Enhancing Social Sustainability in Malaysian Supply Chains: Integrating Occupational Safety and Health for Resilient and Ethical Business Practices

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Abstract: This conceptual paper examines the insufficient integration of Occupational Safety and Health into Malaysian supply chains' social sustainability frameworks, despite its recognized impact on worker well-being and economic performance. While Malaysia has advanced in sustainability overall, incorporating OSH into broader social responsibility strategies remains underdeveloped. This paper argues that protecting worker well-being is essential for sustainable supply chains, directly contributing to social sustainability and economic performance. The study examines the ethical, legal, and business justifications for prioritizing OSH in supply chain management. It draws upon international human rights declarations, treaties, and conventions, including the Universal Declaration of Human Rights, the International Covenant on Economic, Social and Cultural Rights, and the ILO's Occupational Safety and Health Convention, to underscore the fundamental right to a safe and healthy work environment. This model developed through analysis of existing literature and policy frameworks, aims to guide a more comprehensive approach to OSH management within Malaysian supply chains. By analyzing these frameworks, the paper highlights the need for a comprehensive approach that aligns OSH with international standards and sustainable development goals. Ultimately, it advocates for a more resilient and equitable supply chain framework in Malaysia, where worker well-being is central to sustainable business practices.

Keywords: *Occupational safety, health, OSH, social sustainability, supply chain management, worker well-being*

1. Introduction

The concept of sustainability has transcended its initial environmental focus to encompass a broader spectrum of social, economic, and ethical considerations, as highlighted by the United Nations' Sustainable Development Goals (SDGs) (United Nations, 2015). Within this evolving landscape, supply chain management has emerged as a critical area for integrating sustainability principles and recognizing the interconnectedness of business operations and their impact on stakeholders (Carter & Rogers, 2008).

According to Figure 1, "in the contemporary world of business environment, the idea of sustainable enterprise is well embraced with more companies seeking to integrate the triple bottom line; the economic, social and environmental" (Lai et al., 2021). Of the three pillars of sustainability - environmental, economic, and social - the latter has received growing attention in recent literature (Chen et al., 2017; Mani et al., 2016; Mohd Faiz et al., 2016). Social sustainability has become one of the most significant factors in supply chain management as organizations seek to reduce their environmental impact and establish the well-being of employees and residents in the surrounding communities (Thong & Wong, 2018).

**Figure 1: Triple Bottom Line Concept**

In the context of Malaysia, research suggests that while sustainability initiatives are gaining traction, there remains a need to further incorporate occupational safety and health (OSH) considerations into the broader social sustainability strategy, as per in Figure 2 (Suhaiza et al., 2012; Mohammad et al., 2020). Indeed, ensuring the health and safety of workers across the supply chain is a fundamental aspect of social sustainability, as it directly contributes to the well-being and protection of those who facilitate the flow of goods and services (Schulte et al., 2013).

Protection of workers within the supply chain is not only an ethical problem but also becomes of vital importance to the long-term prosperity of the organization itself and that of society in general. That is to say, lack of safe working conditions, direct exposure to hazardous elements, and poor and insufficient measures for protection result in workplace illnesses, injuries, and deaths, which yield far-reaching effects on the worker, their families, and the community at large (Weisbrod & Loftus, 2012). Within this context, the topic of including OSH in the concept of social sustainability within the supply chains can be viewed as an important direction of development in developing economies, such as Malaysia.

The Malaysian manufacturing industry which has made tremendous input in the economic growth of the country has recently attracted attention with regards to its sustainability (Suhaiza et al., 2012). Previous studies also emphasize that social issues are critical to the manufacturing supply chain and social requirements including labor rights, diversity, and product safety (Mani et al., 2016).

