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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 Uganda and Malaysia. Total Quality Management and Organizational Performance, Moderating Effect of WAQF for Tourism Sustainability in Malaysia, Nexus between Monetary Sector Variables and Housing Affordability, A Comparative Study of Online Learning Tools with Arcs Motivation Model Integration, Examining Relationships between Employees' Attributes and Act of Whistleblowing, Bibliometric Review of Halal Tourism and Sustainability Research and Challenges and Opportunities in the Halal Pharmaceutical Industry 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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TABLE OF CONTENTS

Description	Pages
Title	I
Editorial	II
Editorial Board	III
Table of Contents	IV
Papers	VIII
Total Quality Management and Organizational Performance: A Study of Commercial Banks in Bamako, Mali Mbalalufu Mukenga & Olawumi Dele Awolusi	1
Moderating Effect of WAQF for Tourism Sustainability in Malaysia: A Mixed-Method Approach Shafinar Ismail, Mohammed `Izzudin Ismail, Putri Aliah Mohd Hidzir, Suharni Rahmat, Suzila Ismail	16
Evaluating the Nexus between Monetary Sector Variables and Housing Affordability in Malaysia Zarul Azhar Nasir, Noormahayu Mohd Nasir, Muhammad Adidinizar Zia Ahmad Kusairee, Siti Nur'Amalina Syeddin, Nor Zarina Mohd Salim	31
Engaging Tertiary Students: A Comparative Study of Online Learning Tools with Arcs Motivation Model Integration Hafini Suhana Ithnin, Noormahayu Mohd Nasir, Khalijah Ramli	41
Examining Relationships between Employees' Attributes and Act of Whistleblowing Irzan Bin Ismail, Noorazura Durani, Wan Azfarozza Wan Athmar, Mohamad Idham Md Razak, Helmy Fadlisham Abu Hassan	49
A Bibliometric Review of Halal Tourism and Sustainability Research: Trends and Prospects Fatihah Norazami Abdullah, Azyyati Anuar, Rosliza Md Zani, Yong Azrina Ali Akbar	59
Challenges and Opportunities in the Halal Pharmaceutical Industry in Malaysia Nasihah Naimat, Mimi Sofiah Ahmad Mustafa, Nasreen Miza Hilmy Nasrijal, Ida Rahayu Mahat	73

PAPERS

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Total Quality Management and Organizational Performance: A Study of Commercial Banks in Bamako, Mali

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Abstract: The purpose of the study was to examine the effect of total quality management on organizational performance among selected banks in Bamako, Mali. This study adopted a cross-sectional survey design. The target population was 160 respondents and the sample size was 114 respondents. The study questionnaire was the main instrument of data collection. Frequency and percentage distribution were used to determine the profile of the respondents. Mean and Standard deviations were used as descriptive statistics for the independent (total quality management constructs) and dependent variables (organizational performance). Linear and multiple regression analyses were used to determine the effect. The study found a significant effect of total quality management on organizational performance (R^2=0.832, $p<0.01$). Specifically, the study found a significant effect of all the measures of total quality management on organizational performance. Lastly, the study found that there was a positive significant correlation between total quality management and organizational performance among banks in Bamako, Mali. The study concluded that the promotion of total quality management principles is relevant in enhancing organizational performance in the Malian Banking Industry. The study recommended that: the management of the banks should enhance human resource focus to increase reliability and timely delivery of the products/services. Moreover, effective human resources focus during the process of total quality management thus enhancing banks' performance. The management of banks should focus on the improvement of market target blend and customer care. The banks should also focus on the provision of quality services to the customer and promoting their brand.

Keywords: *Total quality management; organizational performance; multiple regression analysis; banks; Mali.*

1. Introduction

The origin of total quality management is linked to the industrial sector of Japan many years ago (Awolusi, 2021; Adam, 2017). From those years the concept of total quality management has evolved and developed and has since in most organizational settings which include schools, motorway maintenance, hotel management, churches and banking institutions. Currently, Total Quality Management has become very useful when conducting the e-business sector and it perceives quality management entirely from the point of view of the customer (Juan-Luis et al., 2023; Jurado & García-Estrada, 2021). The goal of total quality management is to do the right things when you are doing them for the first time and subsequently, it becomes a practice. This is important in the organization because it saves time which time is needed to correct poor work and failed product and service implementations (such as warranty repairs) (Adam, 2017). The theory of total quality management became popular during the 1980s when the banking industry put more effort into providing services depending on the qualities that customers look for in a service or product (Juan-Luis et al., 2023; Jurado & García-Estrada, 2021).

The practice of total quality management has since been demanding quality in all dimensions of the organization's activities with things done as desired from the onset and any wastage and spoilages being kept to the very minimum during routine business (Adeoti, 2018). Across all organizations globally, major developments within a global or International environment have been made to embrace a spirit of completion and innovation with the prime goal of meeting the ever-changing customer demands and aspirations. Organizational snow days are no longer dependent on their current business forms in an exceedingly competitive marketplace (Agus and Hassan, 2015). There is an urgent need to embrace and adopt current means of operation management that improve their performance gradually to continue existing successfully over the years (Allan, 2017; Argote, 2018; Beamon, 2018). For organizations to be able to compete favorably they must essentially and continuously improve their businesses especially the quality of the goods and

services, this may be through improvising better marketing strategies, product differentiation and cost reduction of the business (Allan, 2017; Argote, 2018). In the contemporary world, total quality management still stands out as one of the best and known types of operations management, this has made it gain global attention from all organizational settings ranging from industry to industry and academics over the years.

Banking institutions have been crucial in exhibiting model performance by improving their results despite the high level of competition for a piece of the market. Total quality management has been introduced in major markets, organizations and sectors due to the stiff competition that organizations face (Ahire & Dreyfus, 2016). As a result, all organizations have had to adopt and implement total quality management to achieve their organizational goals and objectives which has been achieved through the improvement of their business success strategies, differentiating their products and gaining a competitive advantage over other firms in the market (Herzallah et al., 2014; Pérez and Gutiérrez, 2019). Organizations implement TQM to gain a competitive advantage in terms of productivity and customer satisfaction. Organizations implement these practices to ensure the benefits of improved operational performance (Beamon, 2018), and financial performance (O'Neill et al., 2019). Commercial banks achieved the goal of being very steady, deposits and shareholders' assets were able to increase by 36.35% and 38.9% respectively (Central Bank of Mali, 2018). Many management styles have been adopted by most organizations and companies in a bid to achieve the set goals and be able to amicably set their organizational goals. The performance of banks and their interest margins are identified as the key indicators of efficiency or inefficiency for most banking systems, this is because they are the link between the interest rate on savings and loans (Beamon, 2018).

The banking sector has steadily remained branded with persistent operational incompetence and reduced customer services. As a way of addressing the difficulties of incompetence in performance, companies are quickly adopting total quality management to make them effective in meeting the demands of their customers (Allan, 2017). Even though quality management practices have been accepted by many companies as capable of converting the quality culture and producing considerable financial results for large-size companies, some worries have been raised on the validity of quality management practices to generate real economic gains and or improve organizational performance of the banking industry. The selected commercial banks like Bank of Africa, Ecobank and United Bank for Africa have continuously emphasized the adoption of total quality management as a strategy for improving their performance in such a way they have adopted employee involvement, employee commitment and customer service management as a way of promoting their performance (Annual Mali commercial bank Report, 2021). However, despite the adaptation of total quality management the selected banks have continuously experienced organizational performance problems as evidenced by low profitability, failure to achieve sustainable competitive advantage and inadequate customer service (Annual Mali Commercial Bank Report, 2021). Hence the need to conduct this study to investigate the impact of total quality management and organizational performance among selected banks in Mali. Consequently, the purpose of the present study was to investigate the effect of Total Quality Management practices on the Organizational Performance of commercial banks in Bamako, Mali.

However, the specific objectives are as follows: (1.) to establish the effect of human resource focuses on organizational performance of commercial banks in Bamako, Mali; (2.) to examine the effect of strategic planning on organizational performance of Commercial Banks in Bamako, Mali; (3) to establish the effect of process management on organizational performance of commercial banks in Bamako, Mali; and (4.) to examine the effect of customer and market focus on organizational performance of Commercial Banks in Bamako, Mali. This study was conducted in Bamako the southwestern part of Mali where all banks are located. The commercial banks include Ecobank Bamako Mali, Bank of Africa Bamako Mali and United Bank of Africa Bamako Mali. Total quality management was measured using customer service management, employee commitment and employee involvement. Organizational performance was measured using productivity, efficiency and effectiveness. Organizational performance is the dependent variable and the independent variable is total quality management. It is hoped that the findings of this study will help the selected commercial banks to understand the importance of total quality management to cope with the dynamic competitive banking industry. Furthermore, managers will benefit from the findings of this study since it will highlight the best total quality management practices that are more effective in achieving organizational performance goals. Similarly, the results of this study will help employees to understand the total quality management practices

such as employee commitment, employee involvement and customer service management as key in the banking industry.

2. Review of Related Literature

This study was guided by three theories: knowledge–based theory (Allan, 2017; Argote, 2018; Beamon, 2018), System approach theory (Kaynak, 2017; Makgati & Awolusi, 2019) and Daming theory of total quality. The study used the Knowledge-based theory by Kaynak (2017)**.** The theory states that "Knowledge is considered the most critical firm resource". According to the proposers of knowledge-based theory, it is argued that knowledge is the most distinct resource in a business and makes it very hard for it to be duplicated. The knowledge and competencies in a firm are considered to be what a firm can use in creating a competitive advantage over others henceforth setting it apart from the rest thus providing a niche that is far above the others. An organization's knowledge is always demonstrated within its organizational culture and identities, policy documents, systems and practices of the employees (Allan, 2017; Argote, 2018; Beamon, 2018). The knowledge and competencies in a firm are considered to be what a firm can use in creating a competitive advantage over others henceforth setting it apart from the rest thus providing a niche that is far above the others. An organization's knowledge is always demonstrated within its organizational culture and identities, policy documents, systems and practices of the employees. Markets and technologies usually represent two aspects of the knowledge that an organization or firm should have.

They display countless performance opportunities since they pave the way and research and development to flourish within the firm, whereas on the other end induce the organizational capacity given the prevailing market conditions (Masters, 1996; Merino-Díaz, 2018; Mohrman & Tenkasi, 2016). In light of this, an organization will be in a very strategic position to determine the best methods of action to be taken to be able to compete favorably and generate several opportunities (Allan, 2017; Argote, 2018; Beamon, 2018). Most organizations look at this act with effectiveness in the contemporary economy, they need to become knowledge-based firms. But few understand what that means, and how to make the changes necessary to achieve it. Perhaps the most common mistake firms make is considering that the higher the knowledge content of their products and services, the closer they are to being true knowledge-based organizations. Deming's Theory of Total Quality Management (Kaynak, 2017; Makgati & Awolusi, 2019) states that if a company is to focus on the costs, the problem is that cost rises while quality deteriorates. The theory is based on fourteen management points, a profound knowledge system and the She Wart Cycle. He is well-known for his ratio which states that Quality is equivalent to the "outcome of work efforts over total costs". For example, when an organization focuses on costs, challenges will manifest where costs will rise as levels of quality shall be dwindling.

Deming's profound knowledge system consists of: "Understanding how the firms' processes work, Understanding the variations that do occur and why they do, and understanding what can be known and human nature understanding". Specifically, Deming's Theory of Total Quality Management (Masters, 1996; Merino-Díaz, 2018; Mohrman & Tenkasi, 2016) states that if a company is to focus on the costs, the problem is that cost rises while quality deteriorates. The theory is based on fourteen management points, a profound knowledge system, and the Shewart Cycle. He is well-known for his ratio which states that Quality is equivalent to the "outcome of work efforts over total costs". For example, when an organization focuses on costs, challenges will manifest where costs will rise as levels of quality shall be dwindling. Deming's profound knowledge system consists of: "Understanding how the firms' processes work, Understanding the variations that do occur and why they do, and understanding what can be known and human nature understanding". Deming's Theory of Total Quality Management is based on fourteen management points, a profound knowledge system, and the Shewart Cycle. "He's famous for his ratio that states that Quality equals the outcome of work efforts over total costs. If a company focuses on costs, a challenge will arise where costs will rise as levels of quality will deteriorate. Deming's profound knowledge system consists of Understanding how the firms' processes work.
Understanding the variations that do occur and why they do, and understanding what can be known and human nature understanding". Deming's theory of total quality management points are: "Creation of a purpose of constancy, new philosophy adoption, halting the dependency on mass inspections, never award business courtesy of price, ensure there is a production system that is continuous and improvement of service, enhanced performance courtesy of the job training, infusing quality in leadership, dismantle fear aspects from the firm,

do away with departmental barriers, eliminate work goals that are based on quantity achieved, eliminate the use of quotas and standards, encourage pride in craftsmanship, facilitate the training and education process of everyone in the firm and ensure that firm's top management structure facilitates the other points". The systems theory is a group of connected parts working together towards a given goal, Barnard as cited by Masters (1996). Accordingly, the theory states that companies are seen as systems that achieve quality by adopting the works of individuals to be able to achieve the common goal of an organization through efficient operational performance. Management for most organizations sees the human, physical and informational aspects of his/her job as linked in a combined total. The job expected of management is to make sure that all sub-systems in the organization as a business are synchronized internally to enable the organization to achieve its objectives through operational performance. This approach theory appreciates the usefulness of the environment of an organization towards its sustainability. This study therefore shall be based on three theories since they relate with the study variables. Details and explanations of the study theories are in chapter two.

This approach theory appreciates the usefulness of the environment of an organization towards its sustainability. According to the theory it is up to the organizational management to select a management approach for the firm to be able to have an effective and competent organization performing in compliance with acceptable standards. Therefore, it is significant to note that there is not a single management approach that can be able to provide all explanations and professionals need to use approaches collectively Boddy and Paton (2018). Organization's Management approaches may be productive or unproductive depending upon their application and appropriateness to given circumstances. "This theory of total quality management has recognized many total quality management systems practices such as total quality management systems practices which have been documented and empirically analyzed in measurement studies and in studies that have investigated the relationship between total quality management and organizational performance. The theory therefore contends that TQM practices are the pivotal pillars in ensuring the organizational performance of any business entity". Conceptually speaking, Total quality management refers to a technique whereby management and its employees get involved in persistent improvement in the production of goods and services. This involves combining both management and quality tools with the prime focus of improving businesses and decreasing their losses resulting from wasteful practices (Brah, 2018). Total quality management is an explanation of the culture, attitude and involvement of employees in providing clientele with products and services that satisfy their human needs.

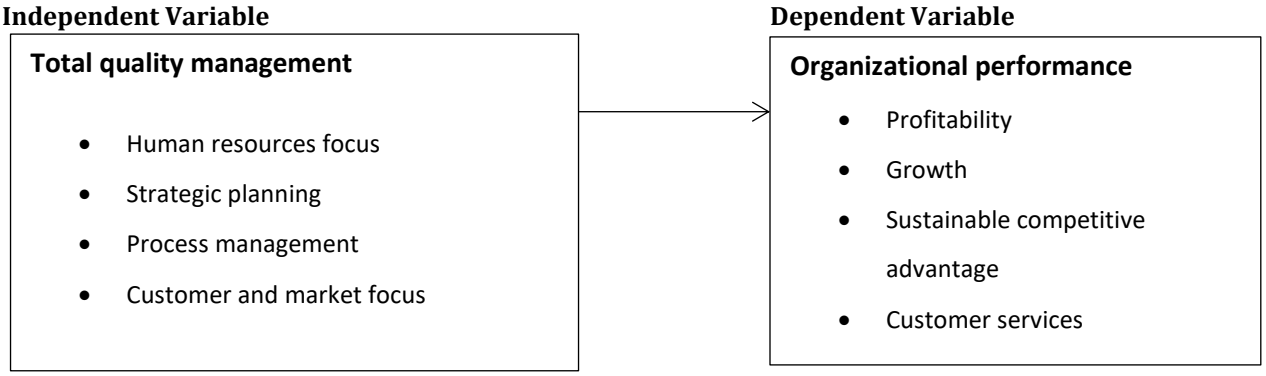
This culture needs quality in all dimensions of the organization's operations, with processes being complete and correct the first time and faults and waste eradicated from operations (Easton, 2018). Total quality management philosophy starts from the top, from the board of directors to the line employees of an organization. Total quality management is an ideology which majorly committed to satisfying the needs of its clients. Total quality management necessitates companies to be able to develop an operational process that focuses on its clients but at the same time invests in resources that position clients and meet their profitability expectations. This means that changing the corporate culture of an organization should be client-centered. "Total quality management needs effective change in an organization's culture which is improved by the commitment of an organization's management strategy for nonstop development, open communication and cooperation through the company; broad employee interest, participation and contribution in the process of quality management. Leaders in a Total quality management system look at the firm as a system; support employee development; establish a multipoint communication among the employees, managers, and customers; and use information efficiently and effectively". Furthermore, leaders inspire employee contribution in policymaking and empowerment of company employees. Total quality management requires actual knowledge management to guarantee that employees get appropriate dependable, reliable, precise, and essential data and information as they need to do their jobs efficiently and professionally in an organization (Powell, 2018).

Total quality management is concerned with constant improvement in all the processes of design and operation, this is from planning up to the decision-making to the execution of work by the front-line staff. The emphasis on nonstop improvement leads to the creation of a tough team whose association is determined by their work on the thorough knowledge of the procedure, and their capability to improve action. Total quality management also suggests reducing and organizing of supplier base which helps in facilitating manager-supplier relationships, development of tactical coalitions with suppliers, and working with suppliers to meet

the needs of the clients or customers (Hendricks, 2017). Organizational Performance refers to the state of yielding gain financially by an organization. It refers to the ability of an organization, institution or company to yield some profit whether accounting or economic. In banks, organizational performance is measured by its profitability. This is the principal goal of any business undertaking whereby without it, a business cannot be in a position to function properly in the long run.

Profitability itself is measured by income and expenses, income here is referred to as the money made from the activities of the business for example interest income for banks and expenses refer to the costs incurred or consumed by the activities of the business for example interest paid on deposits by banks. An increase in the profitability of an organization is considered to be one of the key and paramount responsibilities of most business managers. That explains why most managers are always looking for means to improve their businesses and consequently increase profitability and henceforth the implementation of policies for example the use of strategies such as Total quality management with the ultimate goal to increase profitability and reduce which come as a result of loan defaults by their clients. Studies regarding determinants of profitability of banks have concentrated on both returns on bank assets and equity and net interest rate margins earned. Bank performance and bank interest margins can be looked at as the main indicators of the competence or inefficiency of the banking system, as they drive a wedge between the interest rate received by savers on their deposits and the interest paid by borrowers on their loans (Allan, 2017; Argote, 2018; Beamon, 2018). The conceptual framework is depicted in Figure 1.

Figure 1: Conceptual Framework Showing the Effect of Total Quality Management and Organizational Performance



Source: adapted from Armstrong and Baron (2004) and modified by the researcher (2021).

The independent variable was total quality management. It was measured using human resources focus, strategic planning, process management and customer and market focus. The dependent variable was organizational performance which was measured using profitability, growth, and sustainability competitive advantage and customer services.

Total Quality Management and Organizational Performance: In a rapidly changing competitive environment, human resources are one important source of competitive advantage. Human resource systems can contribute to sustained competitive advantage by facilitating the development of competencies that are firm-specific. Several companies are dependent on their employees to gain an advantage in the competitive market. Therefore, they are strongly related to the efficiency of their human resources and their human resources management (Beamon, 2018). Human resource management (HRM) includes tasks like HR preparation, human resources management, strategic recruiting, employee training, growth compensation management, efficiency, worker relations, health care, employee satisfaction as well as provision of employee services. It includes policies and practices set to improve organizational efficiency, engagement of employees and work quality (Argote, 2018; Beamon, 2018). Strategic planning (SP) is one of the more popular management approaches in contemporary organizations, and it is consistently ranked among the five most popular managerial approaches worldwide Nair (2016).

According to Nair (2016), strategic planning is a tool for finding the best future for your organization and the best path to reach that destination. As per Powell (2018), market advancement involves the improvement of the market target blend and how the necessities in this market are fulfilled with an end goal of upgrading market potential and growing better approaches for serving or working in the objective business sectors. Market pioneers rush to take note of the exceptional practices of clients, for example, their purchasing patterns and will build up their inclinations. To fulfill such inclinations, the firm will at that point need to portion these clients and separate items to fulfill these clients as intently as could be expected. A firm having its workers engaged with the TQM execution measure empowers it to effectively meet the TQM objectives. It shouldn't be simply including them; however, the firm necessities to enable them as they are welcomed over to the dynamic table and the outcome of this is a firm profiting by consistently improving its cycles and frameworks. Employees ordinarily have some crude thoughts and developments that if utilized by a firm will affect progress and disappointment. By including Employees sensitive, their profitability also improves because of their newly discovered inspiration to turn out tenaciously for the firm (Masters, 1996; Merino-Díaz, 2018; Mohrman & Tenkasi, 2016). Workers who engage in the organizational total quality management processes as a group emphatically influence the firm quality drive; this is as indicated by Merino-Díaz (2018) and Mohrman and Tenkasi (2016). However, a firm is required to have formal frameworks of spurring, checking and praising their labor force association in the absolute quality administration measures. If this isn't done, the level and profundity of investment will decay, bringing about a perplexed labor force.

The company's administration needs to build up a climate that is urging workers to engage in the association's quality exercises. Such a climate ought to target building up an inspirational perspective among the representatives, there ought to likewise be correspondence on what objectives should be accomplished and the objectives ought to fundamentally address both association and individual requirements, there ought to likewise be work execution assessment, the association ought to likewise make work fascinating and testing lastly there is a need to perceive top execution and praise it (Mohrman & Tenkasi, 2016). The selection and implementation of the right business strategy will be largely determined by HR competencies that play an important role in the organization's operational activities, planning and implementing the organization's business strategies that have been determined (Masters, 1996; Merino-Díaz, 2018; Mohrman & Tenkasi, 2016). The Role of Mediating and Moderating Factors on the Influence of Behavioral Incivility on Counterproductive Work Behavior. Top Management in organizations keeps up the authority duty regarding the complete quality administration frameworks, with the contribution of every single hierarchical staff. This obligation incorporates; guaranteeing the accessibility of assets to all staff to guarantee improved help conveyance is accomplished for the acknowledgment of the association's vision and mission. Building up and inspecting the quality arrangement and quality goals quarterly to guarantee consistency to the quality principles (Terziovski et al., 2018).

Specifically, Terziovski et al. (2018) underscore the significance of top administration responsibility in projects as it assumes different parts in the firm, for example, impacting mentalities, empowering client support, making a positive setting for change, supervising the improvement of the undertaking, overseeing political struggles, and guaranteeing the accessibility of assets. Thus, the requirement for full responsibility of top administration ought to be perceived, imparted, executed and kept up at all levels in the organization. The significance of total quality management should start to be underscored at the top, where the genuine obligation to execution should be shown through a vision system that includes the association's controlling way of thinking, guiding principles and convictions, reason and mission (Terziovski et al., 2018). The greatness of an effective task relies upon the degree of top administration submitted. The three fundamental features of top administration support which are vital in total quality management and undertaking acknowledgment include: showing interest by taking part in group gatherings, eagerness to invest energy with individuals and tune in to input just as willing to help settle issues; giving essential assets, including preparing and other critical assets and Providing authority by assisting with interpreting plan right into it, ordinary audit of task projects and official dispatching of venture pioneers and task group. The way that top administration is required to set the general bearings of the undertaking by officially shaping a leader directing the advisory group to parcel, audit and screen the task progress (Masters, 1996). Consistent Improvement and Performance can include numerous objectives creating items with zero deformities or accomplishing 100% consumer loyalty (Sadikoglu & Zehir, 2018; Saraph, Benson & Schroeder, 2012; Sharma, 2017; Taveira, James, Karsh & Sainfort, 2012).

Yet persistent improvement has similar essential standards regardless of the set objectives (Merino-Díaz, 2018). These standards include the association of the organization at all levels, discovering reserve funds by improving existing cycles, not by putting away more cash, gathering information on organization activities and evaluating that information, which turns into the pattern against which enhancements will be estimated for constant improvement (Merino-Díaz, 2018). Constant improvement regularly includes making a group that incorporates agents from all spaces of the organization. The group initially invests energy in finding out about their organization and different organizations (benchmarking is basic during this stage). The fundamental quantitative international information is made (Mohrman & Tenkasi, 2016). The group at that point proposes answers for the board and starts to carry out those arrangements. At the point when that is accomplished, follow-up instruments should be set up that look for extra enhancements as time passes by. The group may change individuals with the progression of time, yet ideally becomes a setup and acknowledged piece of the organization even as its timetable changes. On the off chance that the plans are executed as arranged the group will accomplish improved quality because of its underlying endeavors (Mukonga & Awolusi, 2019). This can draw in more workers into this idea which thusly prompts proceed with looking for additional upgrades and subsequently consistent enhancements for organizational performance (Mukonga & Awolusi, 2019; Sadikoglu & Temur, 2015).

There are numerous articles, studies, and studies that portray the parts of value in improving organizational performance. It's very clear that manufacturing and administration enterprises business exhibitions are affected by total quality management (Sadikoglu & Zehir, 2018) tracked down a positive relationship between TQM execution and hierarchical execution and five of TQM standards, client center, ceaseless improvement, top administration responsibility, employee inclusion, and item development have an altogether beneficial outcome on item quality, suggesting the utilization of remuneration and acknowledgment for including workers in TQM endeavors. Sharma (2017) uncovered that the execution of TQM positively affects both operational and hierarchical execution. The outcomes show that client center, nonstop improvement, top administration responsibility, worker inclusion, and item advancement are fundamentally and emphatically identified with item quality. Terziovski, (2018), tracked that distinctive TQM rehearses altogether influence diverse performance results and the fundamental deterrents were the absence of representative contribution, mindfulness and responsibility of the workers, improper firm construction, and absence of the assets. Sadikoglu and Zehir (2018) demonstrated that the Jordanian private emergency clinics apply absolute quality administration rehearses at a serious level.

The most noteworthy focal point of private medical clinics inside complete quality administration rehearses is on client direction, provider the executives, high help from top administration to the quality endeavors, and a worry from the objective clinics in support of representatives in quality administration exercises. However, different researchers have reviewed the literature on total quality management and organizational performance in government institutions, schools, hospitals, banks, public sector but none has conducted a study relating the variables among selected banks in Bamako Mali. Most of the scholars studied the variables in a Western setting which calls for a study in the Mali context. Studies have shown that most of the total quality management and organizational performance has been carried out using Diaspora samples (Saraph, Benson & Schroeder, 2012) and emerging economies in Japan, China and South Korea (Saraph, Benson & Schroeder, 2012). However, very few studies have used samples from sub-Saharan Africa and Mali in particular, thus challenging the generalizability of these studies to a non-Western context. Consequent upon the above-reviewed literature, the present study, therefore, hypothesized the following:

Ho_1: There is no significant effect of human resource focus on organizational performance of commercial banks in Bamako, Mali;

Ho_2: There is no significant effect between strategic planning on organizational performance of Commercial Banks in Mali;

Ho_3: There is no significant effect of process management on organizational performance of commercial banks in Bamako, Mali;

Ho_4: There is no significant effect between customer and market focus on organizational performance of Commercial Banks in Mali.

3. Methodology

This study adopted a cross-sectional survey design. Sharma (2017) states that a cross-sectional study is a study that is conducted once and reveals a snapshot of one point in time. The cross-sectional design is often called the social survey design and is closely connected with a questionnaire. A quantitative approach to data collection and analysis was used. This study population included all the 160 employees from the selected banks in Mali. Namely: the Bank of Africa, Eco Bank and United Bank of Africa. The same population was used as the target population. The respondents included the managers and the support staff. The sample size for this study was calculated using the Slovene formula (Eze & Awolusi, 2018; Onikoyi, Awolusi, & Boyede, 2014). Consequently, a sample size of 114 respondents was contrived. This study used purposive sampling to select the managers because it is useful in identifying uniquely qualified respondents to provide needed information (Mukonga & Awolusi, 2019). The selection was based on expert knowledge of the particular problem of the research. On the other hand, a simple random sampling technique was used to collect data from the respondents. This was achieved by the researcher writing the names of the support staff on different pieces of paper. The papers were then put in a bowl and shaken to randomize them. The researcher then randomly selected the names of the respondents from the pieces of paper until he was satisfied with the number of respondents that she needed.

