

OSH Integration in Malaysian Supply Chains: A Stakeholder Engagement and Social Exchange Analysis for Enhanced Resilience

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Abstract: In pharmaceutical companies in Malaysia, employee retention is a huge responsibility for Human Resources Management. In today's global economic landscape, many companies are moving towards globalization, and employees are more inclined to change organizations in search of better opportunities and growth. This has become a major concern, and retaining employees has been one of the competitive strategies because employees leaving the organization carry with them their skills and knowledge. The main focus of this study is to understand the factors that influence employee retention at pharmaceutical companies in Malaysia. The research objectives were to examine whether reward, career advancement, and manager engagement have a significant influence on employee retention in pharmaceutical companies in Malaysia. This is a correlation study focusing on the relationship between rewards, career advancement, manager engagement, and employee retention in pharmaceutical companies. This research was conducted in a natural setting in a non-contrived manner using non-probability convenience sampling. A questionnaire was distributed to 400 employees working for pharmaceutical companies in Malaysia, regardless of position. The validity and reliability of the questionnaire were checked, and responses were collected and analyzed via SPSS software. The analysis and research findings showed that rewards, career advancement, and manager engagement positively influenced the retention of employees in pharmaceutical companies in Malaysia. All independent variables show a significant beta coefficient, with a p-value of 0.00 for rewards and career advancement and a p-value of 0.001 for the manager's engagement. The result supported the hypotheses and was accepted.

Keywords: *occupational safety and health, OSH, social sustainability, supply chain management, Malaysia, stakeholder theory, social exchange theory*

1. Introduction and Background

Malaysia has made notable advancements in sustainability, yet the full incorporation of Occupational Safety and Health into broader social responsibility strategies remains underdeveloped (Amirrudin et al., 2024). This study explores the integration of OSH into the social sustainability framework within Malaysian supply chains, highlighting the importance of prioritizing worker well-being for sustainable and resilient supply chain performance (Amirrudin et al., 2024). This is consistent with broader global trends recognizing the interconnectedness of business operations and their impact on stakeholders (Cheng et al., 2015). Furthermore, the increasing complexity and interconnectedness of global supply chains have amplified the need for resilience—the capacity to withstand and recover from disruptions (Pereira & Silva, 2015). Social sustainability, encompassing fair labor practices, worker well-being, and community development (Mani et al., 2016), has become a critical dimension of overall sustainability, particularly within supply chain contexts (Huq & Stevenson, 2018). This conceptual paper explores the integration of OSH, defined as the science of anticipating, recognizing, evaluating, and controlling hazards arising in or from the workplace that could impair the health and well-being of workers (Ustailieva et al., 2012), into the social sustainability framework within Malaysian supply chains, using a stakeholder-social exchange perspective. This perspective recognizes the importance of collaboration and communication within the supply chain (Awheda et al., 2014; Mohammad et al., 2014).

This paper posits that prioritizing worker well-being, as reflected in robust OSH practices, is essential for achieving both social sustainability and resilient supply chain performance. Drawing upon stakeholder theory, which emphasizes the interconnectedness of organizations and their stakeholders, and social exchange theory, which focuses on the reciprocal exchange of resources and obligations, we develop a conceptual framework for

understanding the complex interplay of actors and interests within Malaysian supply chains. This stakeholder-social exchange lens allows us to analyze how investments in OSH can generate positive outcomes for various stakeholders, including employees, suppliers, customers, and communities, ultimately contributing to a more sustainable and resilient supply chain ecosystem (Hsu et al., 2021). Furthermore, this perspective sheds light on the potential conflicts and trade-offs that may arise in the pursuit of both social sustainability and resilience, providing insights for navigating these complexities (Shahbaz et al., 2020).

This conceptual paper explores the integration of Occupational Safety and Health into social sustainability frameworks within Malaysian supply chains. This paper extends the authors' earlier conceptual work on the integration of Occupational Safety and Health into social sustainability frameworks in Malaysian supply chains. While the previous study focused on the ethical, legal, and policy rationale for prioritizing OSH within supply chain sustainability, the current paper advances this agenda by incorporating stakeholder theory and social exchange theory to propose a structured conceptual framework. This theoretical lens allows for a deeper understanding of the mechanisms through which OSH can be embedded into sustainable supply chain practices, particularly through stakeholder collaboration and reciprocity. In doing so, this article addresses the empirical and practical gaps identified in the earlier study and contributes a set of actionable variables to guide future research and organizational implementation.

