SUSTAINABILITY AND PROFITABILITY: THE ROLE OF GREEN SUPPLY CHAIN MANAGEMENT IN EMERGING MARKETS

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Abstract

This study, explored the integration of sustainability and profitability within supply chains through Green Supply Chain Management (GSCM). The primary objective was to examine how GSCM practices can enable businesses, particularly in emerging markets, to achieve both environmental and financial sustainability. The increased emphasis on sustainable business practices worldwide and the mounting pressure on emerging nations to retain profitability while adhering to global sustainability targets make this study relevant. Green supply chain management (GSCM), which includes logistics, reverse logistics, sustainable production, and green buying, is essential for lowering environmental impact and boosting competitiveness. Adoption of GSCM is hampered in emerging nations by particular issues like as cultural hurdles, regulatory disparities, and infrastructure constraints. But there are also a lot of chances for innovation, expansion, and green practice adoption in these areas. This study examined previous research, found gaps, and put forth a workable framework for integrating GSCM. The study used a qualitative methodology, combining actual data and case studies that had already been done. According to the findings, businesses can enhance both their financial performance and environmental impact by implementing GSCM. To improve GSCM implementation, recommendations include technological investments, stakeholder collaboration, and policy support. All things considered, this study advances knowledge of the dual effects of GSCM on sustainability and profitability in emerging countries, providing insightful information to researchers, businesses, and policymakers.

Keywords: Green Supply Chain Management, Sustainability, Profitability, Emerging Markets, Supply Chain Integration

JEL classification: Q01, Q56, L23, M14**,** O13, F63, Q53, R11

1. INTRODUCTION

Growing worries about resource depletion, climate change, and environmental degradation have made green supply chain management (GSCM) a crucial paradigm in the global economy (Agyabeng-Mensah et al., 2020). Fundamentally, GSCM aims to incorporate environmental factors into conventional supply chain operations, including production, distribution, procurement, and reverse logistics (Tseng et al., 2019). Businesses all around the world are switching to more environmentally friendly supply chains in an effort to fulfil the rising demand for sustainable products, improve resource efficiency, and cut waste. However, there are particular obstacles to GSCM adoption in emerging markets, such as a lack of infrastructure, legislative limitations, and cultural views on sustainability (Govindan et al., 2021). However, a fundamental component of GSCM, sustainability is addressing current demands without sacrificing the capacity of future generations to address their own (World Commission on Environment and Development, 1987). Conversely, a company's profitability is the amount of money it makes from its operations, which guarantees its economic viability (Porter & Kramer, 2019). A key factor in accomplishing these goals is supply chain management, which coordinates the movement of products, data, and funds throughout the value chain (Christopher, 2016). Therefore, including sustainability into supply chain management gives companies a way to match economic performance with environmental responsibility.

Emerging markets offer a distinct setting for GSCM because of their quick economic expansion and rising consumer demand. These markets have enormous business prospects, but they also face several challenges, including poor enforcement of environmental laws, restricted access to green technologies, and unstable infrastructure (Zhang & Li, 2020). Furthermore, cultural and institutional disparities affect how sustainable practices are viewed and adopted, making GSCM implementation more challenging (Khanna & Palepu, 2021). Customized strategies that consider the socioeconomic characteristics of rising economies are needed to address these issues.

There are still a lot of unanswered questions regarding the use of GSCM in emerging markets, even with the expanding corpus of research on the topic. Numerous studies ignore the particular dynamics of resource-constrained contexts in favor of concentrating on industrialized economies (Sarkis et al., 2019). Furthermore, studies frequently highlight the environmental advantages of GSCM while examining its potential effects on profitability, especially in markets where cost constraints take precedence over other corporate concerns (Dubey et al., 2017). The need for more thorough research into how GSCM may strike a balance between sustainability and profitability in emerging economies is highlighted by these gaps.

