.64 %
	Jabatan Matematik dan Sains Komputer	18	15.25 %
	Others	1	0.85 %
	Total	**118**	**100 %**

Measurement Model:

Reliability and Validity: In this study, all constructs were above 0.70, which met the rule of thumb for composite reliability, and all constructs in Cronbach's alpha also met the rule of thumb of being larger than 0.60. In addition, the value of AVE is larger than 0.50, indicating that they have met the acceptable standard of convergent validity.

Table 2: Measurement Model Analysis

VARIABLES	ITEMS	LOADINGS	AVE	CRONBACH'S ALPHA	COMPOSITE RELIABILITY
Innovative Work Behaviour	**IWB1**	0.781	0.690	0.944	0.952
	IWB2	0.828			
	IWB3	0.767			
	IWB4	0.819			
	IWB5	0.869			
	IWB6	0.840			
	IWB7	0.872			
	IWB8	0.872			
	IWB9	0.822			
Training	**TR1**	0.810	0.722	0.922	0.940
	TR2	0.825			
	TR3	0.856			
	TR4	0.816			
	TR5	0.907			
	TR6	0.879			

VARIABLES	ITEMS	LOADINGS	AVE	CRONBACH'S ALPHA	COMPOSITE RELIABILITY
Reward	RW1	0.839	0.730	0.926	0.942
	RW2	0.851			
	RW3	0.865			
	RW4	0.887			
	RW5	0.783			
	RW6	0.899			
Knowledge Sharing	KS1	0.834	0.681	0.906	0.927
	KS2	0.814			
	KS3	0.864			
	KS4	0.848			
	KS5	0.810			
	KS6	0.778			
Work Engagement	WE1	0.679	0.716	0.949	0.958
	WE2	0.822			
	WE3	0.820			
	WE4	0.884			
	WE5	0.910			
	WE6	0.841			
	WE7	0.906			
	WE8	0.872			
	WE9	0.857			

Discriminant Validity: Discriminant validity for this study was tested by applying the Heterotrait-Monotrait Ratio Correlations (HTMT) criterion suggested by Hair et al. (2022). The result shown in Table 3 indicates that all values were below 0.90, which confirms that the discriminant validity in this study has been established. Having such results confidently confirms that the model for this study has adequate reliability and validity.

Table 3: HTMT Criterion Analysis

	IWB	KS	RW	TR	WE
IWB					
KS	0.881				
RW	0.395	0.507			
TR	0.847	0.835	0.433		
WE	0.899	0.890	0.468	0.832	

Structural Model:

Table 4: Structural Model Analysis

	VIF	Path coefficients	p-value	f^2 value	Decision	Hypothesis
KS -> IWB	3.784	0.267	0.003	0.091	Supported	H3
KS -> WE	2.605	0.552	0.000	0.453		
RW -> IWB	1.300	-0.063	0.290	0.015	Rejected	H2
RW -> WE	1.290	0.050	0.409	0.007		
TR -> IWB	2.869	0.251	0.023	0.106	Supported	H1

TR -> WE	2.434	0.335	0.000	0.179		
WE -> IWB	3.871	0.467	0.000	0.274		
RW -> WE -> IWB		0.023	0.436		Rejected	H5
TR -> WE -> IWB		0.157	0.014		Supported	H4
KS -> WE -> IWB		0.258	0.001		Supported	H6

The results in Table 4 present the hypothesis testing in the structural model for this study. Firstly, all the Variance Inflation Factor (VIF) values for the inner model are below 5, which means that collinearity has no substantial effect on the structural model for this study (Hair et al., 2022).

The training was found to have a significant relationship with innovative work behavior ($\beta = 0.251$, $p < 0.05$). Furthermore, in terms of the effect size, the f^2 values show that this variable has a small effect on this model (Cohen, 1988). Therefore, H1 is accepted. This finding implies that the training will encourage innovative work behavior among academicians in PTSB. This result is in line with the studies conducted by Aziz, Abdullah and Hanapiyah (2022) and Odoardi, Cangialosi and Battistelli (2022). Generally, effective training can help cultivate a culture of innovation where employees learn to embrace challenges, persist in the face of setbacks, and see failures as learning opportunities, which are essential attitudes for fostering innovation. This is in line with the study conducted by Younas et al. (2018).

Reward was found to have an insignificant relationship with innovative work behavior ($\beta = -0.063$, $p > 0.05$). Furthermore, in terms of the effect size, the f^2 values show that this variable has a small effect on this model (Cohen, 1988). Therefore, H2 is rejected. This finding implies that the reward will not encourage innovative work behavior among academicians in PTSB. This result is in contrast with the study conducted by Aziz, Abdullah and Hanapiyah (2022) and Saaondo and Ashwe (2018). However, the result of this study is in line with the studies conducted by Dixit and Upadhyay (2021) and Volery and Tarabashkina (2021). The reward does not encourage IWB among academicians in PTSB due to the nature of the work itself. As an academician, it is normal behavior to be innovative and this is supported by the study of Teichmann & Falker (2021) which indicated that normal behavior should not be rewarded because normal behavior does not deserve a bonus.

Knowledge sharing was found to have a significant relationship with innovative work behavior ($\beta = 0.267$, $p < 0.05$). Furthermore, in terms of the effect size, the f^2 values show that this variable has a small effect on this model (Cohen, 1988). Therefore, H3 is accepted. This finding implies that knowledge sharing will encourage innovative work behavior among academicians in PTSB. This result is in line with the studies conducted by Phung et al. (2017) and Aziz, Abdullah and Hanapiyah (2022). Knowledge sharing facilitates collaboration among academicians from different disciplines and institutions for instance, collaborative research projects often lead to the integration of diverse knowledge bases, methodologies and approaches, resulting in innovative breakthroughs and advancements in various fields. This is supported by the study conducted by Kmieciak (2021) which stated that by sharing knowledge with colleagues, the knowledge base of other employees is increased and the chance for the emergence of innovative ideas increases.

Work engagement was found to have a significant in mediating the relationship between training ($\beta = 0.157$, $p < 0.05$) and knowledge sharing ($\beta = 0.258$, $p < 0.05$) with innovative work behavior. Therefore, H4 and H6 are accepted. This finding implies that the training and knowledge sharing will encourage work engagement among academicians in PTSB, and in turn, will encourage their innovative work behavior. This result is in line with the studies conducted by Contreras, Soria-Barreto and Zuniga-Jara (2022) and Mubarak et al. (2021) which found that work engagement is a mediating factor in innovative work behavior studies.

Nevertheless, work engagement was found to have an insignificant in mediating the relationship between reward with innovative work behavior ($\beta = 0.023$, $p > 0.05$). Therefore, H5 is rejected. This finding implies that work engagement does not mediate the relationship between reward and innovative work behavior among academicians in PTSB. In detail, the result of this study also revealed that rewards have an insignificant relationship with work engagement and innovative work behavior. This implies that the implementation of rewards to enhance employee motivation and performance appears to be ineffective in fostering engagement. In other words, employees are capable of doing the tasks however, they lack enthusiasm and commitment to

their work (Kulikowski & Sedlak, 2020). Kulikowski and Sedlak (2020) found that while financial rewards are crucial for meeting basic human needs, their ability to enhance work engagement may be relatively restricted. Monetary compensation and other financial incentives are not the primary factors that contribute to employee engagement. This is due to academicians often value non-monetary rewards such as recognition, meaningful work, opportunities for personal and professional growth, and a positive work environment as supported by Contreras, Soria-Barreto and Zuniga-Jara (2022).

Table 5: R^2 and Q^2

	R^2	Q^2
IWB	0.794	0.725
WE	0.742	0.742

According to Hair et al. (2022), the most commonly used measure to evaluate the structural model's explanatory power is the coefficient of determination (R^2) value, which represents a measure of in-sample predictive power. The R^2 values for this study were 0.794 (innovative work behavior) and 0.742 (work engagement), which indicates that the model's explanatory power for innovative work behavior is large, while for work engagement is substantial (Cohen, 1988).

This study employed the technique of predictive relevance of Q^2 analysis and PLS prediction which was suggested by Hair et al. (2022), to test the structural model. The Q^2 value for this study was 0.725 (innovative work behavior) and 0.742 (work engagement), which is greater than zero. Henceforth, the predictive relevance of this model was established. The results of the PLS prediction procedure in Table 6 show that all indicators in the PLS-SEM analysis have lower RMSE (or MAE) values compared to the naive LM benchmark, except WE5 which indicates that PLS-SEM has higher MAE values compared to the naive LM benchmark. Therefore, it can be concluded that this model has high medium power.

Table 6: PLS Predict Analysis

	PLS-SEM_RMSE	PLS-SEM_MAE	LM_RMSE	LM_MAE
IWB1	0.583	0.495	0.616	0.499
IWB2	0.519	0.443	0.567	0.458
IWB3	0.593	0.504	0.656	0.542
IWB4	0.557	0.498	0.606	0.520
IWB5	0.562	0.479	0.610	0.483
IWB6	0.578	0.492	0.645	0.528
IWB7	0.555	0.460	0.616	0.500
IWB8	0.533	0.435	0.594	0.464
IWB9	0.543	0.480	0.606	0.500
WE1	0.586	0.476	0.618	0.498
WE2	0.591	0.509	0.645	0.528
WE3	0.557	0.466	0.605	0.487
WE4	0.545	0.449	0.602	0.489
WE5	0.540	0.439	0.547	0.438
WE6	0.589	0.502	0.644	0.524
WE7	0.561	0.436	0.620	0.491
WE8	0.588	0.481	0.614	0.489
WE9	0.577	0.499	0.622	0.524

5. Conclusion and Recommendations

In conclusion, this study found that training and knowledge sharing are significant predictors of IWB whereas reward does not influence IWB. Furthermore, this study found that work engagement has mediated the relationship between two independent variables (training and knowledge sharing) with IWB. Therefore, it is suggested that institutions and the Ministry of Higher Education (MoHE) conduct efficient innovative training to enhance the IWB among academicians. The result of this study also suggested that the management develop a program to encourage knowledge sharing focusing on innovation among the academicians such as mentoring, conferences and seminars. Furthermore, it is suggested that the management enhance the level of work engagement by conducting an innovation competition among academicians. On the other hand, this study will contribute to the body of knowledge regarding the role of training, rewards and knowledge sharing in influencing IWB as well as mediating the role of work engagement. The first limitation of this study is that it only focuses on PTSB, Kulim, and Kedah. Thus, there might be limited information gained for the overall results. Therefore, it is suggested to replicate this study to other institutions. The second limitation of this study is that it only uses three independent variables (training, reward and knowledge sharing). Hence, it is suggested for future research to apply other independent variables to examine the relationship with IWB. The third limitation of this study is work engagement as a mediating variable was exploited. Therefore, future research may consider using other mediating variables such as trust and empowerment.

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Antecedent of Event Management Intention Toward Sustainable Practices: A Theoretical Framework

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Abstract: The incidence of rising global temperature, extreme weather, depletion of finite resources, and other environmental impacts has shown as one of the most crucial issues to deal with. The situation to create low-carbon communities and sustainable systems through sustainable event management—that is, the switch from conventional event management concept to more environmentally friendly and socially responsible practices among the event company by engaging with various stakeholders. Recent studies suggested that evidence on sustainable intentions concerning events in Malaysia is still limited. Therefore, this study aims to explore the relationship between attitude, subjective norms, perceived behavioral control, environmental consciousness and economic benefit toward sustainable capabilities. This paper will contribute to future literature regarding understanding what drives the event management intention toward sustainability contributing to the existing green behavior and body of literature. It will increase stakeholder awareness and policymakers to be more innovative in reducing environmental impact. This paper is expected to better understand company behavior toward adopting ecologically ethical and socially accountable methods. More research needs to be done to validate and reinforce the proposed theoretical framework. Therefore, future research should concentrate on both qualitative and quantitative research designs by examining the relationship between the antecedents and intention. Ideally, insights from practitioners and academicians are highly encouraged in substantiating the proposed theoretical framework.

Keywords: *Event Management, Sustainability, Sustainable Capabilities Intention, Attitude, Environmental Consciousness.*

1. Introduction and Background

The events sector has expanded rapidly in recent years, making a major contribution to both cultural and economic development. However, issues regarding sustainability have been raised by the event's environmental effects, such as waste production, carbon emissions, and resource depletion. A viable strategy to lessen these environmental effects and encourage ecologically friendly practices in the events sector is sustainable event management; sustainability capabilities pertain to the deliberate incorporation of environmentally and socially responsible methods across the whole process of organizing and carrying out an event. By acknowledging the effects that events can have on the environment, nearby communities, and general societal well-being, this strategy goes beyond typical event management. The goal is to organize events that accomplish their goals and make a positive impact on a sustainable and responsible future. Recent studies suggested that evidence of sustainable intentions about events in Malaysia is still limited (Mair, & Smith, 2021; Abdullah et al., 2023). Historically, previous studies predominantly focused on the advantages of sustainable events for society or organizations in terms of socioeconomic development (Chirieleison et al., 2020; Langarita & Cazcarro, 2022). They also aimed to understand the management and organization of these events (Martinho et al., 2018).

The Theory of Planned Behavior (TPB) is a widely recognized psychological model. In the context of sustainable event management, TPB provides important insights into how both individuals and organizations approach and integrate sustainable practices into event planning and execution. Sustainable event management focuses on organizing and conducting events in a way that reduces negative environmental and social impacts while enhancing positive outcomes (Zamzuri et al., 2013). Notably, the sustainability impact of sustainable events on behavioral intentions has often been neglected (Tolkes & Butzmann, 2018). Even so, there is little awareness of event organizers' attitudes toward sustainable practices. Abdullah et al. (2023) indicate that attitudes can be changed depending on the situation and conditions. Thus, sustainable events can shape attitudes and promote sustainable behavior. Therefore, this study wants to report how the factors affect the behavior of event

sustainability in Malaysia as this has not been reported. To reduce environmental footprints and improve sustainability in event planning and execution, the objective of this study is to determine factors that influence the event practitioner's intention toward sustainable practices.

2. Conceptual Framework and Hypotheses Development

The research framework indicates that there were five independent variables: attitude, subjective norms, perceived behavioral control, environmental consciousness and economic benefit.

Attitudes: In psychological terms, attitude refers to a person's evaluation or feelings toward a particular object, person, group, event, or concept. Attitudes can be positive, negative, or neutral and play a significant role in shaping an individual's thoughts, choices, and actions (Ajzen, 2005). The Theory of Planned Behaviour (TPB) posits that attitudes toward a behavior are crucial in influencing an individual's intention to perform that behavior (Tsen et al., 2006). A favorable attitude suggests that the person sees the behavior as beneficial, enjoyable, or desirable, increasing the likelihood of forming a positive intention. Event organizers' positive or negative evaluations of sustainable practices influence their behavioral intentions. A favorable attitude toward sustainable event management, considering its benefits for the environment, community, and long-term viability, increases the likelihood of individuals incorporating such practices into their events (Jones, 2017).

Sustainable event management improves event quality and manages environmental, social, and economic impacts while reducing resource consumption (Janjusevic & Mathur, 2021). Event organizers need to understand the attitudes of their target audience towards sustainable event management to effectively promote and implement sustainable practices. By addressing any negative perceptions or misconceptions through education and awareness campaigns, event organizers can encourage positive attitudes and behavior change among stakeholders. Attitudes are formed through various sources, including personal experiences, social influences, and cognitive processes (Ajzen & Fishbein, 1975). Event organizers' attitudes toward sustainability practices may be influenced by their past experiences with implementing such initiatives. For example, if an event organizer has previously experienced success in reducing waste and carbon emissions at their events through sustainable practices, they are more likely to have a positive attitude toward sustainability and continue to implement these practices in the future.

Attitudes play a role in influencing individuals' intentions and behaviors toward sustainable event management. Individuals who perceive fewer barriers or challenges associated with sustainability initiatives may be more inclined to adopt them due to their favorable attitudes. Sustainable event practices show an organization’s dedication to wider societal and environmental objectives, helping to create a stronger bond with participants. Nowadays, attendees who are driven by purpose frequently prefer to engage with events that align with their values (Ashwin, 2023). By cultivating positive attitudes through education, communication, and advocacy efforts, event organizers can foster a culture of sustainability within the events industry and contribute to a more environmentally friendly and socially responsible future. Therefore, the following hypotheses are proposed:
H1: Attitude has a significant effect on influencing behavioral intention in sustainable event management.

Subjective norm: A critical concept in the theory of planned behavior, refers to the perceived social pressure or approval-disapproval from important others regarding a specific behavior. Research consistently shows that subjective norms play a significant role in influencing behavioral intention in sustainable event management (Song et al., 2012; Hübner & Kaiser, 2006; Han et al., 2018; Wan et al., 2018). For example, 43.4% of the variance in sustainable consumption behavior can be explained by environmental influences, education and information, and market conditions. (Figueroa-Garcia et al, 2018). In the context of sustainable event management, subjective norms encompass the perceived social pressure or approval from industry peers, stakeholders, and the broader community (Barbera & Ajzen, 2020). When significant others expect or support sustainable practices, it contributes to the formation of behavioral intentions and the development of sustainable event management capabilities.

Several studies have emphasized the significant influence of subjective norms on behavioral intention in various contexts. For instance, Song (2012) demonstrated the impact of subjective norms on environmentally

friendly perceptions at a festival. Hübner & Kaiser (2006) and Wan (2018) further supported this finding by examining the relationship between attitude-subjective norms conflicts and the use of urban green spaces, respectively. Research indicates that subjective norms positively impact behavioral intentions across various settings, including sustainable actions. For example, a study on construction companies revealed that perceived social pressure from stakeholders increased the likelihood of adopting green practices (Li et al., 2023). Likewise, the Theory of Planned Behavior (TPB) framework has been used to explore how subjective norms affect individuals' intentions to participate in eco-friendly behaviors. This framework suggests that when individuals believe that significant others expect them to act sustainably, they are more inclined to do so (Wu & Chiang, 2023). These findings collectively suggest that subjective norms play a role in shaping behavioral intention, including in the context of sustainable event management. By understanding and addressing the subjective norms related to sustainable practices in event management, event professionals can develop more effective strategies to encourage sustainable behaviors among attendees, exhibitors, and other stakeholders. This can lead to positive outcomes, such as reduced environmental impact, enhanced brand reputation, and improved stakeholder engagement.
H2: Subjective Norms have a significant effect on influencing behavioral intention in sustainable event management.

Perceived behavioral control (PBC): A key concept in the Theory of Planned Behaviour (TPB), which is a widely used model to predict and understand human behavior. Perceived behavioral control reflects the individual's perception of the ease or difficulty of performing the behavior (Ajzen, 1991). The theory suggests that a concrete intention to engage in a behavior is formed when an individual perceives a sufficient level of control over that behavior. The TPB emphasizes the role of perceived behavioral control, indicating that individuals are more likely to act on their intentions if they feel they have control over the behavior. Conversely, perceived controllability involves external factors like resources, opportunities, and potential barriers (Vamvaka et al., 2020).