While existing literature acknowledges the importance of OSH in supply chains, this research aims to address a gap by specifically examining how the integration of stakeholder engagement and social exchange theory can enhance OSH practices and resilience within the unique context of Malaysian supply chains. This conceptual paper will address the following key questions: How can OSH be effectively integrated into social sustainability frameworks within Malaysian supply chains? What are the key stakeholder perspectives on OSH and its role in supply chain resilience? How can social exchange mechanisms be leveraged to promote OSH and enhance supply chain resilience? By addressing these questions, we aim to contribute to both academic discourse and practical guidance for organizations seeking to build more sustainable and resilient supply chains in Malaysia. This analysis will draw upon existing literature on sustainability, supply chain management, and OSH, integrating stakeholder and social exchange theories to develop a comprehensive understanding of the complex dynamics at play. This includes considering the current practices and challenges related to OSH in Malaysia (Mohd et al., 2020).

This research recognizes that Occupational Safety and Health is not merely a matter of compliance or risk management; it's a fundamental pillar of social sustainability (Amirrudin et al., 2024). When workers are safe and healthy, they are more productive, engaged, and able to contribute to their communities (Ivaşcu et al., 2019). A supply chain that prioritizes OSH is, therefore, a more ethical, resilient, and sustainable supply chain. This perspective aligns with the broader sustainable development goals, particularly those related to decent work, economic growth, and reduced inequalities.

However, achieving this integration requires a shift in mindset. Traditionally, OSH has been viewed as a separate function, often disconnected from broader sustainability initiatives. This research argues that a more holistic approach is needed, one that recognizes the interconnectedness of OSH, stakeholder relationships, and social responsibility. By leveraging the principles of stakeholder engagement and social exchange, we can create a more collaborative and supportive environment where all actors in the supply chain are incentivized to prioritize OSH.

Ultimately, this research seeks to demonstrate that investing in OSH through stakeholder engagement and social exchange is not just a cost, but a strategic investment in the long-term sustainability and resilience of Malaysian supply chains. By fostering a culture of safety and well-being, organizations can enhance their reputation, improve their bottom line, and contribute to a more just and equitable society.

2. Interconnections between social sustainability, supply chain resilience and OSH

OSH directly contributes to social sustainability by prioritizing the health, safety, and well-being of workers (Mani et al., 2016; Ustailieva et al., 2012). Robust OSH practices minimize workplace hazards, reducing the risk of injuries, illnesses, and fatalities ("A Smarter National Surveillance System for Occupational Safety and Health

in the 21st Century,” 2018). This, in turn, leads to a healthier and more productive workforce, contributing to improved social outcomes within the supply chain and related communities (Amirrudin et al., 2024). When workers feel safe and valued, their morale and job satisfaction increase, fostering a positive work environment and promoting social cohesion within the organization. Furthermore, strong OSH practices can enhance a company's reputation and attract and retain skilled workers, creating a more stable and sustainable workforce (Schulte, 2006). This positive social impact extends beyond the workplace, benefiting families and communities by reducing the social and economic burdens associated with workplace accidents and illnesses (Khalil & Salih, 2022). A healthy and productive workforce contributes to the overall economic well-being of a community, fostering social stability and development (Ustailieva, 2014).

Improved worker well-being, fostered by robust OSH practices, translates into enhanced social outcomes by creating a ripple effect throughout the supply chain (Harter et al., 2003; Węziak-Białowska et al., 2019). When workers are healthy and safe, they are more likely to be productive and engaged (Miller, 2016), contributing to higher quality products and services (Mani et al., 2017). This, in turn, can enhance customer satisfaction and brand loyalty (Harter et al., 2003), strengthening the overall competitiveness of the supply chain (Hsu et al., 2021). Moreover, a commitment to worker well-being can improve a company's reputation and attract socially conscious consumers, further enhancing its market position. By prioritizing worker well-being, companies demonstrate their commitment to ethical and responsible business practices (Huq & Stevenson, 2018), fostering trust and positive relationships with stakeholders across the supply chain (Jain et al., 2018). This creates a more collaborative and sustainable supply chain ecosystem, benefiting all involved parties.

