Exploration the Role of Proactive Strategy in Green Healthcare Supply Chain to Achieving Social Sustainability in Malaysia

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Abstract. This research aims to discover the proactive strategy through green healthcare supply chain that contribute to social sustainability of Malaysia's healthcare industries. This research was carefully explored, evaluated, and described in depth from the viewpoints of numerous of literature. Additionally, it investigates and clarified the qualitative information gathered from Malaysia's healthcare sector. This research is one of the among research to identify and conceptually discuss the use of green healthcare supply chain practices that contribute to the social sustainability of Malaysia's healthcare industries. This research is also the first research effort to discover a proactive strategy for green healthcare supply chains in a single setting in a developing country. The objective of this research is to explored the corporate reputation as a proactive strategy through green healthcare supply chain that impact to social sustainability. It also contributed to one of the pillars of sustainable development in Malaysian private hospitals. The research findings enlighten the view on green healthcare supply chain practices. Besides, it also contributes to researchers, the existing corpus of knowledge and a promise to expand the research stream on proactive strategy, corporate reputation, green healthcare supply chain and social sustainability. The empirical findings suggest corporate reputation by green healthcare supply chain initiatives to practitioners to obtain social sustainability in Malaysia's healthcare industries.

Keywords: green healthcare supply chain, corporate reputation, social sustainability

INTRODUCTION

Currently, the global community has grappled with the escalating challenges of climate change and global warming. Key contributors to these environmental crises include the combustion of fossil fuels, deforestation, which weakens the Earth's natural carbon sinks and industrial activities that emit potent synthetic greenhouse gases (GHGs), all of which intensify global warming. According to data reported in 2023, the consequences of these phenomena are becoming increasingly severe, manifesting in extreme weather patterns, rising sea levels, oceanic disruption, threats to food security, and deteriorating public health outcomes (UNEP, 2023; IPCC, 2023). Malaysia is not immune to these impacts. The country has experienced a surge in extreme weather events, including floods, heatwaves, disruptions in agriculture and food supply chains (UNICEF, 2023). These environmental stressors have placed growing pressure on Malaysia's healthcare system, resulting in a heightened incidence of climate-related diseases, heat-induced illnesses, mental health concerns, increased strain on healthcare infrastructure, and rising operational costs (Ministry of Health Malaysia, 2024). While the healthcare sector is primarily aligned with Sustainable Development Goal (SDG) 3 focused on ensuring healthy lives and promoting well-being for all. It is also increasingly expected to deliver sustainable services that address the broader needs of patients, healthcare workers, and communities (Berniak-Woźny & Rataj, 2023). In response, the industry is adopting more proactive strategies (PS) aimed at enhancing social sustainability (SS), recognizing the need for long-term, resilient solutions that integrate economic and environmental into core healthcare operations.

In recent years, Green Healthcare Supply Chain (GHSC) initiatives have emerged as a PS that not only addresses environmental and economic goals but also plays a pivotal role in advancing SS. As healthcare organizations increasingly integrate SS considerations into their operations, GHSC practices have gained traction and visibility on a global scale. Despite this growing prominence, the existing body of literature offers limited in-depth analysis of proactive strategies within GHSC frameworks, particularly in the healthcare sector, due to the sector's complex and evolving priorities (Vallée, 2024). Then, guided by institutional and stakeholder theory, this study investigates how GHSC-driven proactive strategies influence social sustainability outcomes. It provides empirical evidence from private hospitals in Malaysia, illustrating how GHSC adoption contributes to strengthening corporate reputation as a mechanism for social impact. The research further proposes a set of theoretical insights for leveraging GHSC practices to enhance corporate reputation, emphasizing the value of aligning these strategies with broader institutional and stakeholder expectations.

LITERATURE REVIEW

Proactive Strategy

Since the release of the Brundtland Commission Report in 1987, the integration of environmental considerations into strategic decision-making has become a significant focus among managers and organizational theorists. Growing environmental crises, such as ecological degradation and pollution have not only disrupted markets but have also threatened corporate value on a massive scale. These challenges have led stakeholders to view proactive environmental strategies as essential responses to growing uncertainties (Ho et al., 2023). Scholars and practitioners alike have advocated for proactive approaches that treat environmental concerns as urgent, economically beneficial, and integral to long-term sustainability. Emerging research indicates that organizations adopting proactive strategies (PS) tend to experience enhanced operational efficiency (Tyler et al., 2024) and improved competitiveness (Yandi et al, 2024). Furthermore, recent findings suggest that proactive strategies foster the advancement of Green Supply Chains, resulting in stronger organizational performance (Hashmi, 2023). By anticipating future environmental and market dynamics, proactive approaches enable firms to strengthen resilience and deliver superior outcomes.