This sampling technique was preferred because it gives equal opportunity for each participant to be included in the study without bias. The study employed a questionnaire survey as a data collection method. The questionnaire survey was objective targeting both the managerial and support staff to respond to questions regarding total quality management and organizational performance (Awolusi, 2021; Adam, 2017). The data collection tool that was employed in this method was a closed and self-administered questionnaire. The questionnaire was preferred because it is easy to administer (Taveira, James, Karsh & Sainfort, 2012). The questionnaire was used as the main research instrument for this study. A questionnaire is easier to administer, less costly, and ensures greater depth of response (Sharma, 2017; Taveira, James, Karsh & Sainfort, 2012). This study employed close-ended questionnaires, where questions are presented, and the responses are found and the respondent is expected to choose the answer from the options given to him/her. Furthermore, the questionnaire was subdivided into three sections; namely: Section A which showed the profile of the respondents, Section B was used to get descriptive data from total quality management practices and Section C was used to collect data regarding organizational performance. The questionnaires were designed using a five-point Likert scale, where 1=strongly disagree; 2=disagree; not sure; 4=agree; and 5=strongly agree.

The five Likert scale was preferred by the researcher because it captures all the ideas, views and opinions of the respondents. Validity is the extent to which a measuring instrument on an application performs the function for which it is designed (Allan, 2017). Face and content validity have been defined by Adam (2017) as follows: Face validity is the idea that a test should appear superficially to test what it is supposed to test, and Content validity is the notion that a test should sample the range of behavior represented by the theoretical concept being tested. Furthermore, the Content Validity Index (CVI) was computed and a value of 0.90 was ascertained for the instrument to be valid. According to Adam (2017), CVI which is equal to or greater than 0.70 was considered valid. Reliability is the tendency toward consistency found in repeated measurements (Argote, 2018). The reliability of the instrument was ascertained using the internal consistency method. Having validated the questionnaire, pilot testing was carried out on the instrument using 15 employees from the other banks in Mali. The employees were given to respond to the questions in the questionnaire over one week. The derived measures of reliabilities for all the constructs are depicted in Table 1.

Table 1: Cronbach's Alpha Reliability Coefficients

Cronbach's Coefficient Alpha		
Variable(s)	**Number of items**	**Alpha**
Human resource focus	7	0.728
Strategic planning	3	0.601
Process management	6	0.642
Customer and management focus	5	0.622

Organizational performance	16	0.781
Overall	**37**	**0.814**

Lastly, the statistical package for social scientists SPSS was used to process and analyze all quantitative data. Data analysis was based on the objectives of the study. Specifically, the study utilized multiple regression analysis to ascertain the influence of total quality management on organizational performance. The derived equation to determine the effect of total quality management on organizational performance was represented as:

$Y = a + bx$……(1)

The equations for the objectives of the study are indicated below:

DV = f (IVs)……(2)

Y = a + bx

Where

a = Constant

b = parameter

x = independent variables

IV is composed of total quality management Y: Dependent variable: organizational performance here;a_1, a_4 $a_5$$a_6$ are parameters for the variable specifically,

$TQM_i = \alpha_0 + b_1(HRF) + \varepsilon_i$…… **(3)**

$TQM_i = \alpha_0 + b_1SM + \varepsilon_i$…… **(4)**

$TQM_i = \alpha_0 + b_1PM\ \varepsilon_i$……**(5)**

$TQM_i = \alpha_0 + b_1CS + \varepsilon_i$…… **(6)**

Multiple regression analysis was used to determine the effect of employee total quality management on organizational performance (Awolusi, 2021; Awolusi, 2012). As a predictive analysis, multiple linear regression is used to explain the effect between the dependent variable and the independent variables. Where; the dependent variable; is a=intercept; b=slope; x= independent variable, TQM= total quality management which is measured in human resource focus =HRF, process management =PM, Strategic management =SM and customer focus CF and OP is organizational performance. The null hypothesis was tested using the level of significance ($p \leq 0.01$); the decision rule was that: if the p-value is less or equal ($p \leq 0.01$), it would be considered significant; otherwise, the null hypothesis would be rejected.

4. Results and Discussion of Findings

After the data entry stage, the data was captured using the SPSS software and then analyzed concerning the research objectives. The analysis was presented using descriptive analysis, regression analysis and correlations.

Results: Descriptive statistics were used to show the demographic characteristics. These were followed by the t-tests. The majority of respondents were female with a dominance of (64.0) compared to their counterparts, the male with (36.0%). Therefore, this implied that the majority were females although the banks consider gender balance important. Similarly, the majority of the respondents were between the age of 20 -30 years with 46.5 %, 31-40 with 32.5 and 41-50 years with 21.1%. This implies that the majority of the respondents in selected banks in Bamako Mali were young people with a high commitment to serving in the bank. In addition, the majority of the respondents hold a master's degree educational qualification level of 55.3, while those with a degree constituted about 43.9% of total respondents and 0.8% with a diploma. This implies that the majority of the respondents had attained a master's level and also many had attained a degree level. This implies the selected banks in Bamako Mali consider education important and the majority of its employees are educated to a higher level. The majority of the respondents had also worked for 2-4 years with 52.6%, 5-7 years with 31.6 % and 8-10 years with 15.8 %. This implies that the majority of the employees in the selected banks in Bamako Mali have gained adequate working experience in the banks. Lastly, the majority of the respondents were operational staff with 85.1% and managers with 14.9%.

This implies that the majority of the employees in selected banks are operational staff who handle day-to-day activities like customer care and other service deliveries. Based on the descriptive analysis, total quality management in all aspects was moderate with a grand (mean = 3.41). Human resource focus with (an average mean=3.19), Strategic planning with (an average mean= 3.34), process management with average (mean=3.53) and customer service with (average mean = 3.61). This implies that total quality management among selected banks in Bamako Mali was moderate and it needs improvement to enhance organizational performance. The dependent variable in this study (organizational performance) was categorized into profitability, growth dimension, and sustainable competitive and customer service. This variable was measured using quantitative questions with response rates ranging from (1) Strongly Agree; (2) Agree; (3) not sure (4) Disagree; and (5) Strongly Disagree. Responses were analyzed and described using means. The descriptive findings implied that total organizational performance in all aspects rated high with a grand (mean = 3.71). For profitability with (average mean=3.72), growth dimension with average (mean =3.09). Sustainable competitive with (average mean= 3.93) and customer service with (mean=4.06). This implies that organizational performance among selected banks in Bamako Mali is high despite total quality management being moderate in banks.

Table 2: Multiple Linear Regression Analysis for Total Quality Management on Organizational Performance

Variables regressed	Adjusted r^2	F-value	R	Sig.		Interpretation	Decision on H_o
Total quality management Vs. Organizational performance	.832	88.4	.912	.000		Significant effect	Rejected
	Unstandardized Coefficients B	Std. Error	Standardized coefficients Beta	t-value	Sig-value	Interpretation	Decision on Ho
(Constant)	34.454	1.124		28.885	.000	Significant effect	Rejected
Human resource focus	.563	.130	.392	4.156	.000	Significant	Accepted
Strategic planning	.834	.478	.762	3.83	.000	Significant	Accepted
Process management	.156	.283	.059	.552	.582	Insignificant	Accepted
Customer and market focus	.925	.336	.472	2.752	.007	Significant	Accepted

a. Predictors: (Constant), human resource focus, strategic management, process management and customer service

Results in Table: 2 above revealed that quality management has a significant effect on organizational performance at (Adjusted R Squared =.832). This implies that the null hypothesis is accepted. All the regression model's results were significant as noted from the contrived level of significance (Sig. <.01). The findings indicate that human resource focus, strategic planning process management and customer service focus had had significant effect on organizational performance in the Malian Banking industry.

Discussion of Findings: The findings indicated that human resource focus significantly affects organizational performance among selected banks in Bamako Mali. Human resource focus scored a grand (mean = 2.89). This implies that human resource focus has a moderate effect on organizational performance Collins (2018). Concur with the findings that human resource focus influences organizational performance. He adds that human

resource focus includes tasks like HR preparation, human resources management, strategic recruiting, employee training, growth compensation management, efficiency, worker relations, health care, and employee satisfaction as well as provision of employee services which all enhance organizational performance. It includes policies and practices set to improve organizational efficiency, engagement of employees and work quality (Allan, 2017; Argote, 2018; Beamon, 2018). Specifically, Beamon (2018) also concurs with the findings that Human resource focus is the strategic approach to the effective and efficient management of people in a company or organization such that they help their organization gain a competitive advantage thus achieving organizational performance.

Allan (2017) and Argote (2018) also concur with the findings that human resource focus is designed to maximize employee performance in service of an employer's strategic objectives resource management is primarily concerned with the management of people within organizations, focusing on policies and systems. HR departments are responsible for overseeing employee benefits design, employee recruitment, training and development, performance appraisal, and reward management, such as managing pay and employee benefits systems. HR also concerns itself with organizational change and industrial relations, or the balancing of organizational practices with requirements arising from collective bargaining and governmental laws. Argote (2018) and Beamon (2018) also concur with the findings that human resource focus greatly influences organizational performance. The overall purpose of human resources focus is to ensure that the organization can achieve success through people. HR professionals manage the human capital of an organization and focus on implementing policies and processes. They can specialize in finding, recruiting, selecting, training, and developing employees, as well as maintaining employee relations or benefits. Moreover, our findings also indicated that strategic planning significantly affects organizational performance among selected banks in Bamako Mali. Leadership scored a grand (mean = 3.34). This implies that strategic planning has a moderate effect on organizational performance.

Blas & Limbambala (2017) concur with the findings that the interest in strategy planning grew out of the realization that a firm needed a well-defined scope and growth direction not just extrapolations of past performances which were being used to project into the future. Forza & Filippini (2018) made an observation of firms‟ recognition of the need to do strategic thinking and planning. (Blas & Limbambala, 2017) also concur with the findings Of Douglas and Judge (2017) Others point out significant difficulties inherent in investigating the relationship between strategic planning and performance, which include the fact that firm performance in the present is a function of past and not current, planning practices (Blas & Limbambala, 2017; Forza & Filippini, 2018) and that hard-to-obtain longitudinal data would be required to control for time lag effects and to show that causal relationships do exist‟ (Douglas & Judge, 2017; Forza & Filippini, 2018). Strategic planning is one of the more popular management approaches in contemporary organizations, and it is consistently ranked among the five most popular managerial approaches worldwide that enhance organizational performance (Wolf and Floyd 2017). According to Beamon (2018), strategic planning is a tool for finding the best future for your organization and the best path to reach that destination and achievement of organizational performance. In addition, our findings also indicated that process management significantly affects organizational performance among selected banks in Bamako Mali.

Process management scored a grand (mean = 3.53). This implies that process management had a high effect on organizational performance. According to Argote (2018) and Beamon (2018) concur with the finding that process management is an organizational approach that focuses on the processes, and is used in the analysis, design, and organizational development of business processes, to improve organizational performance and increase organizational efficiency. Beamon (2018) also concurs with the findings that process management greatly affects organizational performance and he identified a range of benefits that may expected from adopting process management, such as improving organizational performance, communications within organizations, identifying inputs, identifying outputs, and business activities, understanding the flow of activities within the organization, until product or service arrive to the customer, improving the decisions related to performance processes follow-up, and improving the individual management. Argote (2018) also concurs with the findings that process management has a major effect on organizational performance and integration between the organizational systems and its human resources, where organizations aim to maximize the efficient use of their resources and achieve their strategic objectives and organizational performance.

Lastly, the findings also indicated that customer and market focus had a significant effect on organizational performance among selected banks in Bamako Mali. Customer and market focus scored a grand (mean = 3.61).

This implies that customer and market focus had a high effect on organizational performance. (Mitchell, 2013) concur with the findings that customer and market focus has a great influence on organizational performance. He also contends that market advancement involves the improvement of the market target blend and how the necessities in this market are fulfilled with an end goal of upgrading market potential and growing better approaches for serving or working in the objective business sectors. Beamon (2018) and Argote (2018) also concur with the findings that market pioneers rush to take note of the exceptional practices of clients, for example, their purchasing patterns and will build up their inclinations to achieve organizational performance. To fulfill such inclinations, the firm will at that point need to portion these clients and separate items to fulfill these clients as intently as could be expected. Altogether, for a business to procure attributes that give it an edge over its rivals, research on practices and mentalities that infer nonstop better execution thus better support the, (Beamon, 2018). Beamon (2018) concurs with the findings that subsequently established that converting market knowledge into practice in the planning and decision-making process will follow automatically. Similarly, cross-functional coordination is defined as the organized utilization of company resources in an operationally competent manner rather than being competent in the market (Allan, 2017; Argote, 2018; Beamon, 2018; Bergquist, Fredriksson & Svensson, 2019).

5. Conclusions, Recommendations and Implications

Conclusions: The purpose of the study was to examine the effect of total quality management on organizational performance among selected banks in Bamako, Mali. This study adopted a cross-sectional survey design. The target population was 160 respondents and the sample size was 114 respondents. The study questionnaire was the main instrument of data collection. Frequency and percentage distribution were used to determine the profile of the respondents. Mean and Standard deviations were used as descriptive statistics for the independent (total quality management constructs) and dependent variables (organizational performance). Linear and multiple regression analyses were used to determine the effect. Consequently, the following conclusions were contrived: There is a significant effect of human resource focus on organizational performance in the Malian banking industry. This is because human resource focus has a significant effect on enhancing organizational performance. The findings indicate that the null hypothesis was rejected. The study also concluded on the significant effect of strategic planning on organizational performance in the Malian Banking Industry. The study also concluded on the significant effect of process management on organizational performance in the Malian Banking Industry. Lastly, the present study concluded on the significant effect of customer and market focus on organizational performance in the Malian Banking Industry.

Recommendations: The management of the selected banks should carry out regular training to enhance organizational performance and customer results. Furthermore, the management of the banks should also treat employees as a valuable resource to increase their loyalty to the firm, motivate them and make them proud of their jobs, improve their work-related performances, decrease absenteeism, and reduce intentions to quit. The management of the banks should educate employees on total quality management to increase the quality, reliability, and timely delivery of the products/services. With effective training, employees know the industry and the structure of the bank better. Effective training on quality also increases employees' skills to work effectively and efficiently. Furthermore, it will improve employees' loyalty to the firm, their motivation, and work-related performances. Employees should be given training on delivering high-quality and reliable products and/or services to reduce customer complaints. The management of the banks should come up with a clear vision, mission, and values of the banks. With effective strategic quality planning efforts employees should be taken as an input in developing the vision, mission, strategies, and objectives. This facilitates acceptance and support of strategic quality plans by the employees. Successful strategic quality planning efforts also take into account the possible side effects of the plan on the environment before the organizational performance. The management of the selected banks should focus on serving the external customers. They first should know the customers' expectations and requirements and then should offer the products/services, accordingly. With the aid of successful customer focus efforts, production can be arranged concerning the customers' needs, expectations, and complaints.

The management should also focus on producing high-quality and reliable products/services on time with increased efficiency and productivity. When customer expectations are met, their satisfaction will be increased, and the firm's sales and market share will increase. The management of the banks should include four elements: strategic alignment, IT, employees' involvement and process improvement to achieve organizational performance. The management should focus on the processes, and use them in the analysis, design, and organizational development of business processes, to improve organizational performance. Lastly, the management of the selected banks should focus on the improvement of market target blend and customer care. The banks should also focus on the provision of quality services to the customer and promoting their brand. The management of the selected banks should ensure effective communication throughout the TQM Process to ensure patience and understanding of the organizational and cultural changes, commitment and support from the top management throughout the TQM process are also essential. TQM implementation must also be constantly reviewed to align with plans and budgets, while effective process review and controls to conform to set standards are also essential. Quality improvement measurement systems and IT infrastructures must be installed to generate quality data, information sharing and evaluation, and most significantly, TQM strategies must be constantly aligned with the marketing strategies of the banks to achieve successful TQM implementation.

Implications and Contributions to Knowledge: This study found that all aspects of total quality management including human resource focus, leadership, strategic management, process management, information and analysis and customer market focus are instrumental in the attainment of organizational performance in the Malian Banking Industry. This study is expected to provide specific direction to companies contemplating a TQM program (Awolusi, 2013). Hence, the study is expected to be beneficial to banks in Mali by, enabling better strategic and tactical judgments about TQM implementations. It will help selected banks understand TQM as a business philosophy, its key components and its benefits. It will also explore imperatives for successful implementation. It will serve as a veritable source of information for decision-makers who need to commit resources to such a venture, project team members and Consultants who seek to avoid implementation pitfalls, as well as, professionals who work in this and other related fields (Awolusi, 2013).

Another contribution of this study is the measurement of business performance, which was not limited to or focused on financial metrics, but encompasses diverse business indicators and perspectives, like profitability, growth, customer services and sustainable competitive advantage. Allan (2017) and Argote (2018) specifically identified this gap in the literature. This is on the premise that many researchers often use objective measures such as turnover and profit as a form of measuring enterprise/firm business performance. Lastly, this study offers a theoretical model that can be considered a step forward in developing an integrated model for investigating the relationship between TQM and organizational performance (Awolusi, 2012b). Finally, this research adds to the body of knowledge by providing new data and empirical insights into the relationship between TQM and organizational performance. However, further comparative research may be conducted on the relationship between total quality management and organizational performance within the manufacturing industries in Mali to understudy any probable similarities and differences between manufacturing and service-related firms in Mali.

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Moderating Effect of WAQF for Tourism Sustainability in Malaysia: A Mixed-Method Approach

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Abstract: Due to its substantial contributions to the economy, society, environment, and other sectors, tourism is vital. To keep the tourism business sustainable, the government and other relevant stakeholders must allocate a sizable budget. Consequently, waqf is one way to lessen reliance on government funding. Waqf, in general, refers to assets that Muslims willingly donate and plan to use or grow for the good of the community. The purpose of this study is to determine whether the tourism industry and the economic, social-cultural, environmental, and transversal pillars are significantly correlated. It also looks at how waqf moderates the relationship between the tourism sector's sustainability and the economic pillar. Both quantitative and qualitative methods are used in this methodology. Quantitative data were obtained from 150 respondents, and qualitative data were collected through interviews to verify the quantitative findings. The results show significant positive relationships between economic, social-cultural, environmental, and transversal pillars with tourism industry sustainability. The result also demonstrates that waqf moderates the relationship between the economic pillar and tourism industry sustainability. The implications of waqf would contribute to essential services to the community. This had many significant impacts on the economy as a whole and the sustainability of the tourism industry itself. Waqf can reduce the budget deficit, decrease the need for government borrowing, and decrease the interest rate, thereby removing a significant impediment to private and investment growth.

Keywords: *Tourism; sustainability; waqf; economic pillar; survey; interview; Malaysia.*

1. Introduction

Travel and tourism are important economic activities due to their significant economic contribution directly and indirectly. They have a substantial total contribution to the GDP of most countries around the world. Malaysia's tourism industry is the third-largest contributor to the country's economy. According to the Department of Statistics Malaysia (2019), the national tourism industry recorded a positive growth of 4.8% from January until May 2019, registering a total of 10,954,014 tourist arrivals compared to 10,454,447 in the same period last year. The figure showed an upward trend since 2005 and proliferated over the past twelve years, with an average annual growth rate of 11.2 percent. Consequently, for the industry's sustainability, the government needs to maintain the tourist attractions, facilities, and services offered to both local and foreign visitors, which will increase government expenditure. Massive spending by the government for the year 2020 is RM1.1 billion, for the year 2019 is RM100 million, for the year 2018 is RM2 billion, and for the year 2017 RM400 million for the tourism industry. Though tourism generates income for the economy, government expenditure on this industry continues to increase. One of the alternatives to reduce spending without relying on government funds due to the critical/limited availability of the budget is to devise the waqf model as an innovative way to fund the tourism industry. There are difficulties in maintaining Malaysia's tourism business.

Many things could be a barrier to its development and long-term viability. Due to its geographic location, Malaysia is vulnerable to natural disasters such as floods, landslides, and tropical storms. Climate change might make these problems worse, possibly having an impact on infrastructure and tourist attractions. Other nations in the region compete with Malaysia for tourism (Ismail et al., 2022). Competing nations frequently make significant investments in their tourism industries, which may turn away potential tourists from Malaysia. Infrastructure development can be advantageous, but it can also present problems if it causes overdevelopment, traffic congestion, and environmental damage. It is critical to strike a balance between responsible tourism and infrastructural growth. Cultural insensitivity and social tensions between residents and tourists can occasionally result from large numbers of tourists. It's crucial to make sure that tourists respect and benefit from the local inhabitants. Sometimes the economic benefits of tourism are concentrated

in a small number of places, leaving other regions with few options. It is essential for equitable economic growth to address this inequality. Previous studies on sustainability in the tourism industry focus on other elements such as economic (Creaco & Querini, 2003), social-cultural (Boksberger & Laesser, 2007), environmental (Muhanna, 2006), and transversal pillars (Nunkoo, 2017). This study focused on the moderating effect of waqf apart from observing the element of economic, social-cultural, environmental, and transversal pillars in determining the sustainability of the tourism industry. Therefore, this study is comparable with the previous research by the inclusion of the element of waqf.

Waqf means stopping, containing, or preserving something and is derived from the root verb in Arabic. It also brings other definitions that are pious (charitable) foundations (Çizakça, 1998). In general, waqf represents voluntarily donated assets by Muslims that are intended to be consumed/ developed for the benefit of the community (Marzuki, Amin, Haroming, Mohideen, & Ilyas, 2021). The Waqf system has been proven to become a major key to boosting a country's economy in many other sectors in Malaysia (Harun, Possumah, Shafiai, & Noor, 2016). Venture waqf in a circular economy opens a potential new direction in the transformative role that waqf can play to internalize compassion in financial contracting and develop an Islamic vision of entrepreneurship (Khan, 2019). The roles of waqf become evident and extended to other social purposes like supporting the education system, relief of poverty, taking care of animals, agriculture, horticulture, and water resources (Mahamood & Rahman, 2015; Yakubu & Aziz, 2019). Even though waqf is one of the essential elements of Islamic civilizations, many opportunities are not explored, particularly in Malaysia.

As a result, waqf is expected to be one solution to the tourism industry's sustainability problem. Thus, this study will investigate the significant relationships between the economic, social-cultural, environmental, and transversal pillars of the tourism industry in Malaysia. Next, this study will examine whether waqf moderates the relationship between the economic pillar and tourism industry sustainability in Malaysia. There are a few components to this article. The four pillars of Malaysia's economy—economic, sociocultural, environmental, and transversal—along with the sustainability of the tourism sector are first briefly discussed. Following the presentation of the conceptual framework for tourism industry sustainability, the role of waqf as a moderator in this study is stressed. The demographic, sample, data collection technique, and data analysis are all covered in the methodology section that follows. Also given were the findings from frequency, descriptive, and reliability analyses. Finally, the results from the qualitative study as well as the measurement and structural model have been presented. Conclusions and suggestions are given to round out the section.

2. Literature Review

Tourism in Malaysia Economy: Malaysia's Tourism Industry has shown sustained growth in demand and global expansion over the past decades. According to Tourism Malaysia statistics, in 2017, Malaysia had receipts of approximately RM82.1 million, with a total of 26.76 million tourist arrivals. This dynamic industry, therefore, has made this sector the third-largest contributor to the economy of Malaysia. But for sure, some people are involved in traveling and staying in or outside their country for leisure or business purposes for not more than one year in a row. In addition, in his article on the History of Tourism, Towner (1995) described the traditional perspectives as the affluent's practices, particularly in tourism settings such as resorts or extended tours (Towner, 1995). These forms of tourism are prestigious events that occur periodically in people's lives, and their significance is generally evaluated in quantifiable terms such as visit length and economic outlay.

Tourism has been vitally important in many countries as this sector can substantially benefit the country. The tourism industry requires the ability to continuously adjust to tourists' rapidly changing tastes and desires, their security and needs, their activities, and their enjoyment to achieve tourist/customer satisfaction. This industry also leads to other sectors and industries in Malaysia, such as employment, transportation, travel facilities, leisure and entertainment, lodging, food and beverage services, and much more. Previous studies by Archer and Fletcher (1996), and Frechtling and Horváth (1999) indicate that global and regional experiences revealed tourism industry generates significant positive direct and indirect effects. It helps develop and create jobs, as well as raise wages and capital income for the country.

Sustainability of Tourism Industry: Sustainable tourism is a tourism development system that can ensure sustainability or availability of natural resources, socio-cultural life, and the economy until the next generation.

In essence, sustainable tourism can provide long-term benefits to the local economy and social culture (both current and future) without harming the environment and addressing the needs of the visitors' industry and the community. Based on the definition, it can be perceived that sustainable tourism involves three main aspects social culture, economy, and environment, which should be aligned with each other. Thus, the sustainability of the tourism industry will be discussed in four contexts: i) Economic Pillar, ii) Socio-Cultural Pillar, iii) Environmental Pillar, and iv) Transversal Pillar.

The Economic Pillar and Sustainability of the Tourism Industry: Developing an economy depends on developing multiple business relationships and alliances, industry leaders, educational institutions, non-profit organizations, and the community. In the economic aspect, Marais, Plessis & Saayman (2017) reviewed critical success in tourism related to finance. (Cao et al., 2017) modeled the interdependence of tourism demand, such as analysis of tourism import and export, Gross Domestic Product (GDP), Consumer Price Index (CPI), and other economic indicators. Khan et al. (2017) examined the impact of air transportation and travel on inbound and outbound tourism related to trading and economic indicators. Capital investment spending in the tourism industry is another significant variable that stimulates economic growth. Capital investment means the sectors invested in human capital, land, and technology to increase their productivity and profit maximization further. Liu and Chen (2016) pointed out that increasing the government budget on fixed capital investment is one way to stimulate the economy. A recent study by Du et al. (2014) showed that tourism activities are associated with increases in GDP.

Thus, they suggested that governments and NGOs must cooperate more frequently to launch various tourism products to attract more tourists and encourage tourists to increase their spending on travel destinations. Ecotourism is one of the strengths of the Southeast Asia region, and the member countries have agreed to promote ecotourism within this region (Ruekeith, 2014). As a result, the government can earn more revenue from tourist expenditures, thus fostering economic growth. In an economic sense, Waqf could be characterized as diverting funds and other resources from current consumption and investing them in productive and prospective assets that generate large individuals or society at large revenue for future consumption. Therefore, Waqf is a special mixture of the saving act and the investment act. It works by eliminating those resources from consumption and at the same time putting them in the form of productive assets that increase the economy's capital accumulation (Ismail, 2023). Therefore, the following hypothesis is developed:
H1: There is a significant relationship between the economic pillar and the sustainability of the tourism industry development.

The Socio-Cultural Pillar and Sustainability of the Tourism Industry: The socio-cultural pillar is a concept often associated with sustainable development and serves as one of the three key dimensions, along with the economic and environmental dimensions, that make up the overall framework for sustainability. In the context of sustainable development, the socio-cultural pillar refers to the aspects of human society, culture, and community that need to be considered and addressed to ensure that development is both equitable and sustainable. Balbi et al. (2013) examined the strategies of adaptation to tourism demand changes in the social-cultural aspect. Buonincontri et al. (2017) managed the experience co-creation process in tourism destinations, and Khazai, Mahdavian & Platt (2017) developed a framework for benchmarking and monitoring progress on disaster recovery. From a social-cultural aspect, Lee & Hsieh (2016) analyzed sustainable tourism indicators. Any sustainable community's fundamental goal is to promote human well-being by improving the quality of life. That's the cultural pillar's priority. According to Kepe (2004), local communities must have a sense of helping their communities benefit positively from tourism development. As indicated by previous research, the communities will work closely with non-governmental organizations to educate people on tourism development. To ensure the level of development of tourism, a community can be any existing or potential network of individuals, groups, and organizations that share or have the potential to share common concerns, interests, and objectives (Aref & Gill, 2010). Therefore, the following hypothesis is developed:
H2: There is a significant relationship between the social-cultural and sustainability of the tourism industry development.