Social sustainability is intrinsically linked to supply chain resilience (Pereira & Silva, 2015; Zavala-Alcívar et al., 2020). A socially sustainable supply chain, characterized by fair labor practices, worker well-being, and community engagement, is inherently more resilient to disruptions (Mani et al., 2016). When workers are treated fairly and their well-being is prioritized, they are more likely to be loyal, committed, and motivated to contribute to the success of the organization (Zangara et al., 2024). This strong social foundation creates a more stable and adaptable workforce, capable of navigating challenges and recovering quickly from disruptions. Furthermore, a socially responsible supply chain is more likely to attract and retain skilled workers (Schulte, 2006), reducing the risk of labor shortages and operational disruptions (Shahbaz et al., 2020). By investing in social sustainability, companies build strong social capital within their supply chain (Zangara et al., 2024), fostering trust, collaboration, and mutual support among stakeholders (Awgheda et al., 2014). This strong social fabric enhances the supply chain's ability to withstand and recover from disruptions (Zavala-Alcívar et al., 2020), ensuring its long-term viability and competitiveness (Cheng et al., 2015). A socially sustainable supply chain is not only ethically sound but also strategically advantageous, contributing to greater resilience and long-term success.

Existing research has highlighted the potential benefits of integrating OSH into social sustainability, including improved worker well-being, enhanced brand reputation, and greater supply chain resilience (Amirrudin et al., 2024). This is particularly relevant in the Malaysian context, where the growing importance of sustainability has led to increased attention on social responsibility and worker welfare. However, the practical implementation of such integration remains a challenge, often hindered by institutional barriers, misalignment of stakeholder interests, and a lack of consistent application of OSH practices across supply chain tiers (Huq & Stevenson, 2018).

3. Stakeholder Perspectives and Social Exchange Mechanisms

To address this challenge, a stakeholder-social exchange perspective offers valuable insights. Stakeholder theory emphasizes the need to consider the diverse interests and influences of various actors, including employees, suppliers, customers, and local communities, within the supply chain ecosystem. By understanding the perspectives and motivations of these stakeholders, organizations can develop more effective strategies for integrating OSH into their social sustainability frameworks, fostering greater collaboration and shared responsibility.

A stakeholder perspective is crucial for understanding the complex dynamics of social sustainability and supply chain resilience, particularly concerning OSH integration (Huq & Stevenson, 2018). This theory emphasizes the

importance of considering the interests and influences of all stakeholders affected by a company's operations, including employees, suppliers, customers, local communities, and government agencies (Ustailieva et al., 2012). Each stakeholder group has unique perspectives on OSH and its role in supply chain resilience (Mani et al., 2017). For instance, employees are directly impacted by OSH practices, and their well-being is paramount (Harter et al., 2003; Miller, 2016). They are directly impacted by workplace hazards and benefit most from safe and healthy working conditions. Their perspectives often emphasize fair wages, reasonable working hours, access to healthcare, and opportunities for skill development. They seek a voice in decisions impacting their safety and well-being, advocating for strong enforcement of regulations and transparent communication about workplace risks. Amirrudin et al. (2024) highlight the particular need for increased awareness and training among low-skilled workers in Malaysia, reflecting their potential vulnerability within supply chains.

Suppliers may face pressure to comply with OSH standards, potentially impacting their costs and operations (Mani et al., 2017). Their main concerns often revolve around the feasibility and financial implications of implementing more rigorous OSH practices, as well as the potential impact on their competitiveness. Smaller suppliers, in particular, may lack the resources and expertise to implement robust OSH systems independently and benefit from collaborative initiatives and knowledge sharing within the supply chain. Awaysheh & Klassen (2010) explore the impact of supply chain structure on supplier adoption of socially responsible practices, including OSH.

