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IMPLEMENTATION OF OCCUPATIONAL HEALTH AND SAFETY STANDARDS IN INTERNATIONAL TRADE SUPPLY CHAIN MANAGEMENT: A CASE STUDY OF THE MANUFACTURING INDUSTRY

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Abstract

The globalisation of trade has necessitated the integration of Occupational Health and Safety (OHS) standards into supply chain management, particularly within the manufacturing sector. This study aims to explore the implementation of OHS standards in the context of international trade, focusing on the manufacturing industry as a case study. Employing a qualitative research methodology, the research involved interviews with key stakeholders, including supply chain managers and health and safety officers, alongside a review of relevant literature and case studies. The findings reveal that while many manufacturing firms have made strides in integrating OHS standards, significant challenges remain, particularly in ensuring compliance across international borders. The study concludes with recommendations for enhancing OHS practices within the supply chain framework.

Keywords: Occupational Health and Safety, Supply Chain Management, International Trade, Manufacturing Industry, Compliance

INTRODUCTION

The importance of Occupational Health and Safety (OHS) standards in the manufacturing industry cannot be overstated, especially in the context of international trade. As businesses expand their operations globally, the complexity of supply chains increases, necessitating a robust framework for managing health and safety risks. According to the International Labour

Organization (ILO), over 2.78 million workers die from work-related accidents or diseases each year, underscoring the critical need for effective OHS implementation (ILO, 2021). This alarming statistic highlights the urgency for manufacturers to adopt comprehensive OHS standards that not only comply with local regulations but also align with international best practices.

In the manufacturing sector, the integration of OHS standards into supply chain management is essential for safeguarding employee well-being and enhancing operational efficiency. A study by the World Economic Forum (2020) indicates that companies with strong safety cultures experience a 20% reduction in workplace accidents, which subsequently leads to lower insurance costs and improved productivity. This correlation between OHS compliance and business performance supports the argument for prioritising health and safety within supply chains, particularly as manufacturers face increasing pressure from consumers and regulators to demonstrate social responsibility.

Moreover, the dynamic nature of international trade presents unique challenges related to OHS compliance. Different countries have varying regulations and standards, which can complicate the implementation of a uniform OHS strategy across global operations. For instance, a comparative analysis of OHS regulations in the European Union and the United States reveals significant differences in enforcement mechanisms and compliance requirements (Smith & Jones, 2019). As such, manufacturers must navigate these complexities to ensure that their supply chains adhere to the highest safety standards, regardless of geographical location.

The primary objective of this research is to investigate the current state of OHS implementation within the supply chains of manufacturing firms engaged in international trade. By examining real-world case studies and gathering insights from industry practitioners, the study aims to identify best practices and common pitfalls in OHS compliance. Ultimately, the findings will contribute to the development of a comprehensive framework for integrating OHS standards into supply chain management, thereby enhancing the overall safety and sustainability of manufacturing operations.

The significance of this research extends beyond individual firms, as it has implications for policymakers, industry associations, and stakeholders involved in global trade. By fostering a culture of safety and compliance, manufacturers can not only protect their workforce but also enhance their competitive advantage in an increasingly interconnected marketplace. This study seeks to provide valuable insights that will inform future initiatives aimed at improving OHS standards within the manufacturing supply chain.

LITERATURE REVIEW

The literature on Occupational Health and Safety (OHS) in the context of supply chain management reveals a growing recognition of the importance of integrating safety standards into global trade practices. Numerous studies have highlighted the benefits of implementing effective OHS measures, including reduced workplace accidents, improved employee morale, and enhanced organisational reputation (Kumar et al., 2020). For instance, a meta-analysis conducted by Zohar and Luria (2019) found that companies with robust safety management systems reported a 30% decrease in injury rates, reinforcing the notion that investment in OHS is not only a moral imperative but also a financially sound decision.

One of the key challenges identified in the literature is the disparity in OHS regulations across different countries. The ILO (2021) emphasises that while many nations have ratified international conventions on workplace safety, the enforcement of these standards varies significantly. This inconsistency can create complications for multinational corporations seeking to standardise

their OHS practices across diverse jurisdictions. A case study of a global manufacturing firm highlighted this issue, revealing that differing regulatory environments in Asia and Europe led to challenges in implementing a cohesive safety strategy (Nguyen & Lee, 2020).

Furthermore, the role of supply chain partners in OHS compliance has been extensively documented. Research by Hsu et al. (2018) indicates that collaboration between manufacturers and suppliers is crucial for ensuring adherence to safety standards. By fostering open communication and sharing best practices, firms can create a culture of safety that permeates the entire supply chain. For example, a collaborative initiative between a leading automotive manufacturer and its suppliers resulted in a 25% reduction in workplace incidents over a two-year period (Johnson & Smith, 2021).

The impact of technological advancements on OHS practices in the manufacturing sector has also garnered attention in recent years. The advent of Industry 4.0 and the Internet of Things (IoT) has enabled manufacturers to leverage data analytics and real-time monitoring to enhance workplace safety. A study by Wang et al. (2020) found that the implementation of smart sensors in manufacturing facilities led to a significant decrease in hazardous incidents, as potential risks could be identified and mitigated proactively. This technological integration presents an opportunity for manufacturers to not only comply with OHS standards but also to exceed them by adopting innovative safety solutions.

In summary, the literature underscores the critical importance of integrating OHS standards into supply chain management within the manufacturing industry. The challenges posed by varying regulations, the need for collaboration among supply chain partners, and the potential of technological advancements all play a significant role in shaping effective OHS practices. As this research seeks to build upon these findings, it is essential to consider the practical implications of OHS integration in the context of international trade.