Hence, this paper provides a conceptual framework that recommends the inclusion of OSH into the social sustainability dimension of supply chain management in Malaysia while also supporting the integration due to ethical and economic benefits. If more focus is paid to the protection of the workers from the negative impacts of their jobs, Malaysian companies could improve supply chain robustness, increase the international comparability of Malaysia's economy, and promote fairness and sustainability in the nation.

Figure 2: Supply Chain Social Sustainable Framework
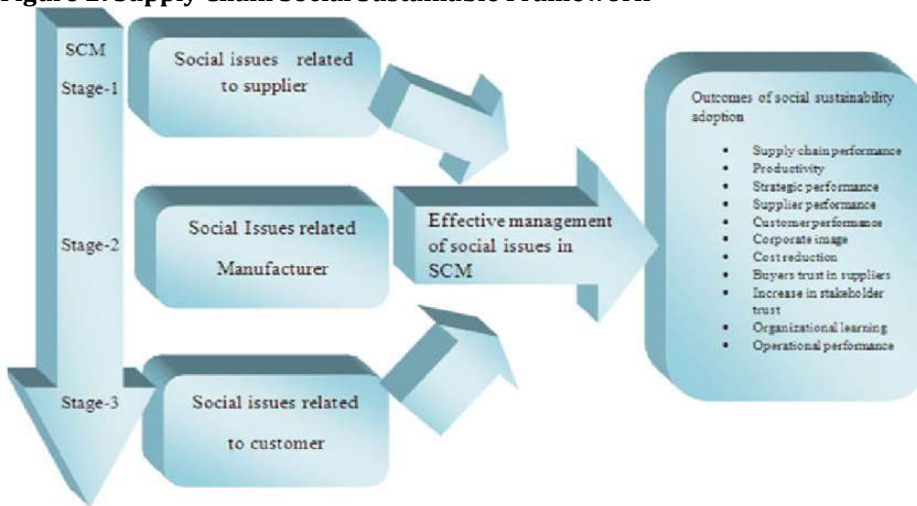
Social Sustainability in Supply Chain Management: An Examination in the Malaysian Context
In supply chain studies, social sustainability has become a key issue. It involves the full use of responsible and ethical practices throughout all parts of the supply chain ecosystems. This broad idea includes fair treatment of employees, respect for basic human rights, active participation in communities, and holistic enhancement of stakeholder well-being (Mani et al., 2016; Sivan et al., 2024a; Suhaiza et al., 2012; Narayanan et al 2024a).

Focusing on the context of Malaysia, a country heavily reliant on the manufacturing sectors, the significance of social sustainability within supply chains is underscored by historical challenges that have surfaced concerning labor rights, workplace safety, and the equitable treatment of workforce participants (Mani et al., 2016). These industries have always been affected by issues that concern the community, and therefore there

should be a collaboration in ensuring supply chains are not only beneficial to the workers but also to society as a whole.

Recent studies have highlighted the imperative of integrating social sustainability into the strategic framework of supply chain management to effectively tackle the aforementioned challenges and contribute to the enhancement of social conditions within these sectors (Lai et al., 2021; Fathullah et al., 2021). This integration ensures that supply chains support fair labor practices, maintain human rights, and have good community relations so that they contribute to long-term economic growth and social progress.

In earlier studies about sustainable supply chain practices, it was seen that they had a positive effect on most performance outcomes, either environmental, economic, or social. For example, research on 400 manufacturing firms in a Malaysian context proved that environmental purchasing and sustainable packaging have a positive effect on these three categories of outcomes (Suhaiza et al., 2012). Practices in sustainable supply chains have constantly been shown in the literature to positively influence several performance outcomes that are grouped as being environmental, economic, or social. As reported by Thong and Wong (2018), "although institutional pressures do mount exogenous forces on firms, the latter still engage unequivocally in environmental and responsible social practices in the pursuit of the superordinate goal of sustainable supply chain management for desirable organizational identity".