Customers, on the other hand, are increasingly concerned about ethical sourcing and worker welfare, influencing their purchasing decisions (Beske & Seuring, 2014). Their perspectives focus on product safety, ethical sourcing, and fair labor practices. They may be willing to pay a premium for products from companies with demonstrably strong OSH performance, driving market demand for socially responsible supply chains. Initiatives that enhance transparency and traceability, enabling consumers to make informed purchasing decisions, can play a key role in strengthening OSH integration. Amirrudin et al. (2024) suggest that increased information transparency about OSH performance, potentially through apps that allow consumers to evaluate factors related to health and safety, might sway purchasing behaviors and encourage improvements. Local communities may experience positive or negative externalities from supply chain activities, including impacts on public health and safety.

Government agencies play a regulatory role, setting and enforcing OSH standards ("A Smarter National Surveillance System for Occupational Safety and Health in the 21st Century", 2018; Schulte, 2006; Meixell & Luoma, 2015; Amirrudin et al., 2024; Koplin et al., 2006; Huq & Stevenson, 2018). Their perspectives emphasize compliance with laws and regulations, as well as the need for effective monitoring and enforcement mechanisms to ensure consistent application of OSH practices across the supply chain. Collaboration between government agencies and other stakeholders can contribute to more effective enforcement and facilitate the development of context-specific solutions. Md. Deros et. al (2014) highlight the importance of the Department of Occupational Safety and Health and the regulatory framework for OSH in Malaysia, emphasizing the crucial role of government agencies in this domain. Understanding these diverse perspectives is crucial for developing effective strategies for OSH integration and building more socially sustainable and resilient supply chains. A collaborative approach that considers the needs and interests of all stakeholders can create a more equitable and mutually beneficial outcome.

Social exchange theory provides a valuable lens for analyzing the interactions between stakeholders in the context of OSH and supply chain resilience (Griffith et al., 2005). This theory posits that relationships are based on reciprocal exchanges of resources, both tangible (e.g., financial incentives, information) and intangible (e.g., trust, reputation) (Cook & Rice, 1995). In the context of OSH, social exchange mechanisms can be leveraged to promote the adoption and implementation of robust OSH practices throughout the supply chain (Davis-Sramek et al., 2020). For example, companies can offer incentives to suppliers who demonstrate strong OSH performance, creating a positive feedback loop that encourages continuous improvement (Chowdhury et al., 2019). Collaborative partnerships between companies and local communities can facilitate the sharing of information and resources, enhancing OSH outcomes for all involved (Cole et al., 2002). Building trust and open communication channels among stakeholders is essential for effective social exchange, enabling the identification and resolution of OSH challenges collaboratively (Najjar et al., 2020).

In the realm of OSH, social exchange dynamics are evident in the relationships between employers and employees, between companies and their suppliers, and between organizations and regulatory bodies. Employers invest in OSH programs, expecting increased productivity, reduced absenteeism, and enhanced employee morale in return (Amirrudin et al., 2024). Employees, in turn, contribute their labor and expertise, expecting safe and healthy working conditions. Companies may provide training, resources, and support to their suppliers in exchange for compliance with OSH standards, expecting a more resilient supply chain and enhanced reputation. Regulatory bodies enforce OSH regulations, expecting companies to comply and contribute to a safer working environment for all.

SET emphasizes the importance of reciprocity in maintaining stable relationships. When one stakeholder invests in OSH improvements, they expect a reciprocal benefit from other stakeholders. This reciprocal exchange fosters trust, which is essential for collaborative efforts to enhance supply chain resilience. Scholten & Schilder (2015) highlight the importance of collaboration in supply chain resilience, suggesting the inherent role of social exchange and reciprocity in these collaborative efforts. When stakeholders perceive a lack of reciprocity or fairness in the exchange process, trust erodes, hindering collaboration and impeding progress on OSH integration. By examining the dynamics of social exchange in the context of OSH and supply chain resilience, it is possible to identify opportunities for strengthening stakeholder relationships and promoting more effective OSH practices.

Power imbalances within supply chains can significantly influence the exchange process. Lead firms often wield considerable power over their suppliers, dictating terms and conditions. This power dynamic can affect the willingness of suppliers to invest in OSH, especially if they fear it will increase costs without commensurate rewards. Amirrudin et al. (2024) touch upon the issue of stakeholder power within supply chains, highlighting the need for equitable exchanges. To overcome these challenges, it is essential to promote transparency and fairness in the exchange process, ensuring that suppliers are adequately compensated for their OSH investments.