By investigating how GSCM promotes sustainability and profitability in emerging markets, this study seeks to close these gaps. It looks for ways to maximize the advantages of GSCM for companies and society while removing obstacles to

implementation. The paper offers a comprehensive view of GSCM by utilizing knowledge from several fields, such as supply chain management, environmental science, and economics. The potential for this research to influence philosophy and practice is what makes it significant. By providing fresh concepts and insights suited to developing markets, the study adds to the expanding conversation on sustainable supply chains among academics. It offers practitioners practical suggestions for creating and putting into practice successful GSCM strategies. Moreover, the study underscores the importance of cross-sector collaboration, emphasizing the role of governments, non-governmental organizations, and businesses in driving the transition to greener supply chains.

This study clarifies the wider ramifications of sustainable business practices while discussing the prospects and difficulties of GSCM in emerging economies. The implementation of GSCM in emerging economies has a knock-on effect on global economic and environmental results as global supply chains get more intertwined (Kumar et al., 2020). Businesses looking to stay competitive in a time of increased environmental awareness and regulatory scrutiny must comprehend these dynamics. Goal 12 of the United Nations Sustainable Development Goals (SDGs), which promotes responsible patterns of production and consumption, is especially in line with this study and the global agenda for sustainable development (United Nations, 2015). The study advances the larger objective of promoting economic growth while preserving the environment by examining the relationship between sustainability and profitability in supplier chains. A crucial nexus between economic viability and environmental sustainability is represented by GSCM. Although there are many obstacles to its adoption in developing nations, it also presents unmatched chances for development and creativity. By filling in the current knowledge gaps, this study will give policymakers and companies a road map for utilizing GSCM's potential to promote sustainable development.

2. LITERATURE REVIEW

Green Supply Chain Management (GSCM)

The term "green supply chain management" (GSCM) describes how supply chain operations, including as procurement, production, logistics, and end-of-life management, are integrated with environmental considerations. GSCM is defined by Srivastava (2007) as "integrating environmental thinking into supply-chain management, including product design, material sourcing and selection, manufacturing processes, delivery of the final product, and end-of-life management of the product after its useful life." According to Zhu et al. (2018), this strategy moves the emphasis from traditional supply chain efficiency to sustainability as a crucial component.

Green procurement, which prioritizes procuring materials with the least possible impact on the environment, is the first of the key GSCM elements. Buying recyclable, biodegradable, or sustainably sourced products is part of this. For

instance, Agyabeng-Mensah et al. (2020) noted that companies using green buying techniques reported better brand recognition and adherence to environmental regulations.

Green production entails streamlining production procedures to cut down on waste, pollution, and energy use. To accomplish this, technologies like circular production models and renewable energy systems are being used more and more (Dubey et al., 2017). Companies like Unilever, for example, have shown that it is possible to combine profitability and sustainable manufacturing by implementing programs that lower operating costs and carbon emissions (Kumar et al., 2020).

Green logistics emphasizes reducing the impact of transportation and storage operations on the environment. This include the use of eco-friendly packing materials, route optimization, and fuel-efficient automobiles. According to Li et al. (2021), businesses who implemented green logistics techniques saw reductions in operating expenses as a result of improved efficiency in addition to environmental advantages.

Finally, reverse logistics focusses on recycling and returning unwanted goods, making sure that things are recycled, repurposed, or disposed of properly. In order to promote a circular economy—where resources are used for as long as possible—this dimension is essential. Businesses with strong reverse logistics systems saw a considerable improvement in their sustainability measures, according to a study by Govindan et al. (2021).

Sustainability vs. Profitability

Because environmentally friendly activities were frequently linked to higher prices, businesses historically seen sustainability and profitability as a trade-off (Porter & Kramer, 2019). However, as business models showing the possible alignment of the two goals have emerged, this viewpoint has changed. According to research by Tseng et al. (2019), incorporating sustainability into core operations can result in increased brand loyalty, cost savings, and market access.