In today's global business landscape, corporate reputation has become a critical factor in achieving long-term sustainability. It reflects a shared perception of a company's historical actions and strategic intentions, often evaluated in relation to its effectiveness compared to key competitors (Arduini et al, 2024). Corporate reputation is broadly understood as the collective assessment of an organization's performance by both internal and external stakeholders, contributing to its market value and sustaining its competitive edge (Olaleye, 2023). From an economic standpoint, reputation is often conceptualized as the expectations and judgments held by insiders and outsiders regarding specific attributes of the organization (Koeswayo et al., 2024). It represents how stakeholders evaluate a firm by comparing its conduct and achievements with those of similar entities, in light of both practical and ethical standards shaped by institutional norms. Aligned with this institutional perspective, corporate reputation in this research is defined as the general perception of an organization its identity, associations, and the anticipated experience it offers to consumers or service users. As noted by Von et al. (2024), reputation and the associated risks have gained prominence due to their direct influence on organizational value. In essence, corporate reputation functions as a reflection of a company's legacy, serving as a communicative tool that signals product or service quality relative to competitors.

Corporate Reputation

In today's global business landscape, corporate reputation has become a critical factor in achieving long-term sustainability. It reflects a shared perception of a company's historical actions and strategic intentions, often evaluated in relation to its effectiveness compared to key competitors (Arduini et al, 2024). Corporate reputation is broadly understood as the collective assessment of an organization's performance by both internal and external stakeholders, contributing to its market value and sustaining its competitive edge (Olaleye, 2023). From an economic standpoint, reputation is often conceptualized as the expectations and judgments held by insiders and outsiders regarding specific attributes of the organization (Koeswayo et al., 2024). It represents how stakeholders evaluate a firm by comparing its conduct and achievements with those of similar entities, in light of both practical and ethical standards shaped by institutional norms. Aligned with this institutional perspective, corporate reputation in this research is defined as the general perception of an organization its identity, associations, and the anticipated experience it offers to consumers or service users. As noted by Von et al. (2024), reputation and the associated risks have gained prominence due to their direct influence on organizational value. In essence,

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Green Healthcare Supply Chain

Within supply chain research, a universally accepted definition of Green Healthcare Supply Chain (GHSC) remains elusive. Various scholars have proposed differing interpretations to capture the essence of appropriate and effective GHSC initiatives. For instance, Bentahar et al. (2023) describe GHSC as the integration of environmentally conscious practices across key supply chain functions, including purchasing, manufacturing, distribution, marketing, and reverse logistics. Similarly, Kaur (2024) characterize GHSC initiatives as emerging innovations that embed environmental sustainability into organizational supply chain processes. Additionally, Tyagi (2024) emphasize the incorporation of environmental principles within conventional supply chain frameworks. Importantly, GHSC practices distinguish themselves from those in other sectors due to their direct influence on environmental health, economic outcomes, and human well-being. In light of these perspectives, this research adopts a working definition of GHSC initiatives as novel actions or improvements in processes, procedures, systems, and business models that collectively enhance sustainable performance across social, environmental, and economic dimensions.

Social Sustainability

Social sustainability refers to the measurement of outcomes related to initiatives aimed at enhancing service quality, strengthening corporate reputation, safeguarding the health and safety of stakeholders, and ensuring customer loyalty and satisfaction. In recent years, organizations have placed increasing emphasis on social sustainability, driven by heightened awareness of issues related to health, safety, and education (Tseng et al., 2023). Moreover, the growing focus on sustainability challenges and intensified global market competition has motivated organizations to prioritize social sustainability more strategically (Abbas, 2024). Many organizations have also integrated sustainability concerns with green supply chain management as a means to advance social sustainability (Khan et al., 2024). Despite this progress, there remains limited exploration of green supply chain adoption within Malaysia's healthcare sector in relation to sustainability (Wahab et al., 2023). To address this gap, this study proposes and empirically evaluates a comprehensive proactive strategy (PS) model embedded within green supply chain practices tailored for healthcare industries in Malaysia.