The Environmental Pillar and Sustainability of the Tourism Industry: The environmental pillar is one of the three key dimensions of sustainable development, alongside the economic and socio-cultural pillars. It focuses on the natural environment and ecological aspects of development. The environmental pillar is

concerned with protecting, preserving, and responsibly managing the Earth's natural resources and ecosystems to ensure long-term sustainability and the well-being of current and future generations. In the environmental aspect, Tang & Tan (2017) proposed a factor decomposition model for analyzing the tourism industry's carbon emission, which refers to the conservation and management of resources, including natural and cultural resources, biodiversity, and waste management. Crouch & Ritchie (1999) define natural resources as the nature of the environment's core resources, including flora and fauna species.

Tourism destinations are a mixture of tourism items such as environmental resources, a selection of facilities, and services to attract visitors (Dwyer & Kim, 2003). Environmental or natural resources are considered one of the main tourist attractions, particularly in rural tourism (Lane, 2009). Therefore, it is advisable to preserve natural resources to maintain the quality of rustic tourism products (Sok, 2010; Reimer & Walter, 2013). Tahir & Roe (2006) highlight the physical integrity in maintaining and building the quality of the landscape in urban and rural areas and preventing ecological and visual pollution. Thus, biological diversity promotes and protects the environment, natural habitats, and wildlife and minimizes the impact of tourism on the environment. The purpose is to sustain the tourism industry for a long time. Therefore, the following hypothesis is developed:
H3: There is a significant relationship between the environmental pillar and the sustainability of the tourism industry development.

The Transversal Pillar and Sustainability of the Tourism Industry: The transversal pillar is not a widely recognized or standardized term in the context of sustainable development. However, the idea of a transversal pillar could refer to a cross-cutting or overarching dimension that interacts with and influences all three main pillars of sustainable development: economic, socio-cultural, and environmental. Transversal pillars in this study refer to governance, security, and infrastructure. Governance is interpreted as a process involving teamwork, collaboration, and stakeholder cooperation to ensure that tourism's social and environmental development in the local economy has multiplier effects (Pulido-Fernández & Merinero-Rodríguez, 2018). Security is essential in all tourist destinations, including transportation routes, zoos, parks, restaurants, bathrooms, hotels, malls, and religious sites for visitors. (Haralambopoulos & Pizam, 1996). Getz (1987) has identified four broad traditions or approaches to tourism planning: (i) boosterism, (ii) an economic, industry-oriented approach, (iii) a physical/spatial approach, and (iv) a community-oriented approach. Tourism infrastructure is the transport, social, and environmental infrastructure supply chain working together to create a regional destination. The destination's infrastructure is a critical determinant of competitiveness (Moreira & Lao, 2014).

Tourism's inherent complexity also requires its development to be accompanied by effective planning and management processes based on sustainability principles. Discrepancies between national government structures and local government perspectives often create a space for local, private interests to dominate rather than strategies leading to socially equitable development that considers residents' needs (Riensche, Castillo, García-Frapolli, Moreno-Casasola, & Tello-Díaz, 2019). Frequent institutional, economic, and social changes are added to the challenge of effective management, making it difficult to manage cooperation and governance (Halkier et al., 2019) in an environment of shifting governance modes. These shifts are a recent focus of the tourism governance literature, along with some main issues related to mobility and hyper-neo-liberalism (Jamal & Camargo, 2018). Governance is a multi-faceted concept in tourism, along with its multi-scale nature (Chaperon, 2017). This helps explain the multitude of methods used to consider the essence of tourism governance and, secondly, how to manage the tourism industry effectively. Therefore, the following hypothesis is developed:
H4: There is a significant relationship between the transversal pillar and sustainability of the tourism industry development.

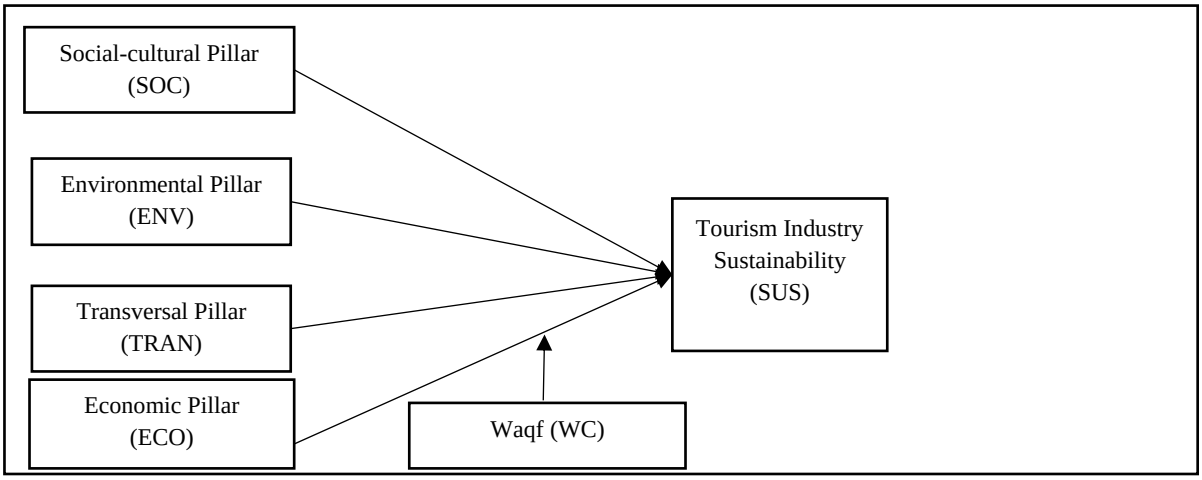
Waqf as Moderator: Çizakça (1998) agreed that the waqf program significantly led to a reduction in government spending that resulted in a decrease in budget deficits, reduced government lending requirements by cutting down the 'crowding-out effect,' and this resulted in a decline in interest rates leading to fundamental obstacles to private investment and growth. Waqf is not part of government expenditure. Indeed, the waqf scheme extended to numerous essential services such as health, education, towns, land, construction, and much more that were made available to the government at no cost in history. It happened with the participation of the individual or private sector. The Waqf system encourages the involvement of any person or private sector

through voluntary actions and will, therefore, minimize the role of government in the economy. The more waqf funds collected for some community-friendly development projects, the less will be the government for some programs (Budiman, 2014). In an economic sense, Waqf could be characterized as diverting funds and other resources from current consumption and investing them in productive and prospective assets that generate large individuals or society at large revenue for future consumption.

Therefore, Waqf is a special mixture of the saving act and the investment act. It works by eliminating those resources from consumption and at the same time putting them in the form of productive assets that increase the economy's capital accumulation. Waqf has played a unique role and always has the potential to do so. Waqf could be regarded as a fundamental financial institution to stimulate economic activity while at the same time ensuring that the gains accrue to some part of society. Therefore, waqf is a unique mixture of saving and investment acts. It works by eliminating those resources from consumption and, at the same time, putting them in the form of productive assets that increase the economy's capital accumulation. Thus, waqf could reduce government spending and economic participation, prevent deficit financing and decrease interest rates, restore income and wealth distribution, eradicate poverty, and enhance economic progress. Therefore, the following hypothesis is developed:
H5: Waqf moderates the relationship between the economic pillar and the sustainability of the tourism industry.

Conceptual Framework: The conceptual framework (see Figure 1) is derived from the empirical literature discussed in the previous sections. A framework was developed specifically to study the relationship between the social-cultural pillar, environmental pillar, transversal pillar, and moderating effect of waqf contribution towards the economic pillar with the tourism industry sustainability.

Figure 1: Conceptual Framework for Tourism Industry Sustainability



3. Methodology

This study employed a mixed-method approach to enrich the findings. It started with the quantitative analysis. Quantitative research design is a systematic, structured approach to conducting research that aims to collect and analyze numerical data. At the same time, qualitative is needed in this study to support the quantitative analysis through semi-structured interviews. The explanatory sequential design is applied by first getting quantitative data and analyzing, getting the result, and determining the quantitative results to explain. Second, gather the qualitative data and analysis, get the results, and interpret how qualitative data demonstrate the quantitative results.

Population and Sample: This study's population comprised staff at the Tourism Department who work in the Ministry of Tourism, Arts, and Culture. The Tourism Department staff consists of managers and executives who conduct tourism-related activities. The next is the staff at Waqf Management Organization who administer and

manage waqf fund: Jabatan Wakaf, Zakat & Haji, Perbadanan Waqf Selangor, Yayasan Sofa, and Yayasan Waqf Malaysia. The tourism industry representative consists of travel agent employees, the staff of transportation services, and hotel-related tourism staff. The other related parties in the tourism industry are local and international tourists and the public, the last population. The reason for choosing people with experience in the tourism industry as the population was to find out which pillar contributes to the sustainability of the tourism industry with the waqf element. The selection of the population and samples was based on a purposive sampling technique. The sample drawn for this study using G-power is 150. In determining the sample size, this study requires 100 and above respondents (Hair et al., 2014). Based on Krejcie & Morgan (1970), a known population table of sample size, the sample size for this study is 108 respondents. Furthermore, based on G-Power application analysis, the sample size needed is 85 respondents. Hence, with 150 respondents obtained for this study, the number of sample size questionnaires being distributed was valid and represented the population.

Data Collection Method: This study used a self-administered survey and drop-off and collect technique. The self-administered survey was used because of its low-cost advantage per survey, and this survey method has less interviewer bias. The self-administered survey also can reach a geographically widespread sample at a lower cost as there is no need for the researcher to be present. For the drop-off technique, the questionnaires were distributed in the office.

Data Analysis: In this study, the quantitative data will be measured by descriptive statistics. The data are coded, computed, and processed using the Statistical Package for Social Science (SPSS) for Window and Partial Least Square Structural Equation Modelling using the Warp PLS 4.0 for this study. This model has four independent variables. The data collected will be analyzed according to four types of analysis: reliability analysis, descriptive analysis, correlation analysis, and regression analysis. Finally, the qualitative data are analyzed using the content analysis process. For qualitative study approach, involves collecting data from a natural setting, using the researchers as the key instrument for data collection, using variate data, inductive and deductive data analysis, flexibility, and originality of information (Creswell, 2014). The interviewees for this study involved staff from the tourism department and Waqf institution in Selangor. Therefore, the researchers used a purposeful sampling technique in drawing respondents in this study. The interview method was used for collecting data from the selected interviewees. The interviews lasted for 15-20 minutes with each interviewee. The responses from the interviewees were recorded with a voice recorder which was later transcribed and coded. Themes were generated from the information provided by these interviewees. Finally, the findings generated from the interviews are discussed in detail in the results and discussion section.

4. Results and Discussion

Frequency Analysis: The results show that the demographic profile and the distribution of gender for this study can be considered well-balanced (Female = 58 percent; Male = 42 percent). Out of 150 valid respondents, 61.3 percent were over 34 years old, 24.7 percent had 11 to 15 years of working experience, and 55.9 percent were from related parties in the tourism industry. Next, the respondents representing the department unit show that out of the total respondents, 55.9 percent (n=80) of the respondents are from the Tourism Department of Malaysia. 11.9 percent (n=17) of the respondents are from the State of Waqf Management, and 11.9 percent (n=17) of the respondents are representatives from the tourism industry. Finally, 20.3 percent (n=29) of the respondents are from other related parties in the tourism industry.

Descriptive Analysis: Descriptive statistics are measured in terms of the mean and standard deviation. The results show that "The tourism industry helps the country to earn income from currency exchange" scored the highest mean among seven items (M=3.57, SD=0.814) since most respondents strongly agreed that they still noticed the tourism industry helps the country earn income from currency exchange. However, the majority of the respondents answered point 3 on the scale (neutral) for "The tourism industry helps the local organization and community to grow," which scored the lowest mean (M=3.30, SD=0.93). This indicates that related parties in the tourism industry somehow agreed that the tourism industry helps the local organization and community to grow. Other items show that associated parties in the tourism industry agreed that the tourism industry must embrace community residents' values (M=3.56, SD=0.82). Furthermore, the related parties also agreed

that the tourism industry could attract more investments in local communities (M=3.51, SD=0.79) and agreed that the tourism industry could create job opportunities (M=3.50, SD=0.87).

Finally, the related parties somehow agreed that the tourism industry enhances local income (M=3.48, SD=0.81) and agreed that the government earns revenue from taxes from the tourism industry (M=3.37, SD=0.85). The results here show that "Proper energy management should be practiced in the tourism industry" scored the highest mean among six items (M=3.56, SD=0.81) since most respondents strongly agreed that proper energy management should be practiced in the tourism industry. However, the majority of the respondents answered point 3 on the scale (neutral) for "The tourism industry motivates the public institution to arrange open spaces", which scored the lowest mean (M=3.27, SD=0.92). This indicates that the related parties somehow agreed that the tourism industry motivates public institutions to arrange open spaces. Other items show that the associated parties agreed that the tourism industry helps increase environmental attractiveness (M=3.54, SD=0.82). Furthermore, the related parties in the tourism industry also agreed that the tourists have to participate in the natural environment (M=3.51, SD=0.75) and agreed to promote the use of recycled and bio-degradable products to tourists (M=3.42, SD=0.78).

Finally, the related parties somehow agreed that the tourism industry protects natural and artificial resources, (M=3.41, SD=0.71). The results show that "The tourism industry should encourage local communities to strengthen their cultural identity" scored the highest mean among the seven items (M=4.22, SD=0.84). Most respondents strongly agreed that the tourism industry should encourage local communities to strengthen their cultural identity. However, most respondents answered neutrally for "Cross-cultural exchange should be practiced in the tourism industry," which scored the lowest mean (M=3.49, SD=0.79). This indicates that the tourism industry's related parties somehow agreed that cross-cultural exchange should be practiced in the tourism industry. Other items show that the tourism industry's related parties agreed that the tourism industry helps to promote social interaction (M=4.11, SD=0.88). Furthermore, the tourism industry's related parties also agreed that the tourism industry helps to increase the quality of people's lives (M=3.59, SD=0.81) and agreed that the tourism industry could diversify the foreign language in communication (M=3.57, SD=0.78). Finally, the related parties in the tourism industry somehow agreed that the preservation of cultural heritage is a need in the tourism industry (M=3.5, SD=0.75) and agreed that the tourism industry also provides opportunities for education (M=3.51, SD=0.83).

The results show that "The tourism industry must ensure good quality tourism experiences" scored the highest mean among eight items (M=4.25, SD=0.79) since most respondents strongly agreed that the tourism industry must ensure good quality tourism experiences. However, the majority of the respondents answered point 3 on the scale (neutral) for "Planning destinations is essential for tourists," which scored the lowest mean (M=3.50, SD=0.80). This indicates that the tourism industry's related parties somehow agreed that planning the destinations is essential for tourists. Other items show that the related parties agreed that the tourism industry's successful management requires an advanced planning strategy (M=4.17, SD=0.88). Furthermore, the associated parties also agreed that innovation helps improve the tourism industry (M=4.03, SD=0.92) and agreed that good business ethics is vital for tourists (M=3.69, SD=0.71). Moreover, the tourism industry's related parties also agreed that tourists prefer safety and security (M=3.58, SD=0.81) and agreed that better infrastructure services would increase the number of tourists (M=3.56, SD=0.79). Finally, the related parties somehow agreed that effective management could boost the tourism industry (M=3.51, SD=0.83). The results show that "Waqf enhances the activities for the tourism industry" scored the highest mean among six items (M=4.21, SD=0.93) since most respondents strongly agreed that Waqf enhances the tourism industry's activities. However, the majority of the respondents answered point 3 on the scale (neutral) for "Waqf prevents the deficit in the development of the tourism industry," which scored the lowest mean (M=3.31, SD=0.93).

This indicates that the related parties in the tourism industry somehow agreed that Waqf prevents the deficit in developing the tourism industry. Other items show that the associated parties in the tourism industry agreed that the Waqf could help reduce government expenditure (M=3.58, SD=0.81). Furthermore, the related parties also agreed that the tourism industry's future investment could utilize the Waqf fund (M=3.50, SD=0.87) and agreed that the Waqf is an opportunity to develop the tourism industry (M=3.49, SD=0.81). Finally, the related parties somehow agreed that Waqf facilitates the tourism industry to reduce financial dependence on the government (M=3.37, SD=0.856). The results show that "The tourism industry can protect the environment"

scored the highest mean among the five items (M=3.53, SD=0.82) since most respondents strongly agreed that the tourism industry could protect the environment. However, the majority of the respondents answered point 3 on the scale (neutral) for "Better infrastructure could improve the tourism industry," which scored the lowest mean (M=3.26, SD=0.92). This indicates that the related parties somehow agreed that better infrastructure could improve the tourism industry. Other items show that the associated parties agreed that security and safety could enhance the tourism industry (M=3.49, SD=0.74). Furthermore, the associated parties also agreed that the cultural exchange experience happens in the tourism industry (M=3.41, SD=0.78). Finally, the tourism industry's related parties somehow agreed that the tourism industry could benefit a country's economy (M=3.39, SD=0.69).

Reliability Test: Based on reliability analysis, the Cronbach alpha reliability coefficient values are in the range of 0.78 to 0.93, as represented in Table 1. This shows that the instrument was reliable after conducting two pre-tests to measure what it was expected to measure.

Table 1: Reliability Analysis

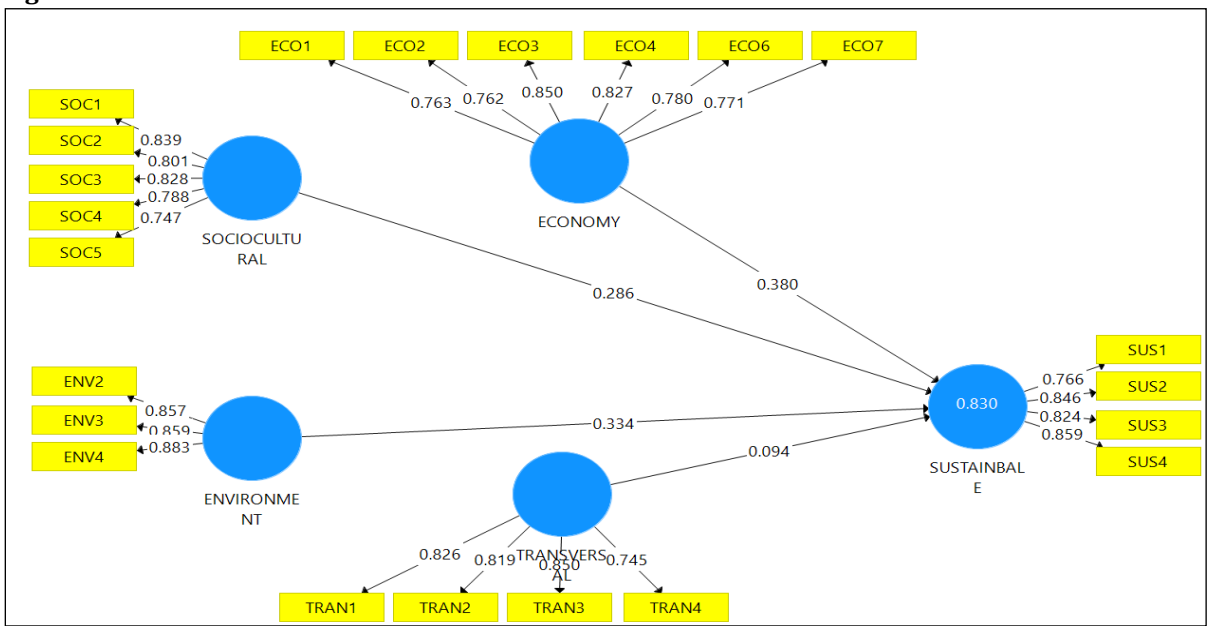
Measurements	No of item	Source
Sustainable Tourism Industry (SUS)	5	α = 0.89 Inskeep (1991)
Economic Pillar (ECON)	7	α = 0.86 Inskeep (1991)
Socio-cultural Pillar (SOC)	7	α = 0.78 Inskeep (1991)
Environmental Pillar (ENV)	6	α = 0.93 Inskeep (1991)
Transversal Pillar (TRAN)	8	α = 0.81 Inskeep (1991)
Waqf (WC)	6	α =0.85 Gonzalez and Torres (2014)

Measurement Model: Next, the study presents the scores for outer loading, composite reliability, convergent reliability, and Cronbach Alpha for reflective measurement model assessment. The first step in model assessment involves examining the individual indicator loadings. It estimates relationships and determines an item's total contribution to its assigned construct. Loadings above 0.7 are recommended, indicating that the construct explains more than 50 percent of the indicator's variance, thus demonstrating that the indicator exhibits a satisfactory degree of reliability (Hulland, 1999). The indicator loadings scores are between 0.745 and 0.883, which exceed the recommended value, suggesting a satisfactory degree of reliability. The second step involves assessing the model's internal consistency reliability using composite reliability (CR). Higher values of CR generally indicate higher levels of reliability. Values between 0.70 and 0.90 are considered "satisfactory to good" (Diamantopoulos, Sarstedt, Fuchs, Wilczynski, & Kaiser, 2012). The three constructs' CR value was between 0.885 and 0.910, which exceeded the acceptable value of 0.7.

In addition, the Cronbach Alpha value for all constructs was between 0.829 and 0.881, which also exceeded the recommended value of 0.7. Thus, the internal consistency of the items used in this study was adequate and confirmed (Bagozzi & Yi, 1988). The next step requires an assessment of the convergent validity of each construct measure by using the Average Variance Extracted (AVE) for all items on each construct. Convergent validity is the extent to which a construct is related to other construct designs to explain and measure its items' variance. The minimum acceptable AVE is 0.50 or higher, which indicates that the construct explains 50 percent or more of the variance of the items that make up the construct (Bagozzi & Yi, 1988). The AVE scores were between 0.629 and 0.751, higher than the minimum acceptable AVE of 0.50, indicating a satisfactory convergent validity. Subsequently, there is a need to assess the discriminant validity to ensure the construct does not correlate with other constructs. For this study, the Fornell-Larcker criteria were used to examine the construct level validity. It suggests that each construct's AVE should be compared to the squared inter-construct correlation of that same construct, and it should not be larger than their AVEs (Fornell & Larcker, 1981).

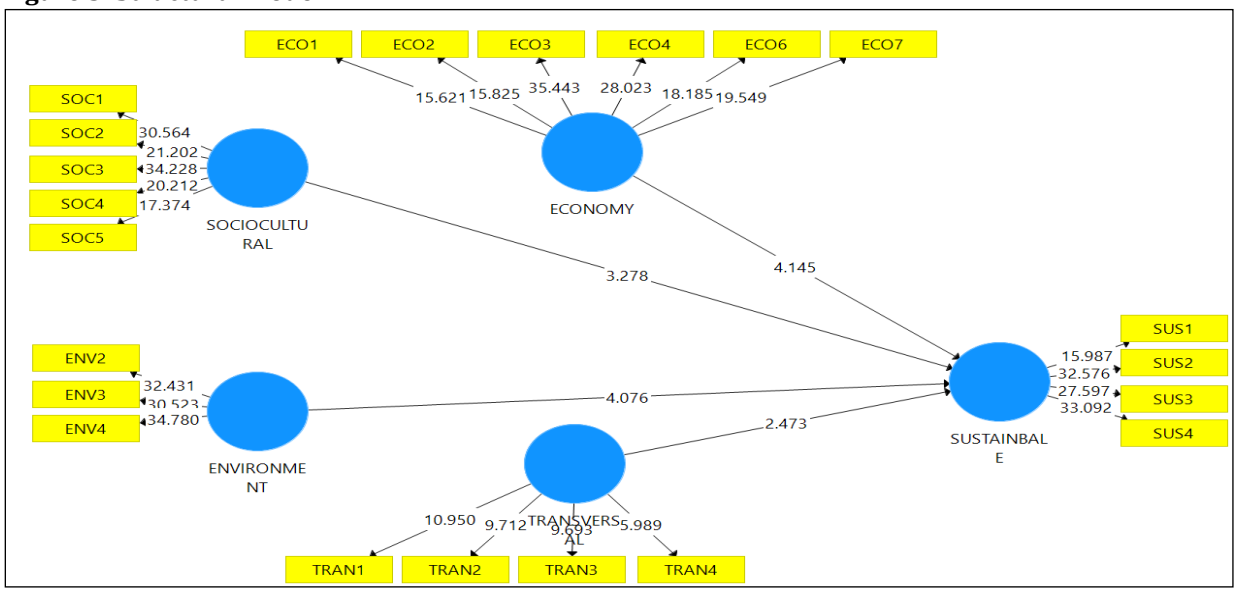
The AVE's square roots are shown on the diagonal and printed in bold, while the non-bold values represent the value of intercorrelation between constructs. The AVE's square roots should be higher than the off-diagonal components. The results ranging between 0.793 and 0.867 meet the criteria stipulated by Fornell & Larcker (1981). Hence, it indicates that the discriminant validity of the model is confirmed. Cross-loadings are another way to check for the discriminant validity at the indicator stage (Grégoire & Fisher, 2006). The loading of each indicator should be higher on the construct it is intended to measure. All measuring indicators are loaded higher than other construct indicators. Thus, the loading confirms that the discriminant validity of the model has been attained. With the present study's results showing all path model measurements as valid and reliable, it is appropriate to proceed to the next step. This involves the assessment of the structural model to determine the significance of the relationships and the developed hypotheses (Henseler, 2012). Additionally, no item was dropped as the values were well above the recommended minimum value, as shown in Figure 2.

Figure 2: Measurement Model



Structural Model: Once satisfied with the measurement model results, the next step in evaluating the PLS-SEM results is to assess the structural model, which involves testing all the hypotheses to identify the effect of the exogenous variables on the endogenous variables to answer the second research question as described in Chapter 1 (Hair, Hult, Ringle, & Sarstedt, 2016). The structural model has four main criteria used in the evaluation, including i) estimation of path coefficient (β), ii) determination coefficient (R2), iii) effect size (f2), and iv) prediction relevance (Q2) (Chin, 2010). Before assessing the structural relationships, collinearity must be examined to make sure the results are not biased. Bias occurs when independent variables in a model are correlated. One way to measure collinearity is by referring to the variance inflation factor (VIF). Ideally, the VIF values should be close to 3 and lower. VIF values above 5 indicate possible collinearity issues (Mason & Perreault, 1991; Hair, Hult, Ringle, & Sarstedt, 2016). The results show no strong indication of multicollinearity as the VIF values for the structural model were between 1.019 and 4.905. Since collinearity is not an issue, the next step is to evaluate the relationships' statistical significance and develop hypotheses. The hypotheses were tested by looking at the path coefficient (β), the significance level (p-value) generated from the 97.5 percent confidence intervals (CI) on the relationships between economic (ECO), environmental (ENV), social-cultural (SOC), and transversal (T) with tourism industry sustainability and how does Waqf contribution moderate the relationship between the economic pillar and tourism industry sustainability. Refer to Figure 3.

Figure 3: Structural Model



The first hypothesis (H1) states that there is a significant relationship between the economy and the sustainability of the tourism industry. The results reveal that the tourism industry's economy and sustainability have a significant positive relationship (β = 0.380, t = 4.145, p-value = 0.000). Thus, the proposed H1 is accepted. The second hypothesis (H2) states a significant relationship exists between the environment and the sustainability of the tourism industry. The results show that they have a significant relationship (β = 0.334, t = 4.076, p-value = 0.000). Therefore, H2 is statistically significant. The third hypothesis (H3) states that there is a significant relationship between the social-cultural and sustainability of the tourism industry. The results show that social-cultural and sustainability have a significant positive significant relationship (β = 0.286, t = 3.278, p-value = 0.001). This shows that the proposed H3 is accepted.