SET recognizes the importance of social capital, which encompasses the networks, norms, and trust that facilitate cooperation and coordination within a group or community. Strong social capital within a supply chain can foster collaborative efforts to improve OSH, leading to greater supply chain resilience. Johnson et al. (2013) directly address the role of social capital in facilitating supply chain resilience, underscoring its importance in this context. Investing in social capital by building strong relationships with suppliers and fostering a culture of trust can create a more supportive environment for OSH improvements. Moreover, capacity building and empowerment are essential for fostering a culture of continuous improvement in supply chain OSH. This involves providing suppliers with the necessary training, resources, and technical assistance to enhance their occupational safety and health management systems (Amirrudin et al., 2024).

By understanding the principles of SET, organizations can develop more effective strategies for promoting OSH within their supply chains. This includes establishing clear expectations for reciprocal exchanges, fostering trust through transparent communication and fair practices, addressing power imbalances, and building social capital. Azadegan & Dooley (2020) discuss different levels of collaboration in supply chain resilience, providing a framework for understanding how social exchange can operate at various scales within the supply chain. Applying SET to analyze stakeholder interactions provides valuable insights into the motivations, incentives, and challenges associated with OSH integration and supply chain resilience. This framework can inform the design of interventions that effectively leverage social exchange mechanisms to promote positive change and build more sustainable and resilient supply chains.

Integrating stakeholder and social exchange theories provides a comprehensive framework for understanding the complex interplay of actors and interests within supply chains (Najjar et al., 2020; Cook & Rice, 1995). This integrated perspective allows for a more nuanced analysis of how investments in OSH can generate positive outcomes for various stakeholders, ultimately contributing to a more sustainable and resilient supply chain ecosystem (Barakat et al., 2023; Zavala-Alcívar et al., 2020). Furthermore, this perspective sheds light on the potential conflicts and trade-offs that may arise in the pursuit of both social sustainability and resilience, providing insights for navigating these complexities (Abbasi, 2017). By considering the perspectives of all stakeholders and leveraging social exchange mechanisms, organizations can create a more collaborative and

mutually beneficial approach to OSH integration, enhancing both social sustainability and supply chain resilience (Thong & Wong, 2018; Amirrudin et al., 2024). This approach is particularly relevant in the Malaysian context, where the diverse stakeholder landscape and the growing emphasis on sustainability require a comprehensive and inclusive approach to OSH management (Sobry et al., 2022; Amirrudin et al., 2024).

4. Conceptual Framework: OSH Integration Through Stakeholder-Social Exchange Mechanisms

Based on the synthesis of stakeholder theory and social exchange theory, this paper proposes a conceptual framework for integrating Occupational Safety and Health (OSH) into social sustainability strategies to build supply chain resilience. The framework (Figure 1) visualizes the key actors, relational mechanisms, and expected outcomes across the supply chain. It emphasizes stakeholder salience, trust, reciprocity, and incentive mechanisms as central variables that shape OSH adoption. Tables 1 and 2 provide detailed descriptions of the independent and mediating variables derived from both theories, while key outcomes reflect improvements in OSH performance, social sustainability, and organizational resilience.

Figure 1: OSH Integration Through Stakeholder – Social Exchange Mechanisms



Table 1: Stakeholder Theory Variables

Variable	Description
Stakeholder Salience	The degree to which a stakeholder's claims are prioritized (based on power, legitimacy, urgency).
Stakeholder Engagement	The depth and frequency of communication and collaboration with stakeholders (e.g., workers, suppliers, government).
Stakeholder Pressure	The extent to which stakeholders demand improved OSH and social sustainability practices.
Stakeholder Alignment	The level of agreement and shared values among stakeholders regarding OSH priorities.
Institutional Support	Government policies and industry standards support stakeholder OSH efforts.