METHODOLOGY

This study aims to investigate the complexity and characteristics of corporate reputation within the context of private hospitals in Malaysia, employing a multiple case study approach. The research specifically examines how corporate reputation functions as a proactive strategy (PS) through the implementation of Green Healthcare Supply Chain (GHSC) practices. A theoretical sampling method was applied to identify eligible private hospitals, with selection criteria requiring registration under the Ministry of Health (MOH). Ultimately, six private hospitals agreed to participate in the study. Data collection focused on in-depth interviews with senior management personnel, who served as key informants due to their strategic insights and decision-making roles. The research is grounded in institutional and stakeholder theories, providing a theory-driven lens for understanding the interplay between GHSC initiatives and corporate reputation. It also draws upon existing literature related to proactive strategies and sustainable healthcare supply chains. Data analysis was conducted in two distinct phases. The first phase involved within-case analysis, which explored how each individual hospital practiced GHSC and its impact on corporate reputation. The second phase, an across-case analysis, allowed for theoretical replication and validation of findings across different institutional contexts. Consistency in case descriptions was ensured by systematically capturing all relevant information pertaining to corporate reputation in relation to GHSC practices. To analyze and identify emerging themes and core categories, the data were coded using ATLAS.ti version 23.0.

Data Collection

In-depth interviews were conducted with eighteen green coordinators from various departments across selected private hospitals in Malaysia. These individuals served as key informants due to their direct involvement in green healthcare initiatives. The interview protocol was developed based on contemporary literature examining proactive strategies (PS) and their influence on social sustainability (SS) through the implementation of green practices. All interviews were conducted in English and were preceded by formal email invitations. Details of the informants are summarized in Table 1. Each interview session lasted between 45 minutes and two hours. All

conversations were audio-recorded with consent, accompanied by detailed note-taking, and subsequently transcribed for analysis. While the selection of informants was confined to those designated by the participating hospitals, the criteria ensured a diverse range of perspectives, which is vital for exploratory research (Yin, 2018). To mitigate potential bias, particularly regarding confidentiality and institutional sensitivity, the identities of the participating hospitals are withheld. In line with Eisenhardt's (1989) recommendation for case study research, six cases were analyzed to provide rich, comparative insights. To ensure data triangulation and enhance the credibility of findings, interview data were supplemented with documentation related to green healthcare supply chain (GHSC) initiatives

Data Analysis

To examine proactive strategies (PS) within the context of Green Healthcare Supply Chain (GHSC) initiatives, this study employed thematic analysis. The analytical process began with a within-case analysis, allowing for an in-depth understanding of each individual case. This phase involved the systematic collection and organization of all relevant data pertaining to the rationale behind GHSC-related proactive strategies. Field notes were first documented, reviewed, and refined by the research team before being coded. To minimize confirmation bias, the analysis of each case was constrained to pre-established theoretical constructs. Following the within-case analysis, the study proceeded to cross-case analysis to facilitate theoretical replication and explore the generalizability of findings across different institutional settings. This phase focused on identifying patterns and trends in how GHSC initiatives interact with and influence social sustainability (SS). Finally, to structure and categorize the emerging themes, data were processed using ATLAS.ti version 23.0. This coding software supported the classification of core categories and the discovery of recurring patterns across the dataset, enabling a robust interpretation of the relationship between GHSC practices and proactive strategies.

TABLE 1-List of Informants

Cases	Informant	Job Position
C1	C1.1	Director, Facility Support Services
	C1.2	Manager, Pharmaceutical Department
	C1.3	Senior Executive, Purchasing Department
C2	C2.1	General Manager, Hospital Support Services Department
	C2.2	Senior Executive, Hospital Support Services Department
	C2.3	Manager, Pharmacy and Supplies Department
	C2.4	Executive, Procurement
C3	C3.1	Engineer, Healthcare Department
	C3.2	Manager, Pharmacy Department
	C3.3	Officer, Safety Department
C4	C4.1	Manager, Pharmacy Department
	C4.2	Assistant, Manager of Procurement Department
	C4.3	Manager, Facility Department
C5	C5.1	Assistant Manager, Admin Department
	C5.2	Assistant Manager, Pharmacy Department
	C5.3	Manager, Facility Department
C6	C6.1	Manager, Pharmacy Department
	C6.2	Manager, Quality Assurance Department

RESULTS AND DISCUSSION

Informants were invited to share their perceptions regarding proactive strategies (PS) implemented through Green Healthcare Supply Chain (GHSC) initiatives and their influence on social sustainability (SS). The coding of field data reflected the perspectives of private hospitals in Malaysia. Data collected from in-depth interviews were systematically analyzed and summarized in Table 2 to identify recurring themes related to PS. Redundant

or overlapping responses were removed to ensure clarity and focus. Subsequently, the remaining insights were organized into thematic categories based on conceptual similarity, allowing for a coherent interpretation of the informants' viewpoints.