The shared value framework is one prominent model that stresses producing economic value in a manner that simultaneously produces societal value (Porter & Kramer, 2019). This strategy enables businesses to improve revenue while addressing societal issues like environmental deterioration. One example is Patagonia, which has centered its lucrative business strategy on sustainability, promoting repairable and recyclable products.

Another illustration is the natural capitalism model, which promotes innovation, waste reduction, and resource efficiency as means of balancing sustainability and profitability (Hawken et al., 2010). By embracing green innovations, companies using this model (like Interface Inc.) have increased their competitive edge and realized notable cost savings.

Additionally, indirect profitability benefits like increased customer loyalty and employee satisfaction can result from sustainability-driven activities. Research indicates that companies that practice environmental responsibility are able to draw in and keep clients who are prepared to spend more for eco-friendly goods (Zhang and Li, 2020).

GSCM in Emerging Markets: Challenges and Opportunities

Emerging markets offer a special setting for GSCM implementation because of their quick industrialization and economic expansion. Notwithstanding the possible advantages, these markets have serious infrastructural problems that prevent the adoption of green practices, such as unstable energy supplies and insufficient transit systems (Khanna & Palepu, 2021).

The regulatory framework, which frequently lacks strict enforcement of environmental regulations, presents another difficulty. A regulatory gap that restricts the implementation of GSCM is caused by the fact that many governments in emerging economies place a higher priority on economic development than environmental sustainability (Agyabeng-Mensah et al., 2020).

Cultural differences also affect how sustainability is perceived; in emerging nations, many consumers and businesses place a higher value on convenience and cost than on environmental factors. Because of this cultural barrier, certain tactics are required to raise awareness and encourage acceptance of green activities (Govindan et al., 2021).

Despite these challenges, emerging markets offer significant opportunities for innovation and growth in GSCM. The rapid urbanization and growing middle-class populations in these markets drive demand for sustainable products and services. Businesses adopting GSCM can differentiate themselves and gain a competitive edge (Zhu et al., 2018).

Moreover, the adoption of green technologies in emerging economies often leapfrogs traditional models, enabling businesses to implement state-of-the-art solutions without legacy system constraints. Studies, such as that by Tseng et al. (2019), highlight that investment in renewable energy and smart logistics systems can transform supply chain operations in these regions.

2.1. THEORETICAL REVIEW

Stakeholder Theory and Its Relevance to GSCM

According to Freeman's (1984) stakeholder theory, in order for an organization to succeed over the long run, it must consider the interests of all parties involved, not just shareholders. Customers, suppliers, workers, communities, and environmental organizations affected by company operations are examples of stakeholders. According to this idea, companies must balance the demands of conflicting stakeholders, which is in line with the tenets of green supply chain management (GSCM) (Donaldson & Preston, 1995).

Stakeholder theory emphasizes the significance of involving a variety of stakeholders in sustainability activities within the framework of GSCM. For example, while regulators enforce compliance rules, consumers demand ecologically friendly items. Suppliers and staff also aid the operationalization of green practices. Recent studies, such as that by Agyabeng-Mensah et al. (2020), underscore that effective stakeholder engagement is crucial for the successful adoption of GSCM practices in emerging markets.

In order to minimize environmental effects, supply chain management sustainability frequently necessitates cooperation with stakeholders. For instance, shipping companies must implement eco-friendly procedures, and suppliers must follow green procurement guidelines. Tseng et al. (2019) assert that improving compliance and encouraging innovation in the supply chain are achieved by coordinating stakeholder expectations with sustainability objectives.

Additionally, a framework for handling such conflicts of interest among stakeholders is provided by stakeholder theory. Other stakeholders, including environmental advocacy groups, seek long-term sustainability, even while stockholders may place a higher priority on immediate earnings. According to Zhu et al. (2021), integrating GSCM into organizational strategies necessitates open communication and mutual agreements in order to resolve such issues.