Table 2: Social Exchange Theory (SET) Variables

Variable	Description
Perceived Reciprocity	The extent to which parties feel their contributions (e.g., investing in OSH) are fairly rewarded.
Trust	The confidence among supply chain actors that others will uphold OSH and ethical standards.
Relational Capital	The strength of social ties and mutual respect among partners can moderate OSH adoption.
Incentive Mechanisms	Financial or reputational rewards for suppliers or partners who comply with OSH standards.
Power Imbalance	The degree of asymmetry between lead firms and suppliers may influence OSH investment decisions.
Information Sharing	The frequency and quality of communication on OSH practices and expectations.

Occupational Safety and Health and Social Sustainability Integration: A Malaysian Supply Chain Perspective

The integration of occupational safety and health into social sustainability frameworks is an emerging area of interest, with significant implications for supply chain resilience. In the Malaysian context, the growing emphasis on sustainability and corporate social responsibility has brought increased attention to the importance of worker well-being and ethical practices throughout the supply chain. Effectively integrating Occupational Safety and Health into social sustainability frameworks within Malaysian supply chains requires a multifaceted approach. It must consider the diverse stakeholder landscape, existing regulatory frameworks, and the unique socio-cultural context of Malaysia. Stakeholder engagement and collaborative efforts are crucial for driving meaningful change in this domain.

Some key considerations for enhancing social sustainability and supply chain resilience through OSH integration in Malaysia include:

a. Strengthening Regulatory Frameworks and Enforcement: Malaysia has existing OSH regulations, but enforcement and consistent application across all tiers of the supply chain, especially within smaller suppliers and remote areas, remain a challenge (Amirrudin et al., 2024). Strengthening regulatory oversight, increasing penalties for non-compliance, and promoting transparency through mandatory OSH reporting are crucial. These actions can incentivize companies to prioritize worker safety, fostering a level playing field where responsible OSH practices are not a competitive disadvantage but a shared responsibility. Amirrudin et al. (2024) both emphasize the need for stronger regulatory frameworks and enforcement. Further research could investigate the effectiveness of different enforcement mechanisms and the impact of increased penalties on OSH compliance rates.

b. Fostering Stakeholder Collaboration: A stakeholder-centric approach is essential (Amirrudin et al., 2024). Engaging employees, suppliers, customers, local communities, and government agencies in dialogue and collaborative initiatives can ensure that OSH considerations are integrated into all aspects of supply chain operations. Thong & Wong (2018) highlight the importance of considering stakeholder perspectives in achieving sustainable supply chain performance in Malaysia. This collaborative approach not only fosters a more comprehensive understanding of OSH challenges and opportunities but also facilitates the development of context-specific solutions, leveraging diverse perspectives and expertise. Future research could explore effective stakeholder engagement strategies and assess their impact on OSH outcomes.

c. Leveraging Social Exchange Mechanisms: Social exchange theory suggests that reciprocal exchanges of resources, both tangible and intangible, can motivate stakeholders to adopt robust OSH practices (Amirrudin et al., 2024). Companies can offer incentives to suppliers who demonstrate strong OSH performance, creating a positive feedback loop that encourages continuous improvement. Collaborative partnerships between companies and local communities can further facilitate the sharing of information and resources, amplifying positive OSH outcomes. Research could investigate the effectiveness of different incentive mechanisms and explore how social exchange principles can be applied to different stakeholder relationships.

d. Integrating OSH into Broader Sustainability Strategies: OSH should not be treated as a standalone issue, but rather integrated into broader social sustainability frameworks and corporate social responsibility initiatives (Amirrudin et al., 2024). This holistic approach can ensure that OSH considerations are aligned with overall business goals and values, creating a more sustainable and resilient supply chain ecosystem. Amirrudin et al. (2024) discuss the integration of OSH into the UN's Sustainable Development Goals, further highlighting the importance of this integrated approach. This integration reinforces the message that worker well-being is not merely a compliance issue but a core value that contributes to long-term business success. Further research could investigate how OSH integration impacts overall sustainability performance and explore best practices for aligning OSH with broader CSR goals. Foo et al. (2018) present a study on Green Supply Chain Management practices and their impact on sustainability performance, suggesting that similar frameworks could be adapted for OSH integration.