RESEARCH METHODS

This study employs a qualitative research methodology to explore the implementation of Occupational Health and Safety (OHS) standards within the supply chains of manufacturing firms engaged in international trade. The qualitative approach is particularly suited for this research, as it allows for an in-depth understanding of the complexities and nuances associated with OHS practices in diverse organisational contexts. The research design involves a combination of semi-structured interviews and a comprehensive review of relevant literature and case studies.

The primary data collection method involves conducting semi-structured interviews with key stakeholders in the manufacturing industry, including supply chain managers, health and safety officers, and regulatory compliance experts. A purposive sampling technique was employed to ensure that participants had relevant experience and knowledge regarding OHS standards and their implementation within supply chains. A total of 15 interviews were conducted, each lasting approximately 60 minutes. The interviews were designed to elicit insights into the challenges and successes associated with OHS compliance, as well as the strategies employed by firms to enhance safety practices.

In addition to the interviews, a thorough review of existing literature was conducted to contextualise the findings within the

broader landscape of OHS practices in international trade. This literature review encompassed academic journal articles, industry reports, and case studies, allowing for a comprehensive understanding of the current state of OHS implementation in the manufacturing sector. The findings from the literature were triangulated with the interview data to ensure the validity and reliability of the results.

Data analysis was performed using thematic analysis, which involved coding the interview transcripts and identifying key themes related to OHS implementation. This iterative process allowed for the identification of patterns and trends within the data, ultimately leading to the development of a framework for integrating OHS standards into supply chain management. The themes identified during the analysis included regulatory compliance, the role of technology, collaboration among supply chain partners, and the impact of organisational culture on safety practices.

Ethical considerations were paramount throughout the research process. Participants were informed of the study's purpose and provided informed consent prior to their involvement. Additionally, measures were taken to ensure confidentiality and anonymity, with all identifying information removed from the final report. By adhering to ethical research practices, the study aims to contribute valuable insights into the implementation of OHS standards while respecting the rights and privacy of participants.

RESULTS AND DISCUSSION

The findings of this study reveal several critical insights into the implementation of Occupational Health and Safety (OHS) standards within the supply chains of manufacturing firms engaged in international trade. One of the most significant themes that emerged from the data is the challenge of regulatory compliance across different jurisdictions. Participants consistently highlighted the complexities associated with navigating varying OHS regulations in different countries, which often resulted in inconsistencies in safety practices across global operations. For instance, one supply chain manager noted, "We have to adapt our safety protocols depending on the country we are operating in, which can be quite challenging and sometimes leads to gaps in compliance."

Another prominent theme identified in the research is the importance of collaboration among supply chain partners in enhancing OHS compliance. Many participants emphasised the need for open communication and knowledge sharing to foster a culture of safety throughout the supply chain. A case study highlighted by one participant demonstrated the effectiveness of collaborative initiatives, stating, "By working closely with our suppliers, we were able to implement joint training sessions that improved safety awareness and reduced incidents significantly." This finding aligns with existing literature, which underscores the value of partnerships in promoting OHS standards (Hsu et al., 2018).

The role of technology in improving OHS practices was another key area of discussion among participants. The integration of smart technologies, such as IoT devices and data analytics, was cited as a game-changer in identifying and mitigating workplace hazards. One health and safety officer remarked, "With real-time monitoring, we can detect potential risks before they become incidents, which has transformed our approach to safety." This sentiment is supported by research indicating that technological

advancements can lead to substantial improvements in safety outcomes (Wang et al., 2020).

Furthermore, organisational culture emerged as a critical factor influencing the effectiveness of OHS implementation. Participants highlighted that a strong safety culture, characterised by leadership commitment and employee engagement, was essential for fostering compliance and promoting safe practices. One participant stated, "When safety is prioritised at the top level, it trickles down to every employee, creating a collective responsibility for OHS." This observation resonates with the findings of Zohar and Luria (2019), who emphasise the importance of leadership in shaping safety behaviours within organisations.

In conclusion, the results of this study underscore the multifaceted nature of OHS implementation within international trade supply chains in the manufacturing industry. The challenges of regulatory compliance, the significance of collaboration, the impact of technology, and the role of organisational culture all play pivotal roles in shaping OHS practices. These findings not only contribute to the existing body of knowledge but also provide practical insights for manufacturers seeking to enhance their OHS standards in an increasingly globalised marketplace.

CONCLUSION

The integration of Occupational Health and Safety (OHS) standards into supply chain management is a critical necessity for manufacturing firms engaged in international trade. This study has highlighted the complexities and challenges associated with OHS implementation, including regulatory compliance across diverse jurisdictions, the importance of collaboration among supply chain partners, the role of technology in enhancing safety practices, and the influence of organisational culture on OHS outcomes.

As globalisation continues to reshape the manufacturing landscape, it is imperative for firms to adopt a proactive approach to OHS compliance. By fostering a culture of safety and prioritising health and safety measures, manufacturers can not only protect their workforce but also enhance their operational efficiency and reputation in the marketplace. The findings of this research underscore the need for ongoing investment in OHS practices, as well as the importance of collaboration and knowledge sharing among stakeholders in the supply chain.

Future research should focus on developing comprehensive frameworks for OHS integration that account for the unique challenges faced by manufacturers in different regions. Additionally, further exploration of the impact of emerging technologies on OHS practices will be essential in understanding how to leverage innovation to improve workplace safety. Ultimately, the successful implementation of OHS standards within international trade supply chains will contribute to a safer and more sustainable manufacturing industry.

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