Resource-Based View (RBV) and Competitive Advantage

Barney (1991) established the Resource-Based View (RBV) theory, which emphasizes the strategic significance of distinctive, valuable, and inimitable resources in attaining a competitive advantage. RBV highlights how exceptional performance may be fueled by internal resources and skills, including technology infrastructure, human expertise, and creative processes. RBV describes how green efforts can become a source of competitive difference in the context of GSCM (Dubey et al., 2017).

By using RBV to GSCM, companies can gain a unique market advantage by utilizing green competencies, such as sophisticated waste management systems, renewable energy use, and sustainable procurement methods. Kumar et al. (2020), for instance, showed that businesses with strong green supply chain strategies saw increases in market share and brand loyalty. This competitive edge is particularly relevant in emerging markets, where sustainable practices are becoming a key consumer expectation.

There are special chances to use GSCM as a competitive advantage in emerging markets. Businesses can benefit from first-mover benefits, such as improved regulatory compliance and access to eco-aware clients, by implementing green ideas early. According to Li et al. (2021), these capabilities lower operational risks related to environmental non-compliance while simultaneously increasing profitability.

Furthermore, the RBV framework emphasizes how crucial it is to keep investing in green resources in order to maintain competitive advantage. This entails implementing cutting-edge technologies, creating eco-friendly products, and educating staff members on sustainable practices. Businesses that include these resources into their supply chains are better equipped to handle upcoming sustainability difficulties and preserve long-term competitiveness, claim Govindan et al. (2021).

Stakeholder theory was adopted for this study because it emphasizes how businesses must balance the interests of various stakeholders, such as suppliers, customers, regulators, and environmentalists, in order to run successful and sustainable operations (Freeman, 1984). This theory's applicability stems from its conformity to the tenets of Green Supply Chain Management (GSCM), which calls for cooperative efforts to include ecological practices into waste management, production, logistics, and procurement (Agyabeng-Mensah et al., 2020). Businesses can improve long-term profitability and operational efficiency by attending to stakeholders' economic and environmental expectations. The idea highlights the significance of enacting laws that encourage cooperation among stakeholders, such as tax breaks for eco-friendly projects and more stringent environmental standards to guarantee adherence. This approach not only fosters sustainability but also drives innovation and competitive advantage, particularly in emerging markets where GSCM practices can address infrastructure gaps and promote economic development.

2.2. EMPIRICAL REVIEW

Success Stories of GSCM Implementation

In a number of developing markets, Green Supply Chain Management (GSCM) has demonstrated noteworthy performance. For example, Khan et al.'s (2019) study looked at how Indian manufacturing companies adopted GSCM methods. They discovered that green procurement and logistics greatly increased operational efficiency while lowering environmental impacts by using a survey-based method with 250 manufacturing enterprises. In order to promote broader use, the study suggested government-backed incentives. In a similar vein, Monteiro et al. (2020) examined how agro-industrial companies' use of green production methods increased their profitability in Brazil. Using a mixed-methods approach that included data analysis and interviews with 20 businesses, the researchers showed that businesses that used eco-friendly products and renewable energy had better market share and customer satisfaction.

Another illustration is the textile sector in China, where 300 companies integrating reverse logistics were examined by Zhou and Li (2021). According to their research, reverse logistics techniques like recycling and material repurposing greatly lowered expenses while enhancing brand recognition. In order to achieve more durable results, they suggested enhancing supplier collaboration. Makhura et

al. (2022) conducted a longitudinal research in South Africa to assess GSCM in mining companies. Green mobility improved sustainability and profitability by reducing fuel usage by 30%, according to data collected from 15 businesses over a five-year period.

Furthermore, emerging economies in Southeast Asia have seen GSCM success. Nguyen et al. (2023) analyzed 150 Vietnamese firms, finding that integrating green procurement and logistics helped achieve international sustainability standards, increasing global market access. This empirical evidence supports the notion that GSCM can drive dual benefits of environmental conservation and economic growth.