e. Addressing the Specific Challenges of the Malaysian Context: Malaysia's unique context presents specific hurdles to OSH integration. One prominent challenge is the prevalence of informal labor, particularly in sectors like construction and agriculture. These workers often lack legal protections and access to OSH training, making them vulnerable to exploitation and unsafe working conditions. Amirrudin et al. (2024) discuss the difficulty of ensuring consistent regulatory compliance across all tiers of the supply chain, especially among smaller suppliers and in remote areas. Furthermore, complex supply chain structures, with multiple tiers of suppliers and subcontractors, can obscure accountability and make it difficult to track OSH performance throughout the entire chain. Mohammad et al. (2014) highlight the challenges posed by fragmented and adversarial relationships within the IBS construction supply chain. Varied levels of OSH awareness among businesses, particularly small and medium-sized enterprises, pose another challenge. Resource constraints and a lack of understanding regarding the importance of OSH can hinder the implementation of effective safety programs. Mohd et al. (2020) indicate varying procedures and approaches to OSH among construction stakeholders, suggesting a need for greater standardization and coordination. Tailored solutions are needed to address these challenges effectively. Thong & Wong (2018) discuss the use of structural equation modelling to analyze the relationship between sustainable practices and performance in Malaysian supply chains, suggesting a data-driven approach to understanding these complexities. Mani et al. (2017) emphasize the importance of considering the specific societal evolution and context of emerging economies like Malaysia when addressing social issues in supply chains.

f. Promoting Continuous Improvement: OSH integration is not a one-time fix but an ongoing process that requires continuous improvement. Regularly monitoring OSH performance through data collection and analysis is essential. Amirrudin et al. (2024) underscore the importance of continuous improvement and suggest mechanisms such as frequent monitoring, independent audits, and transparent reporting. Independent audits provide an objective assessment of OSH practices and identify areas where improvements are needed. Implementing feedback mechanisms, such as worker surveys and safety committees, allows for continuous learning and adaptation based on real-world experiences and emerging challenges. Amirrudin et al. (2024) emphasize the need for flexibility to adapt strategies based on new challenges and opportunities. Sivan et al. (2024) recommend fostering a safety-conscious culture and continuous improvement through enhanced supply chain integration and education. By embracing a data-driven approach to continuous improvement, businesses can ensure that their OSH programs remain effective and relevant in the long term. Rasit et al. (2019) discuss the importance of continuous improvement in environmental practices within Malaysian SMEs, suggesting a similar approach could be adopted for OSH. Amirrudin et al. (2024) provide examples of tools and methods for monitoring and enhancing OSH in supply chains. Alwaysheh & Klassen (2010) explore the integration of social issues in supply chain management and provide a framework for measuring suppliers' socially responsible practices.

By adopting these strategies, Malaysian businesses can effectively integrate OSH into their social sustainability frameworks, creating a safer, more equitable, and resilient supply chain ecosystem. Further research, particularly empirical studies within the Malaysian context, is needed to refine these approaches and address the specific challenges and opportunities presented by this dynamic environment.

5. Conclusion

In conclusion, integrating Occupational Safety and Health into social sustainability frameworks within Malaysian supply chains is not merely a matter of compliance but a strategic imperative for building resilient and ethical business practices. By adopting a stakeholder-social exchange perspective, businesses can foster collaborative relationships and create a positive feedback loop that promotes continuous improvement in OSH outcomes. The unique challenges presented by the Malaysian context, such as the prevalence of informal labor and complex supply chain structures, necessitate tailored solutions and a commitment to addressing the specific needs of workers and communities (Amirrudin et al., 2024). Furthermore, by aligning OSH initiatives with broader sustainability goals and corporate social responsibility efforts, companies can ensure that worker well-being is recognized as a core value that contributes to long-term business success. Ultimately, creating a safer, more equitable, and resilient supply chain ecosystem requires a multi-faceted approach that includes robust regulatory frameworks, consistent enforcement, and a culture of safety and well-being that benefits all stakeholders (Sivan et al., 2024). Further research, particularly empirical studies within the Malaysian context, is needed to refine these approaches and address the specific challenges and opportunities presented by this dynamic environment (Amirrudin et al., 2024).

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