The fourth hypothesis (H4) states a significant relationship between the transversal and sustainability of the tourism industry. Similarly, the results also support the fourth hypothesis (H4), showing a significant relationship between the transversal and sustainability of the tourism industry (β = 0.094, t = 2.473, p-value = 0.014). Besides this, the β value also represents the strength of the effect of each independent variable (IV) on the dependent variable (DV). The higher the β value, the stronger the effect of IV on DV. The analysis shows that for every unit increase in ECO, the SUS will increase by 0.380, provided that other factors remain unchanged. Furthermore, for every unit increase in ENV, the SUS will increase by 0.334, provided that other factors remain unchanged. With the same condition, the results also reveal that for every unit increase in SOC, the SUS will increase by 0.286. Finally, every unit increase in TRAN will impact 0.094 of SUS. Thus, it can be suggested that ECO is the most influential factor in structural model. The results are summarized in Table 2.

Table 2: Path Coefficient (β), T-Value and Significance Level

	Path Coefficient (β)	T-Value	P-Values	Hypothesis
H1: ECO->SUS	0.380	4.145	0.000	Accepted
H2: ENV->SUS	0.334	4.076	0.000	Accepted
H3: SOC->SUS	0.286	3.278	0.001	Accepted
H4: TRAN->SUS	0.094	2.473	0.014	Accepted

Notes: ECO = Economic, ENV =Environment, SOC = Sociocultural, SUS = Sustainable, TRAN = Transversal

The following assessment examines the coefficient of determination (R2) value of the endogenous construct(s). Table 2 shows that the Economic (ECO), environmental (ENV), Socio-cultural (SOC), and Transversal (TRAN)

can explain 83 percent of the sustainability of the tourism industry (SUS). The value of R2 for this study is more than 50 percent, which is acceptable in social science studies because of the complications in interpreting human behavior. The result of the moderating effect analysis was performed using the bootstrapping procedure. The fifth hypothesis (H5) states that Waqf moderates the relationship between economics and sustainability. The results reveal that Waqf moderates the relationship between the economy and the sustainability of the tourism industry and has a significant positive relationship ($\beta = 0.080$, $t = 2.004$, p-value = 0.046).

Findings for Qualitative: The steps to gather qualitative data are by interviewing the respondents following purposive sampling. The respondent's criteria must be the Tourism Department staff who conduct tourism-related activities. The next is the staff at the Waqf Management Organisation, who administer and manage the Waqf fund. Purposive sampling is selected for this study to obtain information-rich and aimed insight as mentioned by Patton (2002). There are four respondents participated in this study. The number of respondents is sufficient for this study to verify the data, as mentioned by Creswell and Clark (2018), as the final sample size is not determined until it reaches saturation. Table 3 summarizes the respondent's profile.

Table 3: Respondent's Profile

Respondents	Gender	Age	Employer
1	Female	43	Tourism Department
2	Male	48	Tourism Department
3	Male	51	Waqf Organisation
4	Female	56	Waqf Organisation

Interviews were conducted through phone calls. Once the data has been collected and transcribed, the data are analyzed based on quantitative data findings through the content analysis process. Table 4 summarizes the results of qualitative data analysis.

Table 4: Summary of Qualitative Results

	Qualitative Results
Economic Pillar	R1-R4 – Respondents agree that the tourism industry is important to stimulate economic growth.
Social-cultural Pillar	R1-R4 – Respondents stated that more cultural and social events boost the tourism industry.
Environmental Pillar	R1-R4 – Respondents agree that preserving natural resources is important to maintain the quality of rural tourism products and protect the environment.
Transversal Pillar	R1-R4 - Respondents indicate the importance of good governance, security, and infrastructure to boost the tourism industry.
Waqf	R1-R4 – Respondents agree that waqf funds can be used to maintain tourism facilities.

5. Conclusion and Implications

This study aims to address the significant relationships between economic, social-cultural, environmental, and transversal pillars with tourism industry sustainability and waqf moderates the relationship between the economic pillar and tourism industry sustainability. This study's first objective is that carry out the PLS-SEM structural model's assessment to test the hypothesis in determining the significant relationships between economic, social-cultural, environmental, and transversal pillars and tourism industry sustainability. Next, interviews were conducted to gain the perspectives of the stakeholders involved in the tourism industry in

Malaysia. The economic pillar has a significant effect on the tourism industry's sustainability. The more economic activities, the more enduring the sustainability of the tourism industry. Therefore, the government, in this case, Tourism Malaysia, should retain and continuously collaborate with the related tourism agencies to stimulate the economy by introducing the program to enhance local tourism. Proper promotion and marketing to the public to raise awareness for holiday destinations and tourism products in Malaysia should be initiated and practiced. For the social-cultural pillar, findings provide evidence that there is a significant positive relationship and direct effect between the social-cultural pillar and the sustainability of the tourism industry. More social-cultural can be developed with the sustainable tourism industry.

Therefore, the State of Tourism Malaysia needs to continue more cultural and social events to boost the tourism industry. By doing this, the local community can mix with people from diverse backgrounds with different lifestyles, which may lead to improved lifestyles and practices from the tourists' examples. For the environmental pillar, there is a significant positive relationship and direct effect between the environmental pillar and the sustainability of the tourism industry. Environmental quality can lead to the sustainability of the tourism industry. Protecting environmental or natural resources is considered one of the main attractions for tourists, particularly in rural tourism. Tourists should maintain to preserve natural resources to maintain the quality of the products of rural tourism. For the transversal pillar, findings confirm a significant positive relationship and direct effect between the transversal pillars with tourism industry sustainability. The more effective the transversal applied, the more sustainable the tourism industry. Therefore, the government needs to increase security levels to lower the crime rate and introduce an online payment gateway, good governance practices, and health awareness of the epidemic transmission. The application of QR codes for payment, keeping track of places you visit, and social distancing may lower the risk since the pandemic is still there.

For the second objective, the PLS-SEM structural model's assessment was carried out to test the hypothesis, that waqf moderates the relationship between the economic pillar and tourism industry sustainability. Next, the interviews were conducted to obtain opinions from the stakeholders in the tourism industry. The result also verifies that waqf moderates the relationship between the economic pillar and tourism industry sustainability. So, with the establishment of Waqf for economic, the more the tourism industry sustainability benefits. Waqf's contribution can also help reduce government expenditure, prevent the tourism industry's deficit in development, and enhance the tourism industry's activities. Thus, the tourism industry's future investment could utilize the waqf fund, and the tourism industry can reduce the government's financial dependency. Therefore, this study's findings are essential in providing literature expansion on the role of Waqf in the sustainable tourism industry. An all-encompassing strategy that takes into account the economic, sociocultural, environmental, and transversal pillars will enable sustainability in the tourism sector. Each of these pillars is essential to the success and long-term survival of Malaysia's tourist industry. Investment opportunities in infrastructure, lodging, and other tourist-related industries may arise from promoting sustainable tourism. Stressing the value of maintaining cultural heritage and traditions can help a place maintain its distinctiveness and draw tourists looking for real-world experiences. Natural landmarks, including rainforests and coral reefs, should be preserved so that tourists continue to find them appealing and so that the harm that tourism does to these ecosystems is reduced.

For an all-encompassing and balanced development, it is crucial to understand how economic, sociocultural, and environmental aspects are interconnected. In addition, Waqf institution can formulate appropriate processes and action plans suited to the current situation and crises. With that, stakeholders could also implement a suitable program to maintain the sustainability of the tourism industry and, at the same time, generate the growth of waqf to sustain the tourism industry. The waqf system also will contribute to the ultimate goals of a modern economy. With a massive reduction in government expenditure, the implications of waqf would contribute to essential services to the community. This had many significant impacts on the economy as a whole and the sustainability of the tourism industry itself. Waqf can reduce the budget deficit, decrease the need for government borrowing, and decrease the interest rate, thereby removing a significant impediment to private and investment growth. Waqf's contribution will enable the tourism industry to be competitive without state coercion and, for example, redistribute taxation through the usual method but voluntary donations. In addition, strategic and significant ways of empowering waqf assets to generate income, expanding waqf for economic purposes, and developing new waqf institutions. This study has several limitations that can be addressed in future studies. First, this study did not get a response from tourists;

therefore, future researchers should collect data from tourists. Second, this research was conducted using a self-administered questionnaire that was distributed online. A face-to-face survey would have been used to gather data better to understand related parties in the tourism and waqf sector if the situation had been permitted.

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Evaluating the Nexus between Monetary Sector Variables and Housing Affordability in Malaysia

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Abstract: Housing affordability is a globally recognized and pressing issue that has prompted extensive discussions in the realms of societal discourse, academic research, and policy development. In the context of Malaysia, this issue persists, despite the government implementing a diverse array of initiatives aimed at alleviating housing affordability challenges. This study aims to explore the nexus between housing affordability and key monetary sector variables, including money supply, interest rates, inflation rates, and foreign exchange rates in Malaysia. The study employed Autoregressive Distributed Lag (ARDL) estimation techniques on a dataset comprising 52 quarterly observations from the years 2010 to 2022. The findings demonstrate the existence of a long-term cointegration relationship between money supply, inflation rates, interest rates and housing affordability. Conversely, in the short term, the analysis reveals that only money supply and inflation rates exert a statistically significant influence on housing affordability. The long-term cointegration of money supply and inflation rates with housing affordability, along with their significant short-term relationship, highlights these two monetary variables as primary drivers of housing affordability. These results underscore the critical role of monetary sector variables in determining housing affordability in Malaysia. Consequently, policymakers are encouraged to prioritize the regulation of monetary sector variables, particularly focusing on money supply and inflation rates, to effectively promote housing affordability in Malaysia.

Keywords: *Monetary sector variables, housing affordability, inflation, money supply, interest rate, foreign exchange rate.*

1. Introduction

Housing affordability stands as a pivotal and pressing apprehension, commanding substantial deliberation within the spheres of societal discourse, academic research, and policy formulation. It is also acknowledged as a burgeoning issue on a global scale (Baker et al., 2016; Lee et al., 2022), especially prevalent within households characterized by moderate to lower income levels (Haffner & Hulse, 2021). The housing affordability problems lead to numerous adverse outcomes that emerge both on a micro level within individual households and on a broader macroeconomic scale (Galster & Lee, 2021).

From a micro perspective, issues regarding housing affordability can profoundly have an impact on individuals' well-being and satisfaction (Foye, 2017). The presence of exorbitant housing costs will result in significant societal consequences, as households are compelled to make concessions by diminishing expenditures on non-housing items and essential household needs, including education, healthcare, and food, to meet the elevated housing costs (Galster & Lee, 2021). The lack of basic housing necessities will result in notable negative externalities, encompassing deteriorations in both physical and mental well-being, in addition to limitations in educational accomplishments (Mason et al., 2013; Cattaneo et al., 2009).

From the macroeconomic standpoint, the housing affordability crisis evidently could also have impacts on socio-economic development, labor market productivity, and natural resource efficiency. Wang et al. (2012) substantiated the notion that housing affordability plays a crucial role in fostering economic development through the attraction of investments into the housing sector and the stimulation of housing consumption. Conversely, a low level of housing affordability can result in an imbalanced economic structure and a reduction in overall economic growth. Galster and Lee (2021) and Maclennan et al. (2018) further articulate that the cost of housing within employment centers is notably exorbitant and unaffordable. People are constrained to choose residences distant from their employment locations, thereby resulting in extended commuting durations, heightened traffic congestion, increased pollution, and the wasteful depletion of natural resources.

Furthermore, research findings by Been et al. (2019) and Chen et al. (2019) demonstrate that the housing affordability problem carries adverse consequences for the labor market, resulting in diminished worker productivity.

In Malaysia, the government has formulated a diverse array of initiatives aimed at mitigating the housing affordability problem. These measures encompass the construction of affordable housing for individuals with lower and middle incomes, provision of financial aid to qualified first-time homebuyers, the introduction of economical rental housing targeting low-income urban households, implementation of a scheme permitting eligible individuals to lease homes with the prospect of future ownership, and establishment of collaborations with financial institutions to extend housing loan programs characterized by competitive interest rates and flexible terms. These strategic initiatives collectively underscore Malaysia's government commitment to addressing the housing affordability issue, with a resolute aim to achieve target 11.1 of the Sustainable Development Goals (SDGs). This target strives to ensure universal access to suitable, secure, and cost-effective housing by the year 2030. Nevertheless, despite the initiatives undertaken by the government to address the housing affordability problem, the situation has deteriorated since the year 2000, with median housing prices consistently exceeding the affordability threshold, which is set at three times the median annual household income (Musaddad et al., 2023).

Against this background, this study was conducted to examine the dynamic interaction between housing affordability and key monetary variables in Malaysia, encompassing money supply, interest rates, inflation, and foreign exchange rates, over both short-term and long-term horizons. This paper follows a structured format with five distinct sections. In Section 2, the literature review comprehends existing knowledge. Section 3 elaborates on the methodology for empirical exploration. Section 4 presents the empirical results and subsequent discussion. Lastly, in Section 5, a conclusion is provided that summarizes the study's findings and offers recommendations.

2. Literature Review

What is Housing Affordability? Ezennia and Hoskara (2019) and Nwuba and Kalu (2018) note that the definition of housing affordability and its measurement concepts are continually evolving and becoming more widespread (Nwuba & Kalu, 2018; Ezennia & Hoskara, 2019). Additionally, Kallakmaa-Kapsta and Kolbre (2013) have emphasized the importance of adopting a multifaceted approach that considers diverse factors affecting housing affordability in various contexts, rather than relying solely on a single, narrowly defined concept in assessing housing affordability. In a similar vein, Ben-Shahar et al. (2020) proposed that different countries and socioeconomic groups have distinct interpretations of the meaning of housing affordability and different measurement approaches.

At a fundamental level, housing affordability is typically measured by examining the cost of housing to the disposable income of a household (Bieri, 2014; Gopalan & Venkataraman, 2015). Galster and Lee (2021) argued that a comprehensive definition of housing affordability should encompass three essential components that are the costs associated with housing and non-housing goods, the financial resources available to the household to purchase houses, and a normative standard that establishes the minimum acceptable levels of consumption for both housing and non-housing goods by the household.

Paris (2007) observes that, in terms of measurement approaches, most of the past studies have employed the Median Multiple Method, also recognized as the housing price-to-income ratio (PIR), to evaluate housing affordability. This method utilizes the median household income as its benchmark. Following this methodology, The Demographia International Housing Affordability (2022) established the median house price to the median household income approach for measuring housing affordability. This approach is currently pervasive on a global scale and bears the imprimatur of esteemed international organizations such as the World Bank and the United Nations (Bank Negara Malaysia, 2016). Housing is considered affordable when this ratio remains below three times.

Monetary Sector Variables and Housing Affordability: This section provides an overview of the findings of past literature on the relationship between monetary sector variables and housing affordability. A multitude of

empirical studies have already examined the relationship between monetary sector variables with housing affordability. Nonetheless, prior research predominantly examined these monetary sector variables in isolation, resulting in disparities within research findings. This underscores the imperative for scholarly inquiry to undertake a more holistic and comprehensive framework to elucidate this intricate relationship.

In their empirical study, Liu and Liu (2010) rigorously examined the association between money supply and housing affordability across eight prominent Australian capital cities. Employing a structural vector autoregression (SVAR) model, their analysis yielded a significant empirical finding: a positive and statistically significant relationship between money supply and housing prices. However, the result of their study postulates that the response of housing price to the shock of money supply are notably more pronounced in the urban centers of Brisbane, Canberra, and Perth, relative to other major capital cities across Australia. These findings are in line with two other studies conducted by Yin et al. (2020) and Feng (2022) in mainland China. In the case of Yin et al. (2020), their study similarly identified a co-movement between housing prices and money supply, particularly in the short term, with this relationship becoming even more pronounced in the medium term. They also elucidated that the expansion of China's money supply resulted in an excess of funds, which in turn increased the demand for residential properties and consequently drove an upsurge in the price. Furthermore, Feng (2022) through the cointegration test discovered a stable and positive long-term relationship between real estate prices and the broad money supply.

Interest rates play a crucial role in addressing housing affordability issues, as interest payments constitute a substantial portion of the overall costs associated with purchasing a house (Elbourne, 2008). Fluctuations in interest rates lead to changes in the spending and saving behaviors of households, thereby influencing decisions regarding residential property purchases (Damen et al., 2016). For instance, the National Association of Realtors U.S. (2004) revealed that housing affordability showed improvement in 69 major cities in the United States as homebuyers experienced the advantages of declining interest rates, resulting in more manageable mortgage payments. Research conducted by Yin et al. (2020) revealed that an increase in interest rates has a positive impact on housing prices, consequently leading to a rise in the housing affordability index, which indicates that housing has become less affordable in China. Furthermore, Deb et al. (2022), in their study on housing market stability and affordability in the Asia-Pacific region, explained that an increase in inflation and interest rates creates a dual challenge for household budgets. This is because higher interest rates result in higher mortgage payments, making homeownership unattainable for the average household. Shi et al. (2014), in their investigation of how changes in central bank policies and retail mortgage rates affected real housing prices in New Zealand from 1999 to 2009, also discovered a significant and positive relationship between real interest rates and real housing prices. This finding suggests that increasing interest rates may not be an effective strategy for reducing real housing prices in New Zealand. In contrast, Januário and Cruz (2023) revealed that there is a negative relationship between interest rates and the housing affordability index. They found that lower interest rates lead to an increase in house prices and worsen the housing affordability index, indicating decreased affordability. Furthermore, Yiu (2023), who conducted a panel regression analysis across ten countries, confirmed that, after controlling factors such as GDP growth and unemployment, changes in real interest rates hurt house price growth rates.

Several studies have examined the relationship between inflation, as a monetary sector variable, and housing affordability. Kleshcheva (2021) conducted research and concluded that inflation has a direct impact on the housing affordability index in Russia. An increase in the inflation rate is an indication that housing becomes less affordable. This finding aligns with the results of a study by Yu and Zhang (2019), which utilized the ARDL bounds testing approach and an error correction model in China. Their research found that inflation positively influences housing price growth both in the short run and the long run. Nevertheless, Lee and Park (2022) provide additional insight by emphasizing that a heightened inflation rate necessitates continued adjustments to the base rate over a specified period until inflation rates converge with the target levels. This phenomenon significantly influences the purchasing capacity of households, resulting in reduced housing demand, decreased housing prices, and enhanced housing affordability. This notion is reinforced by Demary (2009), who succinctly summarizes that when inflation surpasses its long-term average and the central bank reacts by increasing interest rates, a cascading effect ensues. This effect diminishes housing demand and affordability, ultimately resulting in a decrease in housing prices.

An exchange rate refers to the value of one currency when exchanged for another in international transactions (Jamil et al., 2023). Numerous research studies have highlighted the interrelationship between exchange rates and the housing market due to their close intertwining. In their work, Jack, et al. (2019) elucidated that the nexus between real estate prices and foreign exchange rates has consistently held significance. This importance stems primarily from apprehensions regarding the potential influence of foreign exchange rate fluctuations on the prices of commonly traded goods and services in countries that heavily rely on imports. A study conducted by Tatarstan et al. (2021) substantiated that housing affordability is directly affected by multiple factors, including the national currency exchange rate. The national currency exchange rate plays a crucial role in determining the costs of imported building materials and subsequently affects the final pricing within the new housing market. The depreciation of a domestic currency would lead to increased costs for imported building materials, consequently raising house prices and exacerbating housing affordability issues within a country (Kok et al., 2018). However, a study conducted by Zulkarnain and Nawi (2023), which employed a hedonic pricing econometric model, discovered an insignificant impact of the exchange rate on property prices.

3. Research Methodology

This section encompasses a comprehensive discussion of the data collection methods, procedures and techniques that were utilized to address the research objectives. The measurement of both dependent and independent variables is succinctly presented in Table 1. Housing affordability, serving as the dependent variable, is determined by dividing the overall house price by GDP per capita. As for the independent variables, the interest rate is approximated through the overnight policy rate, the money supply is represented by M3, the exchange rate is quantified by the Malaysian Ringgit against the US dollar and inflation is proxied by the consumer price index. The data for the overall house price was extracted from the Malaysian Housing Price Index Report published by the National Property Information Centre (NAPIC), GDP per capita was derived from the Department of Statistics Malaysia (DOSM), while the data for other monetary sector variables was obtained from Bank Negara Malaysia (BNM) monthly highlights and statistics. The time series data utilized consists of quarterly data, comprising 52 observations spanning from the first quarter of 2010 to the fourth quarter of 2022. All the data have been transformed using the natural logarithm to mitigate the potential heteroscedasticity problem.

Table 1: Measurement of Dependent and Independent Variables

Variables	Classification	Data Measurement	Unit	Sources
Housing Affordability (HA)	Dependent Variable	Overall House Price Over GDPP	Ratio	NAPIC & DOSM
Money Supply (MS)	Independent Variable	Money Supply, M3	RM million	BNM
Interest Rate (IR)	Independent Variable	Overnight Policy Rate	Percent	BNM
Inflation (INF)	Independent Variable	Consumer Price Index	Percent	BNM
Exchange Rate (ER)	Independent Variable	RM-USD	RM	BNM

To evaluate the nexus between monetary sector variables and housing affordability in Malaysia, this study employed the Autoregressive Distributed-Lag (ARDL) bound testing approach introduced by Pesaran et al. (2001).

The model specifications are encapsulated in Equation 1, where nHA signifies the l housing affordability and represents the log of money supply, lnR denotes the interstate, lnINF sands for a log of inflation, and lnEX signifies the log of foreign. $lnHA_t = \beta_0 \beta_1 lnMS_t \beta_{2\, ln} IR_t + \beta_3 lnINF_t + \beta \; lnEX_t + \varepsilon_t$ ----- (Equation 1)

The analysis of time series data necessitates adherence to specific procedures to ensure the validity and

reliability of results. The initial step involves conducting stationarity tests using the Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) unit root tests. It is important to note that the ARDL technique can only be applied when all variables are stationary at levels, first differences, or a combination of both. It is not applicable if any of the variables are stationary at the second difference level (Pesaran et al., 2001).

Subsequently, the diagnostic tests are conducted to assess the goodness of fit of the econometrics model. The evaluations encompass several various tests including the Jarque-Bera test, which examines the normality of data distribution and Lagrange Multiplier Serial Correlation (LMSC) tests to detect and address the existence of autocorrelation problems within the dataset. Breusch-Pagan-Gdfrey (BPG) test I employed to identify and mitigate any potential issues of heteroscedasticity problems. Furthermore, the Ramsey Regression Equation Specification Error Test (Ramsey RESET) is utilized to examine and rectify any function from misspecification. In addition, the Cumulative Sum (CUSUM) and Cumulative Sum of Square (CSUMSQ) tests are so conducted to examine the stability of the model parameters. Finally, Autoregressive Distributed Lag (ARD -run and long-run relationship between the dependent variable and all the independent variables. The estimation of the ARDL model, in the long run, using Equation 2 is presented below

$$\triangle lnHA_t = \lambda_1 lnMS_{t-1} + \lambda_2 lnIR_{t-1} + \lambda_3 lnINF_{t-1} + \lambda_4 lnEX_{t-1} + \varepsilon_t \text{ ----- (Equation 2)}$$

The equation that represents the short-run relationship can be expressed as in Equation 3:

$$\triangle lnHA_t = \alpha_0 + \sum_{i=1}^{k1} \gamma_i \triangle lnHA_{t-i} + \sum_{i=0}^{k2} \delta_i \triangle lnMS_{t-i} + \sum_{i=0}^{k3} \varepsilon_i \triangle lnIR_{t-i} + \sum_{j=0}^{k4} \xi_i \triangle lnINF_{t-i} + \sum_{j=0}^{k5} \varphi_j$$

4. Results and Discussion

ADF and PP Unit Root Test Results: Based on the results of the ADF and PP unit root test conducted at a 5 percent significance level as presented in Table 2, all variables were identified as non-stationary at the level. However, all variables were found to be stationary at the first difference level at a 5 percent significance level. Consequently, the cointegration test can be performed through the utilization of the ARDL estimation method.

Table 2: **Results of ADF and PP Unit Root Test**

Level	ADF Unit Root				PP Unit Root			
	Intercept		Intercept and Trend		Intercept		Intercept and Trend	
HA	2.401		-2.103		-2.096		-1.647	
MS	-0.431		-1.902		-0.433		-2.004	
IR	-1.993		-2.225		-1.678		-2.394	
INF	-0.471		-1.966		-0.463		-1.966	
EX	-2.137		-2.317		-2.210		-2.623	
First difference	**ADF Unit Root**				**PP Unit Root**			
	Intercept		**Intercept and Trend**		**Intercept**		**Intercept and Trend**	
HA	-9.726	***	-6.415	***	-10.063	***	-16.809	***
MS	-7.676	***	-7.635	***	-7.639	***	-7.601	***
IR	-3.438	**	-3.154		-3.485	***	-3.198	*
INF	-7.098	***	-7.027	***	-7.098	***	-7.029	***
EX	-6.808	***	-6.801	***	-6.806	***	-6.800	***

Note: *** denotes 1%, ** denotes 5% and * denotes 10% of significant levels.

Co-integration Test Result: The results of the ARDL cointegration test, as displayed in Table 3, reveal an F-statistic value of 6.518. This value exceeds the critical bound of 4.01 at a 5 percent significance level, signifying the presence of a long-term relationship between the dependent variable, housing affordability, and all independent variables, including interest rate, money supply, employment rate, and inflation rate. With the

establishment of cointegration among all tested variables, the subsequent step entails the estimation of the ARDL model in both the long run and short run.

Table 3: Result of ARDL Bound Test for Cointegration

ARDL Model	*lnHA = F (lnMS, lnIR, lnINF, lnEX)*		
Max Lag	**Lag order**	**F-statistic**	**Conclusion**
4	3,4,3,3,4	6.518***	Cointegration
Critical Values Bound		**I (0) Bound**	**I (1) Bound**
10%		2.45	3.52
5%		2.86	4.01
1%		3.74	5.06

Note: ARDL model selected based on Akaike info criterion (AIC) and *** denotes 1% of significant levels.

ARDL Short-run and Long-run Analysis Results: Table 4 presents the results of the short-run and long-run analyses examining the relationship between monetary sector variables and housing affordability in Malaysia. The findings reveal that money supply has a positive and significant influence on housing affordability in Malaysia, with a 5 percent significance level, both in the short run and the long run. More specifically, a 1 percent increase in money supply leads to a 3.212 percent increase in the housing affordability index in the long run and a 1.154 percent increase in the short run. This aligns with the results obtained by Feng (2022), who identified a stable and positive long-term correlation between real estate prices and the broad money supply. Furthermore, Yin et al. (2020) elucidated that the expansion of the money supply led to an excess of funds, thereby increasing the demand for residential properties, and ultimately driving an upsurge in prices, exacerbating housing affordability issues in Malaysia.

Table 4: ARDL Short-Run and Long-Run Analysis Results

Variables	**Coefficient**	**t-stat**	**Prob**	
Long-run Analysis				
DMS	3.212	2.396	0.024	**
*ln*IR	0.768	2.803	0.009	***
*ln*INF	-9.326	-2.227	0.035	**
*ln*EX	0.798	1.467	0.155	
C	-1.493	-0.486	0.631	
Short-run Analysis				
*ln*MS	1.154	2.435	0.022	**
*ln*IR	0.067	0.665	0.512	
*ln*INF	-3.588	-5.118	0.001	***
*ln*EX	-0.053	-0.385	0.704	
ECT	-0.379	-6.279	0.001	***

Note: ***, ** and * are 1%, 5% and 10% of significant levels, respectively

In the long run, it is observed that the interest rate has a positive and statistically significant impact on the housing affordability index, as indicated by a probability value of 0.009, exceeding the commonly used significance level of 0.05. Specifically, the 1 percent increase in the interest rate will result in a 0.768 increase in the housing affordability index in the long run. This phenomenon can be attributed to the research conducted by Deb et al. (2022), which highlights that higher interest rates result in higher mortgage payments, thereby making housing less affordable for households. In the short run, the interest rate is identified as having a positive impact, but it is statistically insignificant in influencing housing affordability. This conclusion is drawn from the p-value, which stands at 0.512, a value higher than the significance level of 0.05.