Limitations of GSCM in Emerging Markets

There are substantial obstacles to GSCM implementation in emerging areas, notwithstanding the success examples. One of the main obstacles to green logistics, according to a study conducted in Nigeria by Adewole et al. (2018), is insufficient infrastructure. The study, which surveyed 120 logistics companies, discovered that inadequate storage facilities and bad road networks made it difficult to apply GSCM techniques effectively. To solve this problem, the researchers suggested significant infrastructure spending by the government. Similarly, financial limitations were emphasized as a key limitation in a study conducted in Pakistan by Rahman and Zafar (2020). Their mixed-methods study of 200 SMEs found that businesses were deterred from embracing GSCM practices by the high cost of deploying green technologies.

Cultural differences present additional difficulties. For example, Sharma et al. (2021) discovered that in India, resistance to change was frequently caused by stakeholders' ignorance of the advantages of GSCM. To close this gap, their qualitative survey of 50 corporate executives highlighted the necessity of focused training initiatives. Garcia et al. (2019) examined regulatory issues in Latin America and discovered that environmental rules vary from one region to another, making it challenging for multinational firms to standardize their GSCM procedures.

Furthermore, the adoption of sophisticated GSCM tactics may be hampered by technology constraints in emerging countries. According to a study conducted in Vietnam by Pham et al. (2022), only 40% of the companies examined have access to contemporary green production technologies. These findings indicate that while GSCM holds promise, addressing these barriers is crucial for broader adoption.

Contributions of GSCM to Sustainability and Profitability

Several studies demonstrate how GSCM contributes to both sustainability and profitability. Agyabeng-Mensah et al. (2020), for instance, showed that implementing green procurement procedures decreased waste by 35% and operational expenses in their study of 150 Ghanaian businesses. The researchers showed a strong positive correlation between GSCM and financial performance using structural equation modelling. The integration of green manufacturing and

logistics also increased energy efficiency, lowering carbon emissions by 25% and increasing profitability by 15%, according to Kim and Park's (2021) analysis of 200 South Korean companies.

Widodo et al. (2023) investigated the impact of green supply chains on the palm oil sector in Indonesia. The researchers discovered that businesses who implemented sustainable sourcing procedures had a competitive advantage in global marketplaces based on data and interviews with 100 businesses. To increase these benefits, the study suggested closer partnerships between businesses and environmental groups.

Furthermore, Zhang et al.'s meta-analysis from 2022, which summarized the results of 50 studies on GSCM, found that businesses that adopted green practices reported higher stakeholder trust and longer-term profitability. According to their findings, manufacturing and mining (two sectors with significant environmental impacts) benefit greatly from green supply chain methods. These results highlight how GSCM can revolutionize the way that sustainability and profitability are aligned, especially in emerging markets.

2.3. GAPS IN REVIEWED LITERATURE

Even though the examined studies made substantial contributions, a number of important gaps show up, indicating areas that require more research. First, there is a dearth of research on cross-industry comparative analysis in emerging markets, despite the fact that numerous studies have looked at the use of Green Supply Chain Management (GSCM) in certain industries and geographical areas. Studies such as those conducted by Monteiro et al. (2020) and Widodo et al. (2023), for example, focus on the agriculture and palm oil sectors but neglect to mention businesses like technology, retail, or construction, where GSCM approaches may encounter particular opportunities and problems. This narrow focus prevents a comprehensive knowledge of how GSCM operates across many economic sectors, sometimes ignoring hurdles unique to a certain industry or transferable methods.

Second, a large portion of the material currently in publication, including that written by Kim and Park (2021) and Agyabeng-Mensah et al. (2020), tends to concentrate primarily on the economic and environmental effects of GSCM. The social aspect of sustainability, namely how GSCM practices affect social fairness, community well-being, and labor conditions in emerging countries, is not well explored, nevertheless. This neglect results in a lack of knowledge regarding the overall impact of GSCM on all sustainability pillars since sustainability increasingly integrates social factors.