The role of social capital in sustainable supply chain management has also been explored in the Malaysian context. From a survey of 106 manufacturing firms, Suheil et al. (2022) demonstrated that there is a relationship between social capital and sustainable performance. According to Suheil et al. (2022), social capital describes the networks, trust, and collaboration among partners in a supply chain; hence, it should be considered an antecedent to the effective implementation of sustainable supply chain practices.

Increasingly, global attention to corporate social responsibility and ethical sourcing has heightened awareness of the issues surrounding social sustainability within Malaysia's supply chain (Sivan et al., 2024b; Narayanan et al., 2024b). This paradigm allows organizations to reduce risks arising from social non-compliance and increase brand reputation and market competitiveness (Fathullah et al., 2021). This can further have a ripple effect on other companies also dealing with the supply chain and result in social sustainability. As a result, although Malaysian firms are increasingly practicing sustainable supply chain management, much of the available literature has focused on environmental and economic as well as social sustainability.

According to the literature, integrating environmental and social issues into supply chain management is observed to have a positive impact on firm performance, as Suhaiza et al. demonstrated in 2012. Social capital can be important in facilitating this process, as Suheil et al. discussed in 2022. While these studies are very informative, much more research is needed to grasp the intricacies of social sustainability in the context of Malaysian supply chain management (Muhammad, Naidu, Sundram, Hussain, Chew, Pillai, & Ibrahim, 2023)

Despite growing interest in both OSH and social sustainability within supply chains, there's a noticeable lack of research examining their integration specifically within the Malaysian context. This research gap makes it difficult to fully understand the specific challenges and opportunities faced by Malaysian businesses in promoting safe and ethical working conditions throughout their supply chains. Further investigation is needed to guide effective policy-making and responsible business practices in Malaysia, ensuring both worker well-being and sustainable supply chain performance.

2. Integrating Occupational Safety and Health to Social Sustainability

OSH has been properly associated as an inseparable part of social sustainability in supply chains. In addition to the ethical imperatives to secure the well-being of workers, OSH acts as the bedrock that underpins the broader social performance and resilience of these complex networks. In that direction, OSH could be named among the most prominent factors of sustainability reflecting its social dimension. Protection of workers within the supply chain is not only an ethical problem but also becomes of vital importance to the long-term prosperity of the organization itself and that of society in general.

As it has been stated in the literature, there is evidence that more and more Malaysian firms adopt Socially sustainable supply chain management, pointing to environmental, economic, and social aspects of sustainability but the integration of OSH about this concept is still an unexplored area. Different authors discuss several aspects connecting OSH and social sustainability in supply chain environments. International Labor Organization, (2022) extends this call by suggesting that the OSH plans should fit within wider CSR policies, especially in global supply chains where labor abuse and hazardous working conditions remain endemic. This is supported by (the International Social Security Association et al., 2023) where the authors have provided a systematic literature review on best practices to enhance safety, health, and well-being at work for global supply chain employees while also recommending using a risk management approach to workplace OSH.

Drawing on the work of Kavouras et al. (2022), the research also exactly highlights that social sustainability is inadvisable without a healthy and safe working environment since these aspects are promising to enhance the health safety and productivity of the working population. In the same vein, Johanson et al (Johanson et al., 2022) have encouraged the integration of social sustainability principles such as OSH into organizational management to elaborate on the ethical and economic value. This is backed by Tan et al. (2023) asserting that improving sustainability performance is prompted by a commitment to OSH, which strengthens employee's affective commitment. These results reinforce the notion of the relationship between OSH, employees' health, and overall organizational resilience.

Good OSH practices promote social sustainability in supply chains in several ways. Jain et al. (2024) describe the evolving nature of work and emphasize the crucial role of OSH in ensuring decent work conditions and protecting worker health in the future (p. 106463). Similarly, Koskela (2014) analyzes the impact of corporate social responsibility reporting on transparency and accountability related to OSH practices, highlighting the strong link between OSH and social responsibility.