Sustainable capability aligns with this concept, as it involves individuals' capacity to overcome barriers and implement sustainable practices effectively. The TPB's concept of perceived behavioral control is relevant in the execution phase of events. Event organizers need to feel they have control over the implementation of sustainable practices, such as choosing sustainable vendors, managing waste effectively, and minimizing the event's ecological footprint (Allen et al., 2022). When event organizers perceive that they have control over the implementation of sustainable practices, they are more likely to take action and make sustainable choices. This is because PBC affects an individual's motivation to engage in the behavior. When people believe that they can perform a behavior, they are more likely to put in the effort to do it.

Additionally, Jin et al. (2013) found that perceived constraints and perceived value, respectively, significantly influence behavioral intentions in event management. Jeong & Kim (2020) further supported this, showing that event quality, tourist satisfaction, and place attachment also play a role. Perceived control can change one's motivation to engage in decision-making processes, which could potentially influence behavioral intentions (Weissmann, 2020) in sustainable event management. These findings suggest that PBC is a complex concept that is important for event organizers to be aware of the factors that influence PBC and to develop strategies to increase their sense of control over the implementation of sustainable practices. By doing so, they can increase their likelihood of engaging in sustainable behaviors and reducing the environmental impact of their events.

Meeprom (2020) found that perceived special event quality directly influenced social, economic, and emotional value, which in turn affected behavioral intentions. Similarly, Hashemi et al. (2020) identified a positive association between perceived conference quality and behavioral intentions, with accessibility and self-congruity playing a significant role. By understanding the factors that influence PBC, event organizers can develop more effective strategies to increase their sense of control over the implementation of sustainable practices. This can lead to increased adoption of sustainable practices in the event industry and a reduction in the environmental impact of events. Therefore, it can be inferred that:
H3: Perceived Behavioural Control has a significant effect on influencing behavioral intention in sustainable event management.

Environmental Consciousness: Environmental consciousness is likely to have a direct impact on forming

strong behavioral intentions (Wiek et al., 2011; Liu, Teng, & Han, 2020). The level of understanding individuals possess regarding the environmental implications of their actions significantly influences their commitment to engaging in environmentally responsible behaviors. Environmental consciousness is a key factor in translating intentions into actual behavior. Boo & Park (2013), Fang et al. (2018) and Lin & Niu (2018) highlight the importance of environmental knowledge and educational experiences in driving the intention to implement green practices. Informed individuals are more likely to follow through on their intentions by incorporating sustainable practices into their daily lives. These individuals recognize the personal responsibility they hold in protecting and preserving natural resources.

Event organizers who possess a greater understanding of environmental issues are more likely to embrace and act upon the principles of environmental responsibility, as outlined by the TPB. Consequently, this knowledge empowers organizers to exercise greater control over their behavior, making them more likely to engage in sustainable practices and contribute to the collective effort to protect the environment. Environmental consciousness acts as a powerful catalyst in fostering strong behavioral intentions and translating them into concrete actions (Tandukar & Yadav, 2020). Song et al. (2012) extend this to the festival context, demonstrating that environmentally friendly perceptions positively influence behavioral intention. Organizers who are well-informed about environmental issues are better equipped to make informed decisions, embrace sustainable practices, and actively contribute to the creation of a more sustainable and responsible society.
H4: Environmental Consciousness has a significant effect on influencing the behavioral intention in sustainable event management.

Economic Benefit: The economic benefit of sustainable event management is a complex and multifaceted issue. Numerous studies have explored the relationship between economic factors and sustainable event practices, providing insights into the challenges and opportunities faced by event managers. Reddy et al. (2023) highlight the role of macro and micro environmental factors in determining the demand and competitive advantage in the event management industry. This suggests that economic considerations, such as market trends and financial incentives, play a significant role in shaping the adoption of sustainable practices by event managers and organizers.

Janjusevic & Mathur (2021) emphasizes the growing importance of sustainability in event planning, with a focus on the environmental, social, and economic impacts of events. During periods of economic growth, businesses and consumers may have more disposable income to spend on events, leading to increased demand for event management services. Conversely, during economic downturns, demand for events may decline as businesses and consumers cut back on discretionary spending. One key issue is the tension between the need for economic viability and the desire to reduce environmental and social impacts. Event managers are often faced with the challenge of balancing the financial sustainability of their events with the need to minimize negative externalities. This can be a difficult task, as the cost of sustainable practices can be higher than conventional practices.

Economic incentives, such as cost savings, support for the local economy, sponsorship opportunities, and enhanced brand value, reinforce the link between intentions—shaped by the Theory of Planned Behavior (TPB)—and the actual adoption of sustainable practices in event planning. The long-term economic advantages, such as an improved brand reputation that leads to increased attendance and greater brand loyalty, can further bolster the intention to pursue sustainable practices (Barozzi, 2023). When organizers recognize that sustainability boosts brand value, they are more inclined to plan and commit to sustainable events. Many event managers may not be aware of the long-term cost savings and reputational benefits that can result from adopting sustainable practices. Understanding that sustainable practices not only lessen environmental impact but also promote local economic development can make organizers more inclined to adopt these practices (Ashwin, 2023).

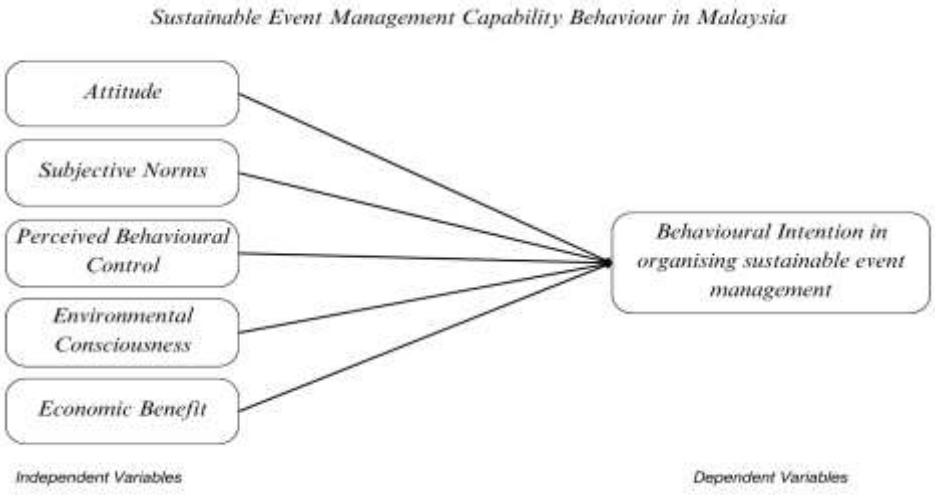
Additionally, there may be a lack of knowledge about how to implement sustainable practices effectively. To effectively address the economic and environmental challenges of sustainable event management, a broader understanding of sustainability is needed. This includes understanding the economic, environmental, and social impacts of events, as well as the role of stakeholders in promoting sustainability. Despite these challenges, there is a growing recognition of the importance of sustainable event management not only as a

social and environmental responsibility but also as a business imperative. These studies collectively suggest that while economic factors can influence the behavior of event managers, a broader understanding of sustainability is needed to effectively address the environmental and social impacts of events. Hence,
H5: Economic Benefit has a significant effect on influencing the behavioral intention in sustainable event management.

3. Theoretical Framework

On this basis, the discussed theoretical argument attempted in this study is expressed in Figure 1 below.

Figure 1: The Framework



4. Conclusion

The project's objective is to develop a comprehensive theoretical framework for understanding the factors that influence event management practitioners' intentions to adopt sustainable practices. This study investigates these factors through a conceptual perspective to address existing research gaps and propose a new theoretical model. By detailing how various elements affect event management professionals' commitment to sustainability, this framework contributes to the broader understanding of sustainable practices in the field. Additionally, the study aims to stimulate further research by encouraging empirical validation of the proposed framework through case studies and quantitative analyses. Future research should delve deeper into the existing literature and use both qualitative and quantitative methods to test and refine the framework. Engaging both practitioners and academics is crucial to gather valuable insights and support for the framework, ensuring its relevance and applicability in real-world scenarios. This approach will help solidify the framework's validity and guide future studies in the domain of sustainable event management.

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Examining Scale Internal Consistency: An Empirical Exploration of Social Media's Impact on SMEs Performance

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Abstract: Small and Medium Enterprises (SMEs) in Malaysia play a vital role in economic development by creating job opportunities and lowering unemployment rates. Numerous studies have been undertaken to improve business performance, with an emphasis on areas such as finance, SME characteristics, and knowledge management. However, in today's technological context, the importance of social media in business, particularly for Malaysian SMEs, should not be underestimated. As a result, the major goal of this study is to assess the internal consistency of the acquired data, facilitating subsequent systematic analysis. In this study, Cronbach's Alpha is used to validate the customized questionnaire. Data were collected from 141 respondents to investigate the effects of compatibility, cost-effectiveness, interaction, and trust on social media usage, as well as its implications for organizational performance. The questionnaire had 36 items and used a 5-point Likert scale to assess internal consistency. Preliminary reliability analysis revealed strong relationships for all variables, demonstrating the instrument's reliability in improving research quality. Furthermore, the study discovered that social media usage had a significant positive influence on SMEs' non-financial performance, notably in terms of cost saving or cost reduction in marketing, enhanced customer service, better customer interactions, and more convenient access to information. Furthermore, compatibility, trust, cost-effectiveness, and interactivity were identified as the main factors influencing social media adoption among SMEs.

Keywords: *Small and Medium Enterprise, Internal Consistency, Social Media, Business Performance, Klang Valley.*

1. Introduction and Background

Survey questionnaires are commonly used in data collection by quantitative researchers to gain information from respondents. As a result, it is critical to evaluate the correctness and reliability of the input before advancing to the next level of analysis. This review method, known as testing the instrument's validity and reliability (Taherdoost & Group, 2017), guarantees that the data obtained is consistent and coherent (Nawi et al., 2020). According to Pallant (2011), researchers should determine whether the scale's items are consistent and assess the same concept. Cronbach's alpha coefficient is a widely used indicator in quantitative research for assessing the construct's internal consistency. This stage is critical for researchers when selecting acceptable instruments or considering developing new ones to correspond with study aims and assure instrument quality (Taherdoost, 2021; Taber, 2018).

Chua et al. (2024) and Said (2018) concurred that reliability testing stands as a pivotal component in assessing test quality, encompassing factors such as reproducibility, consistency, and the consistency of examinees' performance on the test. Taherdoost & Group (2017), on the other hand, underlined the need to investigate the validity of instruments during the exploratory phase, arguing that reliability and validity are inextricably linked. The validity evaluation guarantees that the questions properly measure the target constructs (Field, 2005). As a result, determining validity and reliability is a question of degree rather than binary, since it determines how all test components interact and which factors should be preserved, altered, or removed from the instrument.

2. Literature Review

Social Media Usage

In today's business landscape, small and medium-sized enterprises (SMEs) are increasingly realizing the potential of social media platforms to revolutionize their operations and extend their market reach. As highlighted in a study by Oni (2021), SMEs are adopting social media applications to connect with larger audiences, enhance customer relationships, and retain their clientele. This trend is fueled by the rapid expansion of the internet and the emergence of social media as a pivotal communication channel between

businesses and consumers. With popular platforms like Facebook, Instagram, Twitter, and LinkedIn readily accessible and widely used, SME owners are harnessing these channels to raise brand visibility, advertise their products or services, and interact with their target demographic (Malesev & Cherry, 2021 & Basri & Siam, 2017). This transition towards social media marketing is motivated by its cost-effectiveness and its capacity to tailor advertising efforts to individual preferences.

Numerous companies utilize social media for a variety of purposes, including: 1) engaging with their customer base; 2) actively listening to key stakeholders; 3) providing customer support services; 4) creating valuable content for consumers; and 5) involving consumers in product ideation and development processes (Nilasari, Jaafar & Wahyudi, 2019). Despite the relatively recent surge in social media popularity, businesses have effectively leveraged these platforms to achieve diverse objectives, ranging from long-term goals such as enhancing brand awareness and reputation to more immediate objectives like driving sales (Rust et al., 2021).

Social Media Usage And Business Performance

Business performance is influenced by various factors, with customer orientation being particularly significant and further enhanced by proficient utilization of information technology (Sutrisno et al., 2023). Companies that incorporate social media into their sales strategies aim to enhance communication with both potential and existing customers, thereby potentially improving sales effectiveness (Fraccastoro et al., 2021). Social media platforms provide organizations with tools to support customer orientation efforts, which are crucial for achieving sales performance (Bowen et al., 2021). Information technology is critical to this process because it allows for the collection of consumer data, the comprehension of customer insights, and the facilitation of tailored marketing replies (Payne & Frow, 2005). Furthermore, innovation enhances the effect of customer orientation on SME performance (Domi et al., 2020). Social media platforms improve company performance by supporting customer relationship management (CRM) processes and engaging customers in the value-generation process (Garrido-Moreno et al., 2020). As a technical innovation, social media platforms are critical for SMEs in creating and maintaining customer interactions (Belas, Amoah, Dvorsky, and Suley, 2021), reinforcing the importance of client orientation in driving corporate performance (Neneh, 2018). Given the close ties between entrepreneurs and consumers in small firms, social media platforms are an effective instrument for promoting customer orientation practices (Zontanos & Anderson, 2004).

Factors Influencing Social Media Usage

According to research findings by Odoom, Dorson, and Acheampong (2017), Qalati et al. (2021), and Akbar (2021), the utilization of social media is positively influenced by several factors, including compatibility, trust, cost-effectiveness, and interactivity. These findings are consistent with research that was studied in Malaysia by Ainin et al. (2015), which demonstrated that compatibility, cost-effectiveness and interactivity positively impact Facebook usage, while trust does not. Additionally, Ebrahim (2020) highlighted the significant role of trust in social media, as evidenced by the direct impact of social media marketing activities on brand trust. According to Qalati et al. (2022), although there are several studies on the influence factors of social media usage, there is still a lack of studies about its impact in terms of financial performance. There is also a lack of studies on non-financial performance such as customer loyalty, awareness and brand visibility. Therefore, this study aims to see whether there are significant relationship between compatibility, trust, cost-effectiveness, interactivity, and social media usage and its performance outcomes.

Internal Consistency

Green, Lissitz, and Mulaik (1977) argue that internal consistency is critical for determining the dependability of research instruments because it indicates the degree of interconnection among the items. In contrast, homogeneity refers to a set's unidimensionality. Internal consistency is a required criterion, but it does not ensure homogeneity. According to Jain & Angural (2017), Cronbach's alpha was first proposed by Kuder & Richardson (1937) for dichotomous score data (0 or 1) and was then extended by Cronbach (1951) to accommodate other scoring techniques. Essentially, the reliability of any measurement hinges on its consistency in measuring a concept, with Cronbach's alpha offering a means for researchers to evaluate the strength of data consistency. This assessment is imperative before proceeding to subsequent levels of analysis. According to Hajjar (2018) and Cheung et al. (2023), Cronbach's alpha coefficient assumes that each item has an equal contribution towards their respective constructs and is widely accepted as a measure of construct validity by researchers. Reliability pertains to repeatability, ensuring consistent outcomes in analyses, while

validity focuses on the extent to which a measure accurately captures what it intends to measure, aligning with research objectives. Both concepts are critical in attaining accurate results. Therefore, internal consistency results must exhibit reliability to ensure validity. Sürücü and Maslakçi (2020) define validity as the accuracy of measurement in a quantitative study, while reliability pertains to the consistency of results when the research instrument is repeatedly used in the same context.

Cortina (1993) argues that internal consistency assesses the uniformity of results across various factors within a test. Hence, Cronbach's alpha emerges as the most commonly employed measure of internal consistency, typically calculated as the mean of all possible split-half coefficients. Cronbach's alpha is a widely used measure of scale reliability in research studies. However, recent advancements in statistical methods and research techniques have sparked a novel approach to utilizing Cronbach's alpha in research. Researchers are now exploring the potential of utilizing Cronbach's alpha not only as a measure of scale reliability but also as a tool for identifying and evaluating the underlying factor structure of a set of survey items (Taber,2018). By conducting factor analyses alongside Cronbach's alpha calculations, researchers can gain deeper insights into the dimensionality and validity of their scales (Ayoub et al., 2023). According to Aithal & Aithal (2020), examining the internal consistency of data seeks to determine the dependability of respondents' comments on a research instrument or questionnaire domain, demonstrating tool stability. Cronbach's alpha is used to determine the consistency or dependability of various objects, measures, or ratings. Furthermore, Cronbach's alpha assesses the stability of instruments used to measure study variables, showing the degree of internal consistency. It represents the number of components on the scale and the depth of their interrelationships, with values ranging solely from zero to one. Cronbach's alpha measures the fraction of variability shared by components and is theoretically expressed as:

$$\alpha = \frac{K\ r}{[1+(K-1)\bar{r}\ ]}$$

The average correlation among all factors (r) is calculated by taking the mean of the K (K-1) /2 non-redundant correlation coefficients (i.e., the mean of an upper or lower triangular correlation matrix).

Conversely, Panayides (2013) claimed that the alpha value helps researchers overcome two main difficulties. To begin, he noticed that alpha does not always imply the scale's unidimensionality, since high alpha values can be achieved with multidimensional scales including a significant number of items. Second, he advised against thinking that larger alpha values are necessarily better, as they might be the result of long scales, duplicate objects, or inadequate build coverage. Furthermore, high alpha values may indicate insufficient coverage of the construct, jeopardizing the precision of a major number of individual measurements.

Types of Reliability

Table 1 illustrates the type of analysis for internal reliability:

Table 1: Internal Reliability (Jain & Angural, 2017)

	Types of analysis	Description of analysis
Internal Reliability:	Average inter-item correlation	Mean of all correlations of a correlation construct
	Average item-total correlation	Mean of total correlation of each item
It evaluates the consistency of responses across test items. Dividing into two sections may provide comparable results.	Split-half correlation	Correlation of split-half scores for a construct.
	Cronbach's alpha	Correlation between all potential split-half ratings for a construct

Low and High Value of Cronbach's Alpha (α)

A low Cronbach's alpha value can negatively impact the data's validity, often stemming from insufficient item numbers, partially correlated items, or inconsistencies in the instrument's construction. In such cases, item revision or removal may be necessary. Conversely, an excessively high alpha value suggests redundancy among items, indicating an overlap in the constructs being measured. Additionally, the duration of the test administration can influence the alpha value. One strategy to enhance the alpha value involves adding more related items to assess the same concept, as suggested by Jain & Angural (2017).

The Minimum Sample Size in Calculating Cronbach's Alpha

Gül (2008) recommends a minimum sample size of 30 respondents when the first (largest) eigenvalue from Principal Component Analysis (PCA) exceeds 6.00. However, if the first eigenvalue falls between 3.00 and 6.00, a larger sample size of 100 is suggested. Similarly, Conroy (2016) advises a pilot testing sample of 30 respondents to assess reliability using Cronbach's alpha, particularly when the scale items show strong intercorrelations.