Third, many research have shortcomings in their methodological techniques. For instance, research by Rahman and Zafar (2020) and Khan et al. (2019) may not fully represent the dynamic and changing nature of GSCM practices due to their extensive dependence on cross-sectional surveys. Longitudinal studies that monitor GSCM implementation over time are scarce, leaving gaps in understanding the long-

term effects of green supply chain initiatives. Additionally, most studies employ quantitative methods, with limited use of qualitative approaches that could provide deeper insights into organizational behavior, stakeholder attitudes, and cultural influences on GSCM adoption.

Additionally, studies like Garcia et al. (2019) have addressed regulatory and policy frameworks; however, little is known about the ways in which global market dynamics, regional trade agreements, and international environmental standards affect the uptake and efficacy of GSCM in emerging markets. Understanding how emerging economies might integrate into sustainable global supply chains requires an understanding of the interaction between local regulatory regimes and global pressures, which is still little understood. A more thorough and nuanced understanding of the function and potential of GSCM in promoting sustainability and profitability would result from filling in these gaps.

The neglect of technology innovation and its incorporation into Green Supply Chain Management (GSCM) in emerging countries represents another noteworthy disparity. Research on sophisticated technologies like blockchain, artificial intelligence, and the Internet of Things (IoT) is scarce, despite studies like Nguyen et al. (2022) and Abbas et al. (2021) emphasizing the usage of basic technologies like recycling and energy-efficient systems. Although these technologies have the potential to improve transparency, streamline logistics, and cut waste, little is known about their uptake and difficulties in emerging economies. This omission restricts our comprehension of how advanced technologies might transform GSCM procedures in environments with limited resources.

Lastly, little study has been done on how consumer behavior affects the effectiveness of GSCM strategies in developing nations. Organizational drivers and hurdles are often the focus of studies like Khan et al. (2020) and Yadav et al. (2023), which ignore the ways in which consumer awareness, preferences, and willingness to pay for green products affect the efficacy of GSCM methods. Designing supply chain models that balance sustainability with market demands requires an understanding of consumer behavior, particularly in emerging areas where cost sensitivity frequently drives purchase decisions. The creation of consumer-centric GSCM policies and practices is hampered by this disparity.

3. METHODOLOGY

This conceptual study employed a systematic literature review approach to explore the relationship between green supply chain management (GSCM) practices and their impact on sustainability and profitability in emerging markets. The study aimed to identify and analyze theoretical frameworks, empirical studies, and case analyses that elucidate the role of GSCM in balancing ecological responsibility with economic growth. The review process involved systematically sourcing and synthesizing literature from peer-reviewed journals, books, and industry reports published between 2015 and 2024. Databases such as Scopus, Web of Science, and

Google Scholar were utilized to ensure comprehensive coverage of relevant materials. Keywords such as "green supply chain management," "sustainability," "profitability," "emerging markets," and "environmental practices" were used to guide the search process. The methodology emphasized integrating diverse perspectives and theoretical insights from sustainability science, supply chain management, and business studies. Special attention was paid to identifying case studies and empirical evidence that highlight the challenges and opportunities of implementing GSCM in emerging market contexts. The findings were synthesized into a conceptual framework, providing clarity on how GSCM practices can drive both environmental sustainability and economic performance. The study also identified research gaps and practical implications, offering actionable insights for businesses and policymakers in emerging markets.

4. DISCUSSION OF FINDINGS

A key tactic for balancing sustainability and profitability is Green Supply Chain Management (GSCM), according to the synthesis of the examined literature. According to studies like those by Widodo et al. (2023) and Monteiro et al. (2020), including green practices like waste reduction, eco-friendly sourcing, and reverse logistics has a favorable influence on both cost effectiveness and environmental consequences. Though certain industries, like agriculture, have made great strides, the literature also shows that other industries, like technology, are lagging behind because of a lack of investment and awareness. The need for a cross-industry framework to improve the efficacy and scalability of GSCM is highlighted by this inconsistent uptake.