TABLE 2-The Summary of The PS Through the GHSC Practices from The Perspective Of SS

Proactive Strategy	Sub Themes	Cases	Total
Corporate Reputation	Image Marketing strategy	C1	4/6
	Company name	C2	
	Image A benchmark company	C3	
	Image Trademark Branding Different from competitor Marketing strategy	C4	

Firstly, to answer the research question one, what is the proactive strategy on the strength of green healthcare supply chain practices in the perspective of social performance? C2 revealed that corporate reputation is a PS through the GHSC practices from the perspective of SS (Table 2). The CR determines as a pride for the company that practices GHSC in healthcare industries. According to Ipsos (2023) highlights that building a strong reputation enhances business efficiency by fostering trust among stakeholders, which in turn facilitates better relationships with regulators, partners, and consumers. In the healthcare sector, corporate reputation is increasingly influenced by the adoption of Green Healthcare Supply Chain (GHSC) practices, which play a critical role in advancing social sustainability. By embedding environmentally responsible processes such as sustainable procurement, waste minimization, and energy-efficient logistics, healthcare organizations demonstrate a proactive commitment to social and environmental values. This strategic integration not only reduces ecological harm but also fosters public trust, strengthens stakeholder relationships, and enhances patient and community well-being (Berniak-Woźny & Rataj, 2023). As a result, GHSC initiatives contribute significantly to building a reputable image of healthcare institutions as socially accountable and environmentally conscious organizations, which is vital in a sector where ethical responsibility and community impact are central to performance and legitimacy.

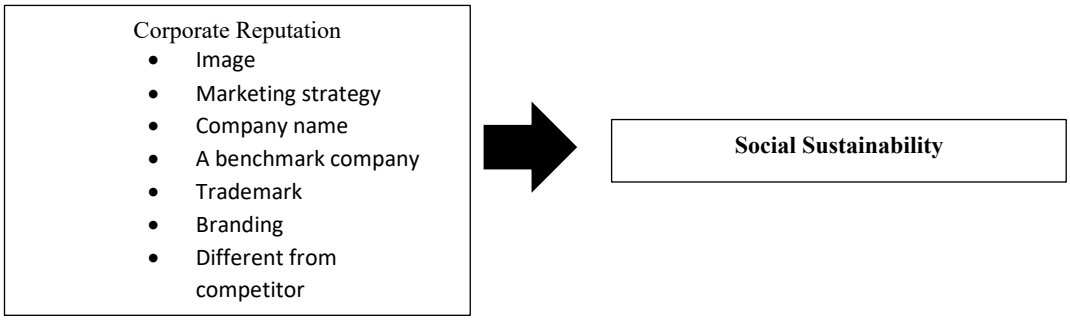
Secondly, to answer the research question two, why organizations implement the proactive strategy by use of green healthcare supply chain practices? The results reported that four of six cases (C1, C2, C3, and C4) indicated PS as a corporate reputation that impacts SS (Table 2). The majority of informants (ten of eighteen) had explained that CR through practices GHSC is a branding for private hospitals. In a sector where trust, transparency, and ethical standards are paramount, adopting green practices—such as sustainable sourcing, waste reduction, and energy-efficient operations demonstrates a tangible commitment to both environmental stewardship and public welfare. This proactive stance resonates strongly with stakeholders, including patients, staff, regulators, and the broader community, who increasingly value sustainability-driven initiatives. As a result, GHSC implementation not only improves operational performance but also builds a credible and positive institutional image, distinguishing healthcare providers as forward-thinking, socially conscious, and aligned with global sustainability goals (Berniak-Woźny & Rataj, 2023). Thus, these results are admittedly by Wang and Feng (2023), the CR as a PS that impacts SS. In summary, this research's cases revealed that Implementing a Green Healthcare Supply Chain (GHSC) is a strategic approach that enhances corporate reputation by positioning healthcare organizations as environmentally and socially responsible institutions. This reputational capital becomes a key intangible asset, reinforcing trust and securing long-term stakeholder loyalty in a competitive healthcare environment.