The Rule of Thumb of Reliability

According to Surucu and Maslacki (2020) and Sideridis (2018), in validating Cronbach's alpha, there are several conditions should be considered:

- The item scores should be based on interval data with no range restrictions, without the need to use the K-R 20 calculation.
- Homoscedasticity and the linearity of errors.
- Small measurement errors and corrections for variance and covariance attenuation.
- Similar distributions across all the items.
- Unidimensional.
- Absence of systematic sources of error.
- Items are independent in terms of content.
- Equality of factor loadings across indicators

Taherdoost & Group (2017) state that during the pilot research phase, the reliability result should be at least 0.60 (Straub et al., 2004). Several scholars have proposed four degrees of reliability: excellent (0.90 and above), high (0.70-0.90), moderate (0.50-0.70), and low (0.50 and below) (Hinton et al., 2004). While many writers feel that an alpha value of 0.70 shows good self-consistency, this may not always be true. Another recommendation stated by Said (2018) indicates that Cronbach's alpha score of 0.6 to 0.8 is appropriate. To assess construct validity in an empirical method, item-to-total correlations and inter-item correlations can be explored. According to Cohen (1988), inter-item correlations between 0.10 and 0.29 indicate a weak connection, 0.30 and 0.49 indicate a medium correlation, and 0.50 to 1.00 show a strong correlation.

Furthermore, Robinson (1991) proposes that in an empirical method, if the item-to-total correlation score surpasses 0.50 and the inter-item correlations exceed 0.30, the concept validity is good. Additionally, Poythress, Douglas, Cruise, and Murrie (2006) suggest that to examine the internal consistency dependability of a scale, Nunnally and Bernstein (1994) recommend that a Cronbach's alpha value of 0.70 or above shows good reliability. However, as Taber (2018) points out, having an abnormally high alpha value is not necessarily ideal.

According to Hair et al. (2016), reliability analysis values may be interpreted using the Rule of Thumb, in which the strength association determination are; <0.6 is considered poor, 0.6 to < 0.7 is moderate, 0.7 to < 0.8 is good, 0.8 to < 0.9 considered very good and > 0.9 is excellent.

3. Research Methodology

The quantitative technique was utilized to gather and analyze the data provided by all respondents. The researcher created and finalized the questionnaire before distributing it to Small and Medium Enterprises (SMEs) in Klang Valley, Malaysia.

Population and Sampling

Based on most current statistics from the Department of Statistics, Malaysia (DOSM) (2020), Malaysia's total number of SMEs in 2021 was 1,151,339, which is 97.2 percent across all commercial businesses, over 400,000 (34%) SMEs reported in the Klang Valley alone. Simple random sampling procedures were utilized to elicit responses from respondents. As a result, this study will require 141 respondents as samples.

Research Instrument

In this study, a survey questionnaire comprising 31 questions divided into six sections was employed to examine the relationship between compatibility, trust, cost-effectiveness, interaction, and social media usage. Respondents were given the questionnaires and instructed to read the statements, then select their responses on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The collected data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 26, incorporating both descriptive and inferential analyses. Descriptive analysis was performed to calculate the frequency and percentage of the total population across various demographic groups.

4. Results

Demographic Profile

Table 3 illustrates the demographic characteristics of respondents

Demographic	N	%
Type of business		
Services	29	20.6
Product	112	79.4
Total	**141**	**100**
Type of Company Ownership		
Sole Proprietor	76	53.9
Private Limited Company	52	36.9
Partnership	13	9.2
Total	**141**	**100**
Age of Business		
1-5 years	92	65.2
6-10 years	37	26.2
11-15 years	6	4.3
Above 15 years	6	4.3
Total	**141**	**100**
Number of Employees		
20 or less employees	115	81.6
21-40 employees	8	5.7
41-60 employees	9	6.4
61-80 employees	9	6.4
Total	**141**	**100**
Type of Social Media Usage		
Twitter	12	8.5
Facebook	80	56.7
Instagram	91	64.5

TikTok	86	61
Years of Using Social Media for Business Purposes		
1-5 years	96	68
6-10 years	42	29.9
Above 10 years	3	2.1
Total	**141**	**100**
Location		
Selangor	81	57.4
Federal State of Kuala Lumpur	35	24.8
Federal State of Putrajaya	25	17.8
Total	**141**	**100**

Table 3 shows the characteristics of the participants in the study. Out of the total group (n=141), 29 respondents offer services in their businesses, which is 20.6%, while 112 respondents sell goods, making up 79.4% of the group. The analysis also looks at the type of companies involved. Most respondents are sole proprietors, with 76 participants (53.9%), followed by private limited companies with 52 respondents (36.9%), and partnerships with 13 respondents (9.2%). Additionally, the years in business are examined, with the majority, 92 SME owners (65.2%), having been in business for 1-5 years. There are 37 respondents (26.2%) with 6-10 years of business experience, 6 respondents (4.3%) with 11-15 years of experience, and another 6 (4.3%) with over 15 years of experience. Moreover, the number of employees is considered, with 115 respondents (81.6%) having 20 employees or fewer. Eight respondents (5.7%) have 21-40 employees, 9 respondents (6.4%) have 41-60 employees, and another 9 respondents (6.4%) have between 60-80 employees. Among the 141 respondents, 12 use Twitter as one of their social media platforms, while 80 use Facebook, 91 use Instagram, and 86 use TikTok for their businesses. Most respondents, 96 (68%), have been using social media for their businesses for 1-5 years, while 42 respondents (29.9%) have been using it for 6-10 years, and only 3 SME owners (2.1%) have used social media for over 10 years. The location of the businesses is also taken into account, with 81 SMEs (57.4%) located in Selangor, 35 (24.8%) in the Federal State of Kuala Lumpur, and 25 (17.8%) in the Federal State of Putrajaya.

Assessing The Missing Data

Table 4 offers an examination of the dataset's missing values. The result revealed that there were no missing data for the count or percent. As a result, we may infer that this dataset has no missing values. The third technique for detecting missing values is to do a descriptive analysis of the data. Table 4 further reveals that there are no missing values in this dataset, allowing for additional
research.

Table 4: Assessing the missing data

Constructs	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
Compatibility	141	100%	0	0.00%	141	100%
Trust	141	100%	0	0.00%	141	100%
Cost-effectiveness	141	100%	0	0.00%	141	100%
Interactivity	141	100%	0	0.00%	141	100%
Social Media Usage	141	100%	0	0.00%	141	100%
SMES Performance	141	100%	0	0.00%	141	100%

Reliability Analysis on Constructed Items

Table 5 presents the reliability analysis of the study concept. The reliability technique is employed to determine the relationship between the scores for each item. Using this method, items with high correlation values with

the test index score exhibit high reliability, while items with low correlation values demonstrate low reliability and are removed from the test. Dennis, Chan, and Funk (2006) refer to this concept as the internal consistency approach. According to the table, Cronbach's alpha value ranges from 0.80 to 0.90, indicating a very strong relationship, whereas a value of 0.9 or above signifies excellent correlation, as noted by Hair et al. (2016).

Table 5: The Summary of Reliability Analysis on Constructed Items

Section	Construct	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No. of Item	Strength of association
A	Social Media Usage	0.953	0.954	6	Excellence
B	Compatibility	0.967	0.967	5	Excellence
C	Trust	0.898	0.898	5	Very Good
D	Cost-effectiveness	0.807	0.817	5	Very Good
E	Interactivity	0.898	0.901	5	Very Good
F	SME Performance	0.906	0.908	5	Excellence

5. Conclusion and Discussion

As shown in Table 5, the Cronbach's Alpha value for the 31 elements suggests a strong relationship. The strength of the association finding indicates that the dependent variable is great, but the independent variables only have one item of excellence (compatibility) and the other three (trust, cost-effectiveness, and interaction) are very good. This result demonstrated that the research equipment is suitable and dependable in measuring responses. Based on the stated rule of thumb, the majority of the references agreed that 0.9 suggested a good level of dependability. As a result, it appears that, despite many writers adhering to the rule of thumb that alpha should reach 0.70 for an instrument to have an acceptable level of self-consistency, this study effectively met the reliability cut-off marks.

Conclusion

This article offers a helpful guide for estimating Cronbach's alpha, a commonly used method to measure the internal consistency of research instruments. In quantitative studies, assessing reliability and validity is crucial for researchers to ensure the quality of their study and achieve their research objectives. However, there are various options available for measuring internal consistency, depending on the research instrument used. Therefore, when interpreting the results, researchers should consider the factors that may influence the value of Cronbach's alpha, potentially inflating or decreasing its values.

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Determinants Affecting the Acceptance of Cashless Payment Among SMEs in Malaysia: Proposal of A Conceptual Framework

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Abstract: There is little uncertainty regarding the driving forces behind the adoption of cashless payment by Small and Medium Enterprises (SMEs), a trend expected to persist and exert a significant impact on SMEs in Malaysia. Such developments are facilitated by collaborative efforts, trust, and a societal inclination towards practicality. Despite the growing body of scholarly and practical research on cashless payment, existing guidelines for its adoption, implementation, and integration into business strategies in Malaysia lack comprehensive research support. This study seeks to propose a new acceptance framework to explore the utilization of cashless payment solutions among small business owners in Malaysia to maximize the benefits of the sustainability of their businesses. 100 respondents of SMEs from four regions in Peninsular Malaysia were involved in the interview to collect the data. The findings of this study are instrumental in enhancing the understanding of e-payment adoption within the SME payment system landscape and its effects on business performance. Additionally, the proposed conceptual framework can be used for future research to determine the relationship between factors of cashless payment adoption and SME performance.

Keywords: *Small and Medium Enterprise, Cashless Payment, Business Performance, Malaysia.*

1. Introduction and Background

According to Md. Husin and Haron (2020) that small and Medium Enterprises (SMEs) make significant contributions to the national economy through a variety of means, including providing diverse goods and services, stimulating regional markets and communities, creating job opportunities, promoting market competitiveness, and driving innovation. According to OECD research from 2018, SMEs account for 97% of all enterprises in the majority of ASEAN countries. Notably, SMEs in Malaysia have achieved notable success. According to the Department of Statistics Malaysia (2018) and Hun (2019), SMEs saw strong growth in 2018, accounting for 6.2% of Malaysia's GDP and outpacing the country's overall GDP growth rate of 5.2% over the same year. MSMEs' GDP share climbed from 37.1% to 36.5% in prior years, reaching 38.3% in 2018. In 2021, Malaysia's SMEs boosted their GDP contribution to 1% (Department of Statistics Malaysia, 2022). Given the critical role played by SMEs, this study is driven to investigate their use of cashless payment methods.

According to Chairunnisa, Alfina, and Yasmin (2020), the payment transaction system is simply one of many innovations that are emerging in current society as a result of the fourth industrial revolution's digital transformation. Furthermore, Ekasari, Rosmeli, and Syafri (2020) state that every company or business must develop effective and integrated competitive strategies, as competition plays a critical role in determining a business's success or failure, and consumer satisfaction is dependent on the business strategy used. With the introduction of more effective communication methods like the Internet and e-commerce, information technology has transformed many parts of people's lives, including their purchasing patterns. People's lifestyles are influenced by both technical improvements and their social settings. As a result of increased competition, businesses must constantly prioritize client requirements and wish to provide higher levels of satisfaction than their competitors. Businesses that can recruit a big consumer base and deliver excellence are likely to thrive in this climate (Recker, Bockelmann, & Barthel, 2024).

CPA Australia (2020) found that over 75% of businesses in Malaysia are using mobile wallets for transactions. However, many small business owners don't fully understand the benefits of cashless payments. Bryan Chung FCPA (Aust.), Chairman of CPA Australia Malaysia Division's Digital Transformation Committee, highlighted the importance of educating small business owners about the advantages of cashless payments, especially during the COVID-19 crisis. He mentioned that Malaysia has seen a 13.9% increase in local companies using fintech lending platforms for cashless payments, which is crucial for startups facing challenges due to the pandemic. Chung also noted the government's efforts to promote cashless payments among low- and middle-income

groups. Despite the benefits, implementing cashless payments faces challenges like cyber threats. Internet-related fraud, including telecommunication, e-commerce, and e-financial fraud, is prevalent in Malaysia, mainly due to a lack of digital literacy among small business owners. To address this, there's a need to raise awareness and educate small business owners about the digital economy and cashless payment systems. Therefore, this study aims to gain insight on what are the reasons behind the adoption of cashless payment.

2. Literature Review

Cashless Payment

Cashless payment systems provide substantial benefits to both businesses and the economy. For businesses, the convenience of various payment methods can increase revenue, streamline operations, and reduce costs (Kumari & Khanna, 2017). Additionally, cashless transactions are considered more hygienic, particularly in the food vending sector (Ugwu & Epiahe, 2014). Technologies such as Near Field Communication (NFC) have been shown to reduce queues and the need for cash in high-volume, low-value transactions (Kadir et al., 2015; Kulkarni, 2021). Recent research by Kilay, Simamora, and Putra (2022) indicates a direct correlation between the use of e-payment services and the supply chain performance of micro, small, and medium enterprises in Indonesia.

Additionally, the adoption of e-payment services by micro-entrepreneurs, who make up a significant portion of the SME sector, could improve their financial inclusion (Mohamad & Kassim, 2017). However, despite these benefits, the uptake of cashless payment systems among businesses has been slow. Studies show that cash and cheques still dominate payment settlements, with businesses expressing dissatisfaction with banks' handling of electronic transactions (Srouji, 2020). Moreover, while credit and debit cards account for some retail transactions, only a small percentage of Malaysians own credit cards, indicating untapped potential for cashless systems (Frost & Sullivan, 2017; Surendran, 2017). The deployment of point-of-sale (POS) terminals within small businesses could revolutionize the retail experience in Malaysia, yet little is known about the factors influencing the adoption of cashless systems among businesses in the country. Research in other countries suggests that firm size, innovation in payment solutions, and infrastructure quality are key determinants of adoption (Thomas, Jain & Angus, 2013; Cruz-Jesus, 2019; Abbas, 2017; Kadar et al., 2018). Additionally, adopting an open innovation approach may further enhance business performance (Kilay, Simamora, & Putra, 2022; Rosyihan & Samira, 2017).

The Adoption of Cashless Payment

In today's digital era, the adoption of digital payment systems is imperative. Numerous studies have explored the factors influencing consumer acceptance of these systems. For instance, Ananda et al. (2020) identified awareness, website features, and perceived usefulness as crucial drivers of digital banking adoption among retail consumers. Flavian et al. (2020) examined factors affecting mobile payment intentions, highlighting mindfulness as pivotal alongside perceived ease of use and utility. Karim et al. (2020) revealed that perceived ease of use, privacy and security, and perceived utility positively impact young adults' adoption of e-wallets. Similarly, Lee and Kim (2020) investigated factors influencing consumer preference for internet-only banks, finding that service offerings, trust, convenience, and economic efficiency had positive effects, while security concerns had negative effects. Kar (2020) identified various factors contributing to satisfaction with mobile payment systems, including utility, trust, cost, security, social influence, ease of use, consumer attitude, trustworthiness, dependability, and responsiveness. Junger and Mietzner (2020) discovered that German households with high trust levels, technological proficiency, strong financial literacy, and a preference for transparency are more likely to adopt FinTech solutions. Finally, Padashetty and Kishore (2013) highlighted the roles of perceived ease of use, expressiveness, and trust in the adoption of digital payment solutions.

Saxena, Dhall, and Malik (2021) identified perceived risk as the primary factor influencing customer attitudes toward adopting mobile banking. Similarly, Crabbe et al. (2009) noted that social and cultural factors, such as perceived credibility, favorable environment, perceived elitism, and demographic characteristics, play a role in the decision to adopt mobile banking. Additionally, Shin and Ziderman (2009) examined a comprehensive model of consumer acceptance in mobile payments, highlighting that alongside technology acceptance criteria, user attitudes and intentions are shaped by perceived security and trust. Taheam et al. (2016) conducted a survey in Punjab and found that factors driving young people's acceptance of digital wallets include control and

security, utility and societal influence, and the desire for performance improvement. Rathore (2016) indicated that consumers primarily use digital wallets for convenience and ease of use. Furthermore, Bezhovski (2016) mentioned that perceived security issues, higher costs, limitations in handling large payments, and the early stage of mobile payments are significant barriers to adoption. Singh and Rana (2017) explored how consumer perceptions and demographic characteristics affect the uptake of digital payments, revealing a positive and significant relationship. Finally, Vaidya et al. (2020) conducted a survey in Chandigarh, concluding that demographic factors such as age, occupation, and education significantly influence digital payment knowledge and usage, while gender does not play a substantial role.

The literature review highlights various factors that significantly influence consumer adoption of digital payment methods. While numerous studies have addressed this topic, there remain additional challenges and factors affecting the adoption of cashless payment methods. Therefore, this study aims to identify the specific factors influencing the adoption of cashless payment among SMEs in Malaysia.

3. Research Methodology

A proposed conceptual framework for a cashless payment system is from the data that is being collected. The participants were selected based on the criteria set by SMECorp, as defined at the 14th National SME Development Council Meeting in July 2013. The purposive sampling technique was employed because it allows for a comprehensive understanding of the issue, as recommended by Patton (2015). This method involves selecting participants who best meet the study's objectives based on the researcher's judgment, as suggested by Obilor (2023). It relies on the researcher's discretion to

Choose participants from the study population, emphasizing the importance of their knowledge of the context in the sampling process. This research is conducted in four different four regions in Peninsular Malaysia. A qualitative approach was used by using interviews approach with 100 respondents for each region. The qualitative research interview allows individuals to convey their thoughts, emotions, and opinions in their own words, providing a rich source of data (Wahab & Naim, 2020). Interviews provide researchers with the opportunity to directly interact with participants and delve deeper into their thoughts, beliefs, and experiences (Busetto et al., 2020). The result of the shows several factors can concluded into several themes as shown in the findings.

4. Findings

As previously stated, the goal of this qualitative study is to gain a better understanding of the adoption of cashless systems in Malaysia among SMEs. So, this study investigates the problems or variables that impede the effective implementation of cashless systems, as well as the current potential that might increase the acceptance of this system from the perspective of SMEs as service or product suppliers. Table 1 summarizes numerous aspects that might be determined during data collection.