Additionally, inflation is found to exert a substantial influence on housing affordability in Malaysia, as indicated by a statistically significant negative effect at a 5 percent significance level in both the short-run analysis (with a p-value of 0.001) and the long-run analysis (with a p-value of 0.035). In the long run, a 1 percent increase in

inflation results in a significant 9.326 percent decrease in the Malaysian housing affordability index, while in the short run, a 1 percent inflation increase leads to a 3.588 percent reduction in the Malaysian housing affordability index. According to the study by Lee and Park (2022) and Markus (2009), a higher inflation rate requires the implementation of a restrictive monetary policy by the central bank, leading to a corresponding escalation of interest rates. The escalation of interest rates, particularly within the housing sector, leads to an increase in borrowing costs, thereby reducing the purchasing power of households. Consequently, people are discouraged from borrowing and spending, resulting in a decline in housing demand, a decrease in housing prices, and, ultimately an improvement in housing affordability.

In terms of foreign exchange rates, the findings suggest a positive relationship with housing affordability in the long run, but a negative relationship in the short run. However, the foreign exchange rate is found to be statistically insignificant in influencing housing affordability in Malaysia in both the short and long run. This is evidenced by the probability value of the foreign exchange rate in the long-run (0.155) and short-run (0.704) that exceeds the 5 percent significance level leading to the failure of rejection of the null hypothesis.

The estimated Error Correction Term (ECT) for the model utilized in this study exhibits a negative sign and is statistically significant at the 5 percent level. The ECT coefficient is -0.379, signifying that around 37.9 percent of the disequilibrium is corrected, resulting in closer to its long-run equilibrium within a one-year timeframe. This aligns with the criteria outlined by Dhungel (2014) for an ideal model, which states that the model should be statistically significant and have a negative ECT coefficient, with its value falling within the range of 0 to -1.

Diagnostic Test Results: The diagnostic test results, as depicted in Table 5, confirm the reliability and validity of the model estimated in this research. This is substantiated by the fact that all the p-values for the tests exceed the predetermined 0.05 percent significance level. Specifically, the Jarque-Bera test, designed to assess normality, yields a p-value of 0.488, signifying that the data conforms to a normal distribution. Furthermore, the Breusch-Godfrey Test, employed to assess the presence of autocorrelation in the original equation, returns a p-value of 0.169, indicating the absence of autocorrelation. Next, the BPG test displays a p-value of 0.356, leading to the rejection of the null hypothesis of homoscedasticity, which hypothesizes that the variance of the residuals in a regression model is constant across various levels of the independent variables. Following that, the Ramsey RESET test indicates that the functional form of the model is accurately specified, as evidenced by the p-value (0.212), which exceeds the predetermined significant level.

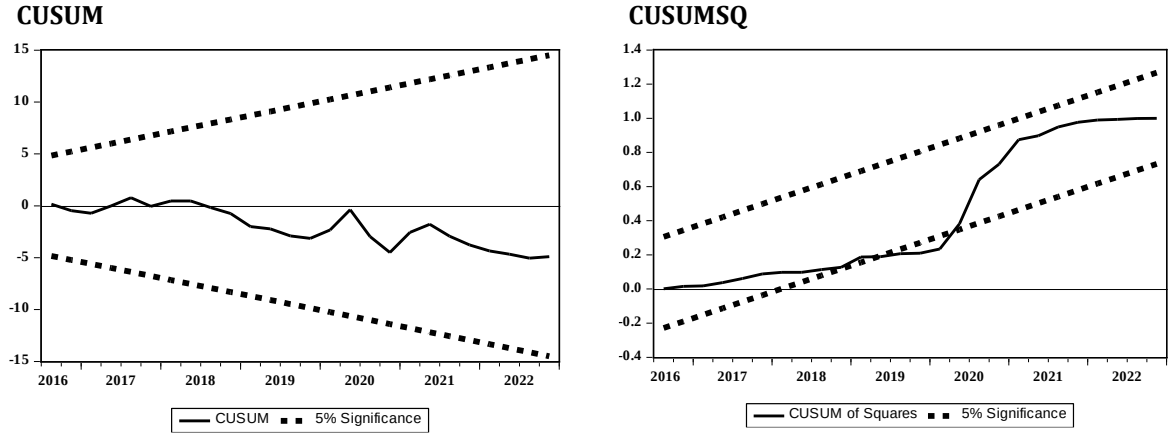
Table 5: Results of Residual Diagnostic Tests for ARDL Model

ARDL Model	**lnHA = F (lnMS, lnIR, lnINF, lnEX)**		
Residual Diagnostic Test			
Normality *Jarque-Bera Test*	**Autocorrelation** *Breusch-Godfrey Test*	**Heteroscedasticity** *BPG Test*	**Functional Form** *Ramsey's RESET Test*
1.434 [0.488]	1.835 [0.169]	1.160 [0.356]	1.643 [0.212]

Note: The figures enclosed in parentheses indicate the p-values

Additionally, as illustrated in Figure 1, the movement of the CUSUM and CUSUMQ test statistics remains within the 5 percent significance level. These findings indicate that all parameters in the model demonstrate stability across different subsamples of the data.

Figure 1: CUSUM and CUSUMQ Test



5. Conclusion

In summary, this study uses Autoregressive Distributed Lag (ARDL) estimation techniques on quarterly data, encompassing 52 observations from the first quarter of 2010 to the fourth quarter of 2022, to examine the long- and short-run impacts of monetary sector variables on housing affordability in Malaysia.

The findings reveal that, firstly, money supply has a positive and significant impact on housing affordability in both the short and long run in Malaysia. The increase in money supply leads to an excess of available funds for the public, thereby increasing the demand for residential properties and consequently driving up housing prices and the housing affordability index in Malaysia. A higher housing affordability index, as indicated by the overall house price relative to GDPP, signifies a worsening of housing affordability issues in Malaysia. Secondly, inflation was observed to have a short and long-run significant impact on housing affordability in Malaysia but in a negative direction. A higher inflation rate necessitates the implementation of a contractionary monetary policy by the Central Bank of Malaysia. This, in turn, leads to an increase in interest rates that discourage the public from borrowing and spending. Consequently, this results in decreased housing demand, and lower housing prices, and ultimately contributes to an improvement in housing affordability in Malaysia. Thirdly, the interest rate does not exert a short-run impact on housing affordability in Malaysia; its effect becomes evident only in the long run. The higher interest rates result in higher mortgage payments, thereby making housing less affordable for households. The long-term cointegration of money supply and inflation rates with housing affordability, along with their significant short-term relationship, highlights these two monetary variables as primary drivers of housing affordability. These results underscore the critical role of monetary sector variables in determining housing affordability in Malaysia. Consequently, policymakers are encouraged to prioritize the regulation of monetary sector variables, particularly focusing on money supply and inflation rates, to effectively promote housing affordability in Malaysia and therefore achieve the Sustainable Development Goals, or SDGs.

For future research, it is recommended that researchers explore how monetary sector variables influence housing affordability across a spectrum of socioeconomic groups, encompassing low-income households, middle-class families, and high-income individuals. By gaining insight into the diverse impacts of monetary variables on housing affordability within distinct socio-economic segments, policymakers can formulate more finely tailored strategies including targeted monetary policies, housing subsidies, and housing market regulations to ensure housing affordability for all.

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Engaging Tertiary Students: A Comparative Study of Online Learning Tools with Arcs Motivation Model Integration

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Abstract: In recent times, the adoption of online teaching methods has become a noteworthy development. This trend gained momentum during the Covid-19 pandemic, as education transitioned entirely to online platforms. Even though our country has now entered an endemic phase, online learning remains pertinent. Many educational institutions continue to embrace online learning, but its success depends on collaboration with students. Several factors influence students' ability to adapt to this new teaching and learning approach. In this research, the aim is to investigate the motivational factors that affect the use of online learning tools. This study utilizes the ARCS Motivation model, which encompasses attention, relevance, confidence, and satisfaction, to explore the relationship between these factors with online learning tools. Data will be gathered from part five students enrolled in entrepreneurship and management courses at the UiTM Perak Branch. Questionnaires, divided into Parts A, B, and C, will be distributed and analyzed using the SPSS software. Consequently, this research has the potential to positively impact the education sector and government policies by promoting the integration of technology into the teaching and learning process. It also sheds light on the evolving landscape of education in the digital age and its implications for both students and educators.

Keywords: *Online learning, ARCS Motivation model, entrepreneurship.*

1. Introduction

The digital age has brought about a significant transformation in the way we acquire knowledge and skills, primarily through online learning. With technology advancing rapidly and the internet becoming increasingly accessible, online education has become a fundamental component of contemporary learning. This revolutionary approach to education transcends geographical boundaries, ensuring that individuals worldwide have access to high-quality learning, regardless of their physical location or time constraints.

In the current era of online learning, learners have the flexibility to choose when and where they engage with educational content, providing a personalized and adaptable learning experience. Whether you are a degree-seeking student, a professional seeking to enhance your skills, or simply someone eager to explore new interests, online learning offers a wide range of courses and resources tailored to your specific needs and aspirations. However, maintaining student engagement and motivation in online courses can be challenging, often resulting in higher dropout rates and diminished learning outcomes. Nowadays, students' characteristics and interests differ significantly from those before the Covid-19 era. Instructors must address these changes and adapt their approaches accordingly. Some students may find it challenging to cope with the changes and challenges present in today's education landscape, despite the evolution of our educational methods. The question remains: do students recognize these changes?

This paper aims to explore the motivational factors that impact the effectiveness of online learning tools. We will evaluate the ARCS Motivation Model, which encompasses Attention, Relevance, Confidence, and Satisfaction, to assess its influence on the effectiveness of online learning. There are two main research questions for this study which are:

- *What is the relationship between motivation factors and the effectiveness of online learning tools?*
- *How strong is the relationship between motivation factors and the effectiveness of online learning tools?*

Research objectives are prepared to answer the following research questions as stated below:

- *To identify the relationships between motivation factors and the effectiveness of online learning tools.*
- *To examine the strength of relationship between motivation factors and the effectiveness of online learning tools.*

2. Literature Review

Online Learning: In the present day, online learning has gained significant practicality and acceptance within the field of education. Numerous tools and software have been developed to support educators in implementing and diversifying their teaching methods. Online learning is applicable in a wide range of fields, including marketing, business, healthcare, and education (Özhan & Kocadere, 2020). Anderson (2011) has compiled various insights related to online learning from multiple sources. Some of these insights highlight the importance of the tools used in online learning, as they facilitate student interaction with course materials. Consequently, for certain students, a computer functions as a tool that provides the necessary processing capabilities and delivers instructional content.

The terminology used for online learning can vary, encompassing e-learning, Internet learning, distributed learning, networked learning, virtual learning, web-based learning, and distance learning. Consequently, it can be challenging to formulate a universally applicable or generic definition for online learning, given its diverse interpretations and applications. Anderson (2011) offers a comprehensive summary, defining online learning as the use of the Internet to access learning materials, engage with course content, interact with instructors and peers, and receive support throughout the learning process. Ultimately, the primary objective of online learning is to acquire knowledge, construct personal understanding, and derive benefits from the overall learning experience.

Attention: To sustain motivation, the first crucial factor that students must address is capturing their attention. Gaining their attention is important, but what's even more vital is keeping them engaged throughout the entire instructional process (Jokelova, 2013). When it comes to motivation, the central focus lies in both initially grabbing and subsequently maintaining one's attention. In the context of learning, the primary aim is to direct attention towards relevant stimuli. On a fundamental level, gaining attention can be relatively easily accomplished through various means, such as making a captivating statement, creating sudden loud noises, or even using moments of silence, among other techniques (Brewin et al., 1987). Keller (2016) highlights that the attention category encompasses a wide range of studies, including aspects like curiosity and arousal, as well as interest, boredom, and related topics such as sensation seeking.

Relevance: The concept of relevance is closely linked to how learners perceive the alignment of instructional requirements with their goals, compatibility with their preferred learning styles, and connections to their prior experiences (Keller, 2016). In simpler terms, it can be associated with the "Why?" question that students often ask when deciding whether to enroll in a course or how much effort to invest in an activity. Providing a satisfactory answer to this question implies that the course or the information offered is likely to be meaningful to the students. Consequently, they are more likely to be motivated and actively engage in achieving the instructional objectives (Jokelova, 2013).

Confidence: Students tend to exhibit higher motivation for learning when they have confidence in their ability to succeed based on their efforts, and when they realize that their success is influenced by their skills rather than external factors beyond their control (Jokelova, 2013). These confident characteristics can be categorized into internal and external loci of control (Jokelova, 2013). An individual with an internal locus of control believes that the outcomes of their actions are contingent on their abilities and personal traits. For instance, a student who studies diligently for a test because they believe that their performance depends on their skills and capabilities demonstrates an internal locus of control. On the other hand, a student with an external locus of control may not see the need to study because they believe that test scores are determined by luck and fate, and regardless of how hard they study, the score will not accurately reflect their efforts.

Satisfaction: Satisfaction constitutes the final element in the ARCS Motivation Model. It can be defined as the experience of a positive feeling or a sense of contentment with one's achievements (Jokelova, 2013). This factor is often referred to as the post-task component because it comes into play after all the tasks have been completed. Although satisfaction may not be an immediate necessity for the current task at hand, it serves as an essential prerequisite for any future tasks. Maintaining contentment with the outcomes of the instruction is what consistently propels students' motivation to continue their learning journey beyond the completion of their current task (Jokelova, 2013).

Hypotheses Development: A set of hypotheses has been developed to address the questions introduced in the introduction section. These hypotheses are primarily based on prior research findings and are closely aligned with the research objectives.

Attention Factor and Effectiveness of Online Learning: Based on prior research, several studies have concurred on the significant impact of attention in the context of online learning. For instance, Conati et al. (2013) conducted a study focusing on influential factors affecting students' attention to adaptive hints in an educational computer game. They found that improving attention to hints is a valuable goal, especially in games like Prime Climb, as students who engage with and pay attention to hints tend to perform better in the game.

Furthermore, research conducted by Papanastasiou et al. (2016) supports the idea that leveraging information and communication technologies (ICTs) through gaming applications can enhance the learning experience for students with attention difficulties, ultimately improving their levels of attention and academic achievement. This approach is beneficial not only for students but also for children in general, highlighting the crucial role of attention in effective online learning. However, it's worth noting that a study by Chen et al. (2019) indicated no significant differences in attention between experimental groups. In this study, individuals engaged in a digital game with additional cartoon-like, animated, and interactive elements achieved significantly better scores on learning outcome tests compared to both a group using a less complex digital game and a group using traditional paper-and-pencil methods. Interestingly, the use of these digital games did not appear to negatively impact learning motivation and attention, contrary to some previous studies. Therefore, the hypothesis for attention factor support is as below:
H1: *Attention has a strong significant relationship with the effectiveness of online learning.*

Relevant Factor and Effectiveness of Online Learning: In this phase, the goal is to develop educational content that matches the specific learning needs of the students. According to a study carried out by Lajane et al. (2021) that assessed the motivation of nursing students in utilizing e-assessment, it was found that students perceived online quizzes as highly relevant. The relevance factor received a score of 3.93, with the lowest score being 3.8 and the highest score being 4.27. Therefore, the hypothesis on the relevance factor is described below:
H2: *Relevant has a strong relationship with the effectiveness of online learning.*

Confidence Factor and Effectiveness of Online Learning: Confidence plays a pivotal role in ensuring that students can effectively use and are motivated to use online learning tools. In previous research, through multiple regression analyses, it was revealed that students' confidence in their ability to learn online emerged as the most robust and positive predictor of satisfaction and the perceived usefulness of online classes (Landrum, 2020). Additionally, other studies incorporated the Technology Acceptance Model (TAM) along with other factors, such as self-confidence and subject norm, in the context of e-learning among accounting students at Malang State University. The findings from this study indicate that perceived usefulness, perceived ease of use, self-confidence, and subjective norms significantly influence the utilization of e-learning. Therefore, the new similar hypothesis also used in this research as below:
H3: *Confidence has a strong significant relationship with the effectiveness of online.*

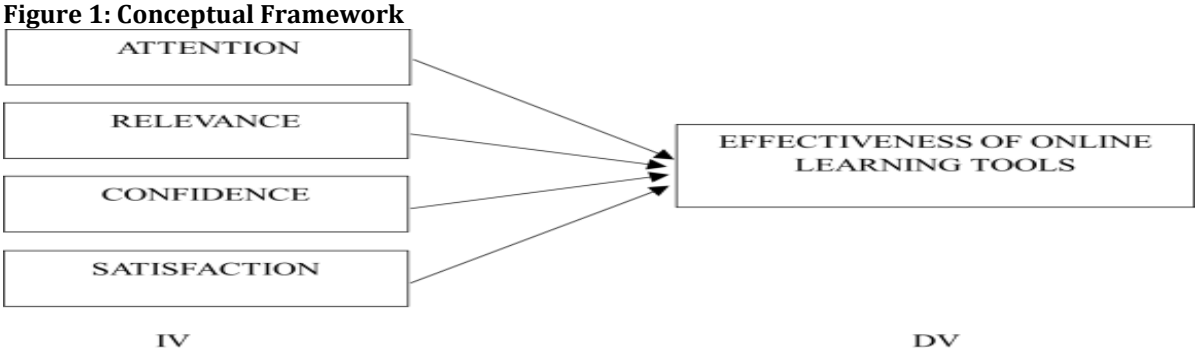
Satisfaction Factor and Effectiveness of Online Learning: Satisfaction can be viewed as a facilitating factor that can positively influence students' motivation to engage with online learning tools. In a study by Hampton et al. (2020) that examined self-efficacy in teaching and overall satisfaction among online nursing faculty members, the participants displayed notably elevated levels of self-efficacy in online teaching and reported high levels of satisfaction. Additionally, they reported that instructor satisfaction due to the benefits of the online environment, such as flexibility, convenience, and access to learning tools, received the highest score. Furthermore, Gopal et al. (2021) recommended that student satisfaction positively impacts online teaching and student performance. Their study aimed to explore whether four factors (quality of instructor, course design, instructor's prompt feedback, and student expectations) had an impact on perceived satisfaction. The findings indicated that these four distinct factors had a positive influence on student satisfaction, and higher levels of student satisfaction were associated with improved student performance.

However, in contrast, a study conducted by Wei & Chou (2020) found that the relationship between online learning perceptions and both online learning performance and course satisfaction was not statistically

significant. This contradicted the hypotheses from that research, which suggested that college students' online learning perceptions significantly and positively affect online learning performance and course satisfaction. Thus, the satisfaction factor will be tested under the hypothesis that:
H4: *Satisfaction has a strong significant relationship with the effectiveness of online.*

Conceptual Framework: Figure 1 below presents the framework utilized to ascertain the motivation factors that influence the effectiveness of online learning tools. The first independent variable pertains to the attention factor, which affects the effectiveness of online learning. The second variable is relevance, followed by confidence. The subsequent independent variable is satisfaction. Lastly, the dependent variable is the effectiveness of online learning tools.

Figure 1: Conceptual Framework



3. Research Methodology

Operationalization of Construct: This study adopted a quantitative approach to gather data, which involved the use of a survey instrument distributed to selected participants. As Mukesh et al. (2013) highlight, quantitative research involves the application of statistical methods with a substantial dataset, and one common technique is the use of surveys. In this case, the researchers chose to utilize a questionnaire as it aligned with the study's objective of evaluating the factors influencing the effectiveness of online learning. Moreover, there are several advantages associated with the use of questionnaires that can be discussed here. Firstly, the questionnaire method offers a cost-effective, prompt, efficient, and precise means of collecting information from a population (Zikmund, 2003). Additionally, it provides greater flexibility compared to alternative methods. This is often referred to as respondent convenience, as individuals have the liberty to respond to questions at their own pace and in their preferred setting.

However, this method also has certain limitations. These include challenges related to the return of completed questionnaires, with researchers having limited control over when respondents choose to return them, as it falls outside their jurisdiction. Additionally, there is the potential for a low response rate due to unreturned questionnaires. Nevertheless, these drawbacks have been mitigated by the distribution of questionnaires through electronic devices. The questionnaire has been developed based on the variables identified in the literature review. It will use the Likert scale technique, which employs a one to five scale (1=strongly disagree, 2=disagree, 3=not sure, 4=agree, and 5=strongly agree) to assess each item within these variables. In this study, the questionnaire method has been chosen as the primary means of data collection, and it will be administered in the English language. The questionnaire consists of about 22 questions, divided into three parts: Part A for demographics, Part B to examine the ARCS Motivation Model, and Part C to assess the effectiveness of online learning tools. The construction of this questionnaire is presented in Table 1 below.

Table 1: Construct of Questionnaire

Part	Category	No. of Items
A	Demographic	4
B	ARCS Motivation Model	15
C	Effectiveness of Online Learning Tools	3
	Total	22

Part A: Demographic: This section is designed to collect information about the respondent's profile, which includes details such as gender, semester, and program. The purpose of this section is to gain initial insights into the background of the respondents. Respondents were instructed to select only one option from the provided columns. Please refer to Table 4.2 for a visual representation of the items included in this section.

Table 2: Items Measuring Background of Respondent

No.	Items	Source
1.	Gender	Ma & Chei (2021)
2.	Semester	Ma & Chei (2021)
3.	Program	Ma & Chei (2021)

Part B: Examine ARCS Motivation Factors: All the questions in Part B are related to the motivation model, specifically focusing on attention, relevance, confidence, and satisfaction. These items were developed based on a previous study conducted by Hao & Lee (2019). There are a total of 15 items in this section, and they are assessed using the Likert scale. These items have been suitably modified to align with the research topic, which is motivation factors. Please refer to Table 3, Table 4, and Table 5 for a comprehensive list of the items developed under the ARCS Motivation Model.

Table 3: Items Developed for Attention Factor

No.	Items	Source
1.	This material allows me to become even more focused than before.	Hao & Lee (2019)
2.	This material deeply fascinates me.	Hao & Lee (2019)
3.	This material boosts my learning motivation.	Hao & Lee (2019)
4.	This material can help me become focused on my studies	Hao & Lee (2019)

Table 4: Items Developed for Relevance Factor

No.	Items	Source
1.	This material teaches me how to apply knowledge that I have learned from class.	Hao & Lee (2019)
2.	This material helps me understand basic knowledge of "Where Are You Going?" and "What Do You See?	Hao & Lee (2019)
3.	This material allows me to fully understand the concepts that are being expressed.	Hao & Lee (2019)
4.	This material allows me to fully understand the concepts that are being expressed.	Hao & Lee (2019)

Table 5: Items Developed for Confidence Factors

No.	Items	Source
1.	This material makes me work diligently and achieve good learning results.	Hao & Lee (2019)
2.	This material provides me with the confidence that I need to complete my studies.	Hao & Lee (2019)
3.	This material gives me the confidence that I need to achieve my learning targets.	Hao & Lee (2019)

Table 6: Items Developed for Satisfaction Factor

No.	Items	Source
1.	I feel satisfied when I see myself making progress using this material.	Hao & Lee (2019)
2.	This material motivates me to work hard to learn and practice even if I am unable to completely master the course material.	Hao & Lee (2019)
3.	I am happy to learn entrepreneurship using this digital software.	Hao & Lee (2019)
4.	Time flies when I use this material because it is fun to use.	Hao & Lee (2019)

Part C: Effectiveness of Online Learning: This part consists of only three items and is primarily focused on assessing the effectiveness of online learning tools. The items used in this section were adapted from Bahasoan et al. (2020). Please refer to Table 7 below for a list of all the items within this part.

Table 7: Items Developed for Effectiveness of Online Learning Tools

No.	Items	Source
1.	Level of satisfaction	Bahasoan et al. (2020)
2.	Obstacles during usage of online learning	Bahasoan et al. (2020)
3.	Materials delivered during online learning tools	Bahasoan et al. (2020)

Research Instrument: The questionnaire was specifically designed to collect data from students at the UiTM Perak branch, aiming to assess the effectiveness of online learning tools. All the questions included in this questionnaire were developed by drawing from previous studies that explored various concepts. In the context of this research, these items were adapted and modified to align with the scope and objectives of the study. Moreover, this research employed the Likert scale technique to measure the effectiveness of each motivation factor. The Likert scale rating was chosen as it is well-suited for this study, making it easy to measure each construct and more straightforward for respondents to understand and provide their responses. To distribute the surveys, a Google Form was utilized as the online platform. Each participant received guidance on how to complete the Likert scale questionnaire for evaluating various factors.

Population and Sampling: The scope of this study focuses on UiTM students at the Perak branch, specifically within one campus, which is Tapah. The selection of the UiTM Tapah campus is based on the higher number of students enrolled in entrepreneurship courses during this semester. The student population was determined through consultation with lecturers who use online learning tools as supplementary teaching materials, and it was found that about 111 students needed to participate in this study. This research exclusively targets students in part 5 of their academic program. According to statistics provided by the lecturer in charge (LIC), there are approximately 814 students enrolled in entrepreneurship and management courses at UiTM Seri Iskandar. However, only students under the instruction of lecturers who implement online learning tools were chosen for this study. The sampling technique was determined based on the Krejcie and Morgan Table for Sample Size Determination. Given a population of 111 students, it was calculated that 86 samples were required for data collection.

Data Analysis Procedure: The data analysis process begins with the commencement of correlation analysis. This initial step is primarily focused on exploring the connections between the independent and dependent variables. Moreover, it aims to assess the magnitude or strength of any such relationships that might be present.

Correlation Analysis: Correlation analysis is one of the functions available in SPSS software. It is used to clarify the relationship between two different variables. The Pearson correlation coefficient, which falls within the range of -1 to +1, is employed for this purpose. The sign associated with the coefficient indicates whether the correlation is positive or negative (Pallant, 2011). Additionally, this analysis can assist in determining the strongest relationship that influences the independent and dependent variables.

Research Timeline: The project is expected to be completed within a 20-week timeframe, with the following specified durations for each segment of the research project:

Research Section	Duration
1. Title	1 week
2. Introduction	2 weeks
3. Need for this Study	1 weeks
4. Background	2 weeks
5. Objectives	1 week
6. Research Questions and or Hypothesis	1 week
7. Research Methodology	3 weeks
8. Data Collection	3 weeks

9. Data analysis interpretations and discussions	3 weeks
10. Summary conclusion and recommendations	2 weeks
11. Reviewing work for final submission	1 week

4. Conclusion

The importance of conducting a conceptual study on the application of the ARCS Motivation Model to online learning tools in higher education-level entrepreneurship courses cannot be overstated. This research is significant because it empowers tertiary educational institutions to implement effective strategies that not only attract but also motivate students to extensively utilize online learning tools for entrepreneurship and management courses. To further enhance the adoption of these tools in the classroom, particularly among tertiary education students, instructors and lecturers should leverage the factors that hold value for these students. Numerous studies have shown that the use of online learning tools has a positive impact on the learning experience, inspiring students to engage with information enjoyably and creatively.

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Examining Relationships between Employees' Attributes and Act of Whistleblowing

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Abstract: The purpose of this study is to examine the connection between employees' attributes and the act of whistleblowing. The study was conducted at Penang Port Sdn Bhd by using quantitative method and purposive sampling data gathering. A total of 117 employees from Penang Port Sdn Bhd participated in the survey. The data gathered was processed using Statistical Package for Social Science (SPSS) version 25. The results indicate a positive correlation between all variables of whistleblowing. The findings highlight that only two characteristic which is attitudes towards whistleblowing and internal control, have a meaningful association with the act of whistleblowing. Alternate hypotheses (H1) are accepted for hypotheses 1 and 2 but rejected for hypotheses 3. The implications of the findings for the organization are examined, as well as future study directions.