Many factors affect the management of a sustainable supply chain, especially the aspects of OSH, for instance, the stakeholder's power and organizational culture. Incorporating stakeholders into the supply chain is a major concern highlighted in Song (2023) when detailing the conduct of OSH in industries where power relations are more sophisticated as in the case of the electric power industry. This study posits that organizations with higher levels of corporate integrity and social consciousness are more likely to develop and apply effective OSH programs in their supply chain for the mutual advantage of employees and society.

Malaysian small and medium-sized enterprises have been identified as one of the areas where enhanced OSH practices' standards will yield the greatest value (Nor Azma et al., 2016). Thus, the embedding of OSH into the conceptual model of social sustainability in the Malaysian supply chain can open up revolutionary changes. By prioritizing worker well-being, organizations can not only enhance their social and environmental performance but also potentially reap economic rewards through reduced operational costs and improved productivity (Nor Azma et al., 2016).

To effectively integrate OSH into the social sustainability agenda within the Malaysian supply chain, a multifaceted approach is required. This may involve strengthening regulatory frameworks, implementing robust OSH management systems, and fostering a culture of safety and health awareness among supply chain actors (Suhaiza et al., 2012, Thong & Wong, 2018). Additionally, collaborative efforts between businesses, industry associations, and government agencies can help drive progress and ensure that sustainability initiatives are consistently applied across the supply chain (Mohammad et al., 2020).

Therefore, OSH has to be integrated into the sustainable supply chain management of organizations hence the importance of involving all the stakeholders and creating an organizational culture that supports OSH. Furthermore, Song (2023) stresses the need for the cooperation of stakeholders, especially within high-risk industries regarding power relations, to address OSH issues and enhance workers' welfare. Thus, it has been noted that the practice of how EHS performance is integrated into corporate social responsibility reports has been increasing over the years: therefore, there is an inclination toward the disclosure of OSH issues in this regard (Dotson & Henshaw, 2009).

In a bibliometric analysis of the existing literature, it is found that the combination of occupational health and social responsibility is the focus of a large number of circulated articles, as reviewed in (Bautista-Bernal et al., 2021). Therefore, further research should explore ways in which theoretical knowledge of OSH can be translated into efficient frameworks that organizations can apply to their social sustainability models. The article by Lannetta (2022) is an excellent way to disclose major difficulties and useful strategies regarding the promotion of OSH and social sustainability in global supply chains. It is noted that the responsibility for the improvement of OSH conditions and associated hazards belongs to multiple actors, including suppliers, buyers, governments, and NGOs. It also stresses the imperativeness of fostering ongoing change and the implementation of the most effective practices in the supply chain to develop and maintain an environment free from work-related diseases, discomforts and injuries to all workers.

Mapping OSH into Social Sustainability Through SDG17: Partnerships for the Goals
OSH can be expanded to the concept of social sustainability with the help of collaboration with SDG 17 – Partnerships for the Goals that promote the attainment of the targets set by the 2030 Sustainable Development Agenda. SDG 17 deals with international cooperation, and partnerships and teaches and reminds governments, the business sector and non-governmental organizations that every global challenge can be resolved through collective and effective cooperation. Through these partnerships, the corporates will be able to have a better approach to integrating OSH into their value chain hence improving the working conditions.

While the connection between OSH and good health outcomes is evident in SDG 3 (directly addresses the health outcomes related to work, aiming to reduce work-related injuries, illnesses, and deaths), a deeper exploration reveals its far-reaching impact across the Sustainable Development Goals, as outlined in the 2030 Agenda (United Nations, 2015).

OSH is not only relevant to the tenth SDG - the prevention of work injuries and illnesses (SDG 3.9) but is also tied to the eighth SDG concerning decent work with better and safer working conditions, (SDG 8). Basic decent working conditions which include safety and health are not only benefits from the physical aspect but are important to the welfare, productivity and satisfaction of the workers. This in effect has further a vast flow chain that affects poverty eradication – SDG 1 and promoting economic growth –SDG 8 (safeguarding labor rights and ensuring safe working conditions). A healthy and secure worker would be economically productive than a sick and insecure worker making the society more resilient.