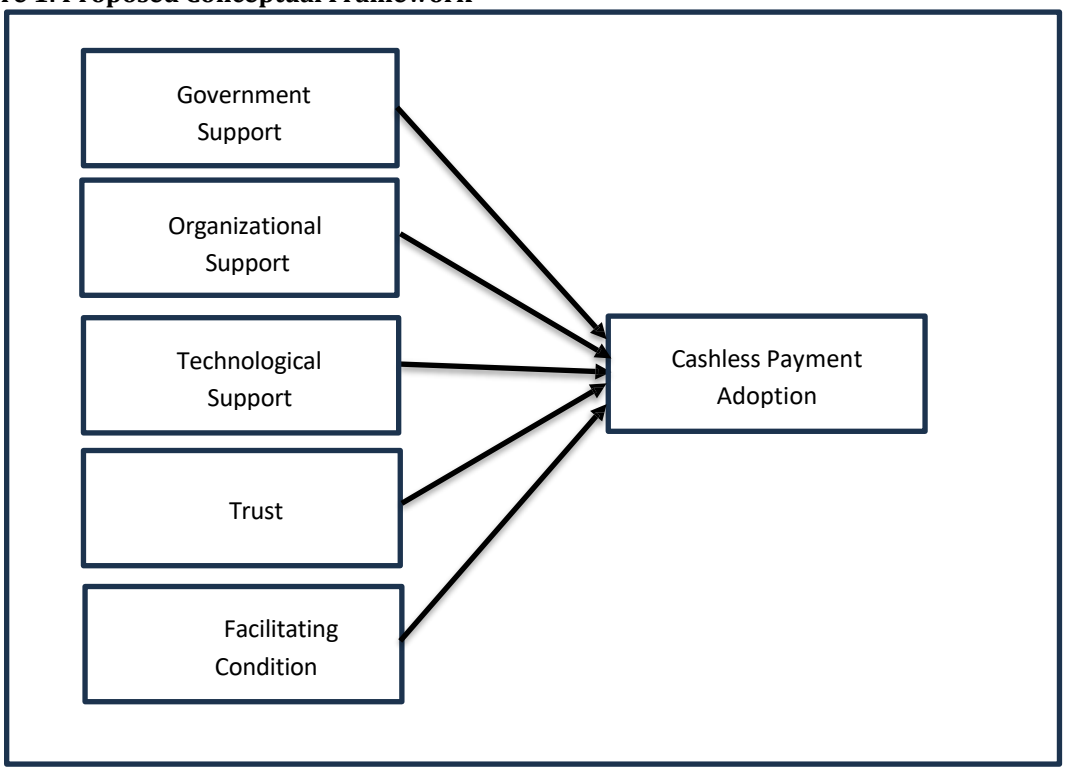
Table 1: Table of Construct

No	Input	Theme
1	Lack of education and training	
	Lack of enforcement from the government or agency	
	Does not provide incentives	Government Support
	No subsidy given on cashless payment	
	Lack of collaboration with government or agency	
	Complicated policy	
2	Lack of Knowledge among business owners	
	Lack of digital awareness	Organizational Support
	SME owners resist to change toward cashless payment	
	Incompetent workforce	

	Employees hard to understand technological change	
4	Features that do not support business nature	
	Features not user-friendly	Technological Support
	Complicated to use	
	The systems are frequently outdated.	
4	Lack of safety measurement	
	Security is not guaranteed	Trust
	Concern about the leakage of data and information.	
	Perceived high risk	
5	Facing line problem	
	Floating transaction	Facilitating Condition
	Hidden charges	
	Countless cashless payment options	
	Lack of features to notify the transaction	

The results reveal several factors contributing to the limited adoption of cashless payment methods among SMEs in Malaysia. These factors have been categorized into five groups: government support, organizational support, technological support, trust, and facilitating conditions. Consequently, a novel conceptual framework has been introduced in Figure 1, outlining the challenges encountered by SMEs in Malaysia. Through examination of this framework, researchers can acquire insights into potential solutions to address these challenges.

Figure 1: Proposed Conceptual Framework



Government support plays a crucial role in driving the adoption of cashless payments (Ng et al., 2021). When governments actively support and promote cashless payment solutions, it creates an environment that

encourages individuals and businesses to transition away from traditional cash transactions (Allam, 2020). This support can take various forms, such as implementing policies that incentivize the use of cashless payments, investing in the development of secure and reliable electronic payment infrastructure, and working with financial institutions to ensure widespread access to cashless payment methods (Ng et al., 2021, Pazarbasioglu et al., 2020, and Srouji, 2020). Additionally, government support can also include public awareness campaigns to educate the population about the benefits and convenience of cashless payments, as well as initiatives to address any concerns or barriers that may exist (Putrevu & Mertzanis, 2023). By providing support and creating an enabling environment, governments can help overcome challenges like resistance to change, lack of awareness, and concerns about security and privacy (Glyptis et al., 2020).

Support from organizations is a critical factor in the acceptance of cashless payment systems. By facilitating and endorsing the use of digital payment methods, organizations significantly influence consumer adoption rates (Yang et al., 2021). Research demonstrates the positive impact of organizational support on the adoption of cashless payment systems. For instance, Moghavvemi et al. (2021) discovered a notable association between organizational support and individuals' inclination to use digital payment services. Their findings indicate that active promotion and support from organizations lead to higher adoption and utilization of cashless payment services. Additionally, Dahlberg et al. (2015) underscored the influence of social and cultural factors on the adoption of digital payments. Their study revealed that organizational support, manifested through training and educational initiatives, can effectively address concerns and barriers individuals may encounter when considering the use of digital payment services.

Inadequate technological support can impede the adoption of cashless payment methods. Without sufficient technological infrastructure, such as reliable internet connectivity and robust payment systems, individuals and businesses may encounter challenges in conducting or accepting cashless transactions (Najib & Fahma, 2020). This lack of technological support may pose entry barriers for cashless payment solutions, especially in developing regions or rural areas with limited infrastructure development (Amankwah-Amoah, 2019). Consequently, individuals in these areas may have restricted access to cashless payment options, compelling them to rely on traditional cash-based transactions. Moreover, this insufficiency in technological support not only hampers the uptake of cashless payments but also hinders the overall progress and advancement of digital economies (Afaha, 2019). Additionally, Krishna et al. (2023) highlighted in their study that inadequate technological support could raise concerns about the security and reliability of cashless payment systems. These concerns may give rise to skepticism among prospective users, resulting in a hesitancy to adopt cashless payment modalities.

Facilitating conditions play a pivotal role in shaping the adoption of cashless payment systems. These factors encompass the provision of resources, infrastructure, and assistance essential for individuals to effectively utilize cashless payment methods (Rahman, 2022). For instance, the presence of a dependable and easily accessible digital transaction network, including internet connectivity and mobile phone coverage, serves as a significant enabling factor that can incentivize individuals to embrace cashless payment systems (Balakrishnan, 2021). Moreover, the availability of user-friendly and secure payment platforms, such as mobile wallet applications or online banking services, can further facilitate the uptake of cashless payment (Singh, 2019).
Therefore, all these factors (government support, organizational support, technological support, trust, and facilitating condition) in Figure 1, were determined as factors to adopt cashless payment.

5. Conclusion

The proposed conceptual framework for the factors influencing the adoption of cashless payment provides a comprehensive understanding of the key determinants in this evolving field. By reviewing collecting information and data from 100 respondents, this framework identifies government support, organizational support, technological support, trust, and facilitating conditions as factors that play crucial roles in the decision-making process of SME when adopting cashless payment methods The framework also highlights the need for collaborative efforts between consumers, merchants, and policymakers to promote widespread adoption of cashless payment solutions. This conceptual framework serves as a valuable tool for future research in the area of cashless payment adoption. By utilizing this framework, researchers can further investigate the specific impacts of each determinant on adoption rates and explore additional factors that may influence individuals'

decisions.

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Unveiling Counter-Narratives: The Impact of Citizen Journalism via Social Media on the Israel-Palestine Conflict

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Abstract: The Israel-Palestine conflict has traditionally been portrayed by mainstream media through dominant narratives that often align with specific viewpoints and agendas. In this context, the rise of citizen journalism has introduced both challenges and opportunities by providing alternative perspectives and counter-narratives to mainstream representations. However, the precise impact and role of citizen journalism in shaping these counter-narratives during the Israel-Palestine confrontations remain underexplored and require further investigation. Therefore, this study aims to examine how citizen journalism is utilized to offer alternative perspectives on the mainstream media's coverage of the Israel-Palestine conflict and to influence public perception of products and services associated with Israel. The study finds that social media has amplified the reach of citizen journalism, serving as a platform for digital activism among Palestinians, and providing alternative narratives to those presented by mainstream media. This has enabled Palestinians to garner support from international allies, condemn the violence committed by Israeli military forces, and contribute to Israel's gradual loss in the battle of public opinion, thereby limiting the effectiveness of Israeli propaganda in both mainstream and new media.

Keywords: *Counter-Narrative, Social media, Israel-Palestine Conflict*

1. Introduction

Technological advancements have drastically reshaped lifestyles, revolutionizing communication and granting effortless access to vast information. The creation and enhancement of various technologies have undoubtedly introduced a broad spectrum of benefits and opportunities in our rapidly advancing modern society. The advent of the Internet and digital platforms has particularly transformed conventional systems, especially within the media industry, altering how information is disseminated to the public. Allan (2013) emphasizes the participatory aspect of this journalism, which contrasts with the traditional, top-down approach typical of mainstream journalism.

Citizen journalism is described as the gathering, writing, editing, production, and distribution of news and information by people not trained as professional journalists, often to provide an alternative to the mainstream news agenda (Goode, 2009). Mainstream news media are often governed by entities with specific agendas and interests, which can result in selective reporting and controlled media framing. Citizen journalism, however, has the potential to uncover hidden truths, providing a platform for oppressed individuals to voice their realities. Citizen journalism has been crucial in delivering unfiltered, on-the-ground observations directly from the conflict zones. By utilizing social media and digital platforms, ordinary individuals take on the role of citizen journalists, offering immediate and personal accounts that often contrast with mainstream media narratives. Thus, this study seeks to explore how citizen journalism is utilized to offer alternative perspectives to mainstream media coverage of the Israel-Palestine conflict and its significant impact on public perception.

2. Citizen Journalism in the Modern World

The relationship between traditional journalism and citizen journalism is intricate and multifaceted. While traditional journalism originates from established news organizations and adheres to established editorial practices, citizen journalism has emerged as a complementary—and at times disruptive—force within the media landscape. Citizen journalism has always existed alongside traditional journalism practices. While pinpointing the exact inception of citizen journalism is challenging, it is more meaningful to examine the events that contributed to its rise. The emergence of citizen journalism is linked to the increasing interaction between

journalists and the general public, providing ordinary individuals with the opportunity to communicate outside the traditional constraints of time and place (Mutsvairo & Salgado, 2020).

The evolution of citizen journalism has been a dynamic process that has fundamentally transformed traditional journalism, marked by significant milestones over the years. One early example is cited by Allan (2013), who notes that in 1963, Abraham Zapruder unintentionally became a citizen journalist when he captured the assassination of John F. Kennedy on his camera. Though not intentional reporting, this incident highlighted the potential for ordinary people to document historic events, laying the groundwork for the rise of citizen journalism. The term "citizen journalism" gained prominence following the 9/11 attacks in the United States in 2001. It later became more apparent during the 2004 Asian tsunami, as photographs and videos personally blogged by travellers gained widespread attention (Jurat, 2013).

The rise of citizen journalism paralleled technological advancements in the last decade of the twentieth century, which revolutionized how information is disseminated, particularly due to the rapid growth of the Internet and social media. Technology, including smartphones and social media platforms, played a critical role in this transformation, enabling anyone with a phone or internet connection to share stories. Ordinary individuals can use their phones to capture and document events as they happen and immediately share these stories through social media. The unrestricted access to social media tools allows virtually anyone to quickly disseminate information, news, or opinions without delay, often accompanied by photos and video evidence.

Additionally, with the capabilities of social media, this approach empowers everyday people to engage in shaping and spreading news narratives, ensuring that a wider range of voices and perspectives are represented in the media. This, in turn, fosters a more inclusive and democratic media environment. Furthermore, citizen journalism addresses the issue of trustworthiness in news distribution, particularly in authoritarian regimes, by enhancing public access to reliable and credible sources of information, thereby promoting engagement and reinforcing concepts of independence and reliability. As a result, citizen journalism not only democratizes content distribution but also bolsters the trustworthiness and dependability of shared information.

Moreover, citizen journalism has the potential to influence the agendas of traditional media and shape government policy in democratic countries (Khan et al., 2022). It encourages public participation and discourse, shaping the topics and narratives that gain prominence in mainstream media. This influence has been particularly evident in addressing the credibility gap and public skepticism towards mainstream news, especially during major events like the COVID-19 pandemic, within the context of crisis management and risk communication (Sheen et al., 2021). In Malaysia, for instance, the government has integrated both mainstream journalism and citizen journalism to disseminate information and policies related to COVID-19. News practitioners, health experts, and social media influencers have collaborated to educate and relay information to the public from various perspectives. By providing alternative sources of information and a broader array of viewpoints, citizen journalism reinforces the credibility of news, contributing significantly to a more informed and empowered public, thus helping the government build public trust in managing the crisis.

While citizen journalism amplifies voices often unheard by mainstream media, it is also met with skepticism by professional journalists due to its lack of validation processes and perceived lack of neutrality. Mahamed (2022) notes that one of the primary concerns with citizen journalism is the lack of training and resources available to citizen journalists. Unlike their professional counterparts, citizen journalists may lack the expertise and resources needed to report accurately and objectively. This deficiency can lead to the spread of misinformation and fake news, with significant consequences for both individuals and society. Another issue is the lack of accountability and transparency. Without a formal organization or editorial process, citizen journalists may not be held to the same standards of accuracy and ethics as professional journalists, potentially resulting in biased reporting or the dissemination of rumors and unverified information.

Additionally, concerns about the credibility of citizen journalism persist. Some view citizen journalists as less trustworthy than professional journalists, which can undermine the overall credibility of citizen journalism. Research indicates that media users have different expectations of professional journalism and place higher importance on the roles of professional journalists compared to non-professional citizen journalists. Although citizen journalism is widely recognized and influential, it does not replace traditional journalism but rather

complements it in several ways. Its immediacy in capturing events and presenting diverse perspectives has significantly expanded the scope of journalism. During major crises such as natural disasters, citizen journalists on social media provide instant updates, thereby supplementing the coverage offered by established news outlets.

3. The Emergence of Citizen Journalism in the Ongoing Israel-Palestine Conflict

The Israel-Palestine conflict traces its roots back to the late 19th century, a period marked by the Zionist movement's efforts to establish a Jewish homeland in Palestine, then under Ottoman rule. This territory, traditionally regarded by Jews as the Land of Israel, became the focus of increased Jewish migration, particularly after the Balfour Declaration of 1917, which endorsed the establishment of a national home for the Jewish people in Palestine. Following World War II and the Holocaust, international advocacy for the creation of a Jewish state intensified, leading to the founding of Israel in 1948. This event catalyzed a protracted conflict between Israel and the Palestinian population, marked by the displacement of hundreds of thousands of Palestinians, a consequence of the war that followed Israel's establishment (United Nations, 2023).

Palestinians seek to establish an independent state within the boundaries of historic Palestine. However, Israeli control over the West Bank, the blockade of the Gaza Strip, and internal political divisions within Palestine continue to impede this objective. Despite numerous peace negotiations, a sustainable peace agreement remains elusive. The conflict has been characterized by significant violence, involving Palestinian militant activities and resistance movements, as well as Israeli military actions. Key issues such as Israeli settlements in the West Bank, the status of Jerusalem, and the future of Palestinian refugees have complicated international mediation efforts, particularly those led by the United States (United Nations, 2023).

Central to the conflict are territorial disputes, security concerns, and the pursuit of self-determination. Israeli control over Palestinian territories, especially Gaza, has had far-reaching impacts across several domains, including healthcare, food security, mobility, and media. The Israeli blockade has severely restricted access to medical supplies and other essential resources for Gazans, negatively impacting their health and overall well-being. Additionally, limitations on mobility have disrupted daily life, economic opportunities, and access to critical services in Gaza. The control exerted by Israel over Gaza has also shaped the flow of information and the narratives presented to the global public. Both Israel and Palestine have sought to sway international opinion through extensive media coverage. Social media platforms have emerged as powerful tools in this context, facilitating the spread of alternative narratives and diverse perspectives on the conflict. This development has elevated the role of citizen journalism in the ongoing battle to shape public perception and influence global discourse

Genesis of Citizen Journalism and Social Media Role in the Israel-Palestine Conflict

Debates have arisen regarding the role of citizen journalism and the dissemination of information through social media platforms. Citizen journalism has played a crucial role in deepening the understanding of the Israel-Palestine conflict by offering dissenting perspectives and challenging dominant narratives. The advent of social media has empowered users to document events, share personal experiences, and engage in public discourse. For Palestinians, social media has become a battleground to showcase their resistance against Israel's suppression and occupation, revealing aspects of the conflict that mainstream media may overlook and countering Israeli narratives.

Research has demonstrated the impact of social media on conflict coverage, the polarization of public discourse, and the role of suspicion and distrust in shaping media narratives. Furthermore, investigations into war and peace journalism perspectives have highlighted the influence these approaches have on the framing and portrayal of international conflicts, including the Israel-Palestine situation (Bhowmik & Fisher, 2023). Yarchi and Ayalon (2020) explored the pivotal narratives in the Israel-Palestine conflict, emphasizing that modern conflicts involve a struggle to control the narratives conveyed, particularly within the media sphere. They identified a common pattern in how political entities, both state and non-state actors, strive to position themselves as victims, assign blame to the opposing side, and propose their solutions. However, these narratives diverge depending on specific events and cultural contexts.

The Israeli narrative, for instance, focuses on self-defense, portraying Israelis as victims and justifying their actions as necessary responses to Palestinian terrorism. This narrative underscores Israel's desire for peace, its efforts to prevent bloodshed, and its defense against global terrorism, thereby resonating with concerns about terrorism and the potential loss of national identity, particularly in light of recent waves of immigration. Conversely, the Palestinian narrative, particularly as expressed by Hamas, centers on the liberation struggle, aiming to highlight the plight of Palestinians living under Israeli occupation and to garner international support. This narrative depicts the conflict as a fight for freedom and justice, portraying Palestinians as victims of oppression and territorial control while rationalizing their resistance as a legitimate response to Israeli aggression.

With the advent of the Internet, Palestinians have been able to connect regardless of geographic location—whether in Israel, the occupied territories, refugee camps in Lebanon, or the diaspora. Online Palestinian political activism has been facilitated by the convergence of physical and virtual spaces, with participatory online media, social media, and geospatial data (Foursquare) playing key roles. Palestinians have leveraged the Internet and social media to counter Israeli government oppression, participating as citizen journalists to provide alternative information and truths that challenge mainstream media portrayals (Tawil-Souri & Aouragh, 2021).

Social media has significantly empowered the Palestinian people to share their stories, advocate for their cause, and counter mainstream narratives. Palestinian residents have used social media to coordinate political and social gatherings, mobilize public sentiment, and share news and updates related to the Palestinian cause. Social networking sites have also helped to overcome communication barriers among Palestinians, allowing them to share and exchange information. During Israeli attacks on Gaza, social media platforms were utilized for real-time reporting and the rapid dissemination of breaking news. According to the "2021 Social Networking Report," Facebook was the most popular social networking platform among the Palestinian community, with 95.16% of users active on the site. WhatsApp followed with 81.5%, Instagram with 63.28%, TikTok with 27.70%, and Twitter with 26.14%. However, the Ipoke report noted that approximately 6.9% of Palestinian users were detained by Israeli authorities due to their social media activity, with 6.1% detained specifically because of the content they shared (Ali, 2022).