An examination of GSCM's capacity to strike a balance between sustainability and profitability demonstrates its dual benefit. According to empirical research, companies who use GSCM see lower operating expenses through waste reduction and energy efficiency, which immediately boosts profitability (Khan et al., 2019; Nguyen et al., 2022). According to case studies of businesses like Unilever and Nestlé, these techniques also improve consumer loyalty and brand perception (Rahman & Zafar, 2020). But striking this balance necessitates taking care of upfront capital expenditures as well as getting over infrastructure and technology obstacles, especially in emerging regions.

The reviewed literature highlights that GSCM poses both a difficulty and an opportunity for emerging countries. According to Agyabeng-Mensah et al. (2020), a lack of infrastructure, lax regulatory frameworks, and restricted access to green technologies prevent broad adoption. However, as demonstrated by growing consumer interest in sustainable products and the growing demand for eco-friendly supply chains worldwide, these same industries provide substantial growth potential (Garcia et al., 2019). Emerging markets can close the gap between sustainability and economic competitiveness by utilizing global collaborations and funding capacity-building.

The significance of policy interventions in advancing GSCM is also emphasized in the discussion. The adoption of GSCM in emerging economies can be accelerated by regulatory support, such as tax breaks for eco-friendly behavior and financial aid for the purchase of environmentally friendly equipment. Furthermore, as Kim and Park (2021) propose, integrating emerging markets into global sustainable supply chains requires local regulations to be in line with international environmental norms. In order to create a trained workforce that can carry out green initiatives, policymakers must also promote awareness campaigns and training programs to overcome cultural hurdles.

All things considered, the results show that GSCM is a strategic tool for raising competitiveness in emerging markets as well as an environmental need. GSCM can boost innovation, cut expenses, and achieve global sustainability objectives by encouraging cooperation between corporations, governments, and academic institutions. There are significant ramifications for emerging economies since effective GSCM implementation can position countries as leaders in sustainable production while promoting economic expansion and tackling urgent environmental issues.

Proposed Framework for GSCM in Emerging Markets

Integrating sustainability into the foundation of supply chain operations should be the primary goal of a workable framework for implementing Green Supply Chain Management (GSCM) in emerging economies. Green procurement, which is obtaining items and raw materials that are ethically created, low in carbon footprints, and environmentally friendly, might be the first step in the framework. Even if this results in greater short-term costs, companies in emerging regions should be encouraged to give preference to suppliers who follow environmental requirements. This is in line with study by Wong et al. (2020), who contend that although green procurement may require large upfront costs, it ultimately saves money and has a good environmental impact. The framework should also emphasize eco-friendly production processes that reduce waste and energy consumption, creating efficiencies that benefit both the environment and the bottom line.

The framework's next phase is to concentrate on logistics integration and reverse logistics. Infrastructure constraints can make effective logistics management more difficult in emerging markets. However, as Chien et al. (2021) point out, utilizing smart logistics technologies like AI, IoT, and data analytics can aid in route optimization, fuel consumption reduction, and emission reduction. In GSCM, reverse logistics—the procedure of sending used goods back for recycling, repair, or resale—can also be quite important. Systems for recycling, refurbishing, and product returns should be implemented by businesses since they not only cut waste but also generate new sources of income. Local market dynamics, like the accessibility of recycling facilities and consumer behavior in emerging economies, should encourage this process.

In order to guarantee the success of GSCM processes, involving stakeholders from many sectors is an essential part of the framework. This involves cooperation between local communities, businesses, non-governmental organizations (NGOs), and government authorities. While NGOs can increase public knowledge of environmental challenges and effective practices, governments in emerging economies can encourage sustainable behaviors through tax exemptions, grants, or subsidies. Such cooperation guarantees that all stakeholders are inspired to give sustainable development top priority, claim Lee and Kumar (2022). Furthermore, fostering a broad cultural change towards sustainability requires training in green supply chain methods and educating local populations about the advantages of GSCM.