Moreover, a comprehensive OSH should address the following: susceptibility differences of different demographic segments—women (SDG 5: Achieve gender equality and empower all women and girls); and marginalized communities (SDG 10: Reduce inequalities within and among countries). Addressing inequalities, therefore, ensures that all people have equal access to safe and healthy working conditions, hence leading to a fairer and more just world. Ultimately, the integration of OSH into social sustainability pertains not only to compliance but also to creating a future wherein workers are valued, protected, and empowered to thrive.

In other words, the integration of OSH into social sustainability provides the key pathway toward the realization of the interrelated goals enshrined in the 2030 Agenda for Sustainable Development as outlined in Transforming Our World: The 2030 Agenda for Sustainable Development, 2018. In ensuring the safety and health of employees, SDG 3 and SDG 8 and provide an appreciable ripple effect that pushes social justice, reduces poverty and ensures sustainable economic development. OSH is not a compliance issue but forms one of the main building blocks for a future where businesses have put people on an equal footing with profit, realizing that a healthy and empowered workforce is the bedrock on which to construct a truly sustainable society.

3. Conceptual Framework: Integrating Occupational Safety and Health into Socially Sustainable Supply Chains

When discussing OSH, as well as socially sustainable OSH of supply chains, it is crucial to introduce OSH as a multifaceted endeavor based on ethical, legal, and business principles. The principles of protection for the

safety and health of the worker lie in fundamental human rights declarations and treaties. The Universal Declaration of Human Rights, for example, emphasizes the inherent right to life, liberty, and security of person, which inherently necessitates a safe and healthy work environment (United Nations, 1948, art. 3). Similarly, the International Covenant on Economic, Social and Cultural Rights reinforces this by stating everyone's right to just and favorable working conditions, including a safe and healthy workplace (United Nations, 1966, art. 7).

Beyond ethical considerations, legal frameworks play a critical role in shaping OSH practices. National and international labor laws, alongside specific OSH regulations, establish clear requirements for businesses to uphold. For instance, the International Labour Organization's Convention No. 155 - Occupational Safety and Health Convention, 1981, provides comprehensive guidelines for establishing and maintaining a safe and healthy working environment (International Labour Organization [ILO], 1981). Additionally, diligence standards, such as the UN Guiding Principles for Business and Human Rights (2011), offer a framework for companies to identify, prevent, mitigate, and account for how they address their human rights impacts, including those related to OSH, within their operations and supply chains.

Furthermore, integrating OSH into supply chains is not just an ethical or legal imperative but also a sound business strategy. As Dotson and Henshaw (2009) argue, mainstreaming OSH within supply systems often leads to tangible economic benefits. Companies with robust OSH practices tend to experience higher productivity due to reduced absenteeism and improved worker morale. Simultaneously, they benefit from lower costs associated with workplace accidents, injuries, and legal liabilities. Moreover, a strong commitment to OSH enhances a company's brand image and reputation, attracting customers and investors who value ethical and sustainable practices. Ultimately, prioritizing OSH contributes to a more resilient and sustainable supply chain, benefiting all stakeholders involved.

This integration is composed of the factors that according to Marshall et al., (2014) are referred to as environmental, social and governance (ESG) factors. As for the environment, it entails the reduction of consequences arising from the business undertakings and supply chains and the management of risks associated with the environment. On the ethical side, it embraces the interest of its workers, aims at paying well, and equally, supporting local communities, and the fight for justice for ethical suppliers in the chain. They also seek to find other ways of having proper management of corporations and their operations, policies working regulations and business relations while respecting being audible, accountable, and participative all in an effort towards promoting good practices towards business management.