In 2023, an armed conflict between Israel and Hamas in the Gaza Strip has persisted for more than two months since October 7th. The death toll has escalated dramatically due to continuous aerial bombardments and violence by Israeli military forces against Gaza's civilian population. As of December 15th, Al-Jazeera (2023) reported that at least 18,787 Gazans have been killed, including 7,729 children and 5,153 women. The Israeli military has been accused of repeatedly violating international humanitarian law by targeting civilian infrastructure such as homes, schools, hospitals, and places of worship, as well as attacking medical staff and journalists, who are protected under international law while depriving the area of essential services like medical facilities, electricity, and water.

The Impact of Citizen Journalism on the World's Perception

Citizen journalism has been instrumental in creating more balanced media coverage for Palestinians. It enables them to connect and share information and news about their situation and the resistance movements taking place. This form of journalism significantly influences the Palestinian community, shaping their thoughts and behaviors. With restrictions on certain news media platforms regarding Palestinian content, citizen journalism through social media has become highly effective in spreading awareness about the dire situation in Palestine and in garnering international support. The coverage provided by citizen journalists not only shapes Palestinian attitudes but also fosters a strong sense of national identity and ethnic solidarity.

New media channels have a profound impact on social shaping and cultural interactions, continuously engaging with contentious political issues. The Israeli-Palestinian conflict has become a central focus for the public, shaped by how news and stories are selected and presented on these platforms. This reshapes Palestinian consciousness about the ongoing conflict, whether in the Gaza Strip or occupied Palestinian territories like the West Bank (Horoub, 2023). In the past, most mainstream media outlets only published content from the Israeli perspective, often labelling Hamas as a terrorist group. However, during the latest 2023 war, these outlets began to report more objectively, synchronizing with new media content shared by ordinary people. Citizen

journalism and social media have significantly influenced public opinion during this war, leading many mainstream media outlets to adopt more balanced reporting and publish Palestine-related content. This has helped connect Palestinians and rally international support, with many concluding that Israel has lost the battle for public opinion, as shown in Figure 1.

Figure 1: News Headlines on the Mainstream Media Framing on the Israel-Palestine Conflict



Citizen journalism has also contributed to significant global activism, with Palestinians and their international allies condemning and urging Israel to stop the oppression and violence against Palestinian civilians and to restore their rights. Many of the war's victims are vulnerable individuals, including children, women, and the elderly. Since the emergence of the Israel-Palestine conflict, there have been multiple rallies and demonstrations organized by international supporters, individuals, and institutions.

Figure 2: Global Demonstrations in Response to the Israel-Palestine Conflict by ACLED

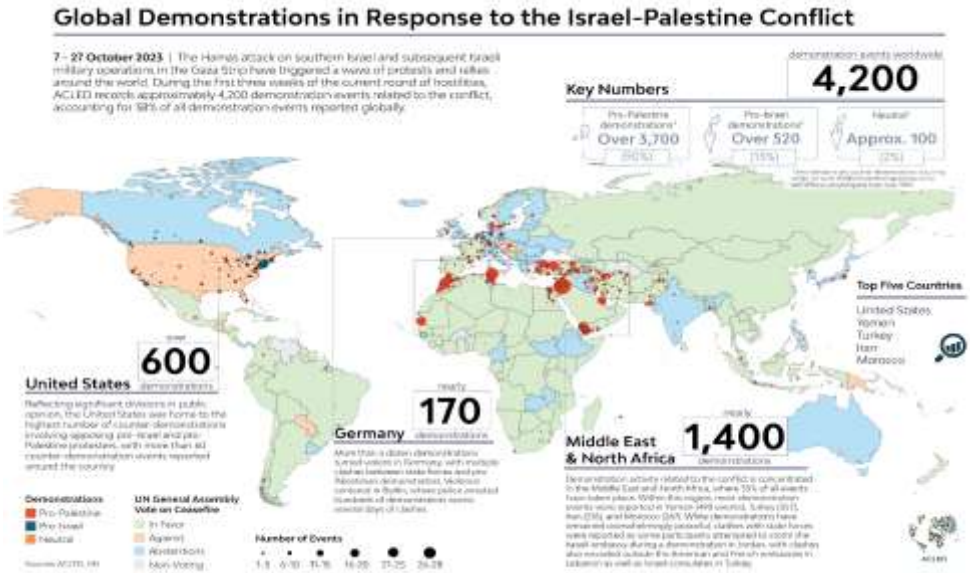


Figure 2, an illustration by The Armed Conflict Location & Event Data Project (ACLED), shows that as of November 7th, approximately 4,200 protest and rally events related to the 2023 Israel-Palestine Conflict have been held in nearly 100 countries and territories, accounting for all global demonstration events. Of these, 90%—over 3,700 demonstrations—have been pro-Palestinian, while there have been over 520 pro-Israel demonstrations and approximately 100 neutral demonstrations. Additionally, activism has extended to economic actions, with movements urging boycotts as a form of protest, fuelling the Boycott, Divestment, and Sanctions (BDS) movement established in 2015 by a coalition of Palestinian civil society groups (Chughtai et al., 2023). Many brands have been severely impacted by these boycotts, leading to the closure of brand outlets in certain countries, and negatively affecting stock prices and corporate images. A list of brands boycotted by the BDS movement is shown in Figure 3.

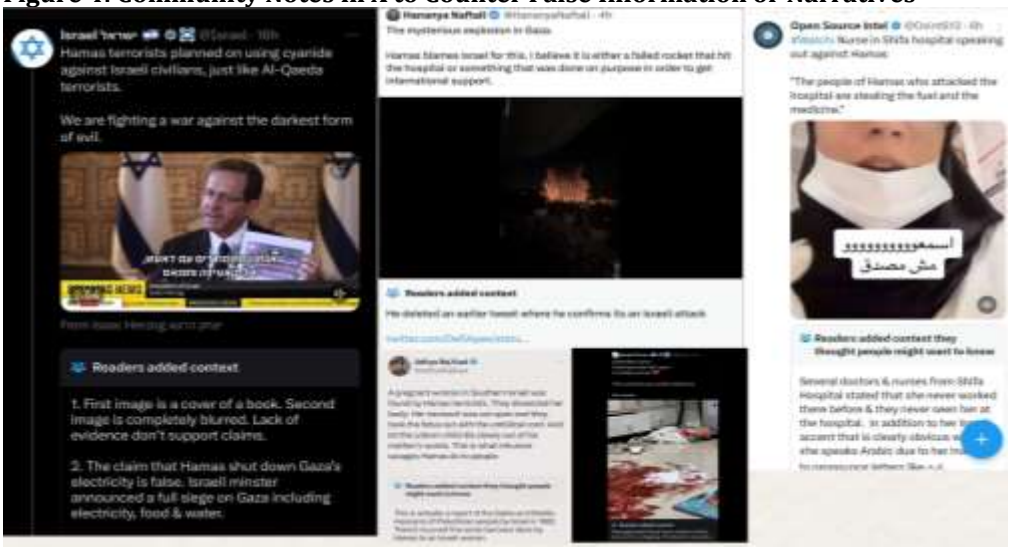
Digital activism has also gained momentum through online campaigns, leveraging social media features such as retweets, sharing updates across platforms, and utilizing hashtags to increase visibility. In response, Israel has intensified its social media campaigns to propagate its narrative. However, citizen journalism helps counter this by providing alternative perspectives and factual truths to challenge Israeli propaganda. Social media features, such as live vlogging, have been instrumental in the counter-narrative movement, allowing real-time coverage of events. Throughout the prolonged conflict, a significant amount of disinformation and fake news has circulated on social media platforms, manipulated by various actors to spread propaganda and influence public opinion. In response, X (formerly known as Twitter) has introduced a new feature called Community Notes to counter fake information.

Figure 3: List of Brands Boycotted by the BDS Movement



Community Notes is a collaborative tool that allows users to add helpful context to potentially misleading posts, with contributions from anyone on X. Supporters of the Israel Defense Forces (IDF) and their allies have frequently used social media to share content to win the narrative battle, often posting propaganda videos, images, and statements that include misleading or fake information. Citizens have used Community Notes to correct and counter these false narratives by providing more accurate information along with evidence. For example, a post by Jim Ferguson claimed that Hamas soldiers were using U.S. weapons "left behind in Afghanistan to attack Israel," but this was refuted by Community Notes, which clarified that the image was an old photo of Taliban soldiers from 2021 (Dixit, 2023). Figure 4 provides examples of how Community Notes on X has been used to counter false information or narratives shared on the platform.

Figure 4: Community Notes in X to Counter False Information or Narratives



However, the use of social media by Palestinians has encountered significant challenges and restrictions, including surveillance and detention by Israeli authorities based on social media activity. During the 2021 Gaza War, Facebook, Instagram, and other platforms faced accusations of censorship for allegedly blocking content related to the conflict and suspending Palestinian accounts (Culliford, 2021). This conflict, which resulted in the deaths of 256 Palestinians, including 66 children, led to claims that social media companies were suppressing content about the Palestinian cause.

In the 2023 conflict, there was widespread outrage and dissatisfaction over the perceived uneven censorship of pro-Palestinian content on platforms such as Instagram and Facebook. Meta, the parent company of these platforms, denied the accusations, attributing the issues to potential system glitches due to the high volume of posts related to the conflict. However, investigations into Meta's censorship during Israel's 2021 assault on Gaza suggested otherwise. Recent examples have highlighted ongoing problems with Meta's algorithmic moderation. For instance, WhatsApp, also owned by Meta, produced images of children with guns when the word "Palestine" was entered, and Instagram's automatic translation mislabelled Palestinian profiles as "terrorists" (Paul, 2023). Prominent Palestinian activists have recently reported that their accounts and content have been restricted.

Despite these challenges, citizen journalism through social media has played a crucial role in helping Palestinians connect and raise global awareness of their suffering. Over the years, this has garnered significant attention and support, leading to a gradual shift in opinion in Western countries regarding the ongoing conflict between Israel and Palestine. This shift has been facilitated by the collaboration between mainstream journalism and citizen journalism, along with the integration of various communication systems.

4. Conclusion

The Israel-Palestine conflict marked by profound humanitarian crises, political instability, economic disruptions, and regional tensions, has long been a focal point of global attention. Traditional media have often depicted the conflict through narratives shaped by specific viewpoints, which sometimes reflect the political agendas of powerful entities. However, the rise of citizen journalism, particularly through social media, has introduced a new dimension to the portrayal of the conflict by offering alternative perspectives and counter-narratives that challenge mainstream media representations.

Citizen journalism, often referred to as participatory journalism, empowers ordinary individuals to engage in news gathering and dissemination, thus democratizing the media landscape. In the context of the Israel-Palestine conflict, Palestinian citizens have utilized social media as a platform for digital activism, offering insights and narratives that are often overshadowed or ignored by mainstream media outlets. This grassroots form of journalism has been instrumental in mobilizing international support for the Palestinian cause, drawing attention to the hardships faced by Palestinians under Israeli military actions, and gradually shifting global opinion.

The 2023 conflict saw a resurgence of similar issues, with social media users expressing outrage over perceived uneven censorship of pro-Palestinian content. Meta's platforms were again at the center of controversy, with reports of Palestinian activists' accounts and content being limited. Additionally, problematic algorithmic moderation surfaced, such as WhatsApp generating inappropriate images when prompted with the word "Palestine" and Instagram's automatic translation mistakenly labelling Palestinian profiles as "terrorists." Despite these challenges, citizen journalism via social media has remained a vital tool for Palestinians, helping them connect with global audiences and sustain international attention and support for their cause.

The effectiveness of boycotts against Israeli products or services affiliated with Israel as a form of protest has also been a topic of discussion. The potential impacts of such boycotts include economic consequences, where the revenue of Israeli companies could be adversely affected, particularly if the boycott is widespread and sustained. Politically, boycotts can serve as a form of protest against Israeli policies, raising awareness and pressuring policymakers. Socially, boycotts can mobilize support for the Palestinian cause and foster solidarity, while also sparking dialogue and debate on the broader issues surrounding the conflict. However, boycotts may

also lead to counter-reactions from Israeli authorities or supporters, who may attempt to discredit the boycott movement or retaliate against its supporters.

The Israel-Palestine conflict continues to have far-reaching consequences, affecting not only the immediate parties involved but also shaping the political, economic, and social landscape of the Middle East. Citizen journalism has played a transformative role in this context, revolutionizing the way information is communicated and enabling alternative narratives to reach global audiences. While challenges such as censorship and algorithmic biases remain, the impact of citizen journalism and social media in mobilizing international support for the Palestinian cause cannot be underestimated.

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Factors Influencing Automotive Lubricant Consumer Purchasing Behavior: A Conceptual Model

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Abstract: The automotive industry's rapid expansion and rising consumer appetite for automobiles have created an unprecedented demand for automotive lubricants. This surge in demand reflects lubricants' essential role in ensuring optimal performance, longevity, and efficiency of automotive engines and mechanical components. In the present day, consumers exhibit increased precision and selectivity in their purchasing behavior, underscoring the necessity for careful deliberation before making a purchase decision. Given the diverse range of products available, it is essential to understand consumer preferences to ensure that the selection is aligned with market demands and expectations. Thus, this paper aims to develop a conceptual model for automotive lubricant purchase behavior based on the Theory of Consumption Values (TCV), which are divided into five parts: functional value, emotional value, social value, and epistemic value. The consumption value theory, applicable across diverse goods and services, emerges as a valuable framework. Its versatility enables a comprehensive understanding of consumer preferences and behaviors across various markets, facilitating informed decision-making for businesses and policymakers. Through this conceptual model, the paper endeavors to provide insights into the complex interplay of value perception and provide insights into the drivers behind consumers' choices regarding automotive lubricants.

Keywords: *Theory of Consumption Values (TCV), Automotive Lubricant*

1. Introduction and Background

In this era of economic advancement, top-tier products can address nearly every aspect of an individual's life and catalyze various societal transformations. With the rapid economic growth in Asia, every industry faces a pressing need for enhanced logistics and supply opportunities (Khan et al., 2019). This heightened demand stems from the necessity for improved logistic options, particularly in the automotive sector (Kumar et al., 2022). Automotive has become indispensable for Malaysians, given their role in facilitating transportation, especially considering Malaysia's ongoing development of logistical and transportation infrastructure supported by public transportation systems (Jeevan et al., 2023; Yusoff et al., 2021).

In February 2020, Malaysia introduced its National Automotive Policy 2020 (NAP 2020) indicating to propel the country toward becoming a leading hub for automotive manufacturing, engineering, and technology in the region (Hamzah et al., 2022; Iskandar & Ariffin, 2019). This strategic initiative by the Malaysian government is designed to enhance technological competitiveness in manufacturing and expand employment opportunities for Malaysians (Yean, 2021). NAP 2020 consists of three main thrusts, three strategies, and seven roadmaps or blueprints, which will be executed until 2030.

These roadmaps encompass:

Table 1: NAP 2020 Roadmaps

No	Name
1.	National Roadmap for Automotive & Mobility Value Chain (NRAMVC)
2.	National Roadmap for Automotive & Mobility Technology (NRAMT)
3.	National Roadmap for Automotive & Mobility Talent (NRAMTa)
4.	National Roadmap for Automotive Aftermarket (NRAA)
5.	National Blueprint for Automotive Mobility as a Service (NBAMaaS)
6.	National Blueprint for Automotive Robotics (NBAR)
7.	National Blueprint for Automotive Internet of Things (NBAIoT)

Consequently, with the increasing reliance on cars in Malaysia, (Tan, 2022) There arises a significant concern regarding the demand for automotive lubricants (Saidon et al., 2023). These lubricants are essential for

maintaining the functionality of automotive vehicles (Denton, 2020). Automotive lubricants, derived from complex mixtures of base oils and additives, have undergone substantial technological advancements over the years, driven by developments in combustion engines, petroleum refining, environmental regulations, and marketing trends (Abdellatief et al., 2023).

Consumer consumption values directly relate to the products or services being considered and to the products' perceived utility. Hence, comprehending consumer behavior holds significant importance, particularly considering the increased demand for automobiles spurred by NAP 2020 (Iskandar & Ariffin, 2019). This is not merely a trivial matter but an opportunity for companies to boost sales and gain a competitive edge. The potential expansion for businesses within the industry is fuelled by the escalating demand for high-quality, reliable products that meet customer needs. While previous studies have enhanced our understanding, their limitations should be acknowledged. Firstly, many of these studies still need to systematically survey perceived values. Instead, they have focused on a limited set of value components while overlooking equally crucial others. Secondly, due to the incomplete selection of value constructs, the existing literature needs to catch up on opportunities to comprehend the relative strengths of different perceived values in shaping consumer behavior. Thirdly, most prior studies have been restricted to descriptive or conceptual discussions and modelling. The current research model is grounded in the original theory of consumption values developed by Sheth et al. (1991), which identifies five critical categories of consumption values: functional value (related to attributes, physical performance, and utility), social value (related to symbolism and group membership), emotional value (related to affective responses), epistemic value (related to curiosity, novelty, and knowledge), and conditional value (related to specific situations

2. Literature Review

Sheth et al. (1991) have introduced a theory focusing on consumer intentions regarding purchasing decisions for goods or services. This theory aims to elucidate why consumers decide to purchase or abstain from purchasing (or using) a particular product and why they prefer one product over another. These consumer intentions stem from various values, including functional value, social value, emotional value, conditional value, and epistemic value. Given the diversity in consumer behaviors, models of purchase decision-making behaviors are customized by different individuals.

Functional Value: Functional value serves as the primary driver influencing consumer choices and is intertwined with practical and physical factors such as reliability, stability, and the product's pricing (Sheth et al., 1991). In alternative research, functional values convey the product's or brand's practical advantages (Carlson et al., 2019). Recent research indicates that functional value can be dissected into two distinct factors: quality value and price value. Quality value pertains to assessing product attributes, such as consistent quality and texture(Tiwari et al., 2022). On the other hand, price value involves the consideration of internal and external reference prices that customers evaluate during the purchase decision-making process (Wei et al., 2020). Within the realm of automotive lubricant products, functional value is considered the primary determinant in consumer purchase choices (Duraisamy, 2022). Brands of automotive lubricant products that excel in reliability, stability, and affordability tend to attract consumer interest due to their functional attribute.

Social Value: Social value refers to the perceived benefit obtained from being associated with one or more particular social groups. (Sheth et al., 1991). An alternative acquires social value through a combination of positive or negative stereotyped demographics, socioeconomic, and cultural-ethnic groups (Gleny & Bernardo, 2023). The concept posits that products extend beyond functional value; they also provide symbolic or social value (Koay & Leong, 2023). Consumers may perceive that certain behaviors are favored by family, friends, colleagues, and others, leading them to be influenced by these beliefs (Rana et al., 2024). From these points, social value in this study will be defined by the impact of one's close social circle and personal social identity, considering the diverse characteristics and options of the product. This value is essential for gaining a deeper comprehension of consumer engagement.