Keywords: *Whistleblowing, relationships, employees, attitudes, internal control.*

1. Introduction/Problem Statement

Nowadays, whistleblowing plays an important role in the fight against unlawful activities. Illegal activities such as corruption, fraud, and other unlawful activities occur wherever people exist. Unfortunately, not all organization apply or practices this action. An individual attitude throughout the act of whistleblowing is a critical determinant of the success of this action (Kapardis 2020; Chen, 2019). This is because when an individual is classified as an employee, it becomes a part of their responsibility to enhance the growth of an organization in the future. However, it becomes worse when Malaysian people do not care about others they only focus on their problem and do not care about the effectiveness of whistleblowing (Baltaci & Balci, 2017; Gao, Lei, Brink, Alisa, 2017). Based on past works of literature, it was obvious that even having the Whistleblower Protection Act 2010 (Act 711), people were still reluctant to be involved in exposing the malpractices that evolved in an organization (Baltaci & Balci, 2017; Gao, Lei, Brink, Alisa, 2017).

Most people believe that it goes against their nature to take such action. Many people are hesitant to blow the whistle due to the fear that their jobs may be at risk if reports of wrongdoing are disclosed to specific individuals. This shows several variables hinder a person from blowing the whistle (Baltaci & Balci, 2017). The regulation currently does not make it mandatory for organizations to have an internal whistleblowing route. According to the Whistleblower Act Implementation Report 2017, since the enactment of the Whistleblower Protection Act in 2010, there has been a notable decline in both complaints received and the number of whistleblowers. As indicated in the table below, there was a substantial initial surge in both complaints and whistle-blowers, followed by a sudden drop in the year 2015.

As per the research findings, the total count of complaints received in August 2017 amounted to 62,852 with the involvement of 473 whistleblowers. There has been only a single case filed under the Whistleblower Protection Act 2010 (Act 711) in the decade following its adoption. Due to the volume of complaints, it is vital that a model be built to aid policymakers in analysing the elements that influence whistleblowing and further understanding the area of concern. It is particularly crucial to treat whistleblowing as an important practise as organisations aim for accountability and transparency as one of the United Nations' 2015 Sustainable Development Goals.

SDG16 of the United Nations' Sustainable Development Goals for Growth focuses on promoting the rule of law and ensuring equal access to justice; significantly decreasing corruption and bribery; and establishing effective, accountable, and transparent institutions. Furthermore, there has been very little research into the benefits of using whistleblower channels. Hence, the objective of this study is to create a theoretical model based on the factors that influence the voluntary act of whistleblowing within an organization. This involves examining the

relationship between attitudes towards whistleblowing, internal control, and commitment to the act of whistleblowing.

2. Literature Review

Every organization encounters the risk of wrongdoing. People who realize or suspect the wrongdoing will be those who work with the organization. Whistleblowing is an action to speak out about fraud, corruption, and improper or unlawful activities conduct in the workplace which can destroy the organization involved (Kapardis, 2020). Studies show that most organizations prefer the act of whistleblowing through internal channels so that any malpractice can be disclosed and corrected internally and are not publicized (Ahmar, Yunos & Amin 2018). The act of whistleblowing, which can be referred to as internal or external recipients 'who can effect action', has not been given much attention in academia (Chen, 2019; Loyens & Vandekerckhove 2018).

Based on accounting research, whistleblowing can be defined as the act of organization members revealing illegal immoral, or illegitimate practices under the control of their employers to individuals or organizations that have the potential to take corrective action (Gao, Lei & Brink 2017). Studies on accounting whistleblowing indicate that reporting intentions are not significantly correlated with years of work experience, gender or type of employment (Baltaci & Balci, 2017; Gao, Lei, Brink, Alisa, 2017). Within the domain of information security, whistleblowing can be described as purposeful acts of "non-compliance" with information security policies, wherein individuals intentionally disclose classified, proprietary, or potentially sensitive information (Berndtsson, Johansson & Karlsson, 2018).

In order to eliminate corruption, Malaysia's Whistleblower Protection Act 2010 was force in Dec 2010 and is part of the Government Transformation Plan (GTP)'s National Key Result Area (NKRA) (Tan, et.al 2019). It protects the whistleblower in terms of confidentially of the information and also immunity from civil and criminal action. A whistleblower is a person who informs the organization regarding unethical conduct that happens in the organization. However, the culture in Malaysia has contributed to the factor that discourages employees to report misconduct in an organization whereby the values in Chinese and Indian societies expect actions by superiors to require fewer justifications. It is less likely for the subordinates to report their superiors' wrongdoings (Rozaimy et al., 2017).

Generally, whistleblowing involves an employee's intent to formally address instances of illegal, immoral and/or illegitimate practices by peers, supervisors, and/or subordinates during their daily working activities (Palumbo & Manna 2019). The act of whistleblowing in the organization is critical to minimize or prevent the organization from being exposed to potential damage at any time (Chen, 2019; Baltaci & Balci, 2017). The act of whistleblowing could be related to the intention of whistleblowing.

There are two types of whistleblowing**:** internal and external. Internal whistleblowing takes place when incidents are reported to individuals in higher positions with the authority to take action. External whistleblowing, on the other hand, brings the incidents to the attention of outsiders with the authority to intervene. Being aware that whistleblowing can be a useful tool in detecting corruption.

There are two types of whistleblowing: internal and external. Internal whistleblowing is defined as reporting or highlighting occurrences to someone in higher positions in the organisation for actions to be taken, and the disclosure of wrongdoings should be done through an anonymous route (Zakaria; et al., 2020, Mathew; et al., 2020). External whistleblowing, on the other hand, involves alerting outsiders with the authority to take action. Whistleblowing is a powerful tool for uncovering corruption, and it should be encouraged and practiced in both private and public institutions (Zakaria et al., 2020). Whistleblowers, on the other hand, typically work from a position of weakness: they are not in high-ranking positions in the organization, and employment contracts include a clause requiring them not to expose extremely sensitive information about the organization. As a result, the employee may face reprisal and maltreatment as a result of their claims (Corollo, 2020). According to Kenny (2018), the goal of all of these approaches is to silence whistleblowers.

Therefore, to become a whistleblower, a person needs to have some level of assurance that doing so will result in something beneficial, such as the suppression of corruption and the arousal of public interest. Then, according to another researcher, internal locus of control has an impact on the purpose of a whistleblower (Izraeli and Jaffe, 1998). Su'un and Muslim (2020), who mentioned that the locus of control variable has a positive association and greatly affects the severity of whistleblowing, also backed up this claim. According to Ridwan & Arifuddin (2019), locus control has a favorable impact on whistleblower intentions.

According to Chen et al. (2017), internal whistleblowing generally carries less negative consequences for an organization since it shields it from social media attention and public scrutiny while also providing a chance to take corrective action before the illegal activity worsens. Internal whistleblowing can improve organizational governance and encourage ethical behavior when done correctly (Mehrotra et al., 2020). According to a different study, there are a variety of elements that influence an individual's intention to report internally (Culiberg & Miheli, 2017).

Urumsah et al. (2018) and Tompunu et al. (2020) reported the beneficial effects of whistleblowing intention in their studies on professional dedication. Another element that may have an impact on the purpose of a whistleblower is organizational commitment. Organizational commitment, according to research by Adha & Anita (2021), is a state in which a worker supports a certain organization and its objectives and aspires to keep their membership in that organization.

Whistle blowing should be seen as a tool that will complement all other initiatives to improve corporate governance in Malaysia as it works to achieve a higher standard of corporate governance consistent with the UN's Sustainable Development Growth 16 on peace, justice, and strong institutions. It is crucial to incorporate appropriate whistleblowing policies to increase the efficacy of internal control systems, especially in light of the complementary role that whistleblowing plays in discouraging fraudulent acts in organizations.

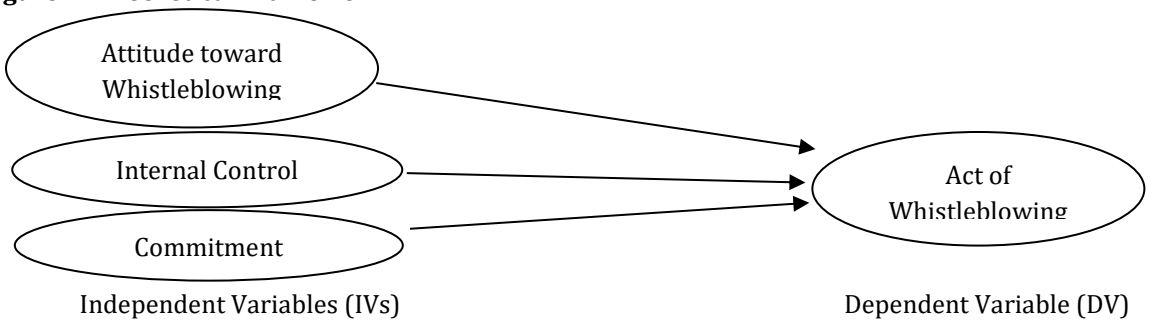
Research Question: Are there any relationships between the attitude towards whistleblowing, internal control, commitment and act of whistleblowing.

Research Objectives: In ensuring that the research questions can be answered, this study outlines several objectives:
i. To ascertain the extent to which whistleblowing actions are practiced within an organization.
ii. To examine the relationships between the internal factors (attitude, internal control, commitment) and the act of whistleblowing.
iii. To develop a theoretical model consisting of relevant variables in evaluating the practice of whistleblowing acts in an organization.

Hypotheses: This study is geared towards answering the following hypotheses:
H1: There is a relationship between attitude and act of whistleblowing.
H2: There is a relationship between internal control and the act of whistleblowing.
H3: There is a relationship between commitment and the act of whistleblowing.

Theoretical Framework: From the previous study's reviews, the study will examine the act of whistleblowing in the organization where the relationship is described.

Figure 1: Theoretical Framework



Sources adapted from: Nadzri Ab Ghani et al., 2011; Philmore Alleyne et al., 2013

3. Methodology

The development of a theoretical model for evaluating voluntary whistleblowing is the goal of this study. The research will be descriptive, with a focus on identifying key elements connected to the characteristics of interest. The study will take place in a natural environment, which also implies that there are no plans to manipulate any variables or create a false environment for the study's participants in order to achieve the study's goals. This study will only collect data at one moment in time because it is cross-sectional in nature. The specific questionnaire for this study was given out during working hours, and the respondents completed it at a convenient time once they had done noting it. Individuals will be the analysis's analytical unit.

Population of the study are employees or law enforcement officers from law enforcement agencies in Malaysia, namely Kastam DiRaja Malaysia, Jabatan Imegresen Malaysia, and samples will be drawn from the population. The expected sample size is 370 respondents based on the estimated population of 10,000. The study will apply non-probability sampling using convenience or purposive sampling techniques that are deemed to be appropriate for this type of study and enable adequate and accurate collection of information. This study will apply a quantitative approach where data will be gathered using a questionnaire, consisting of items adapted from Dorasamy (2012), as the survey instrument and analyzed through several analyses, namely demographic, descriptive, reliability, correlational and multiple regression analysis.

This study will focus on the act of whistleblowing among employees of law enforcement agencies in Malaysia. Once the problem area has been identified, the study will also define the problem or issue at hand using the hypothetico-deductive method to highlight the main outcome. The next process is the development of the research hypotheses for answering the research questions. The next process will focus on the development or selection of measurements that will determine the approach of the ensuing process which is data collection. Collected data will then be analyzed using selected statistical software namely descriptive and frequency analysis, reliability analysis, and correlational analysis. The hypotheses of the study will then be answered through the output of the analysis that will be interpreted to give meaning to the study. As a result, this study aimed to ascertain the positive or negative influence of key variables on each other. Consequently, this study was led to discover whether the imperative variables had positively or negatively influenced each other.

4. Findings and Discussion

Only 117 of the 200 questionnaires that were provided have been completed and returned to the researcher. The questionnaire's results were analyzed using SPSS version 24 by the researcher, who also provided an interpretation of them in this chapter. These goals have been attained. The analysis of the data will produce a conclusion that will address the study's research topic. The seven questions that make up a demographic profile are: gender, age, marital status, education level, position held, monthly salary, and duration of service. The frequency and percentage breakdown of the demographic profile are displayed in the table below.

The table above shows that 117 respondents are involved in the survey. 97 respondents (82.9 percent) are male while the other 20 respondents (17.1 percent) are female. This shows the number of male respondents is much higher than female respondents. It also found that 9 respondents (7.7 percent) are 25 and below, 65

respondents (55.6 percent) are 26-40 and 43 respondents (36.8 percent) are 41-60. The biggest number that contributed to the survey is respondents aged 26-40 years while the lowest contribution in the survey is respondents aged 25 and below. The result also shows that 22 respondents (18.8 percent) are single and 95 respondents (81.2 percent) are married. Married respondents are much higher than single respondents who contributed to the survey. 72 respondents (61.5 percent) are secondary school, 23 respondents (19.7 percent) are diplomas, 8 respondents (6.8 percent) are degrees and 14 respondents (12 percent) are other levels of education. The survey received the highest participation from secondary school respondents, followed by diploma and other levels of education. The lowest contribution to the survey came from the respondents with a degree education background.

Table 1: Demographic Profile of the Respondents

Demographic Profile		Frequency	Percent
Gender	Male	97	82.9
	Female	20	17.1
Age	<25	9	7.7
	26-40	65	55.6
	41-60	43	36.8
Marital status	Single	22	18.8
	Married	95	81.2
Level of education	Secondary school	72	61.5
	Diploma	23	19.7
	Degree	8	6.8
	Others	14	12.0
Position held	Manager	6	5.1
	Executive	8	6.8
	Non-executive	103	88.0
Income per month	Below RM 1500	28	23.9
	RM 1501 - RM 3000	52	44.4
	RM 3001 - RM 4500	27	23.1
	Above RM 4500	10	8.5
Length of service	<1 year	2	1.7
	1 - 5 years	32	27.4
	6 years and above	83	70.9

In term of position held, 6 respondents (5.1 percent) are manager, 8 respondents (6.8 percent) are executive, and 103 respondents (88 percent) are non-executive. This shows the highest number of respondents contributed in the survey is non-executive and the lowest number of respondents is manager. Meanwhile for the monthly income, 28 respondent (23.9 percent) are below RM 1500, 52 respondents (44.4 percent) are RM 1501 – RM 3000, 27 respondents (23.1 percent) are RM 3001 – RM 4500 and 10 respondents (8.5 percent) are above RM 4500.

It also shows that the highest number of respondents contributed in the survey is having income per month RM 1501 – RM 3000 followed by below RM 1500 and RM3001 – RM 4500. Income per month above RM 4500 is the lowest number of respondents that contributed in the survey. The result also found that 2 respondents (1.7 percent) are below one year, 32 respondents (27.4 percent) are 1 – 5 years and 83 respondents (70.9 percent) are above six years. Above six years length of service is the highest number of respondents that contributed to the survey followed by 1 – 5 years length of service and below one year.

Table 2: Descriptive Statistics

Variables	N	Mean	Std. Deviation
Act of whistleblowing	117	3.5160	0.74270
Attitudes toward whistleblowing	117	3.2863	0.61436
Internal control	117	3.4872	0.77254
Commitment	117	3.5714	0.65142

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 the average act of whistleblowing had a standard deviation of 0.74270 and a mean of 3.516. Internal control comes in second with a mean of 3.4872 and a standard deviation of 0.77254, while commitment achieves the highest mean among the other components at 3.5714. The attitudes towards whistleblowing had the lowest mean, 3.2863, and the lowest standard deviation, 0.61436.

Reliability Statistics: When determining the accuracy of a measurement, reliability is related to the consistency and stability of the measuring tool. Cronbach's alpha was employed in reliability statistics to determine how well the items are positively associated with one another and whether they are internally consistent. The table provides a summary of the researcher's reliability statistics for the variable.

Table 3: Reliability Statistics of Variable

Variables	Cronbach's Alpha	No of Items
Act of whistleblowing	0.846	8
Attitudes toward whistleblowing	0.790	8
Internal control	0.901	7
Commitment	0.831	7

Based on the results, it can be concluded that the act of whistleblowing, which is a dependent variable in this study, is very reliable at 0.846, which is regarded as excellent because it is close to 1.00. While internal control and commitment are rated as very strong with Cronbach's alphas of 0.901 and 0.831, respectively, the reliability for the independent variable, attitudes towards whistleblowing, is rated as good with a Cronbach's alpha of 0.790. As a result, the researcher has sufficient, consistent data from the survey to properly conduct this study.

Correlation: Correlation refers to the examination of relationship between variables. This study will investigate how attitudes towards whistleblowing, internal control, and commitment correlate with both dependent variable, which is the act of reporting, and the independent variable. It will reveal the direction, intensity, and importance of the relationship between all of the variables will be indicated by correlation. It will indicate whether there is a positive or negative correlation between the variables. As a result, the table below illustrates the connection between the act of whistleblowing and the factors influencing it.

Table 4: Correlations between Act of Whistleblowing and Factor that Influence Act of Whistleblowing

		Act of whistleblowing	Attitudes toward whistleblowing	Internal control	Commitment
Act of whistleblowing	Pearson Correlation	1			
	Sig. (2-tailed)				
Attitudes toward whistleblowing	Pearson Correlation	.672**	1		
	Sig. (2-tailed)	.000			
Internal control	Pearson Correlation	.738**	.645**	1	
	Sig. (2-tailed)	.000	.000		
Commitment	Pearson Correlation	.544**	.655**	.552**	1
	Sig. (2-tailed)	.000	.000	.000	

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

The table above demonstrates a robust correlation between attitudes towards whistleblowing and the act of whistleblowing, indicated by R-value 0.672. There is a significant positive correlation between attitudes toward whistleblowing and act of whistleblowing since the significant level is 0.000. While, for the relationship between internal control and act of whistleblowing also has strong relationship with the R-value of correlation

is 0.738. The significant level is 0.000 proven that there is significant positive correlation between internal control and act of whistleblowing. For the relationship between commitment and act of whistleblowing, it shows that there is moderate relationship correlation with R-value 0.544. However, significant level 0.000 proven that commitment and act of whistleblowing also has significant positive correlation.

Regression Analysis: Regression analysis used in this study to analysis one or more independent variable which is hypothesized to affect the dependent variable. To address the study's hypothesis, regression analysis was performed. This section will focus on the coefficient of determination (R^2), elucidating the percentage of variance in the dependent variable explained by the variation in the independent variable. Besides that, it also about the beta coefficient (β) where it would estimate the result from a multiple regression analysis performed on variable that have been standardized. Table below shows the result of the regression analysis that has been analyzed.

Table 5: Regressions between Act of Whistleblowing and Factor that Influence Act of Whistleblowing

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.783[a]	0.613	0.602	0.46836	1.807

Only 61.3 percent of the dependent variable can be predicted from the factor of the independent variable, according to the R square value, and there are still 38.7 percent of independent variables that are available but not included in this study.

Table 6: Regression Coefficients

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.346	.265		1.307	.194
Attitudes toward whistleblowing	.365	.105	.302	3.478	.001
Internal control	.486	.076	.505	6.428	.000
Commitment	.077	.091	.068	.851	.396

Based on the table above, it found there is a significant relationship between attitudes toward whistleblowing and act of whistleblowing (β = 0.302; p = 0.001). Thus, hypotheses 1 of alternate hypotheses (H_1) are accepted in this study. The result also shows internal control and act of whistleblowing have a significant relationship (β = 0.505; p = 0.000). Thus, hypotheses 2 of alternate hypotheses (H_1) are also accepted in this study. However, the result in found there is no significant relationship between commitment and act of whistleblowing (β = 0.68; p = 0.396). Thus, hypotheses 3 of alternate hypotheses are rejected and null hypothesis (H_0) is accepted in this study.

Discussion: The findings of the study demonstrate a strong positive correlation among attitudes towards whistleblowing, internal control, and adherence to the practise. This demonstrates how each aspect is connected to the others. The variation in the independent variable, which comprises of attitudes towards whistleblowing, internal control, and commitment, explains 61.3 percent of the variance in the dependent variable. The independent variable's remaining balance of 38.7% of the variation is not taken into account in this study. Additionally, it was discovered that while there is no significant association between dedication and whistleblowing, there is a substantial relationship between views towards whistleblowing and internal control and the act of whistleblowing. The result indicates that attitudes towards whistleblowing had an impact on whistleblowing behavior (= 0.302; p 0.001). This result is in line with earlier literature. The null hypothesis (H0) is therefore rejected, but alternative hypotheses (H1) are accepted.

Dorasamy (2012) stated that it is positive where majority of the respondents believed that a well-managed of the whistle blower's line will shows the high ethical standards when walking the talk is done and the greater chances of responsibility not being diffused by everyone to report unethical conduct if the management make employees aware of potential unethical situation. From the finding, result also shows that there is a significant relationship between internal control and act of whistleblowing (β = 0.505; p = 0.000). This finding is also

consistent with the past literature. Hence, the alternate hypotheses (H_1) are accepted in this study. However, one of the factors shows there is no relationship between acts of the whistleblowing. The result ($\beta = 0.068$; $p = 0.396$) show that commitment do not have a relationship with the act of whistleblowing in the study. This finding is not consistent with the past literature. So, alternate hypotheses (H_1) are rejected, and null hypotheses (H_0) are accepted. No relationship occurs even though the whistleblower suggests helpful changes and may sometimes retaliate while also changing the objected practice, manager and colleague still do not like the act of exposure (Near et al., 2002).

5. Conclusion and Recommendations

Whistleblowing is related to the managing risk. The study has contributed to an understanding of the act of whistleblowing in the organization. The study shows that attitudes toward whistleblowing, internal control and commitment are positively associated with the act of the whistleblowing. However, the finding shows there is no relationship between commitment and act of whistleblowing. So, the alternate hypotheses (H_1) between commitment and act of whistleblowing are rejected. It also can be concluded that the most factor that influence the act of whistleblowing is internal control. To enhance the growth of the organization in the future, they should find new strategies from time to time in order to make the act of whistleblowing are useful and effective in the organization.

There are several recommendations regarding act of whistleblowing which they can apply in future research. This study has offered limited insight into the relationship between attitudes toward whistleblowing, internal control and commitment to the act of whistleblowing. Therefore, it would be beneficial for future research to consider the following suggestion. First of all, expand the study into other organizations by investigating the relationship between the act of whistleblowing with the other factors that the researcher does not use in this study. This kind of investigation would help explain the comparison among the aspects of organization whistleblowing. Future research also can investigate the role and impact act of whistleblowing in the organization. Instead, future research also can investigate the confidentiality of the information given by the whistleblower. This kind of investigation would help the researcher to determine the effectiveness of whistleblowing in the organization.

This study is hoped to serve as a guide for the implementation of whistleblowing as one of the mediums for achieving organizational transparency and promoting higher integrity as a way of doing things. It will also provide insight into the current state of whistleblowing practices among domestic organizations and assist policymakers in making sound decisions when it comes to the act of whistleblowing by providing a clear scenario of what happens in the organization. The outcome might also be useful to the parties who are involved directly or indirectly in this field of study. This study is also expected to motivate other researcher to undertake similar areas for their future research.

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A Bibliometric Review of Halal Tourism and Sustainability Research: Trends and Prospects

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Abstract: This study explores the discussion around Halal tourism and sustainability using bibliometric approaches. It focuses on authors, important institutions, document formats, patterns of worldwide involvement, and multidisciplinary research regions. Examining the cited literature, the research finds important data influencing this field's future. Rigid bibliometric analyses gather a heterogeneous set of academic papers and use quantitative techniques to classify texts, evaluate worldwide involvement, and identify patterns of citation. The results, which acknowledge the limitations of the dataset, show a vibrant academic environment where research publications are the main source of scholarly output and demonstrate scholars' commitment to thorough examination. English-language publications from many nations that demonstrate an interdisciplinary approach spanning the fields of business, management, environmental science and social sciences demonstrate the worldwide significance of this work. This study emphasizes how closely related economic, cultural, and environmental factors are. Academic articles that receive many citations act as cornerstones that direct subsequent study. In conclusion, this bibliometric analysis offers crucial insights into the field of halal tourism and sustainability research, with the goals of advancing knowledge, encouraging moral behavior, and stressing the importance of diversified viewpoints for scholars, practitioners, and decision-makers.

Keywords: *Halal Tourism, Sustainability, Islamic Tourism, Bibliometric Analysis*

1. Introduction

The convergence of "Halal Tourism" and "Sustainability" has emerged as a vital subject of investigation within the worldwide tourism domain. There is a growing interest among scholars and practitioners in the convergence of several factors, which is indicative of the wider socio-economic and environmental issues that are inherent in modern tourist practices. In recent years, an increasing amount of scholarly work has emerged to comprehend the intricacies and consequences of halal tourism within a global context that is becoming more aware of the need for sustainability. Several recent studies have contributed to the understanding of halal tourism and its relationship with sustainability. Keliat and Sentanu (2022) conducted an integrative review that synthesized the existing knowledge base and literature on this topic. Battour et al (2021) critically assessed the connection between halal tourism and sustainability. Rahmat (2021) conducted a literature review specifically focusing on halal tourism within the social science disciplines. Additionally, Rusydiana et al (2021) conducted a bibliometric study that examined the indicators associated with halal tourism. Previous research has examined the prospects of halal tourism in several settings, including Malaysia, Singapore, and Ethiopia, and has analyzed the determinants that impact halal tourism (Abbasian, 2021). These studies emphasize the significance of researching halal tourism and sustainability to comprehend the various economic, social, environmental, and cultural aspects of this business and its influence on society and the environment.

Considering the increased scholarly activity in this field in recent years, there exists a strong rationale for undertaking this bibliometric analysis. The extant body of literature, exemplified by prominent scholarly works such as Keliat and Sentanu (2022), Battour et al. (2021), Rahmat (2021), and Rusydiana, Abbasian (2021), has established the foundation for comprehending the complex interplay between halal tourism and sustainability. The research has analyzed the knowledge foundation, evaluated the interaction between these aspects, investigated halal tourism across other fields within the social sciences, and even scrutinized the factors influencing this industry.

Hence, it is imperative to conduct a thorough bibliometric analysis to catch these nascent trends and evaluate their scholarly influence. This analysis has the potential to offer valuable insights into the strengths and limitations of publications in the field of halal and Islamic tourism. Additionally, it can serve as a guide for future

research endeavors in this area. In this study, we aim to investigate the effects of a new drug on patients with a Furthermore, it has the potential to provide a more comprehensive comprehension of the methods to create halal-friendly places, drawing insights from the viewpoints of millennials (Suban et al., 2021). A systematic review and thematic analysis might address the existing gaps in the literature by examining the accumulating evidence on halal tourism (Idris et al., 2022).

A recent scholarly investigation conducted by Abdullah et al., (2023) undertook the task of charting the cognitive terrain about the intersection of halal tourism and sustainability. This comprehensive analysis encompassed an examination of prevailing research trajectories, thematic foci, and patterns of authorship within this domain. The purpose of this study was to conduct a bibliometric analysis of publication patterns in the field of halal tourism. The analysis attempted to assess many aspects including research topics, sources with high publication output, highly cited documents, co-authorship patterns, and bibliographic coupling. The study was conducted by Abdullah (2021). Adirestuty et al., (2023) conducted a bibliometric analysis to investigate scholarly literature about the management of halal tourism from 2012 to 2021. The objective of the study conducted by Rusydiana et al., (2021) was to analyze the bibliometric indicators of halal tourism to ascertain the research landscape and progress in this field as reflected in publications from esteemed scholarly journals.

There has been an increasing focus on subjects such as digital marketing within the context of halal tourism, the socio-cultural aspects of halal tourism experiences, and the formulation of sustainability measures specifically designed for halal tourism locations (Hanafiah et al., 2022). According to Battour et al., (2021), the existing body of research on halal tourism mostly focuses on the demand-side aspect, hence necessitating an examination of halal tourism from the supply-side standpoint. The examination of halal tourism's growth in Indonesia has been analyzed through a supply-side approach, focusing on the concepts of Place Attachment and Value-Norm-Belief, as explored by Dewi (2023). The phenomenon of halal tourism destinations has witnessed a notable surge in international arrivals on a global scale. This has led to a competitive environment among both Muslim and non-Muslim countries, as they strive to appeal to Muslim visitors (Suryandari et al., 2022).