This integrated framework for OSH in supply chains comprises several key components. First and foremost is leadership and commitment (Song, 2023; Johanson et al., 2022). This necessitates top-down engagement from both buyers and suppliers, ensuring that OSH is integrated into core business models and sustainability strategies. This includes incorporating OSH into environmental management systems, prioritizing OSH funding as a chief business imperative, and effectively communicating OSH expectations and procedures throughout the supply network (Johanson et al., 2022).

The second crucial component is robust risk assessment and management (Sivan et al., 2024). This involves a shared responsibility between buyers and suppliers to collaboratively assess and monitor the nature and extent of OSH risks. These risks should be evaluated based on specific industries or sectors, geographical locations, and the workers involved. Furthermore, this collaborative approach should extend to the joint development and implementation of feasible and effective risk mitigation strategies, with clearly defined roles and responsibilities for all parties.

Third, capacity building and empowerment are essential for fostering a culture of continuous improvement in the supply chain OSH. This involves providing suppliers with the necessary training, resources, and technical assistance to enhance their OSH management systems. Equally important is empowering workers through information dissemination, skills development programs, and accessible grievance mechanisms.

Fourth, transparency and traceability are crucial for achieving supply chain sustainability goals, including those related to OSH. Enhanced visibility into supply chain operations allows for better identification and

mitigation of OSH risks. Furthermore, it promotes accountability and responsibility among all supply chain parties by openly communicating OSH performance and fostering a culture of data sharing through dedicated platforms.

Finally, stakeholder engagement (International Social Security Association et al., 2023) is concerned with the intended communication with the workers, unions, NGOs, and local communities throughout the process. This means that – as was said – their differences must be accepted, and one must strive to appreciate them; their inputs have to be included in the decision-making regarding continuous improvement efforts.

Figure 3: Conceptual framework for integrating OSH into social sustainability.
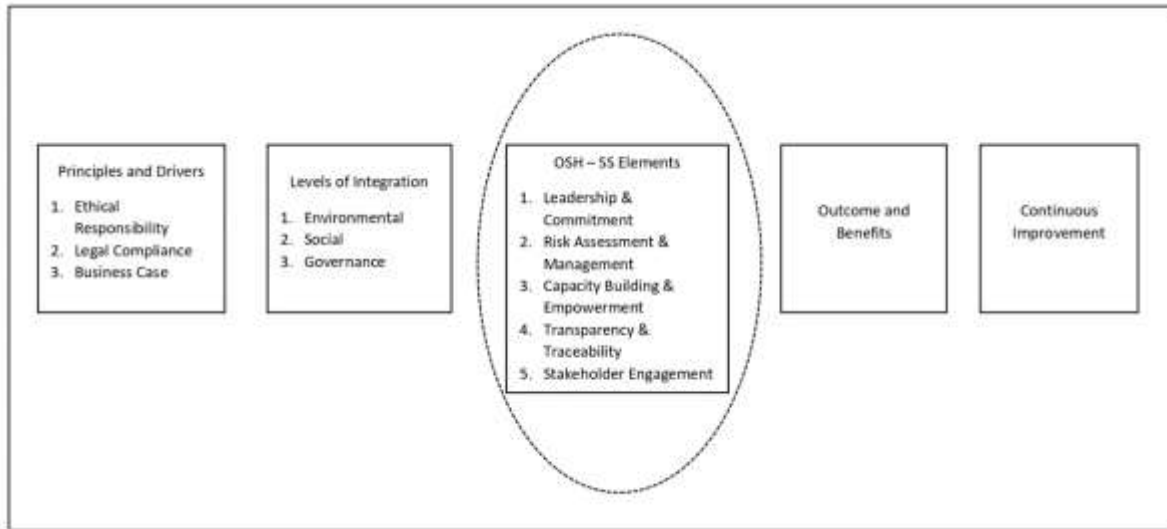
OSH integration in socially sustainable supply chains has manifold positive outcomes, among them improvement of the OSH performance and workers' well-being, enhancing social sustainability performance, business resilience, and brand reputation, and promoting a more equitable, just, and sustainable global economy. Continuous improvement assures long-term relevance and impact. This implies frequent monitoring, independent auditing, transparent reporting about OSH and social sustainability performance, and related feedback mechanisms for learning and flexibility to adapt the strategies according to emerging challenges and opportunities.