Emotional Value: Emotional value refers to the perceived benefit derived from the emotional states and feelings experienced when consuming a product (Sheth et al., 1991). It encompasses the idea of gaining benefit from a product's ability to evoke specific feelings or emotional states. Emotions are considered to be a significant

factor in consumption activity, with emotions being deemed to be influential in the development of consumers' preferences and preferences, including in the context of automotive lubricants.(Gleny & Bernardo, 2023). Consumer sentiments toward products and services can influence their intent to purchase. Prior studies have demonstrated a significant association between emotional values and green purchase intentions among both European and non-European tourists (Gleny & Bernardo, 2023).

Conditional Value: Conditional value refers to the perceived benefit gained from an alternative based on the specific situation or circumstances confronting the decision-maker (Sheth et al., 1991; Zailani et al., 2019). This implies that factors like time and place play a crucial role in shaping consumer behaviors. Research shows that changes in personal situations can affect consumers' choices in purchasing (Petzold et al., 2019). The concept underscores the idea that the context or circumstances surrounding a decision can impact how useful a product or service is perceived to be (Jackson & Jabbie, 2020). In this scenario, a consumer might opt for a specific automotive lubricant brand because of current promotional campaigns. Consequently, these promotions may lead customers to switch to a different brand for their purchases.

Epistemic Value: Epistemic value, as defined, refers to the perceived benefit obtained from a product's ability to spark curiosity, offer novelty, and satisfy the desire for knowledge (Sheth et al., 1991). When a product possesses epistemic value, it provides consumers with new experiences, fulfilling their cravings for novelty, curiosity, and learning (Hsu et al., 2022). Consumers may opt for such alternatives out of boredom, curiosity, or a desire for something new, different, or fashionable (Siebert et al., 2020). For instance, a consumer may select a particular automotive lubricant brand in pursuit of a distinctive experience. In this research, the study will explore how the performance of cars or automobiles impacts consumer behavior.

3. Research Design

A research design is a comprehensive plan or blueprint that outlines how a research study will be conducted. For this study, a theoretical research design will be employed, focusing on the development and validation of the conceptual model. Initially, an extensive review of existing literature will be conducted to identify key variables and theoretical frameworks related to consumer behavior in the automotive lubricant market (Hennink & Kaiser, 2022). These insights will guide the construction of the conceptual model, hypothesizing the relationships between various influencing factors. Following this, the model will be empirically tested using a quantitative research approach (Rahman & Muktadir, 2021). Data will be collected through a structured survey administered to a representative sample of automotive lubricant consumers. The collected data will then be analyzed using advanced statistical techniques such as Structural Equation Modeling (SEM) (Hair et al., 2019) To validate the proposed relationships and refine the model. This research design ensures that the conceptual model is both theoretically grounded and empirically validated, providing a robust framework for understanding consumer purchasing behavior in this market.

Significance of the Research

This conceptual paper holds significant importance both in academia and for practitioners in the automotive lubricant industry. Academically, it offers insights into refining operational strategies for automotive lubricant suppliers amidst the increasing demand for high-performance products catalyzed by advancements in the automotive sector (Butt, 2020). By delving into consumption value, the paper illuminates the factors influencing consumer choices, providing practical recommendations for implementation.

By empirically validating the relationships between these factors, the model offers valuable insights that can guide industry practices(Ugalde et al., 2024). Companies can leverage these insights to tailor their marketing strategies, enhance product development and positioning, and improve customer segmentation and targeting. Additionally, understanding the drivers of consumer satisfaction and loyalty enables businesses to refine their customer service and retention strategies, leading to a competitive advantage in the market (Kazungu & Kubenea, 2023). Overall, this model serves as a critical tool for aligning industry practices with consumer expectations, ultimately fostering more effective decision-making and sustainable growth in the automotive lubricant industry.

Several studies have explored factors influencing consumer purchasing behavior in the automotive lubricant

market or related areas. For example, a study by Cvetkov-Čikošev et al. (2021) discusses how various media sources and customer attitudes towards the industry influence consumer behavior, emphasizing the role of traditional and digital media in decision-making processes (Cvetkov-Čikošev et al., 2021). Another study by Bhattacharyya and Thakre (2021)Highlights the importance of psychological factors, such as beliefs and attitudes, which vary significantly between urban and rural consumers in the automotive market. This has shown how significant is the study for better understanding and study.

Despite limitations such as the absence of randomized trials, theoretical testing enhances understanding. Moreover, understanding consumer demand for automotive lubricants is pivotal for formulating strategies to optimize these products, especially considering their environmental impact. This aligns with Sustainable Development Goals (Lee et al., 2020), advocating sustainability and environmental friendliness, and offering valuable support to scholars and researchers exploring similar topics. Practically, the paper aids organizations in incorporating lubricants into their operations, enabling them to develop strategies to enhance profitability and operations while promoting sustainable practices in line with Sustainable Development Goals. By deciphering consumer consumption, enterprises can strive for improved service quality, ultimately contributing to the growth of the Malaysian economy.

Study Limitation

The conceptual paper encounters limitations in data access due to time and resource constraints, hindering a comprehensive examination of the overarching topic. The primary aim remains to investigate the correlation between consumer values in intention to purchase automotive lubricant brands in the automotive lubricant market. Numerous obstacles arise, particularly when navigating the intricate relationship between consumer satisfaction towards the automotive lubricant brand, which can also result in brand loyalty, which further study must be done. This dynamic potentially unveils links between individual personality traits and diverse outcomes, further contributing to the significance of the study in academia and practical applications within the automotive lubricant industry. Additionally, this conceptual paper is delimited by insufficient readings of literature from multi-disciplinary sources, limiting the breadth of theoretical understanding. Investigative limitations also arise; the paper is primarily a review of existing literature, with data collection yet to be conducted. Furthermore, time constraints impede the full exploration of literature related to the topic.

4. Conceptual Model Development

This conceptual paper attempts to determine to understand the relationship between consumers and their intention to purchase automotive lubricants by referring to consumption value. A study has been made on several models with the same approach which has been established by other authors but with different topics such as Green food product purchase intention: Factors influencing Malaysian consumers (Yogananda & Nair, 2019) and The impact of consumption value on consumer behavior: A case study of halal-certified food supplies (Muhamed et al., 2019). Therefore, as shown in Figure 1, the study proposed:

Figure 1: Proposed Research Model

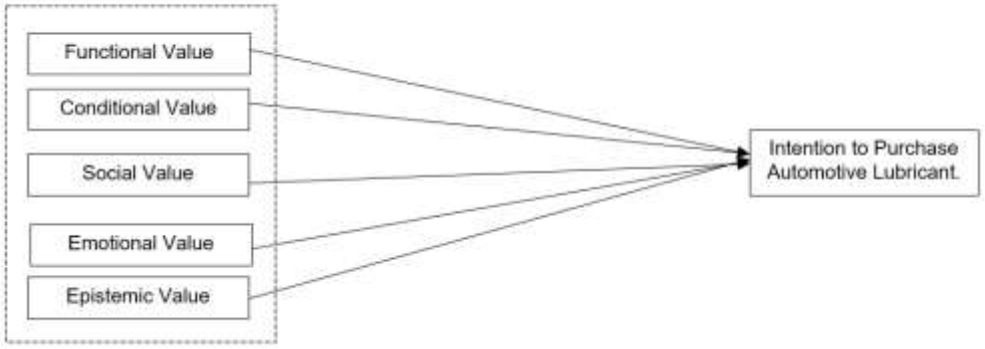


Table 2: Summary of Hypothesis

No	Hypothesis
1.	Functional Value affects the intention to purchase automotive lubricant
2.	Social Value affects the intention to purchase automotive lubricant
3.	Emotional Value affects the intention to purchase automotive lubricant
4.	Conditional Value affects the intention to purchase automotive lubricant.
5.	Epistemic Value affects the intention to purchase automotive lubricant

5. Conclusion

This academic paper aims to explore how the theory of consumption, specifically the concept of consumption value, relates to brand loyalty within the automotive industry. Satisfied customers are more likely to make repeat purchases and exhibit brand loyalty. To achieve this satisfaction, companies must understand the factors influencing it and assess their impact. This study aims to identify such factors within automotive lubricant companies, facilitating improved marketing strategies and product delivery. By pinpointing these factors, companies can enhance the efficiency and effectiveness of their marketing efforts, minimizing risks and conserving resources. Additionally, this study assesses the organization's readiness and identifies areas of strength to leverage and weaknesses to address. As the automotive industry continues to grow, insights from this study can aid industry players in meeting evolving consumer needs. Future research should also explore other automotive segments, such as electric vehicles, as they are introduced to Malaysia.

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Motivation in Learning and Happiness: A Study among Generation Z University Students in Malaysia

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Abstract: The focus on success has overshadowed the happiness of students, leading to increased stress levels and eventual disengagement and dropout. This study prioritized the importance of student motivation in their happiness. It aimed to determine whether there is a link between motivation in learning and the happiness of Gen Z students in a Malaysian institution. 120 business faculty members enrolled in bachelor's degree programs in Malaysia participated in an online survey. The survey consisted of close-ended questions and utilized a Likert-type scale to gauge levels of agreement or disagreement regarding happiness using The Happiness Measures (HM). The analysis of the data was performed with SPSS Statistics Version 29. The study findings indicated a strong and meaningful correlation between happiness and three predictor variables: self-efficacy, active learning strategy, and achievement goals. Moreover, the research emphasized the capacity of extracurricular pursuits to improve the welfare of Generation Z students.

Keywords: *Happiness, self-efficacy, active learning strategy, attainment goal*

1. Introduction and Background

Learning is the process by which an individual builds and reconstructs meanings in their mind by connecting the input to past experiences. Motivation is unquestionably a component that plays a big influence in developing this pretty sophisticated mental activity (Keramati, 2024). Emotions also have significant functions in our day-to-day existence. In educational settings, feelings "may offer hints about additional characteristics of behavior episodes." Although it has been postulated since the time of Socrates and Aristotle, happiness is one of the aspects that humans need. It has only lately gained attention, however, as the positive psychology movement has grown in importance.

Between 2020 and 2024, the field of psychology produced around 375,000 articles focusing on negative topics such as mental illness, depression, anxiety, fear, and anger, while only 124,000 articles addressed positive concepts and human capabilities. The 2023 National Health and Morbidity Survey of Malaysia found that 29% of young adults experienced mental illness and depression, consistent with happiness research. Analysis of happiness research in Malaysia suggests a decline in the national happiness index, projecting a drop to 59th place in the world ranking for 2024, down four positions from the previous year. These insights are based on the annual World Happiness Report by the UN Sustainable Development Solutions Network. The 2024 Global Annual Review predicts that students will make up half of the global workforce by that year. As Generation Z, born between 1997 and 2012, will soon hold influential positions in government, it is crucial to prioritize their well-being.

Even though developed nations like the United States, the United Kingdom, Europe, and various Asian countries have begun implementing a positive approach to education (Abedini, 2019; Argyle & Hills, 2020), education in Malaysia has received minimal attention in higher education, specifically in public universities. There has been limited focus on researching student happiness due to the perception that researchers conducting positive studies are not legitimate scientists. Undoubtedly, the country's education system is fundamental to its future, as it aims to move towards being a more powerful and advanced nation. Therefore, it is fitting for the government to have strategies to modernize public universities into active, competitive educational institutions. With these considerations in mind, this initial study aimed to establish whether there are any links between Malaysian students' motivation to learn and their level of happiness, as demonstrated in prior studies in the Western world. The following are the study's objectives. Thus, the following are the study's objectives: 1) To examine the relationship between self-efficacy and happiness among Gen Z students at university in

Malaysia; 2) To examine the relationship between active learning strategy and happiness among Gen Z students university in Malaysia; 3) To examine the relationship between attainment goal and happiness among Gen Z students university in Malaysia.

2. Literature Review

Happiness conveys the idea that life is worthwhile and enjoyable and arises from enjoyment, satisfaction, and a positive sense of well-being. Happiness can be characterized as a person's overall sense of well-being, their actual perception of their life, and their pleasant feelings. Emotions have always been important to human life, and happiness is one of the fundamental emotions that everyone experiences. Diener (2020) defines happiness as an individual's assessments of their life, both emotive and cognitive. It is the emotional condition that a person experiences in every part of their life. Studies involving students from 40 different nations revealed, according to Diener (2020), that students' happiness plays a crucial role in their overall life satisfaction. Siti, Wan, Azyanee, and Nooradzlina (2021) have shown through their research that the most important life goal is to attain happiness. This conclusion aligns with their findings. Happiness content can be differentiated by components such as life satisfaction and, on a smaller level, job satisfaction, satisfaction with educational institutions, or satisfaction with a product. Carr (2018) investigated the significance of happiness for 7,204 university students worldwide. According to the data, 64% of college students believe that happiness is the most significant aspect of life. Lee (2023) offered a similar perspective, claiming that pleasant acts and pleasurable feelings at school like engaging in participatory class activities are what lead to happiness. Pleasant emotions may be a technique for fostering interpersonal connections (Michalos, 2018). Shahrroz & Farraz (2018) inferred those emotions [happiness] is “an empowering source of information about how to influence motivational patterns”. Similarly, this study focuses on how emotional components, associated with public university students’ Generation Z happiness are influenced by their motivation to learn.

Motivation for Learning

The process by which goal-directed activity is explored and maintained is a straightforward definition of motivation (Pintrich, 2018). General definitions of motivation distinguish between two types: extrinsic motivation, which refers to external factors, and intrinsic motivation, which describes internal factors. Boekaerts (2001) and Schiefele and Rheinberg (2017), have extensive links between learning, motivation, and accomplishments. In his study, Erb (1996) found that students' low self-esteem, lack of responsibility, and dysfunctional families were the main causes of their lack of enthusiasm to learn in university. Numerous studies conducted in this area have concluded that students who are highly driven are more likely to comprehend their material better and perform well in their classes. Researchers are particularly interested in examining the components of intrinsic motivation in this study because it is thought that these components lead to highly cognitive thinking, which is necessary for developing notions related to abstract scientific ideas.

Brophy (1998) identified four measures that can impact an individual's motivation for learning. These measures pertain to the learning environment, personal goals, task importance, and self-efficacy. Tuan et al. (2005) highlighted the presence of various motivational measures in their recent study, aiming to develop a tool for assessing students' motivation for learning. They emphasized the need to specifically measure the following scales in learners: learning environment, performance goals, achievement orientation, science learning value, self-efficacy, and active learning strategies. This discussion focuses on three motivational scales: self-efficacy, active learning strategies, and achievement goals, as space constraints limit the scope of the study.

Bandura (1997) defines self-efficacy as an individual's belief in their ability to accomplish tasks, whether they are initially perceived as difficult or easy. The inclusion of the scale of students' active engagement in this study is aligned with the constructivist viewpoint it adopts, based on the idea that knowledge is actively constructed and varies among individuals. Active learning is crucial as it puts students in control of their education and integrates values into the curriculum. Tasks such as researching theories and concepts, solving problems, and applying learned ideas to real-world situations are central, with motivation closely linked to these tasks and their level of determination in completing them. On the other hand, an attainment goal emphasizes the need to improve one's skills in achieving the goal and the desire to do so through internal motivation

Self-Efficacy and Happiness

The belief in one's ability to accomplish tasks, known as self-efficacy, can apply to tasks perceived as easy or difficult, as per Bandura (1997). Farshid & Ali (2022) discovered that self-efficacy is positively and significantly related to both male and female students, while happiness serves as a predictor of academic achievement specifically for male students. Fatemah and Mohammadreza (2023) found that students with higher academic self-efficacy and happiness display a positive attitude and possess greater problem-solving abilities and adaptability in school, leading to improved academic well-being. Ahmed (2019) conducted a study on the relationship between happiness and self-efficacy among university students in Egypt and Lebanon. The research findings indicated that Egyptian and Lebanese men achieved higher average scores in happiness and self-efficacy compared to women. Lebanese participants scored significantly higher in happiness and self-efficacy than their Egyptian counterparts of both genders, with a large impact on happiness. The study demonstrated statistically significant links between the two measures in both countries. A study conducted by Hassan, Haidar, Fahime; Ghadriye, Rojia, Masomeh, and Fariba (2022) emphasized the predictive role of 'academic self-efficacy' in the happiness of university students, involving 290 students from an Iranian medical science university. Healthcare providers at the university consider these aspects when designing mental health promotion initiatives aimed at fostering student happiness. Vania & Linda (2020) demonstrated the positive impact of happiness on self-efficacy and the negative influence of stress on happiness among graduate students from Southern Brazil. In a study by Izzet (2023), a linear model was developed to explore the impact of general self-efficacy, academic self-efficacy, and life satisfaction on happiness. The model demonstrated strong fit indices, indicating its adequacy and suitability. The study sample comprised 315 selected students. Thus, it is hypothesized that:

H1: Self-efficacy has a positive significant relationship with happiness among Generation Z university students in Malaysia.

Active Learning and Happiness

Students are required to engage in active learning, taking responsibility for their educational journey and incorporating values into their learning process. According to a study conducted by Ahmed & Jehad (2022), active learning is positively and significantly linked to satisfaction and happiness in the classroom environment for business students. Similarly, Torsak (2023) research examined the connection between happiness, learning levels, and academic achievement among students at Buriram Rajabhat University, Thailand, using the Learning with Happiness survey. The study involved 587 participants, consisting of 428 female and 159 male students, and revealed a high overall evaluation of learning with happiness among the students. Fung & Tsz's (2019) study emphasized the positive and significant relationship between learning and happiness among first and second-grade students in Hong Kong. Additionally, a survey by Lam & Pratchayapon (2023) found a statistical correlation between happiness and self-determination across all academic levels, indicating that higher levels of happiness could lead to increased positive learning motivation for students at their respective schools. An analysis of the research results suggested that kindergarten and elementary students demonstrated the highest levels of happiness and intrinsic motivation for learning, while high school students, who exhibited the lowest level of happiness, may benefit from additional support through alternative methods. Thus, it is hypothesized that:

H2: Active learning strategy has a positive significant relationship with happiness among Generation Z university students in Malaysia.