Lastly, to answer the research question three, how does it impact on social performance? Four of six cases (C1, C2, C3, C4) indicated that CR by practices GHSC impacts SS (Table 2). The majority of informants four of eighteen were addressing corporate reputation in private hospitals is significantly shaped by internal practices that emphasize employee involvement, organizational rewards, and the adoption of environmentally friendly substitute materials. When employees are actively engaged in sustainability initiatives, such as green healthcare supply chain (GHSC) programs, they become ambassadors of the hospital's values, fostering a culture of accountability and

innovation. Incentivizing sustainable behavior through organizational rewards whether through recognition, performance-based incentives, or career advancement further motivates staff to contribute positively to the hospital's environmental and social goals. Additionally, the use of eco-friendly substitute materials in medical supplies and daily operations signals a strong commitment to sustainability, aligning with public expectations and regulatory standards. Together, these practices enhance the hospital's image as a responsible and forward-thinking institution, ultimately strengthening its corporate reputation in a highly competitive and socially conscious healthcare environment (Tarnovskaya, Hånell, & Tolstoy, 2022). C2.1, the General Manager, Hospital Support Services Department of C2, expressed his views on a CR as a PS through the GHSC practices and its impact on SS. C2.1 of C1 highlighted that:

"(..)It gives an excellent image to our hospital. Many companies are buying insurance, and corporate companies choose as a panel hospital. They are quite impressed that we can have almost a total implementation…".
(C2.1, General Manager, Hospital Support Services Department)
This statement is supported by C1.2 of C1 by highlighting that:
"(..)It is one of the corporate images for this hospital. In an indirect way, if any companies that care for the environment, maybe that will influence their decision in choosing us as their hospital panel…"
(C1.2, Manager of Pharmaceutical Department)

Therefore, this research investigates the experiences and perspectives of informants from private hospitals to uncover how corporate reputation functions as a proactive strategy (PS) that supports social sustainability (SS). A key insight from this study is the recognition of corporate reputation not merely as an outcome, but as an active strategic tool leveraged to enhance SS, particularly within the context of private healthcare institutions. This exploratory inquiry contributes novel understanding by examining corporate reputation through the dual lenses of stakeholder and institutional theory an area that remains insufficiently explored in existing SS literature. The findings provide valuable perspectives on how private hospitals strategically integrate reputation-building efforts with broader sustainability objectives. Moreover, the study highlights the importance of engaging institutional and stakeholder viewpoints to develop more holistic and effective approaches to SS within healthcare. To truly foster social sustainability, private hospitals must look beyond their immediate organizational boundaries and consider broader societal expectations. Accordingly, the proposed working proposition is: **P:** Corporate reputation can be identified as a proactive strategy through green healthcare supply chain initiatives to promote social sustainability from the perspective of the healthcare industry.



THEORETICAL AND PRACTICAL CONTRIBUTION

These research offerings are noteworthy. Firstly, a significant contribution of this research that corporate reputation as a proactive strategy and green healthcare supply chain literature. Secondly, it also to employ the institutional and stakeholder theory to frame a conceptual model that links with SS. Corporate reputation, when viewed as a proactive strategy within the framework of Green Healthcare Supply Chain (GHSC) practices, plays a vital role in advancing social sustainability in the healthcare industry. From the lens of institutional theory, healthcare organizations are increasingly influenced by regulatory pressures, normative expectations, and societal demands to adopt sustainable and socially responsible practices. At the same time, stakeholder theory emphasizes the need for healthcare institutions to address the interests and values of diverse stakeholders including patients, employees, suppliers, and the broader community by demonstrating ethical conduct and environmental commitment. By integrating GHSC initiatives such as green procurement, waste reduction, and resource efficiency, healthcare providers not only meet institutional expectations but also reinforce trust and legitimacy among stakeholders. This alignment positions corporate reputation as a dynamic and strategic asset, actively

contributing to social well-being, employee engagement, and community trust. Therefore, corporate reputation emerges not merely as a reflection of past performance but as a forward-looking, stakeholder-driven strategy that strengthens the healthcare sector's role in achieving broader sustainability goals.

Thirdly, the synergetic mechanism identified in this research should assist institution groups in understanding the concept of corporate reputation as a proactive strategy through the GHSC initiatives that contributed to SS. Consequently, from a practical standpoint, the adoption of GHSC initiatives such as environmentally responsible procurement, energy-efficient logistics, and sustainable waste management not only reduces ecological impact but also reinforces the hospital's commitment to social well-being. These practices reflect an organization's dedication to protecting public health, ensuring safety for employees and patients, and fostering ethical and transparent operations. In doing so, healthcare institutions build a strong, credible image that resonates with both internal and external stakeholders. A well-managed reputation built through consistent green practices not only differentiates the organization in a competitive market but also increases trust, employee morale, and patient loyalty. Thus, in practice, corporate reputation becomes an essential strategic tool that supports the healthcare sector's broader aim of achieving long-term social sustainability. Finally, from the results, research propositions were discussed and put forward. Thus, future research could test the research proposition in a cross-discipline context.

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