4. Challenges and Opportunities

Malaysia's development of its economy has revealed a growing need to incorporate OSH within the broader aspirations of social sustainability in supply chains. This comprises adequate work practices and community involvement but also involves the vital issue of OSH itself. Integrating OSH into social sustainability in Malaysian supply chains presents both challenges and opportunities, reflecting a broader trend that aligns with Sustainable Development Goal (SDG) 17: Partnerships for the Goals.

While Malaysia has demonstrated progress in embracing sustainable business practices to benefit companies, the environment, and stakeholders, the country still faces significant challenges in ensuring the well-being of workers throughout its supply chains (Danish et al., 2017; Thong & Wong, 2018). Variation in regulatory compliance is among the main hurdles faced when merging Malaysian supply chains with OSH care. Enforcement can be inconsistent across remote or rural parts although Malaysia boasts strong regulations for occupational safety as well as health (International Labour Organization, 2022). The lack of resources and knowledge among small suppliers can result in their partial adherence to occupational health and safety standards, thus creating a gap in safety practices (International Labour Organization, 2022). Large multinationals face significant obstacles when it comes to ensuring that occupational health and safety standards are adhered to throughout their supply chains (Danish et al., 2017).

A major impediment to the integration of OSH into Malaysian supply chains is the absence of awareness as well as education at various levels. There is a lack of knowledge on basic workers' rights, especially for those who are low-skilled or unorganized that touch on workplace environment as far as safety is concerned or even any specific measures that should be put in place for their protection (Eyiah et al., 2019). Workers' ignorance can lead them to unknowingly cause dangers. At the same time, employers may not fully appreciate the significance of OSH, regarding it as an added expense instead of investing in the welfare and long-term productivity of their employees (Allen & Dibie, 2019).

Addressing this knowledge gap within the supply chain is crucial. Efforts to promote OSH awareness and provide accessible education to both workers and employers, particularly within the supply chain context, are essential to fostering a culture of safety and ensuring that OSH is seen as a shared responsibility (European Agency for Safety and Health at Work, 2012).

Malaysian supply chains can be highly complex, involving multiple tiers of suppliers, subcontractors, and informal labor, making it challenging to monitor and enforce consistent OSH standards (Alsamawi et al., 2017). This intricate web of interconnected businesses requires significant coordination and oversight to ensure that each link, from primary suppliers to smaller subcontractors, adheres to the same high standards of OSH (Cunha et al., 2019). The presence of informal labor within these chains further complicates matters, as these workers may fall outside the scope of traditional monitoring and enforcement mechanisms.

Another opportunity lies in the growing awareness and demand from consumers and stakeholders for socially responsible and sustainable supply chain practices (Muhammad, Naidu, Sundram, Hussain, Chew, Amirrudin, 2023). As Malaysian consumers become more conscious of the ethical and environmental implications of their purchasing decisions, companies may find themselves under increased pressure to demonstrate their commitment to worker well-being, including through robust OSH policies and practices. This consumer-driven shift can serve as a powerful catalyst for change, motivating companies to prioritize OSH integration as a key component of their social sustainability efforts.

However, there are also significant opportunities to integrate OSH into social sustainability within Malaysian supply chains. For example, recent studies have shown that companies with robust OSH management systems tend to have better safety records and overall performance compared to those without such systems (Ayob et al., 2021). By investing in OSH measures, companies can not only protect their workers but also enhance their overall productivity and competitiveness. This can further contribute to the broader goals of social sustainability, as healthy and safe workers are more likely to be engaged, productive, and contribute positively to their communities.