Attainment Goal and Happiness

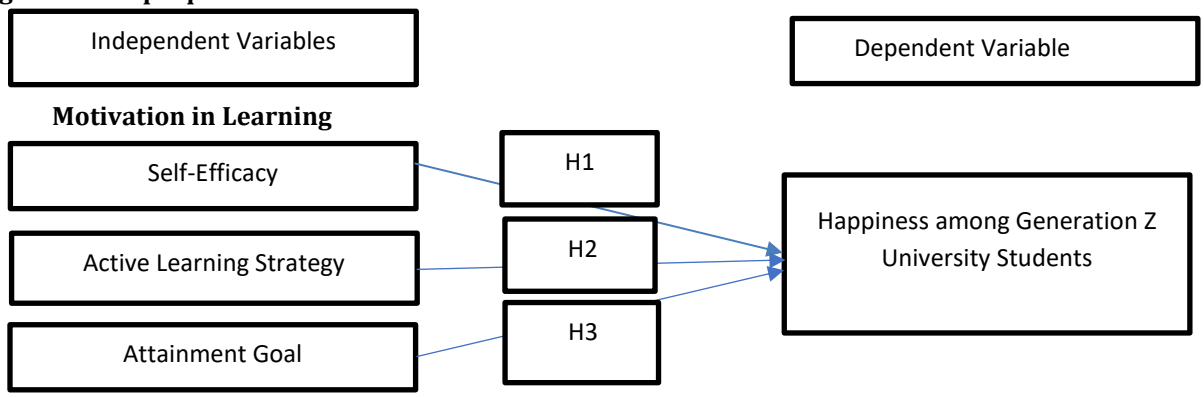
Jamileh, Farokh, Abbas, Maryam, and Toni (2022) conducted a study examining the connection between attainment goals, achievement motivation, and happiness in undergraduate nursing students. The study found a direct and significant correlation between these factors among 255 undergraduate nursing students in an urban area of Iran. Similarly, a study by Hasssanzadeh and Galin (2023) demonstrated a significant relationship between happiness and achievement goals with a 95% reliability level among male and female students. Conversely, research by Robinson and Iji (2019) at Central Luzon State University in The Philippines, involving 300 college students, indicated no significant relationship between achievement goals and happiness. Thus, it is hypothesized that:

H3: Attainment goal strategy has a positive significant relationship with happiness among Generation Z university students in Malaysia.

Research Framework

Figure 1 displays the suggested framework for this investigation. Self-Efficacy, Active Learning Strategy and Attainment Goal make up three independent variables of the study. Happiness is the study's dependent variable. The framework also shows the proposed correlation for hypotheses in the investigation.

Figure 1: The proposed research framework



3. Research Methodology

The research used a quantitative approach to explore the potential link between motivation and happiness. It employed a quantitative research design and collected validated and structured data. The participants were business students from 15 different bachelor's degree programs at a public university. Subjects from the specific group, comprising students born between 1997 and 2012, were conveniently selected using quota sampling. To gather information for the study, the researcher utilized both primary and secondary data sources. The primary data was collected through questionnaire surveys distributed to the respondents, while the secondary data was sourced from various online platforms, websites, journals, and articles. All primary data underwent processing and analysis using Statistical Package for Social Science Version 29.

Measurement of Student's Happiness

The assessment to gauge the happiness of students was created by Fordyce in 1988 and 2005. This happiness evaluation, called the Happiness Measures (HM), comprises two components. The initial part measures the perceived overall happiness quality, while the second part evaluates the individual's assessment of time spent feeling happy, unhappy, and neutral. The original 10-point scales in the first part were modified to 5-point scales to standardize the outcomes, ranging from 1 (very sad) to 5 (extremely happy). The frequency percentages of happiness time in the second part were not altered. This specific tool was chosen because it is a thoroughly studied indicator of well-being and is frequently referred to as the 'granddaddy' of happiness measures (Fordyce, 1988). These assertions are backed by Diener (1984), who discovered that among the 20 happiness and well-being measures examined, Fordyce's Happiness Measures exhibited the most robust correlations with daily affect and life satisfaction.

Measurement of Motivation in Learning

The Self-determination Theory (SDT) assesses three aspects of motivation in education: self-efficacy, active learning strategy, and achievement goals. Ryan and Deci (2000) explain that learners can be motivated internally or externally. Bandura and Ryan & Deci (2000) established four main dimensions that affect students' motivation, with at least one dimension needing satisfaction for motivation to occur. The survey used comprises 16 items to gauge motivation levels, employing a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). This study's reliability tests produced Cronbach alpha values of .829 for self-efficacy, .836 for active learning strategy, and .881 for achievement goals. SPSS version 29 was used to analyze the students' responses about their happiness and motivation in education. The initial data analysis aimed to determine the average levels of student happiness and motivation in education. Following this, the data underwent further examination for reliability, descriptive analysis, correlation, and regression to explore the connections between motivation in education and happiness.

4. Results and Findings

Table 1 data reveals that among 105 respondents, 61.9 percent are female while 38.1 percent are male. The 21-25 age group comprises the highest proportion of respondents at 45.7 percent. In terms of ethnicity, Malay constitutes the largest group at 38.1 percent, followed by Chinese at 29.5 percent, Indian at 21 percent, and others at 11.4 percent.

Table 1: Demographic Profile

VARIABLE	FREQUENCY	PERCENTAGE%
GENDER		
Male	40	38.1
Female	65	61.9
AGE		
16-20	24	22.9
21-25	48	45.7
26-30	33	31.4
RACE		
Malay	40	38.1
Chinese	31	29.5
Indian	22	21
Others	12	11.4

In Table 2, it is evident from the reliability test results that all six constructs have values above 0.6, indicating satisfactory reliability. The study conducted an internal consistency reliability test to assess the reliability of each variable. The table presents the interpretation of reliability based on Cronbach's alpha with data from 105 respondents. The Cronbach's alpha for happiness yielded a value of .893, indicating suitability for eight questions. Similarly, the self-efficacy variable demonstrated promising reliability with a Cronbach's alpha value of .829 for seven questions. Additionally, the active learning strategy showed a good result with a Cronbach's alpha of .836 for seven questions. The attainment goal showed a good result with a Cronbach alpha of .881 for eight questions.

Table 2: Interpretation of reliability based on Cronbach's alpha for 105 respondents

VARIABLE	CRONBACH'S ALPHA	NO. OF ITEM	RESULT
Happiness	.893	8	Good
Self-efficacy	.829	7	Good
Active Learning Strategy	.836	7	Good
Attainment Goal	.881	8	Good

Table 3 presents the total mean score and standard deviation for each variable. The highest total mean score (M = 3.6583, SD = .74159) is for the attainment goal, followed by the active learning strategy (M = 3.5492, SD = .74569). In addition, the mean score for the happiness variable (M = 3.2037, SD = .86013) ranks third, and the self-efficacy variable (M = 2.9587, SD = .76961) has the lowest mean score among the variables.

Table 3: Total of Mean Scores and Standard Deviation

VARIABLE	MEAN	STANDARD DEVIATION
Happiness	3.2037	.86013
Self-Efficacy	2.9587	.76961
Active Learning Strategy	3.5492	.74569
Attainment Goal	3.6583	.74159

Source: Primary data from IBM SPSS statistics V29

The results are outlined in Table 4, demonstrating a notable correlation at the 0.01 significance level (1-tailed) between the independent variables (self-efficacy, active learning strategy, and attainment goal) and the dependent variable (happiness). All the independent variables exhibit a positive connection with the dependent variable. Self-efficacy demonstrates a strong positive association with happiness (r=0.800), and the association is statistically significant (p= 0.000, p< 0.05), supporting the validation of H1, indicating a statistically significant positive association between self-efficacy and happiness in Malaysia. Similarly, the results indicate a moderate positive link between active learning strategy and happiness (r=0.659), with a statistically significant association (p= 0.000, p< 0.05), supporting the validation of H2, proposing a significant positive association between active learning strategy and happiness in Malaysia. Additionally, the attainment goal displays a strong positive correlation with happiness (r= 0.741) and a statistically significant association (p= 0.000, p< 0.05), confirming the validation of H3, a statistically significant positive association between the attainment goal and happiness in Malaysia.

Table 4: Correlation Analysis

		HAPPINESS	SELF-EFFICACY	ACTIVE LEARNING STRATEGY	ATTAINMENT GOAL
Happiness	Pearson Correlation Sig.	1	.800**	.659**	.741**
	(1-tailed)		.000	.000	.000
	N		105	105	105

The R2 value of the model, as indicated in Table 5, is 0.74, suggesting that 74 percent of the variability in happiness can be attributed to the variations in self-efficacy, active learning strategy, and attainment goal. The remaining 26 percent can be explained by other factors. The model's F value stands at 80.189, with a significance level of (p <0.01), indicating a robust fit. It's worth noting that self-efficacy exhibits a significantly positive correlation with happiness (β=0.509, p<0.01), thus providing support for H1. Similarly, an active learning strategy is positively linked to happiness (β=0.274, p<0.01), supporting H2. Furthermore, the attainment goal shows a positive significant relationship with happiness (β=0.157, p<0.01), hence supporting H3. These results affirm that the attainment of a goal is positively associated with happiness. To summarize, self-efficacy emerges as the most influential variable in determining happiness, with a significant relationship, whereas the attainment goal appears to have the least impact on happiness, but still maintains a crucial relationship with happiness.

Table 5: Regression Analysis

	Dependent Variable Usage
Independent variables (β)	
Self-Efficacy	.509*
Active Learning Strategy	.274*
Attainment Goal	.157*
F value R2	80.189**
Adjusted R^2	0.704
	0.696

* p<0.05, ** p < 0.01

Discussion

The results indicated a correlation between motivation in learning and happiness. As a result, this study has effectively achieved its goal of examining the strong and positive relationship between self-efficacy, active learning strategy, and achievement goals concerning happiness among individuals in Malaysia. This investigation illustrates that self-efficacy, active learning approach, and achievement goals play a significant role in influencing the happiness of university students from Generation Z. This suggests that higher levels of self-efficacy, active learning approach, and achievement goals are linked to greater perceived happiness. The research results are consistent with previous studies, indicating a significant and positive correlation between self-efficacy and happiness. Among Malaysian Generation Z students, self-efficacy has the most influence on

their happiness, as shown by regression analysis. This finding is in line with the conclusions of other researchers such as Hassan et.al (2022), Vania & Linda (2020), and Hubli et al (2024). Students who have a strong belief in their abilities are more likely to take on challenging tasks and demonstrate intrinsic motivation. They tend to exert a high level of effort to meet their responsibilities and attribute setbacks to factors within their control rather than external circumstances. Additionally, self-efficacious Generation Z students tend to recover quickly from failures and are more likely to achieve their goals.

The study found that active learning strategy has a significant and positive relationship with happiness, which is consistent with earlier research. This outcome is consistent with research by Torsak (2023), Fung & Tsz (2019), and Lam & Pratchayapun (2023). Any university activity that involves active learning is essential because it allows students of Generation Z to engage with the material rather than just passively absorbing it. Students perform better and achieve higher academic levels when given the chance to actively participate in the material they are studying. Grades or grade point averages (GPA) are frequently used to describe academic success. The Cumulative Grade Point Average (CGPA) must be steady and maintained every semester to reach the maximum CGPA following the study semester. The courses taken at higher education institutions provide a wealth of instances of motivation in learning. Similar to subject reading, mastering math demands perseverance and active learning techniques. Intrinsically driven students are more likely than their counterparts to apply practical arithmetic strategies including visualizing, checking, and estimating. They also have a higher propensity to select deeper learning and performance strategies. If given the choice between an easier and a more challenging math problem, intrinsically driven students would choose the more complex problem because they enjoy challenges and want to push their subject-matter knowledge.

Consistent with previous studies, the study revealed that the attainment goal has a significant and positive relationship with happiness. This result is in line with other studies conducted by Jamilleh& Haedba (2022), and Hassanzadeh Galin (2023)**.** Intrinsically driven students are more likely than their counterparts to apply practical arithmetic strategies including visualizing, checking, and estimating. They also have a higher propensity to select deeper learning and performance strategies. If given the choice between an easier and a more challenging math problem, for example, intrinsically driven students would choose the harder problem because they enjoy challenges and want to push their subject-matter knowledge. Those who invest a great deal of time and energy into their education will, in turn, experience great passion and satisfaction as they work toward their academic objectives each academic year. To be happy as a student would mean to be satisfied with one's obligations and responsibilities

5. Conclusion and Recommendations

This study also clarifies how providing extracurricular activities might enhance students' sense of self-worth, active learning approach, and satisfaction with goal attainment in higher education among Gen Z. Participating in extracurricular activities at higher education institutions allows students to broaden their social networks, discover new interests, and grow as leaders. Students can combine their academic knowledge with practical know-how and gain real-world experience through internships, student clubs and organizations, sports teams, and green environment programs. This can increase their level of self-efficacy, active learning strategy, and goal achievement. Furthermore, extracurricular activities and international programming promote student unity and collaboration. The present study has several limitations that need to be acknowledged. Motivation in learning associated with students' happiness is still unexplored, especially in Malaysian universities. To begin with, data was collected from students at a single university. Even though the sample was somewhat representative of the university's population, more study with a wider range of participants is required to ascertain whether the results apply to other student populations at other universities. Future research should include more faculties for the findings to apply to all of Malaysia's higher education institutions. Second, when students use the questionnaire answer strategy, it has less of an impact on the respondents' personal opinions. It is recommended that future studies include focus group interviews and a longitudinal study design to precisely identify the variables that influence happiness. Using these methods of improvement, the researchers can gain more insight into the self-efficacy, active learning strategy and attainment goal of each individual. This study, in particular, lacks mediators and mediating, which could result in diversity and positive outcomes. Lastly, to lend even more significance to the study, moderating and mediating variables should be incorporated into the framework.

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Factors Influencing the Acceptance of AI in Mobile Health Apps in Malaysia

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Abstract: In today's fast-paced world, maintaining health and personal wellness has become a top priority. Artificial intelligence (AI) has emerged as a powerful tool in this effort, offering innovative solutions through mobile health applications. These applications use AI-driven algorithms to analyze user data, including sleep patterns, food intake, daily activity levels, diet preferences, stress indicators, and meditation, to provide personalized recommendations and insights. Mobile health applications have the potential to improve healthcare systems by enhancing health and disease management, communication, efficiency, treatment adherence, reducing costs, and increasing access to health interventions. This paper aims to provide a better understanding of the use of artificial intelligence in healthcare tools by examining the factors influencing the intention to use mobile health applications in Malaysia. It will discuss the extended UTAUT constructs and the concept of personal health characteristics, such as performance expectancy, effort expectancy, social influence, facilitating conditions, and health consciousness.

Keywords: *Artificial Intelligence, Mobile Health, Health Applications, UTAUT, Health Consciousness.*

1. Introduction and Background

Over the last decade, life expectancy has notably increased in many countries, largely due to declining fertility rates. Consequently, the proportion of older individuals within the global population is rising. This growing trend of aging populations presents significant challenges for both developed and developing nations (Kong et al., 2022). According to The World Health Organization (WHO), by 2030, one in every six people of the global population is expected to be 60 years or older marking an increase in the population from 1 billion to 1.4 billion in 2020 (WHO., 2011). Furthermore, by 2050, the number of individuals aged 60 and above is predicted to double to 2.1 billion, while those aged 80 and older are expected to triple, reaching 426 million. This underscores the worldwide increase in both the proportion and absolute number of older adults within the total population.

Consequently, the rise in life expectancy has been accompanied by a prevalence of various health issues such as stroke, heart disease, cancer, diabetes, and other chronic diseases of non-communicable disease (NCDs) for older people, posing undoubtedly challenges for them in carrying out daily activities. Thus, in recent decades, various new technologies have been developed to fulfill the scarcity of people's health-related needs particularly older people (Khan et al., 2020a). The integration of scientific and digital technology innovations has substantially affected the medical aspects and healthcare practices in coping with increasing aging populations. One of the widely used innovations of digital technologies in healthcare is mobile health applications (mHealth). Mobile health applications permit older adults to live longer and more independently and, most importantly, facilitate their healthcare needs. Besides, the growing number of smartphone users goes hand in hand with the dependence on mobile technology (Saidon, et al., 2023).

Life expectancy refers to the average number of years a person is expected to live. In Malaysia, there has been a notable increase in life expectancy over the years. Although higher than the average for upper-middle-income countries, it remains lower compared to high-income nations. In 2020, Malaysia's life expectancy reached 74.9 years, up from 74.5 years in 2014 and 64.2 years in 1969. This rise in lifespan, coupled with a drop in fertility rates below the replacement level of 2.1 in 2013, has contributed to an aging population (Koris, et al., 2024). The number of older adults has been steadily rising, from 3.4 million in 2019 to 3.5 million (10% of the total population) in 2020. It is projected that by 2040, 14.5% of Malaysia's population will be 65 years and older, making it an aged nation (Haron et al., 2024). In addition, The Economic Outlook 2023 report from the Ministry of Finance Malaysia highlighted the finding by the Department of Statistics Malaysia, noting that the country's aging population is dramatically increasing more quickly than anticipated. By 2050, over 15% of Malaysians

will be aged 65 and above. Despite the increase in life expectancy, the does not necessarily equate to better health for the older populations (Market Intelligence, 2024). Moreover, the Khazanah Research Institute projects that, Based on current trends, people are expected to spend 9.5 years in poor health due to chronic diseases.

Mobile health involves the use of mobile devices like smartphones, personal digital assistants, and other wireless technologies to aid in providing medical care and public health services, as defined by the World Health Organization (WHO). It involves leveraging these tools to improve access to healthcare, facilitate communication between patients and healthcare providers, and manage health conditions remotely. (WHO., 2011). Mobile health applications are developed for numerous health purposes such as decision support, medication adherence, reminders, reproductive health apps, and others. The global market has over 350,000 healthcare apps, indicating a massive growth in the number of mobile health applications (Statista, 2024). Older adults typically utilize health services more frequently than those in other age groups (Khan et al., 2020b). For example, the elderly in the Netherlands consist roughly 20% of the total population and, indeed, contribute approximately 80% to the total healthcare expenses (Davenport & Kalakota, 2019), suggesting a substantial increase in the utilization and cost of healthcare services worldwide.

These mobile health applications are beneficial to older adults and becoming more common to help the elderly's self-management of chronic diseases and independent living conditions (Wildenbos). Studies found that mobile health applications assist the elderly in controlling medical costs and provide support groups. However, to ensure the successful utilization of mobile health applications among older adults, mobile health applications must be simplified and have convenient features and functions such as artificial intelligence. Artificial Intelligence (AI) is the definition of technology that can improve human capabilities (Liu, 2017; Schwab, 2017). The assistance of Artificial Intelligence facilitates human daily routine through the advancement in education (i.e., virtual learning), customer service assistance (i.e., personalized assistants), health care (i.e., disease diagnosis, patient monitoring), etc. (Becker, 2018.; Davenport & Kalakota, 2019; Kashive et al., 2021).

Hence, the application of artificial intelligence (AI) in developing mHealth apps is being investigated to offer more personalized healthcare, prevent diseases, enhance treatment, monitor individuals with chronic conditions remotely, improve healthcare delivery, and reduce costs and diagnostic time (Garcia, et al., 2023), Researchers are investigating how artificial intelligence (AI) can be utilized in the creation of mHealth applications to provide individualized healthcare, prevent illnesses, enhance therapies, remotely oversee patients with chronic diseases, improve healthcare provision, and decrease both expenses and the duration needed for diagnoses (Afrah & Kose, 2020).