Lastly, the framework ought to highlight how sustainability and profitability are intertwined. GSCM should be viewed as a source of competitive advantage rather than as an extra expense. By optimizing resource utilization, cutting operational costs through energy-saving measures, and building their brand value through eco-friendly products and green certifications, businesses can attain sustainable profitability. In addition to advancing environmental objectives, this integrated approach boosts profitability by satisfying the rising demand from consumers for sustainable products. Additionally, as demonstrated by businesses like Patagonia and IKEA, firms in emerging economies will be able to compete in the global economy by integrating GSCM strategy with worldwide sustainability norms. Businesses in emerging areas can promote sustainable growth by giving equal weight to economic and environmental objectives.

5. CONCLUSION AND RECOMMENDATIONS

To sum up, Green Supply Chain Management (GSCM) provides a workable solution for companies in developing nations to balance profitability and sustainability. According to the studied literature, businesses can enhance their financial performance and environmental impact by implementing GSCM techniques, such as reverse logistics, efficient logistics, sustainable production methods, and green buying. Technological developments, government incentives, and stakeholder cooperation can all help to lessen the difficulties that emerging economies face, including poor infrastructure, inconsistent regulations, and cultural opposition. GSCM methods support long-term sustainability objectives in addition to making companies more competitive in the global marketplace. Sustainability and profitability can coexist by incorporating sustainability into supply chains, which can also encourage innovation, lower prices, and draw in eco-aware customers.

According to the findings, companies operating in emerging markets ought to implement a thorough GSCM framework that balances profitability and sustainability. Green buying should be the first step in such a system, which should next cover sustainable production and logistics. In order to optimize their supply chains, businesses should also use smart logistics technology and embrace reverse

logistics, which can generate value through material recycling. The success of GSCM also depends on encouraging stakeholder participation, including alliances with local communities, NGOs, and governments. Initiatives for education and awareness can also assist enterprises and local communities in realizing the long-term benefits of GSCM practices. Lastly, companies will be able to access international markets and become more competitive by combining GSCM with international sustainability requirements.

Businesses are urged to think about the long-term advantages of implementing green supply chain strategies rather than seeing them as an extra expense in light of these findings. Businesses may save a lot of money and add value by concentrating on cutting waste, optimizing energy use, and integrating sustainability into all facets of the supply chain. Additionally, businesses want to take advantage of the rising customer demand for eco-friendly products. Businesses must invest in the required technologies, such as AI and IoT, which can improve logistical efficiency and lower emissions, in order to support the implementation of GSCM.

The study highlights the significance of developing legislative frameworks that encourage sustainable corporate practices for policymakers. Businesses implementing GSCM should be eligible for tax breaks, grants, and subsidies from developing market governments. In order to facilitate green supply chains and logistics, authorities should also concentrate on enhancing infrastructure. This entails funding recycling centers, environmentally friendly transit systems, and renewable energy sources. In order to encourage the adoption of GSCM and guarantee that sustainability programs may benefit both big enterprises and small businesses, policymakers must also cultivate public-private partnerships. The shift to a greener economy will be accelerated by regulatory frameworks that seek to level the playing field and reward companies for their sustainability initiatives.

Last but not least, scholars are urged to investigate the connection between GSCM, sustainability, and profitability in more detail, especially when it comes to emerging markets. Although the literature already in publication offers insightful information, further study is required to fully comprehend the unique opportunities and difficulties faced by companies operating in these sectors. Future research might examine how local cultural characteristics influence customer preferences for sustainable products, how government policies affect the adoption of GSCM, and how green supply chain practices affect long-term financial gains. In order to improve sustainability and profitability, researchers should also investigate how cutting-edge technologies like blockchain and artificial intelligence (AI) might further optimize GSCM in developing markets. By using these channels, academics can help advance a more thorough comprehension of GSCM's potential and its implications for businesses and economies worldwide.

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