Another opportunity lies in the growing emphasis on corporate social responsibility and stakeholder engagement within the Malaysian business landscape. By integrating OSH into their sustainability initiatives, companies can demonstrate their commitment to worker well-being, build trust with local communities, and enhance their reputation as socially responsible corporate citizens (Nor Azma et al., 2016). This can lead to improved relationships with suppliers, customers, and other stakeholders, ultimately strengthening the resilience and competitiveness of the supply chain as a whole.

One promising opportunity in integrating OSH into social sustainability in Malaysian supply chains is the potential for collaboration and collective action. By fostering partnerships between larger corporations, small and medium-sized enterprises, government agencies, and worker representatives, a more comprehensive and effective approach to OSH can be developed. Establishing industry-wide initiatives, such as joint training programs, shared monitoring and auditing systems, and knowledge-sharing platforms, can help to disseminate best practices and ensure that OSH is integrated throughout the entire supply chain (Napsiah & Faridah, 2012; Nor Azma et al., 2016; Ayob et al., 2021).

Another opportunity lies in the growing awareness and demand from consumers and stakeholders for socially responsible and sustainable supply chain practices. As Malaysian consumers become more conscious of the ethical and environmental implications of their purchasing decisions (Norazah, 2023), companies may find themselves under increased pressure to demonstrate their commitment to worker well-being, including

through robust OSH policies and practices (Suhaiza et al., 2012). This consumer-driven shift can serve as a powerful catalyst for change, motivating companies to prioritize OSH integration as a key component of their social sustainability efforts (Ima et al., 2021). For example, the increasing consumer preference for eco-friendly products and ethical sourcing practices in Malaysia (Tengku et al., 2016) demonstrates this shift towards holding companies accountable for their entire supply chain.

5. Implications of Study

This study underscores the critical importance of integrating OSH into the broader framework of social sustainability within Malaysian supply chains. It highlights the need for strengthened regulatory frameworks and more consistent enforcement to ensure that OSH practices are aligned with the goals of social sustainability. For businesses, the study reveals that prioritizing OSH can lead to improved productivity, enhanced brand reputation, and greater resilience against operational disruptions. Additionally, it points to the potential for increased international competitiveness for Malaysian firms that adopt global best practices in OSH and sustainability.

The study also has significant implications for academia and stakeholder engagement. It contributes to the literature by providing a conceptual framework for integrating OSH into social sustainability, opening new avenues for research on the impact of such integration on supply chain resilience and organizational performance. Moreover, the study emphasizes the importance of collaboration among businesses, government agencies, and NGOs to ensure the consistent application of OSH practices across all tiers of the supply chain, fostering a culture of safety and well-being that benefits both workers and society at large.

Conclusion

Although interest in both OSH and social sustainability within supply chains is growing, little research has been conducted on their integration, particularly within the Malaysian context. This creates a knowledge gap, which constrains the full appreciation of specific challenges and opportunities to the creation of safe and ethical working conditions throughout the supply chains that Malaysian businesses are presented with. Further research in Malaysia is called for to effectively guide policy-making and responsible business practices that assure workers' well-being and sustainable performance of supply chains. With rigorous implementation and continuous improvement, it is foreseen that these efforts will eventually engender a fair and just supply chain setting that benefits workers, local communities, and society at large.

The embedding of these elements of social sustainability into supply chain management frameworks has real benefits. Improvements in brand reputation are associated with increased customer loyalty and higher sales. Moreover, the refining of relations with stakeholders could also further strong collaboration and strengthen supply chain resilience. Second, compliance with international labor standards is a sure pathway to averting legal implications and associated monetary fines. An active social sustainability strategy will also ensure a more committed workforce, hence lower staff turnover, and higher workforce productivity.

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