Any form of mobile technology can be utilized for mHealth, connecting and engaging users of various types. mHealth applications have been designed to support numerous aspects of health and healthcare delivery, including patient education, monitoring, behavior change, surveillance, prevention, health promotion, and awareness creation. These applications function through both synchronous formats (real-time interactions such as video conferencing) and asynchronous formats (delayed interactions like email and instant messaging) (Cossy-Gantner et al., 2018; Latif et al., 2017). mHealth apps have proven effective across various aspects of healthcare and medical procedures(WHO, 2018). They have been hailed as a solution to numerous healthcare hurdles in developing nations. However, the anticipation would not be fulfilled unless the factors influencing the acceptance of the mHealth app are thoroughly examined and reconstructed.

Although technology acceptance research has received considerable attention, particularly in terms of user acceptance, perceptions, and adherence, few studies have specifically summarized the factors influencing users' intention to adopt artificial intelligence in mHealth applications, which has yet to be fully conceptualized. This paper aims to identify the factors that drive the acceptance of mHealth among the elderly in Malaysia and integrate them into a proposed conceptual framework. The importance of this research is it offers recommendations for healthcare policy and encourages the use of mHealth among the growing elderly demographic.

2. Literature Review

Mobile health application (mHealth): The term mHealth refers to the use of mobile devices such as cell phones, personal digital assistants, patient monitoring tools, and other wireless devices to aid medical and public health activities (WHO, 2011). The significant adoption of mobile health apps is to enhance patient healthcare, efficiency, and quality of services of medical premises and healthcare providers, as well as to reduce medical bills and encourage individuals to be involved in their healthcare management (Addotey-Delove et al., 2020). mHealth applications enable access to health-related information, treatment support, personal digital assistance, and self-care to improve the effectiveness of healthcare services. Also, mHealth apps can facilitate the self-management of one or more aspects by providing users with tailored instructions, information, reminders, and guidance by capturing their health data. Special attention has been given to the effectiveness of mHealth applications technologies in resolving health-related needs and problems toward flexibility in providing medical treatment to all patients. mHealth applications provide low medical costs, save treatment time, wider access to medical services, and more confidential solutions, especially for highly private health problems. Therefore, mHealth applications can be seen as the critical factor between healthcare systems and people's well-being. Moreover, integrating artificial intelligence tools into mHealth applications would help enhance the nation's health standard towards reaching health and social equality.

Research on the adoption and acceptance of innovative mHealth applications has attracted significant interest from scholars. Various theoretical frameworks, such as the Technology Acceptance Model (TAM), Theory of Reasoned Action (TRA), Theory of Planned Behavior (TPB), and Unified Theory of Acceptance and Use of Technology (UTAUT), have been employed to explore and understand the factors that influence user intentions and behaviors towards information technology over time. According to Zhaou, behavioral intention plays a key role as a determinant of individual inclination to use technology. The level of determination an individual has to participate in a specific behavior is known as behavioral intention.

Technology Acceptance Model: Previously, researchers used TAM to determine the behavioral intention using Attitudes, Perceived Usefulness (PU), and Perceived Ease of Use (PEOU) constructs. Binyamin & Zafar, (2021); (Samadbeik et al., 2020); To et al., (2019) and Zhu et al., (2023) used TAM in their mobile health studies to determine behavior intention to use mHealth. For example, (Binyamin & Zafar, 2021b) found perceived ease of use, perceived usefulness, and attitude to the effective predictors and demonstrated influence towards behavioral intention to use mHealth applications. Despite TAM having suggested intention as the primary determinant of user behavior of information technology, Bao & Lee, (2023) argued that TAM is not a model developed specifically for or in the healthcare context. Researchers found that the model also showed low explanatory strength that needs for extension of the variables in explaining technology adoption in healthcare (Zin, Kim, Kim, & Feyissa, 2022),

Performance expectancy is defined as an individual's opinion that using technology will improve his/her job effectiveness (Venkatesh et al., 2016) In the context of the mHealth application, performance expectancy refers to how users perceive using mHealth applications will help them reduce their health-related threats. The unified Theory of Acceptance and Use of Technology (UTAUT) describes that performance expectancy is one of the factors that determine the use intention of new technology (Alaiad et al., 2019). Performance expectancy is derived from the preceding 7 versions of perceived usefulness (Technology Acceptance Model), result in anticipations (Social Cognitive Theory), comparative benefit (Innovation Diffusion Theory), and external drive (Motivational Model) (Venkatesh & Davis, 2003). Lim et al., (2021) identified performance expectancy was associated with the use of mHealth apps among primary care physicians to provide support for their clinical work on patients. Also, Semiz & Semiz, (2021) examine the UTAUT constructs among 354 mHealth users revealing that performance expectancy was the second most significant determinant affecting usage of mHealth. This study supported the findings by Alam et al (2020), which demonstrated performance expectancy has a positive effect on the behavioral intention to use mHealth. Hence, it is hypothesized that:
H1: Performance expectancy positively influences behavioral intention to use mHealth applications.

Effort expectancy refers to an individual's belief that technology is simple to use (Venkatesh et al, 2003). The ease of use is significantly linked to the intention to use mHealth since the health app is a novel application for the users (Alam et al., 2020). Effort expectancy encompasses the three preceding variables of perceived ease of

use from TAM, ease of use from Innovation Diffusion Theory, and complexity from MPCU (Alaiad et al., 2019). It is a crucial determinant of intention to use mHealth, as indicated by a prior study on smartphone users who are willing to utilize mHealth if the apps are beneficial (Hussein, 2018). Studies have revealed that effort expectancy has a positive impact on Saudi patients' intention to use mHealth (Alkhalifah, 2022). Furthermore, Ahadzadeh et al., (2021); Alam et al., (2020); Beh et al., (2021); Lim et al., (2021); Shiferaw et al., (2021); Wu et al., (2022) have recognized the positive influence of effort expectancy on the intention to use mHealth. Consequently, it is hypothesized that effort expectancy will positively influence the intention to use mHealth apps if the technology is user-friendly and convenient.
H2: Effort expectancy positively influences behavioral intention to use mHealth applications.

Social influence is defined as "the degree to which individuals perceive that the beliefs or opinions of significant others indicate they should use a new technology or system." (Venkatesh, Morris, Davis, & Davis, 2003). According to Alam et al (2020), social influence refers to how much individuals value the opinions of others regarding their use of mHealth applications. This concept is rooted in the image aspect of Innovation Diffusion Theory, the social factors of the Model of PC Use (MPCU), and the subjective norms of the Theory of Reasoned Action (TRA) and the Technology Acceptance Model 2 (TAM2) (Alaiad, Alsharo, & Alnsour, 2019). SI construct is where one's behavior is influenced by; their belief others will view them as a result of using the mHealth application. Besides, the examination of social influence has also been shown to significantly affect the intention to use mHealth applications during the pandemic Covid-19 (Semiz & Semiz, 2021). Based on the above analyses, it is hypothesized that:
H3: Social influence positively influences behavioral intention to use mHealth applications.

Venkatesh et al. (2003) define facilitating conditions as the degree to which one believes technical infrastructure and organization exist to provide support for the use of the system. In the context of mHealth applications, facilitating conditions refer to individual beliefs that technical and organizational infrastructure exists to facilitate the usage of mHealth apps (Alam, Hu, et al., 2020). Facilitating conditions are positively associated with the behavioral intention of using the smartphone for health-related technology. Samadbeik et al., (2020) examined and validated the influence of facilitating conditions construct on the intention to use mHealth apps on medical students and found influenced the intention to use mHealth. The previous result also shows that facilitating conditions of using mobile electronic medical records positively affects the intention to use health apps (Kim et al., 2015). Therefore, it can be hypothesized that:
H4: Facilitating conditions have a positive influence on behavioral intention to use mHealth applications.

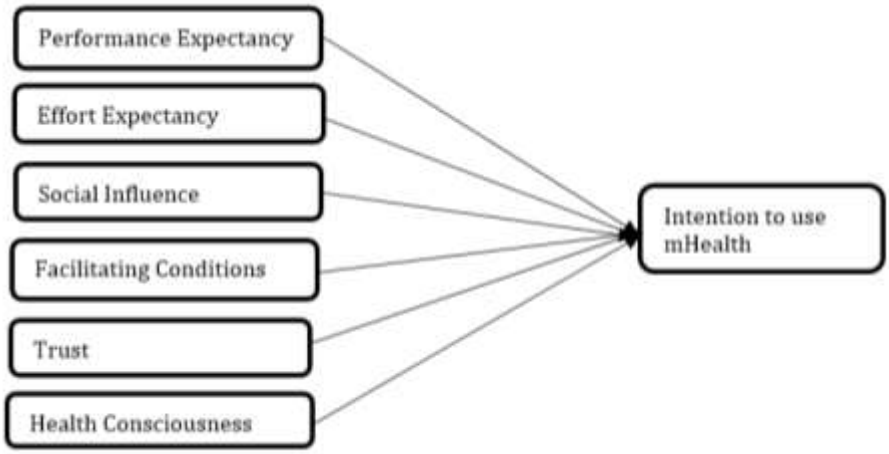
Trust in using new technology, especially health-related technology that will affect health and life-long threats is essential to promote the use and acceptance of new technologies. In this study, trust is defined as an individual's level of confidence in the safety of using a mHealth application (Handayani, Gelshirani, Azzahro, Pinem, & Hidayanto, 2020). The level of trust can be measured in terms of credibility, honesty, and reputation of mHealth service providers. Xia, et al., (2019) confirmed that patients' intention to adopt health-related technology is highly dependent on trust to support the finding (Alkhalifah, 2022; Zhao et al., 2018). Hence, users are more motivated to utilize mHealth applications when they have a high level of trust. However, there is a lack of detailed explanations regarding the influence of trust on the behavioral intention to use these applications, which this study aims to address and expand upon in the existing literature. Therefore, it is hypothesized that:
H5: Trust has a significant influence on behavioral intention to use mHealth applications.

According to Ahadzadeh et al., (2021), health consciousness is the intrinsic motivation individuals have to maintain good health and take responsibility for their well-being. It reflects how much people incorporate health concerns into their daily lives and their commitment to preserving their health (Barua & Barua, 2020b). Another study defines health consciousness as the level at which people take care of their health (Yee et al., 2019). Studies have linked health consciousness positively influencing the use of health applications (Alam et al., 2022b; Alam, Hu, et al., 2020b; To et al., 2019). Previously, health consciousness demonstrated a positive relationship with preventive healthcare behavior and showed a significant relationship with the use of mHealth applications (Meigasari, Handayani, Ayuningtyas, & Hidayanto, 2020). Moreover, health-conscious people are actively pursuing information on how to enhance their health accordingly. Not surprisingly, health-conscious people tend to frequently and actively seek more health-related knowledge. As a result, it is hypothesized that:

H6: Health consciousness has a significant influence on behavioral intention to use mHealth applications.

Hence, based on the review of the literature above, this study employs the conceptual framework as presented below in Figure 1.

Figure 1: Proposed conceptual framework



3. Research Methodology

This conceptual paper investigates new technology acceptance by focusing on published literature regarding the intention to use artificial intelligence in mHealth apps by older adults. Employing the theory synthesis and model research design, this study applied the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA). As highlighted by (Jaakkola, 2020), conceptual papers help to bridge the gaps in the existing theories in unique ways, link different disciplines, provide a multi-level understanding, and broaden thinking scope. Hence, most of the impactful papers of recent years are conceptual papers that enable theory building unrestricted by empirical generalizations. PRISMA serves as a recognized standard for evaluating and scrutinizing the quality of previous studies as well as facilitating the identification of inclusion and exclusion criteria (Ramely et al., 2022).

A structured literature search of the two selected databases; Google Scholar, and Scopus. Google Scholar was used in this study because it provides a simple way to conduct a broad search for literature across disciplines and sources. However, according to Halevi et al., (2017), it is recommended that researchers not fully depend on Google Scholar in writing citations to improve transparency and ensure the quality of the article. Therefore, this study also includes Scopus, Emerald Insight, and Science Direct databases for making citations and finding relevant articles. Additionally, the articles gathered from these databases complement the sources collected from Google Scholar.

The search was limited to articles published in English, using keywords such as TITLE-ABS-KEY (“telemedicine”), (“health applications”), (“mobile health applications” AND “health management”), (“mobile health”), (“mHealth”), (“artificial intelligence” AND “telemedicine”), (“usage intention”), (“intention to use”), (“mHealth AND UTAUT”), (“mHealth” AND “health management”), and (“diseases”). Titles and abstracts were screened to eliminate duplicates, and all authors participated in this screening process. Studies meeting the inclusion criteria, which focused on mobile health (mHealth) and its use among users or patients in developing countries—specifically involving mobile phones—were selected through consensus for further review. Particular attention was given to factors influencing patients' acceptance of mHealth. Studies that did not specifically mention mHealth applications or artificial intelligence tools, but instead focused on telemedicine, telehealth, or organizations, were excluded. Additionally, hand searching supplemented the selection process, and the final decision on resource inclusion was made collaboratively by the three authors, while two authors conducted the full-text review and data abstraction.
This research employs a quantitative methodology to investigate the influence of performance expectancy,

effort expectancy, social influence, facilitating conditions, trust, and health consciousness on the intention of Malaysian users to adopt mHealth applications. The study focuses on older adults in Malaysia as the target population, specifically those aged 45 to 60, as this demographic is rapidly increasing. Additionally, the research indicates that the acceptance of mHealth applications is linked to internet and smartphone usage. By 2020, it was estimated that approximately 29 million people in Malaysia were smartphone users, with 86.6 percent of the population accessing the internet via their mobile devices (Siddharta, 2024). The minimum number of respondents will be 500, using non-probability sampling using convenience sampling techniques. The data from the participants will be gathered using a self-administered survey, which will be based on the previous study and modified accordingly. The data will be analyzed using SPSS version 28 which has been widely used by scholars around the world, especially for simple tests.

5. Managerial Implications and Recommendations

The swiftly aging global population brings both opportunities and challenges for healthcare systems, particularly in addressing non-communicable diseases (NCDs) that disproportionately impact older adults. This paper highlights the vital role that mobile health (mHealth) applications, augmented by artificial intelligence (AI), can play in enhancing the quality of life and healthcare outcomes for the elderly. As dependence on digital solutions grows, there are several key implications for healthcare providers, technology developers, and policymakers.

Firstly, the integration of AI into mHealth applications offers a significant opportunity to personalize healthcare delivery. AI-driven features such as predictive analytics, personalized health recommendations, and real-time monitoring can empower older adults to manage their health conditions more effectively. However, to ensure the widespread adoption of these technologies, developers must focus on creating user-centric designs that cater to the specific needs and capabilities of older adults. This involves simplifying user interfaces, ensuring ease of use, and providing clear instructions that reduce the learning curve. These considerations are crucial in addressing the barriers to technology adoption among older adults, who may have limited familiarity with digital tools (Hernandez, Adrian, Ferre, & Mora, 2022; Castro, et al., 2021)

Moreover, the acceptance of mHealth applications is greatly influenced by trust and security, particularly among older adults who may have increased concerns about the confidentiality and protection of their personal health information. Software developers and healthcare providers must give priority to data security through the implementation of strong encryption techniques, secure authentication procedures, and clear data management policies. Establishing and preserving trust is not only about safeguarding the technology but also about ensuring that users are well-informed and have confidence in the utilization of their data. This trust can be further reinforced through support from reputable healthcare organizations and professionals, as well as through adherence to international health data standards and regulations (Park, Lee, & Kim, 2024; Zhang et al., 2023).

The importance of healthcare providers in the successful adoption of mHealth applications cannot be emphasized enough. As trusted sources of health information, they are uniquely positioned to advocate for the use of these tools. They must receive the necessary knowledge and training to recommend suitable mHealth applications to their patients. Moreover, integrating mHealth tools into routine clinical practice can enhance the continuity of care, particularly for managing chronic conditions prevalent among older adults. This integration requires healthcare organizations to invest in training and infrastructure that supports the seamless use of mHealth applications within existing healthcare frameworks (Sun, et al., 2023; Maher, Khan, & Prikshat, 2023). In many advanced nations, local authorities have collaborated to transition traditional healthcare services to digital healthcare interventions by investing in the development of e-healthcare systems to deliver high-quality services. For example, the German government has introduced e-health cards for local patients to access healthcare and insurance. Canada, the government is actively encouraging the implementation of electronic health records and mobile health solutions for improved medical record management and patient care (Gu, et al., 2021).

Policymakers have a crucial role in promoting the adoption of mHealth technologies. By creating and implementing policies that foster the use of digital health solutions, governments can help ensure that the

benefits of mHealth are accessible to all, particularly vulnerable populations like the elderly. This includes providing subsidies or incentives for the development and use of mHealth applications, as well as ensuring that these technologies are inclusive and accessible to those with varying levels of digital literacy. Additionally, policymakers should support research and development initiatives to further integrate AI into mHealth applications and create frameworks that address ethical concerns related to AI in healthcare (Thompson, et al., 2023).

Finally, collaboration among stakeholders—such as healthcare providers, technology developers, policymakers, and the elderly—is crucial for effectively implementing mHealth applications. This collaboration should focus on continuous feedback and improvement of mHealth tools to meet the changing needs of the aging population, it is important to ensure that medical tools remain relevant and effective. Engaging older adults in the design and development process can provide meaningful insights into their preferences and challenges, towards more effective and user-centered solutions (Zheng et al., 2022; Park et al., 2021). The successful adoption and integration of AI-enhanced mHealth applications into healthcare systems require a concerted effort from multiple stakeholders. By focusing on user-centric design, building trust, equipping healthcare providers, enacting supportive policies, and fostering collaboration, the potential of mHealth to improve the lives of older adults can be fully realized. These recommendations offer a roadmap for stakeholders to navigate the complexities of an aging population and the growing burden of NCDs, ensuring that digital health solutions effectively meet the needs of those who need them most.

Conclusion

In conclusion, this concept paper proposes to identify the antecedents that influence the intention to use AI-based mHealth applications in Malaysia. One important discovery from this study is the introduction of a theoretical framework that has not been previously explored by researchers. It is crucial to identify the connections between personal health characteristics and concepts, as this has a significant impact on the behavioral intention to use AI-based mHealth applications. This study contributes a new potential relationship between personal health characteristics (health consciousness) and trust as they extend to the UTAUT model. The integrated UTAUT model with additional variables was used to determine the behavioral intention to use mHealth applications based on personal health characteristics.

According to the findings above, this study hypothesized that the UTAUT construct will have positive determinants toward behavioral intention to use AI-based mobile health interventions. However, future studies need to pay more attention to validate the influence of trust and health consciousness that might have different impacts on intention based on prior studies. This research will serve as a base for future studies. This research therefore has provided many questions in need of further research. Additional research is required to determine whether the proposed framework can effectively explain the phenomenon, by expanding the sample of respondents and focusing on specific mHealth applications. In addition, future work may explore different constructs that influence the intention to use mHealth applications such as complexity. Besides, this would be helpful for the app designers and developers in creating the mHealth applications with AI tools.

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