Nevertheless, the dynamics of the field are undergoing tremendous evolution. The emergence of new research paths and the deepening of existing ones have created a need for a complete bibliometric study to capture these evolving trends. The rationale for conducting this study is rooted in the objective of offering a contemporary overview of the intellectual terrain about the intersection of halal tourism and sustainability. This study seeks to utilize bibliometric tools to discern new trends, influential books, and shifting research orientations.

Moreover, the objective of this study is to provide a comprehensive international outlook on this discourse by broadening the focus to include a wide array of countries and cultural situations. The motivation behind this study stems from the aim to encourage interdisciplinary involvement, acknowledging the complex relationship between economic, cultural, and environmental aspects within the realm of halal tourism.

Bibliometric analyses have played a crucial role in enhancing comprehension of the relationship between halal tourism and sustainability. Nevertheless, a significant deficiency remains in the thorough examination of emerging research trends and growing research orientations within this interdisciplinary domain. Numerous bibliometric studies have provided useful information about publication trends, influential authors, and research issues. Suban et al., (2021) conducted a bibliometric analysis of halal and Islamic tourism, wherein they assessed the global literature using a bibliometric approach that incorporated several features. The study not only provided insights into the existing body of knowledge but also offered guidance for future scholars intending to explore this field.

Contemporary scholarly literature indicates a growing scholarly inclination toward interdisciplinary inquiry that delves into the complex dynamics between cultural, economic, environmental, and social dimensions of halal tourism and sustainability (Suban et al., 2021 & Hanafiah et al., 2022).

Nevertheless, there is a notable deficiency in bibliometric research that thoroughly examines the interconnections between different disciplines and their respective contributions to our comprehension of this

intricate domain. Although prior research has laid a strong groundwork, it is possible that it does not comprehensively cover the swiftly evolving academic environment, particularly given recent advancements, and developing issues (Suban et al., 2021).

Therefore, the aims of this study are as follows. First and foremost, it aims to conduct a bibliometric analysis of scholarly research on halal tourism and sustainability, focusing on patterns and research output. The analysis will encompass all relevant scholarly papers, categorizing them by document and source type, year of publication, language, subject area, and the most frequently cited source titles. The study will cover the period from 2015 to 2023.

Furthermore, the primary goal is to examine clusters within two co-occurrence networks by analyzing keywords from the publications and exploring co-occurrence patterns of these keywords, along with terms found in the titles and abstracts of the articles. Lastly, the study seeks to provide a comprehensive analysis of research patterns at the intersection of halal tourism and sustainability, with a specific focus on the geographical distribution of published works and the authorship of these publications.

The subsequent sections of the paper are categorized into five distinct parts: Section 2 provides a concise overview of the existing literature about the intersection between halal tourism and sustainability. Section 3 provides an in-depth examination of the technique employed in the present study. Sections 4 and 5 provide a comprehensive explanation of the data analysis and outcomes, accompanied by a detailed conclusion and suggestions.

2. Literature Review

The literature offers a thorough overview of the changing research landscape in the field of tourism, specifically examining the convergence between Halal Tourism and Sustainability. The research, which encompasses a wide range of studies, demonstrates the increasing attention and importance placed on sustainability within the tourist industry, indicating its potential for future growth (Niñerola et al., 2019). Furthermore, the investigation into the intersection between sports tourism and sustainability, as demonstrated by the study conducted by Jiménez-García et al., (2020), highlights the ever-evolving nature of this area of research, which has received significant interest in recent times. Wong et al., (2020) have made a significant contribution by employing bibliometric analysis to assess the research progress in prominent hospitality and tourism journals. This highlights their novel approach to examining the trajectory of scholarly work in this field.

In a similar context, Pahrudin et al., (2022) acknowledged the necessity of formulating a forthcoming research agenda in the field of sustainable tourism, reinforcing the importance of this area in scholarly discussions. Abdullah's (2021) extensive investigation of halal tourism serves as a valuable resource for gaining insights into the complexities of this specialized and rapidly expanding sector. The subject of Halal travelers and their unique demands is of increasing significance, as evidenced by their religious and societal incentives for travel (Moshin et al., 2020). Furthermore, the study conducted by Samori et al., (2016) delved into the notion of halal tourism within the Islamic framework, providing insights into the patterns and potentialities observed in several Asian nations. The significance of the study in the field of halal tourism is shown by Wardi et al., (2018) exploration of the relationship between halal tourism qualities, tourist satisfaction, and word of mouth.

Additionally, the scholarly work conducted by Battour et al., (2021) made a valuable contribution to the ongoing discourse surrounding halal tourism. Their study involved a thorough evaluation of the idea, examining its relationship with entrepreneurship, and exploring the potential for creative marketing strategies within this domain. The research conducted by Köseoglu et al., (2016) and Qian et al., (2018) highlights the changing nature of tourism research. Köseoglu et al., (2016) noted a dearth of relational bibliometric research in the sector, despite a significant rise in the publication of bibliometric publications in prominent hospitality and tourist journals since 2008. Qian et al., (2018) conducted a study on content analysis, which facilitated a full comprehension of the status of research on sustainable tourism. The literature on tourism and quality was thoroughly examined by Simón et al., (2019), providing significant contributions for researchers and practitioners alike.

In a similar vein, the study conducted by Benckendorff & Zehrer (2013) explored the multidisciplinary nature of research in the field of tourism, highlighting the convergence of several academic disciplines. In their study, Mulet-Forteza et al., (2019) conducted a bibliometric analysis in the domains of tourism, leisure, and hospitality. Their objective was to discover relevant factors that guide scholars and researchers in terms of potential research areas and career advancement. Feizollah et al., (2021) emphasized that halal tourism extends beyond geographical and cultural limitations. As a market with a global presence, it expands its influence beyond the boundaries of nations predominantly inhabited by Muslims. The literature presents the changing and dynamic research patterns in the domain of tourism and sustainability, emphasizing the complex and diverse nature of this topic.

While the existing literature offers valuable insights into the dynamic landscape of tourism, particularly in the context of halal tourism and sustainability, one notable gap remains. The lack of a comprehensive bibliometric analysis within this field to date represents an opportunity for further exploration. Bibliometric analysis, as evidenced by previous studies (Wong et al., 2020), can provide a systematic and data-driven approach to mapping the research trends, identifying key contributors, and uncovering emerging themes in the domain of halal tourism and sustainability. By conducting a bibliometric analysis of the existing body of research, future scholars can gain a more nuanced understanding of this complex and diverse area. This would not only enhance the scholarly discourse but also guide researchers and practitioners in identifying promising research directions, ultimately contributing to the sustainable development of tourism in line with halal principles.

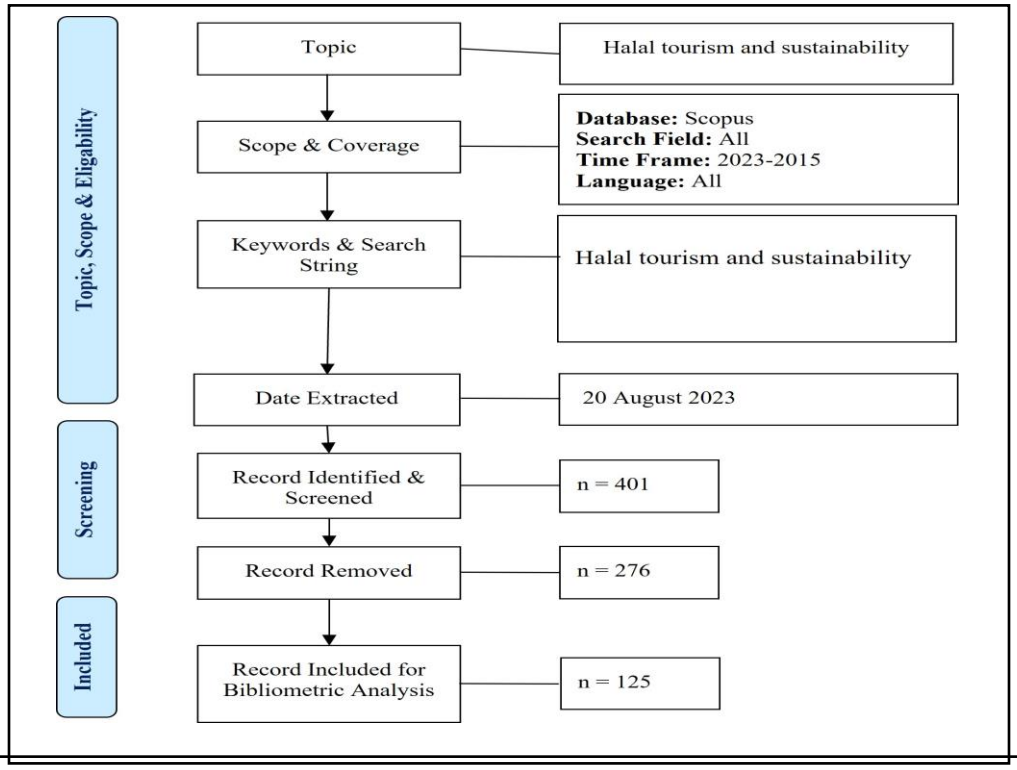
3. Method

Bibliometric analysis is a quantitative research methodology employed for the study and evaluation of scientific publications and their respective attributes. The process entails a methodical examination of bibliographic data, namely citations, to discern patterns, trends, and connections within a certain area of research (Leydesdorff & Vaughn, 2006). Bibliometric analysis provides valuable insights into the academic communication process and the influence of scientific research by examining publication patterns, citation networks, and other bibliographic indicators (Waltman, 2016).

The primary source of literature for this study is the online Scopus database, which is utilized to gather a comprehensive collection of papers related to the topics of halal tourism and sustainability. The rationale for using the Scopus online database is mostly attributed to its esteemed standing as the most extensive repository encompassing journals, book series, conferences, and proceedings. Notably, these resources are evaluated and categorized according to their citation effect. Additionally, Scopus offers comprehensive access to a wide range of abstracts and citations sourced from reputable, peer-reviewed scholarly literature across several academic fields. Figure 1 illustrates the comprehensive depiction of the search method and subsequent bibliometric analysis conducted in this work, including a detailed description of the sequential stages involved.

The study into halal tourism employed the subsequent search methodology. The subject matter under consideration was "Halal Tourism and Sustainability." The investigation was carried out using the Scopus database. The search was carried out between the years 2015 and 2023. The search encompassed all sorts of sources. The keywords and search query were "Halal tourism" and "sustainability." A total of 401 records were detected using the screening technique. Based on the established criteria for inclusion in the study, a total of 125 documents were selected to conduct bibliometric analysis.

Figure 1: PRISMA Flow Diagram



Source: Moher D, Liberati A, Tetzlaff J, Altman DG, the PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. *PLoS Med 6*(7): e1000097.

4. Results & Discussion

Document and Source Types

The academic community is dedicated to developing knowledge in halal tourism and sustainability, with research articles accounting for 78.40% of all texts. The concept of sustainable halal tourism is still in its early stages, and further research should focus on making locations halal-friendly from the perspective of millennials. Conference papers, book chapters, reviews, and editorials contribute to the dissemination of knowledge on the subject. Book chapters provide in-depth analyses, while reviews synthesize existing knowledge and provide insights into academic conferences' proceedings. Most of the dataset is derived from editorial teams of academic journals or magazines, reflecting the scholarly community's guidance and insights.

Table 1: Document Type

Document Type	TP	%
Article	98	78.40%
Conference Paper	11	8.80%
Book Chapter	7	5.60%
Review	4	3.20%
Book	2	1.60%
Conference Review	2	1.60%
Editorial	1	0.80%
Total	**125**	**100%**

According to Table 2, this bibliometric study reveals that journals are the most common source type, accounting for 82.4% of the dataset. This indicates the academic domain's interest in halal tourism and Sustainability. The dataset also includes 9 books (7.2%), 8 conference proceedings (6.4%), and 5 book series (4%). Most of these

publications are published through journal articles, highlighting the importance of scholarly communication in the field. Further research is needed to understand millennial perspectives on halal-friendly settings and sustainable halal tourism.

Table 2: Source Type

Source Type	Total Publications (TP)	Percentage (%)
Journal	103	82.4
Book	9	7.2
Conference Proceeding	8	6.4
Book Series	5	4
Total	**125**	**100.00**

Year of Publications/Evolution of Published Studies

Table 3 shows the distribution of publications on "halal tourism" and "sustainability" over time. In 2023, there were 31 articles, accounting for 24.8% of the overall dataset. This indicates a significant amount of ongoing research and scholarly effort on the topic. Further studies should focus on making destinations Halal-friendly based on millennials' perspectives. Sustainable halal tourism is a global topic affecting economics, environment, and social issues. In 2022, 39 publications were reported, indicating a peak in research activity. The field's research efforts were sustained during the COVID-19 pandemic, with 8 articles in 2019 and six in 2018. However, there is a gap in accessible publications, with no data for 2017 and 2015 alone.

Table 3: Year of Publications

Year	Total Publications	Percentage (%)
2023	31	24.8
2022	39	31.2
2021	18	14.4
2020	17	13.6
2019	8	6.4
2018	6	4.8
2017	5	4
2015	1	0.8
Total	**125**	**100.00**

Languages of Documents

Table 4 displays the languages of publications on "halal tourism" and "sustainability" in the dataset. English dominates, accounting for 98.4% of the total, reflecting its global reach and accessibility. Only one publication in Italian and one in Malay contributes to non-English literature, emphasizing the need for diverse linguistic contexts.

Table 4: Languages Used for Publications

Language	Total Publications	Percentage (%)
English	123	98.4
Italian	1	0.8
Malay	1	0.8
Total	**125**	**100.00**

Subject Area

Table 5 presents a comprehensive overview of the publications categorized by their respective subject areas. The data reveals that the category of "business, management, and accounting" accounted for the highest number of articles, totaling 80 publications, which represents 64% of the total. The subsequent categories include "social science" (32.8%), "environmental sciences" (21.6%), "engineering" (12.8%), and "energy" (10.4%). The remaining subject categories, including mathematics, medicine, multidisciplinary, and

psychology, collectively accounted for less than 5% of the overall articles. The number 5 is an integer that stands on its own without any other numbers.

Table 5: Subject Area

Subject Area	Total Publications	Percentage (%)
Business, Management and Accounting	80	64
Social Sciences	41	32.8
Environmental Science	27	21.6
Economics, Econometrics and Finance	25	20
Engineering	16	12.8
Energy	13	10.4
Mathematics	4	3.2
Medicine	1	0.8
Multidisciplinary	1	0.8
Psychology	1	0.8
Total	**125**	**100**

Most Active Source Titles

Table 6 presents a dataset of publications on halal tourism and sustainability, with the "Journal of Islamic Marketing" being the most prominent, accounting for 18% of the dataset. Other sources include "Sustainability Switzerland," "Journal of Environmental Management and Tourism," "Lecture Notes in Networks and Systems," "Geojournal of Tourism and Geosites," and "International Journal of Religious Tourism and Pilgrimage." These publications highlight the importance of sustainability principles in halal tourism, environmental management, and religious aspects of travel.

Table 6: Most Active Source Title

Source Title	Total Publications	Percentage (%)
Journal Of Islamic Marketing	23	18%
Sustainability Switzerland	10	8%
Journal Of Environmental Management and Tourism	9	7%
Lecture Notes in Networks and Systems	5	4%
Geojournal Of Tourism and Geosites	3	2%
International Journal of Religious Tourism and Pilgrimage	3	2%
Routledge Handbook of Halal Hospitality and Islamic Tourism	3	2%
Advanced Science Letters	2	2%
African Journal of Hospitality Tourism and Leisure	2	2%
Asia Pacific Journal of Tourism Research	2	2%
International Journal of Tourism Cities	2	2%
IOP Conference Series Earth and Environmental Science	2	2%
Journal Of Destination Marketing and Management	2	2%
Journal Of Hospitality and Tourism Research	2	2%

Keywords Analysis

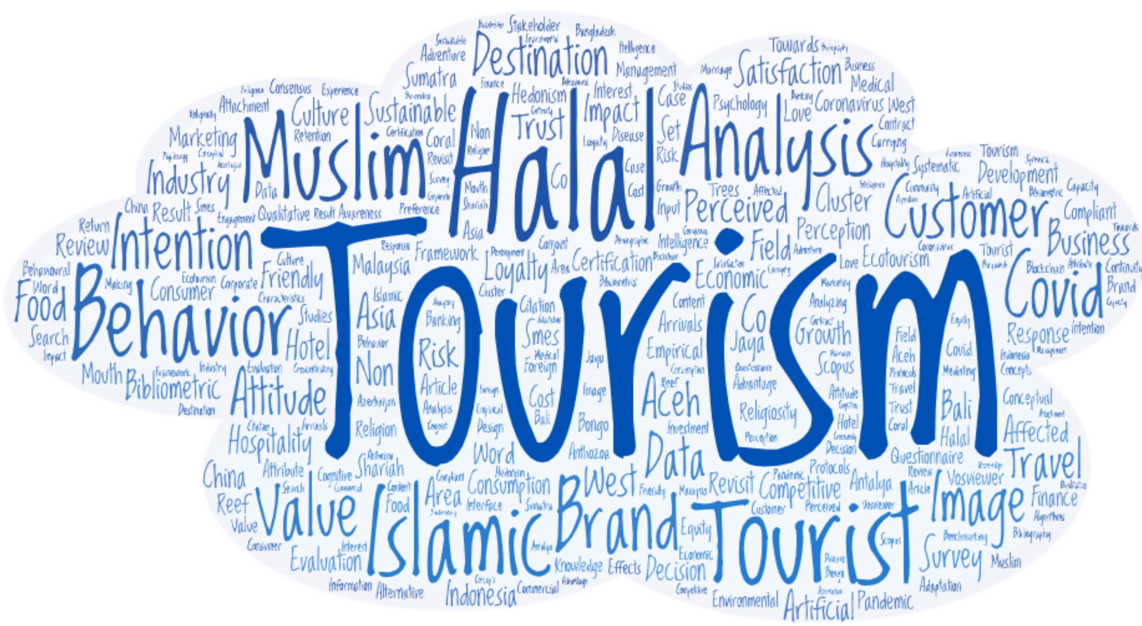
Table 7 presents the author's identified keywords associated with articles on the topics of "halal tourism" and "sustainability." This study examines the primary keywords that have been identified to categorize specific domains. Keywords such as "halal tourism," "Indonesia," and "tourism and halal" have been frequently utilized in various publications about this subject matter.

Table 7: Top Keywords

Author Keywords	Total Publications	Percentage (%)
Halal Tourism	56	44.80%
Indonesia	17	13.60%
Tourism	15	12.00%
Halal	13	10.40%

Tourist Destination	10	8.00%
Tourism Development	9	7.20%
Sustainability	8	6.40%
Islamic Tourism	7	5.60%
Muslim Tourists	7	5.60%
Tourism Industry	7	5.60%
Halal Food	6	4.80%
Malaysia	6	4.80%
Religiosity	6	4.80%
Tourist Satisfaction	6	4.80%
West Sumatra	6	4.80%
Ecotourism	5	4.00%
Perceived Value	5	4.00%
Satisfaction	5	4.00%
Trust	5	4.00%
Islamism	4	3.20%

Figure 3: Word cloud of the author keywords



Geographical Distribution of Publications -Most Influential Countries

Table 8 presents a dataset of publications on "halal tourism" and "sustainability" in various countries. Indonesia is the largest contributor, accounting for 42.4% of the total with 53 articles. Malaysia follows closely with 35 papers, accounting for 28%. Turkey contributes 6.4%, while the UAE contributes 7.6%, indicating interest in Halal Tourism and sustainability features. Egypt has 6 publications, indicating academic interest. New Zealand and Spain contribute 4%, while South Korea, Sweden, and Thailand have four publications. Bangladesh, Finland, and the UK have three publications, while China, Ghana, India, Italy, Jordan, the Netherlands, and Saudi Arabia have two articles. Australia and Azerbaijan each have one publication.

Table 8: Top 20 Countries contributed to the publications.

Country	Total Publications	Percentage (%)
Indonesia	53	42.4
Malaysia	35	28
Turkey	8	6.4
United Arab Emirates	7	5.6
Egypt	6	4.8
New Zealand	5	4
Spain	5	4
South Korea	4	3.2
Sweden	4	3.2
Thailand	4	3.2
Bangladesh	3	2.4
Finland	3	2.4
United Kingdom	3	2.4
China	2	1.6
Ghana	2	1.6
India	2	1.6
Italy	2	1.6
Jordan	2	1.6
Netherlands	2	1.6
Saudi Arabia	2	1.6
Australia	1	0.8
Azerbaijan	1	0.8

Authorship

Table 9 lists the authors contributing to the dataset on "halal tourism" and "sustainability," with Battour being the most prolific with 6 publications. Abror and Rahman have 5 articles, accounting for 4% of the dataset. Han and Wardi have four articles, each accounting for 3.2%. Aimon, A-Ansi, Boan, Mady, Salaheldeen, Trinanda and Zulvianti have three publications, accounting for 2.4%. Aja, Aksum, Batman, Legendary, Elsotouhy, Gaffar, Hurriyati and Jeaheng have two publications, accounting for 1.6% of the dataset.

Table 9: Most Productive Authors

Author's Name	No. of Documents	Percentage (%)
Battour, M.	6	4.8
Abror, A.	5	4
Rahman, M.K.	5	4
Han, H.	4	3.2
Wardi, Y.	4	3.2
Aimon, H.	3	2.4
Al-Ansi, A.	3	2.4
Boğan, E.	3	2.4
Mady, K.	3	2.4
Salaheldeen, M.	3	2.4
Trinanda, O.	3	2.4
Zulvianti, N.	3	2.4
Aji, H.M.	2	1.6
Aksu, A.	2	1.6
Batman, O.	2	1.6
Elbendary, I.	2	1.6
Elsotouhy, M.	2	1.6
Gaffar, V.	2	1.6

Hurriyati, R.	2	1.6
Jeaheng, Y.	2	1.6

Most Influential Institutions

Table 10 presents a compilation of academic institutions that are associated with publications about the subjects of "halal tourism" and "sustainability". Three universities, namely Universiti Teknologi MARA (UiTM), Universiti Malaya, and Universitas Negeri Padang, exhibited an equal number of articles, specifically seven, which collectively constituted 5.6% of the dataset. Several more academic institutions, namely Tanta University, International Islamic University Malaysia, Universiti Sains Islam Malaysia, Universiti Malaysia Kelantan, and the Faculty of Commerce, have contributed four papers each, collectively representing 3.2% of the dataset. The intellectual discourse is greatly enriched by the contributions of esteemed academic institutions such as the University of Canterbury, Oulun Yliopisto, Universiti Putra Malaysia, Universitas Airlangga, Universitas Islam Indonesia, and Universitas Pendidikan Indonesia.

Table 10: Most influential institutions with a minimum of three publications

Institution	Total Publications	Percentage (%)
Universiti Teknologi MARA	7	5.6
Universiti Malaya	7	5.6
Universitas Negeri Padang	7	5.6
Universiti Sains Islam Malaysia	6	4.8
Tanta University	5	4
International Islamic University Malaysia	5	4
Universiti Malaysia Kelantan	5	4
Faculty of Commerce	5	4
Sejong University	4	3.2
University of Sharjah	4	3.2
Universiti Malaysia Terengganu	4	3.2
College of Business Administration	4	3.2
Oulun Yliopisto	3	2.4
University of Canterbury	3	2.4
Universiti Putra Malaysia	3	2.4
Universitas Airlangga	3	2.4
Universitas Islam Indonesia	3	2.4
Universitas Pendidikan Indonesia	3	2.4

Citation Analysis

Table 11 provides a comprehensive overview of bibliometric indicators, offering nuanced insights into the characteristics and influence of the dataset focused on "halal tourism" and "sustainability." The dataset spans the years 2015 to 2023, reflecting the temporal scope of scientific contributions included. Notably, the years of citation (2015-2023) align with the publishing years, emphasizing the contemporary nature of the dataset. With a total of 125 papers, the dataset encapsulates a wealth of scholarly publications.

The cumulative count of citations for these papers is 957, illustrating the collective impact and visibility within the academic sphere. The metric "citations/year (119.63)" delves into the temporal dimension, indicating that, on average, each paper garners 119.63 citations annually. Moreover, the average number of citations per paper stands at 7.66, showing the impact at an individual publication level.

Assessing the impact at the author level, the dataset boasts an average of 366.69 citations per contributor, underscoring the significance of their scholarly influence. The mean quantity of papers authored by each contributor is 48.28, indicating a prolific and substantial contribution to the dataset.

Turning to metrics evaluating dataset impact, the h-index of 17 suggests that within the dataset, a minimum of 17 publications have attained at least 17 citations each, providing a quantitative measure of influence.

Additionally, the g-index, valued at 27, considers both citation quantity and distribution, signifying that a minimum of 27 articles within the dataset have been referenced in no less than 27 instances. Together, these metrics offer a comprehensive evaluation of the scholarly impact and reach of the "halal tourism" and "sustainability" datasets.

Table 11: Citations Metrics

Metrics	Data
Publication years	2015-2023
Citation years	2015-2023
Papers	125
Citations	957
Citations/year	119.63
Citations/paper	7.66
Citations/author	366.69
Papers/author	48.28
h-index	17
g-index	27

Highly cited articles

Table 12 is a compilation of the 10 most often referenced publications within the dataset, focusing on the intersection of "halal tourism" and "sustainability." The table presents data about the authors, publication titles, publication years, total citation counts (referred to as "Cites"), and the average annual citation count (referred to as "Cites per Year").

In their 2019 publication, Abror, Wardi, Trinanda, and Patrisia examine the influence of halal tourism, consumer involvement, and satisfaction, with a particular focus on the moderating effect of religiosity. This publication ranks second in terms of citations, with a total of 58. The publication in question demonstrates a notable influence, as it garners an average of 14.5 citations annually.

The research article titled "The Influence of Halal-Friendly Attributes on Guest Purchase Behaviors in the Hotel Industry of Thailand" by Jeaheng, Al-Ansi and Han was published in 2019. The present work has garnered a total of 55 citations, indicating its significance in the examination of customer behavior within the Halal-friendly hotel sector. Furthermore, the average number of citations received this year stands at 13.75, further underscoring its scholarly relevance in this field of study.

The scholarly article titled "The 'Halalification' of Tourism" authored by Khan and Callanan in 2017 has garnered a total of 55 citations. This study examines the phenomenon of "Halalification" in the realm of tourism, with an annual citation rate averaging 9.17.

In their article titled "The Impact of Tourists' Perceptions on Halal Tourism Destination: A Structural Model Analysis" published in 2020, Rahman, Moghavvemi, Thirumoorthi, and Rahman examine the influence of tourists' perceptions on Halal tourism destinations using a structural model analysis. The publication has garnered a total of 54 citations, showcasing its notable annual average of 18 citations. This serves as a testament to its importance in enhancing our comprehension of the viewpoints of tourists about halal tourism.

Battour, Hakimian, Ismail and Boan (2018) conducted a study titled "The perception of non-Muslim tourists towards halal tourism: Evidence from Turkey and Malaysia." This paper offers valuable insights into the viewpoints of non-Muslim travelers regarding halal tourism, supported by a comprehensive collection of 52 sources. On average, it has garnered an annual average of 10.4 citations.

The article titled "Halal Food: Structured Literature Review and Research Agenda" was authored by Secinaro and Calandra in 2021. The scholarly article, published in the year 2021, has garnered a notable count of 50 citations, attesting to its contemporaneity and significance within academic discourse. On average, it garners an impressive 25 citations annually.

Han, Al-Ansi, Koseoglu, Lin, Park, Yu & Kim (2019). Halal tourism: Exploring travel motivators and customer retention. The present study, which centers on the determinants of travel and customer loyalty in the context of halal tourism, has garnered a total of 35 citations, with an annual average of 8.75 citations.

The study titled "Halal Tourism: A Literature Review and Experts' Perspectives" by Moral-Moral and Vargas-Sánchez (2020) provides a comprehensive examination of existing research on halal tourism, accompanied by insights from professionals in the field. This scholarly work has garnered 32 citations, indicating its significance and influence in the academic discourse around halal tourism. On average, it has received 10.67 citations every year.

In 2017, Rahman and Zailani conducted a study titled "The effectiveness and outcomes of the Muslim-friendly medical tourism supply chain." This publication investigates the supply chain in Muslim-friendly medical tourism, supported by a total of 28 citations. On average, it garners an annual average of 4.67 citations. The publications, which have garnered high citation counts, have made substantial contributions to the field of halal tourism and sustainability. This attests to their influence on scholarly discourse and the dissemination of information.

Table 12: Highly cited articles

No	Authors	Title	Year	Cites	Cites per Year
1	Wardi, Abror, Trinanda	Halal tourism: antecedent of tourist's satisfaction and word of mouth (WOM)	2018	80	16
2	Abror, Wardi, Trinanda, Patrisia	The impact of Halal tourism, customer engagement on satisfaction: the moderating effect of religiosity	2019	58	14.5
3	Jeaheng, Al-Ansi, Han	Halal-friendly hotels: impact of halal-friendly attributes on guest purchase behaviors in the Thailand hotel industry	2019	55	13.75
4	Khan, Callanan	The 'Halalification' of tourism	2017	55	9.17
5	Rahman, Moghavvemi, Thirumoorthi, Rahman	The impact of tourists' perceptions on halal tourism destination: a structural model analysis	2020	54	18
6	Battour, Hakimian, Ismail, BoÄŸan	The perception of non-Muslim tourists towards halal tourism: Evidence from Turkey and Malaysia	2018	52	10.4
7	Secinaro, Calandra	Halal food: structured literature review and research agenda	2021	50	25
8	Han, Al-Ansi, Koseoglu, Lin, Park, Yu, Kim	Halal tourism: travel motivators and customer retention	2019	35	8.75
9	Vargas-SÃ¡nchez, Moral-Moral	Halal tourism: literature review and experts' view	2020	32	10.67
10	Rahman, Zailani	The effectiveness and outcomes of the Muslim-friendly medical tourism supply chain	2017	28	4.67

5. Conclusion

In conclusion, this bibliometric analysis provides significant insights into the academic environment of "halal tourism" and "sustainability," revealing a wide range of scholarly contributions across different document types and disciplines. The results highlight the widespread presence of scholarly literature, which indicates the researchers' commitment to thoroughly investigate these subjects. Moreover, the presence of English-language publications from various nations underscores the widespread international interest in halal tourism and

sustainability, surpassing geographical limitations. The field exhibits an interdisciplinary character, encompassing Business, Management, Environmental Science, and Social Sciences, which reflects the complex interrelationships among economic, cultural, and environmental elements within these realms. The influential roles played by institutions such as UiTM and Universiti Malaya, as well as authors like Battour and Abror, highlight their significant contributions in creating the subject of study. Highly cited articles play a crucial role in establishing a fundamental knowledge base that serves as a guiding framework for future research endeavors.

The collaboration between scholars from diverse disciplines serves as a theoretical foundation for understanding the complex interplay of economic, cultural, and environmental factors within the realms of halal tourism and sustainability. The identification of influential institutions and authors further contributes to the theoretical discourse, establishing key figures and entities that shape the academic landscape.

From a practical perspective, these findings have direct implications for educators, industry professionals, and policymakers. The identified highly cited articles can serve as theoretical pillars, offering a foundational knowledge base for academics and industry practitioners alike. Institutions such as UiTM and Universiti Malaya, along with influential authors like Battour and Abror, provide practical guidance for educational programs, policy formulation, and industry practices, aligning theoretical perspectives with real-world applications.

Recognizing the limitations of this research is crucial for both theoretical and practical considerations, ensuring a nuanced interpretation of the findings. For future research, the identified avenues, such as longitudinal analyses, qualitative investigations, and cross-cultural inquiries, offer theoretical frameworks for developing a more comprehensive understanding of the field. These theoretical advancements, coupled with practical insights, can guide future interdisciplinary collaboration, shaping global perspectives, and fostering responsible and sustainable practices in the ever-evolving domains of halal tourism and sustainability.

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Challenges and Opportunities in the Halal Pharmaceutical Industry in Malaysia

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Abstract: Following the global significance of halal pharmaceutical products, Malaysia has positioned itself as a key manufacturer to increase industrial demand. This study examines Malaysia's halal pharmaceutical industry by internalizing consumer preferences for halal pharmaceuticals and the associated complexities. The data derived from literature reviews were subjected to documentation analysis. Consumer preference was substantially influenced by religious beliefs, product quality, and health concerns. Halal certification, cross-contamination concerns, and regulatory compliance were the key issues underlying halal pharmaceutical products. Overall, this empirical work expanded the current literature with pivotal insights into the future developments of halal pharmaceuticals in Malaysia. Industry players, policymakers, and stakeholders can utilize such knowledge to develop strategies that enhance the halal pharmaceutical industry and meet Muslim consumers' preferences.

Keywords: *Halal pharmaceuticals, Malaysia, consumer preferences, future directions.*

1. Introduction

The recent demand for halal-certified products among the global Muslim population has increased the number of halal pharmaceutical products in Malaysia (Norazmi & Li Sze, 2015; Yvonne, Ab Ghani, A. Navamukundan, Jahis, & Gamil, 2019). In other words, the demand for halal pharmaceuticals is evident worldwide (Hussein, 2016), specifically among Muslim consumers. Compared to its previous valuation of US$94 billion in 2019, the halal pharmaceutical industry worldwide could reach US$105 billion by 2024 (MIDA, 2021). Javeed, Mohamed Mokhtar, & Lebai (2018) and Ab Latiff, Zakaria, & Man (2021) explained that Muslim consumers gravitate towards Shariah-compliant products with specific dietary requirements and religious beliefs. Having transcended its religious role, the halal concept is currently a standard preferred by both Muslims and non-Muslims (Ambali & Bakar, 2014; Hiong Lim, Suddin, Rahat, & Abdul Adis, 2016; Haque, Kabir, Tarofder, Yasmi, & Mhm, 2019). In this regard, Malaysia has domestically and globally expanded the halal pharmaceutical industry (Muhamad Suhaini, 2022; Abdul-Talib & Abd-Razak , 2013; Whitehead, 2021). Consumer preferences for halal pharmaceutical products, associated challenges, and the future direction of the halal pharmaceutical industry in Malaysia were examined in this study. The elicited results expanded the current body of literature on the halal pharmaceuticals industry in Malaysia and facilitated stakeholders, policymakers, and industry players to make informed decisions.

2. Methodology

This qualitative work comprehensively analyzed current publications (including journals and other pertinent periodicals) on the halal pharmaceutical industry to internalize consumers' selection of halal pharmaceutical products, associated issues, and future developments in Malaysia. These articles were analyzed to extract information, determine key themes, and derive key outcomes. This analysis was built on the foundation laid by past scholars and added to the current body of literature.

3. Consumer Preferences for Halal Pharmaceutical Products

Halal pharmaceutical product selection is influenced by various factors. For example, religious beliefs significantly impacted consumer preferences in choosing halal pharmaceutical products. Those abiding by Islamic dietary restrictions prefer products that (i) fulfil halal requirements (Awan, Siddiquei, & Haider, 2015; Tatiek & Hendar, 2020; Vanany, Mei Soon, Maryani, & Wibawa, 2020) and (ii) use Shariah-compliant ingredients and (iii) manufacturing, processing, and labelling practices (Norazmi & Li Sze, 2015). It is vital for Muslim consumers seeking halal pharmaceutical products to fulfil these prerequisites. Following the significance of religious beliefs in the decision-making process, consumers who ensure that the manufacturing procedures comply with halal standards, the ingredients used are permissible, and the product labelling corresponds to

halal status can use halal pharmaceutical products that meet their religious obligations (Saha, Rifat, & Shimanto, 2019; Norazmi & Li Sze, 2015). Halal-conscious consumers actively authenticate a product's halal certification pre-purchase to meet religious beliefs and health requirements.

Quality and safety are also considered during halal pharmaceutical product selection. Consumers are aware of the need to practice rigorous quality standards when selecting products to sustain their health and well-being. Halal certification assures consumers of product safety and efficacy (Rahim, 2017; Maison, Marchlewska, Dewi Syarifah, Zein, & Purba, 2018). For example, halal-certified pharmaceuticals implement stringent quality control measures in the manufacturing process (prohibiting pork- or alcohol-based ingredients) to ensure optimal quality standards (Mukhtar & Butt, 2012). Consumers who acknowledge this certification as an embodiment of quality and safety develop a high level of trust in these pharmaceuticals (Ab Talib, Md Sawari, Abdul Hamid, & Ai Chin, 2016; Atieqoh, Waseso, & Hamidi, 2023). Only a carefully examined pharmaceutical product that meets certain prerequisites is awarded halal certification. Thus, consumers prioritize halal-certified products over non-certified ones. This preference ensures their Shariah compliance while also maintaining their health and safety. Consumers can trust in these products' quality and effectiveness, which reflect their choices and values.

People who prioritize well-being actively seek products that reflect their health standards and religious beliefs (Saha, Rifat, & Shimanto, 2019). As such, consumers' emphasis on health and wellness has substantially influenced their preference for halal pharmaceutical products (Vizano, et al., 2020). Much emphasis is placed on a product's Shariah compliance in addition to its efficacy (Suryani & Ahkman, 2020). Thus, Shariah-compliant pharmaceutical products with health benefits have garnered much popularity among halal-conscious consumers (Kasri, Ahsan, Widiatmoko, & Hati, 2023). Commonly regarded as solutions that holistically address physical and spiritual well-being, these products are perceived to fulfil health objectives while adhering to religious tenets (Abdalla, 2019; N.A. Vizano, et al., 2020). Consumers' preference for halal pharmaceutical products stems from their obligation to Islamic tenets. Overall, consumers are reassured of and satisfied with halal pharmaceutical products that fulfil health and religious requirements (Hehanussa, 2022). Such standards allow consumers to prioritize their health and well-being while making decisions that parallel individual beliefs and values.

4. Challenges in Halal Pharmaceutical

Distinctive attributes of the halal pharmaceutical industry render it challenging to ensure its adherence to halal standards. These conundrums adversely affect halal pharmaceutical product elements, such as the manufacturing process, certification procedures, and consumers' product perceptions. Notably, the authentication of pharmaceutical ingredients is a key concern. Pharmaceutical formulations include a diverse range of active and inactive components, some of which may originate from animal sources. Thus, pharmaceuticals that label their products as halal must perform extensive documentation and compliance monitoring to ensure that all ingredients and manufacturing procedures comply with the necessary standards (Norazmi & Li Sze, 2015). Deemed a meticulous and time-consuming process, the sourcing and manufacturing of each ingredient must be extensively examined and verified to ensure its halal standards (Zehra & Naqvi, 2017).

Pharmaceutical products' halal integrity is hampered by cross-contamination. For example, manufacturing facilities that produce both halal and non-halal products pose cross-contamination risks. The development of unique halal pharmaceutical products proves complex following the need to identify halal alternatives for ingredients sourced from non-halal origins or those containing potentially non-halal additives. Consequently, holistic studies, resource allocation to create and apply advanced technologies, and collaboration with halal science experts must be seriously considered (Mohezar, Zailani, & Zainuddin, 2016). Stringent measures involving distinct production lines, dedicated equipment, and strict cleaning protocols should also be implemented throughout the manufacturing process to lower contamination risks. Such precautions can prevent unintentional contamination and uphold the end products' halal integrity (Noronha, 2020).

Certification requirements and the interpretation of halal requirements also hamper halal pharmaceuticals (Mahidin, Othman, & Mohd Saifudin, 2016; Jaswir, 2019). The tedious and time-consuming process of obtaining

halal certification for pharmaceutical products and the presence of diverse certifying bodies or authorities with distinct halal compliance criteria are challenging due to strict requirements (E Azam & Abdullah, 2021). Such variations can lead to discrepancies in halal labelling standards, specifically for globally marketed pharmaceutical products. Standard guidelines must be developed via harmonization and standardization to ensure consistent and reliable halal certification across different regions and regulatory frameworks (Annabi & Ibidapo-Obe, 2017).

Halal labelling for pharmaceutical products must meet regulatory compliance under the purview of the Department of Islamic Development Malaysia (JAKIM). This regulatory body is responsible for halal certifications in Malaysia. As such, local pharmaceuticals must follow JAKIM regulations to obtain halal certification. Despite being complex and time-consuming, it is vital to comply with specific nations' halal regulations and certification requirements by understanding and fulfilling the diverse regulatory frameworks and documentation requirements of different jurisdictions (Eun Kyeong, Hee-Yul, & Dong-Hwan, 2020).

Future Directions of Halal Pharmaceutical Products in Malaysia: Halal pharmaceutical products in Malaysia must exercise focus and strategic planning in several key areas. First, the regulatory framework underpinning halal pharmaceuticals must be constantly upgraded. Holistic and globally recognized halal standards must also be developed in line with the pharmaceutical industry (Mohd Fauzi, Ab Rahman, Wan Hassin, & Shah Shahara, 2020). These measures require regulatory bodies, industry stakeholders, and Islamic scholars to collectively ensure halal pharmaceutical product compliance and integrity and improve consumer confidence and trust (Baker , Bayirli, & Zakzouk, 2020). For example, stakeholders can address relevant challenges, leverage resources, and optimize the industry. Halal pharmaceutical products' compliance and integrity can be enhanced with high halal standards.

Second, halal pharmaceutical products' growth and advancement depend on significant research and development (R&D) investments (Muhamad Zain, Nor Muhamad, Che Yaacob, & Sayed Ahmad, 2017). Novel halal options, procedures, and technologies can improve production quality and efficiency via ongoing research and innovation (Zehra & Naqvi, 2017). Government bodies that offer financial assistance, tax exemptions, and additional incentives to enterprises that allocate resources for R&D are key to leveraging the halal pharmaceutical sector. Research centers and universities focusing on halal pharmaceutical research can also be established. Meanwhile, the industry and academia can exchange resources and expertise to develop unique halal products. Both governments and pharmaceutical companies can expand and develop the halal pharmaceutical industry via R&D investments.

Third, Malaysia can broaden the market scope and examine export prospects by functioning as a global hub for halal pharmaceutical products (Mazlan & Hamzah, 2015). Relevant government bodies can establish mutual recognition agreements on halal pharmaceutical product certification with other countries to export halal pharmaceuticals. These products can be promoted at global halal conferences and exhibitions to widen the customer base. Overall, Malaysia can provide new employment opportunities and strengthen the national economy by establishing itself as a global halal pharmaceutical industry.

5. Conclusion and Suggestions

Key stakeholders must collaborate to attain future goals in the halal pharmaceutical industry. In ensuring global recognition tailored to the pharmaceutical sector, regulatory bodies should continuously refine halal standards. Certifying authorities must perform harmonization to minimize discrepancies in halal labelling standards for globally distributed products. Strong support from research institutions is key to driving pharmaceutical innovations and advancements. Consumer advocacy groups also play a pivotal role in increasing awareness and educating consumers, who can be empowered to make informed choices. The essentiality of religious compliance, quality, and safety must also be emphasized. Guided by shared objectives, this collective effort can optimize the local industry while positioning Malaysia as a global leader in halal pharmaceuticals. Collaborative governance, innovative research, and the commitment to meet different consumer preferences in halal pharmaceutical products are key to positioning Malaysia as a global industry player. Such strategic measures increase industry growth, resilience, and worldwide recognition.

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wereion level of 55.3, while those with a degree constituted about 43.9% of total respondents and 0.8% with a diploma. This implies that the majority of the respondents had attained a master's level and also many had attained a degree level. This implies the selected banks in Bamako Mali consider education important and the majority of its employees are educated to a higher level. The majority of the respondents had also worked for 2-4 years with 52.6%, 5-7 years with 31.6 % and 8-10 years with 15.8 %. This implies that the majority of the employees in the selected banks in Bamako Mali have gained adequate working experience in the banks. Lastly, the majority of the respondents were operational staff with 85.1% and managers with 14.9%.

This implies that the majority of the employees in selected banks are operational staff who handle day-to-day activities like customer care and other service deliveries. Based on the descriptive analysis, total quality management in all aspects was moderate with a grand (mean = 3.41). Human resource focus with (an average mean=3.19), Strategic planning with (an average mean= 3.34), process management with average (mean=3.53) and customer service with (average mean = 3.61). This implies that total quality management among selected banks in Bamako Mali was moderate and it needs improvement to enhance organizational performance. The dependent variable in this study (organizational performance) was categorized into profitability, growth dimension, and sustainable competitive and customer service. This variable was measured using quantitative questions with response rates ranging from (1) Strongly Agree; (2) Agree; (3) not sure (4) Disagree; and (5) Strongly Disagree. Responses were analyzed and described using means. The descriptive findings implied that total organizational performance in all aspects rated high with a grand (mean = 3.71). For profitability with (average mean=3.72), growth dimension with average (mean =3.09). Sustainable competitive with (average mean= 3.93) and customer service with (mean=4.06). This implies that organizational performance among selected banks in Bamako Mali is high despite total quality management being moderate in banks.

Table 2: Multiple Linear Regression Analysis for Total Quality Management on Organizational Performance

Variables regressed	**Adjusted r^2**	**F-value**	**R**	**Sig.**		**Interpretation**	**Decision on H_o**
Total quality management Vs. Organizational performance	.832	88.4	.912	.000		Significant effect	Rejected
	Unstandardized Coefficients B	Std. Error	Standardized coefficients Beta	t-value	Sig-value	Interpretation	Decision on Ho
(Constant)	34.454	1.124		28.885	.000	Significant effect	Rejected
Human resource focus	.563	.130	.392	4.156	.000	Significant	Accepted
Strategic planning	.834	.478	.762	3.83	.000	Significant	Accepted
Process management	.156	.283	.059	.552	.582	Insignificant	Accepted
Customer and market focus	.925	.336	.472	2.752	.007	Significant	Accepted

a. Predictors: (Constant), human resource focus, strategic management, process management and customer service

Results in Table: 2 above revealed that quality management has a significant effect on organizational performance at (Adjusted R Squared =.832). This implies that the null hypothesis is accepted. All the regression model's results were significant as noted from the contrived level of significance (Sig. <.01). The findings

indicate that human resource focus, strategic planning process management and customer service focus had had significant effect on organizational performance in the Malian Banking industry.

Discussion of Findings: The findings indicated that human resource focus significantly affects organizational performance among selected banks in Bamako Mali. Human resource focus scored a grand (mean = 2.89). This implies that human resource focus has a moderate effect on organizational performance Collins (2018). Concur with the findings that human resource focus influences organizational performance. He adds that human resource focus includes tasks like HR preparation, human resources management, strategic recruiting, employee training, growth compensation management, efficiency, worker relations, health care, and employee satisfaction as well as provision of employee services which all enhance organizational performance. It includes policies and practices set to improve organizational efficiency, engagement of employees and work quality (Allan, 2017; Argote, 2018; Beamon, 2018). Specifically, Beamon (2018) also concurs with the findings that Human resource focus is the strategic approach to the effective and efficient management of people in a company or organization such that they help their organization gain a competitive advantage thus achieving organizational performance.

Allan (2017) and Argote (2018) also concur with the findings that human resource focus is designed to maximize employee performance in service of an employer's strategic objectives resource management is primarily concerned with the management of people within organizations, focusing on policies and systems. HR departments are responsible for overseeing employee benefits design, employee recruitment, training and development, performance appraisal, and reward management, such as managing pay and employee benefits systems. HR also concerns itself with organizational change and industrial relations, or the balancing of organizational practices with requirements arising from collective bargaining and governmental laws. Argote (2018) and Beamon (2018) also concur with the findings that human resource focus greatly influences organizational performance. The overall purpose of human resources focus is to ensure that the organization can achieve success through people. HR professionals manage the human capital of an organization and focus on implementing policies and processes. They can specialize in finding, recruiting, selecting, training, and developing employees, as well as maintaining employee relations or benefits. Moreover, our findings also indicated that strategic planning significantly affects organizational performance among selected banks in Bamako Mali. Leadership scored a grand (mean = 3.34). This implies that strategic planning has a moderate effect on organizational performance.

Blas & Limbambala (2017) concur with the findings that the interest in strategy planning grew out of the realization that a firm needed a well-defined scope and growth direction not just extrapolations of past performances which were being used to project into the future. Forza & Filippini (2018) made an observation of firms‟ recognition of the need to do strategic thinking and planning. (Blas & Limbambala, 2017) also concur with the findings Of Douglas and Judge (2017) Others point out significant difficulties inherent in investigating the relationship between strategic planning and performance, which include the fact that firm performance in the present is a function of past and not current, planning practices (Blas & Limbambala, 2017; Forza & Filippini, 2018) and that hard-to-obtain longitudinal data would be required to control for time lag effects and to show that causal relationships do exist‟ (Douglas & Judge, 2017; Forza & Filippini, 2018). Strategic planning is one of the more popular management approaches in contemporary organizations, and it is consistently ranked among the five most popular managerial approaches worldwide that enhance organizational performance (Wolf and Floyd 2017). According to Beamon (2018), strategic planning is a tool for finding the best future for your organization and the best path to reach that destination and achievement of organizational performance. In addition, our findings also indicated that process management significantly affects organizational performance among selected banks in Bamako Mali.

Process management scored a grand (mean = 3.53). This implies that process management had a high effect on organizational performance. According to Argote (2018) and Beamon (2018) concur with the finding that process management is an organizational approach that focuses on the processes, and is used in the analysis, design, and organizational development of business processes, to improve organizational performance and increase organizational efficiency. Beamon (2018) also concurs with the findings that process management greatly affects organizational performance and he identified a range of benefits that may expected from adopting process management, such as improving organizational performance, communications within

organizations, identifying inputs, identifying outputs, and business activities, understanding the flow of activities within the organization, until product or service arrive to the customer, improving the decisions related to performance processes follow-up, and improving the individual management. Argote (2018) also concurs with the findings that process management has a major effect on organizational performance and integration between the organizational systems and its human resources, where organizations aim to maximize the efficient use of their resources and achieve their strategic objectives and organizational performance. Lastly, the findings also indicated that customer and market focus had a significant effect on organizational performance among selected banks in Bamako Mali. Customer and market focus scored a grand (mean = 3.61).

This implies that customer and market focus had a high effect on organizational performance. (Mitchell, 2013) concur with the findings that customer and market focus has a great influence on organizational performance. He also contends that market advancement involves the improvement of the market target blend and how the necessities in this market are fulfilled with an end goal of upgrading market potential and growing better approaches for serving or working in the objective business sectors. Beamon (2018) and Argote (2018) also concur with the findings that market pioneers rush to take note of the exceptional practices of clients, for example, their purchasing patterns and will build up their inclinations to achieve organizational performance. To fulfill such inclinations, the firm will at that point need to portion these clients and separate items to fulfill these clients as intently as could be expected. Altogether, for a business to procure attributes that give it an edge over its rivals, research on practices and mentalities that infer nonstop better execution thus better support the, (Beamon, 2018). Beamon (2018) concurs with the findings that subsequently established that converting market knowledge into practice in the planning and decision-making process will follow automatically. Similarly, cross-functional coordination is defined as the organized utilization of company resources in an operationally competent manner rather than being competent in the market (Allan, 2017; Argote, 2018; Beamon, 2018; Bergquist, Fredriksson & Svensson, 2019).

5. Conclusions, Recommendations and Implications

Conclusions: The purpose of the study was to examine the effect of total quality management on organizational performance among selected banks in Bamako, Mali. This study adopted a cross-sectional survey design. The target population was 160 respondents and the sample size was 114 respondents. The study questionnaire was the main instrument of data collection. Frequency and percentage distribution were used to determine the profile of the respondents. Mean and Standard deviations were used as descriptive statistics for the independent (total quality management constructs) and dependent variables (organizational performance). Linear and multiple regression analyses were used to determine the effect. Consequently, the following conclusions were contrived: There is a significant effect of human resource focus on organizational performance in the Malian banking industry. This is because human resource focus has a significant effect on enhancing organizational performance. The findings indicate that the null hypothesis was rejected. The study also concluded on the significant effect of strategic planning on organizational performance in the Malian Banking Industry. The study also concluded on the significant effect of process management on organizational performance in the Malian Banking Industry. Lastly, the present study concluded on the significant effect of customer and market focus on organizational performance in the Malian Banking Industry.

Recommendations: The management of the selected banks should carry out regular training to enhance organizational performance and customer results. Furthermore, the management of the banks should also treat employees as a valuable resource to increase their loyalty to the firm, motivate them and make them proud of their jobs, improve their work-related performances, decrease absenteeism, and reduce intentions to quit. The management of the banks should educate employees on total quality management to increase the quality, reliability, and timely delivery of the products/services. With effective training, employees know the industry and the structure of the bank better. Effective training on quality also increases employees' skills to work effectively and efficiently. Furthermore, it will improve employees' loyalty to the firm, their motivation, and work-related performances. Employees should be given training on delivering high-quality and reliable products and/or services to reduce customer complaints. The management of the banks should come up with a clear vision, mission, and values of the banks. With effective strategic quality planning efforts employees should be taken as an input in developing the vision, mission, strategies, and objectives. This facilitates acceptance and support of strategic quality plans by the employees. Successful strategic quality planning efforts

also take into account the possible side effects of the plan on the environment before the organizational performance. The management of the selected banks should focus on serving the external customers. They first should know the customers' expectations and requirements and then should offer the products/services, accordingly. With the aid of successful customer focus efforts, production can be arranged concerning the customers' needs, expectations, and complaints.

The management should also focus on producing high-quality and reliable products/services on time with increased efficiency and productivity. When customer expectations are met, their satisfaction will be increased, and the firm's sales and market share will increase. The management of the banks should include four elements: strategic alignment, IT, employees' involvement and process improvement to achieve organizational performance. The management should focus on the processes, and use them in the analysis, design, and organizational development of business processes, to improve organizational performance. Lastly, the management of the selected banks should focus on the improvement of market target blend and customer care. The banks should also focus on the provision of quality services to the customer and promoting their brand. The management of the selected banks should ensure effective communication throughout the TQM Process to ensure patience and understanding of the organizational and cultural changes, commitment and support from the top management throughout the TQM process are also essential. TQM implementation must also be constantly reviewed to align with plans and budgets, while effective process review and controls to conform to set standards are also essential. Quality improvement measurement systems and IT infrastructures must be installed to generate quality data, information sharing and evaluation, and most significantly, TQM strategies must be constantly aligned with the marketing strategies of the banks to achieve successful TQM implementation.

Implications and Contributions to Knowledge: This study found that all aspects of total quality management including human resource focus, leadership, strategic management, process management, information and analysis and customer market focus are instrumental in the attainment of organizational performance in the Malian Banking Industry. This study is expected to provide specific direction to companies contemplating a TQM program (Awolusi, 2013). Hence, the study is expected to be beneficial to banks in Mali by, enabling better strategic and tactical judgments about TQM implementations. It will help selected banks understand TQM as a business philosophy, its key components and its benefits. It will also explore imperatives for successful implementation. It will serve as a veritable source of information for decision-makers who need to commit resources to such a venture, project team members and Consultants who seek to avoid implementation pitfalls, as well as, professionals who work in this and other related fields (Awolusi, 2013).

Another contribution of this study is the measurement of business performance, which was not limited to or focused on financial metrics, but encompasses diverse business indicators and perspectives, like profitability, growth, customer services and sustainable competitive advantage. Allan (2017) and Argote (2018) specifically identified this gap in the literature. This is on the premise that many researchers often use objective measures such as turnover and profit as a form of measuring enterprise/firm business performance. Lastly, this study offers a theoretical model that can be considered a step forward in developing an integrated model for investigating the relationship between TQM and organizational performance (Awolusi, 2012b). Finally, this research adds to the body of knowledge by providing new data and empirical insights into the relationship between TQM and organizational performance. However, further comparative research may be conducted on the relationship between total quality management and organizational performance within the manufacturing industries in Mali to understudy any probable similarities and differences between manufacturing and service-related firms in Mali.

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