



A concise review of green supply chain management within organization reform

Hameedullah Zaheb*, Hedayatullah Karimy, Najib Rahman Sabory, Mir Sayed Shah Danish

Department of Energy Engineering, Faculty of Engineering, Kabul University, Kabul, Afghanistan

Special Issue Article

Open Access

Published

ABSTRACT

Green-supply chain management practices improve organizational performance from a financial and non-financial perspective. This study aims to evaluate the impact of green supply chain strategies on organizational performance. High involvement of waste reduces the efficiency of the supply chain process, which ultimately creates an adverse impact on the performance of an organization. The lack of waste reduction strategies affects the environment in terms of pollution and over-consumption of energy. This study is descriptive, and the SLR (Systematic literature review) approach is used to evaluate the impact of green practices on organizational performance. The green supply chain practices reduce the company's cost because green strategies eliminate valueless elements for customers and increase the price. The research contributes to the field of academics and business as well. From a theoretical point of view, the desired study extends the literature for future scholars. From a business perspective, the selected research suggests strategies to reduce supply chain waste. Secondary research is used to collect the data, and results will be generated after evaluating peer-reviewed articles from authentic journals. It is concluded that green practices are the need of the present business era because businesses have to reduce waste and contribute to environmental protection to get a competitive advantage.

Keywords

- Green supply chain
- Supply chain process
- Organizational performances
- Energy over-consumption
- Organizational assets
- Organizational strategies

Received: January 11, 2022; Revised: March 18, 2022; Accepted: March 24, 2022; Published: June 30, 2022

© 2022 REPA. All rights reserved.

1. Introduction

Green supply chain management (GSCM) adopts sustainable practices in the whole supply chain process, such as eco-friendly product design, recyclable material during production, waste minimization strategies in the logistic operations, and delivery of products [1]. The sustainable supply chain practices believe that the business should adopt those strategies that are environmentally friendly and serve the community because the protection of the environment is the responsibility of the company as well. The GSCM practices also involve lean manufacturing, less energy consumption, and an efficient work process [2]. The traditional supply chain process involves the high cost of production and wastage of material due to poor planning; adopting long routes for logistics is costly and does not add value to the customer. The prime goal of green supply chain management is for the environment, the company and stakeholders. Green supply chain and sustainable practices involve beneficial activities for the environment, community, and economy because society plays a part in developing any business [3].

The current era of business is highly competitive, and organizations include sustainable practices in corporate strategy to gain a competitive advantage. For instance, Macdonald's took the initiative to use recyclable materials to save resources [4]. Moreover, another initiative of using sunlight for their operations store energy for the country. Lean manufacturing is the prime dimension of GSCM in which an organization minimizes waste in the production process. Excessive transportation is costly for an organization during the supply chain process and adds no value to the customer [5]. Moreover, transportation increases

air pollution and destroys the environment as well. The retail industry majorly focuses on lean manufacturing because of the complex supply chain process involving several intermediaries, such as manufacturers, distributors, and wholesalers [6].

GSCM practices improve organizational performance from a financial and non-financial perspective. From an economic point of view, GSCM reduces the company's cost by eliminating waste which ultimately leads to high profitability. Furthermore, efficient processes such as calculated production and reduction in over-processing lessen the company's operating expenses and increase the revenue in the long run [7]. From a non-financial perspective, GSCM is the source of competitive advantage. The protection of climate, community and economy create a positive image of the company in the mind of customers against competitors. The customer of the present era is well aware of sustainable practices because technological advancement and green practices are the best way to achieve a competitive advantage [8]. The study aims to discuss the impact of GSCM and sustainable practices on business performance.

High involvements of waste reduce the efficiency of the supply chain process, which ultimately creates an adverse impact on the performance of an organization. The lack of waste reduction strategies affects the environment regarding pollution and over-consumption of energy [1]. Climate change and environmental and community hazardous damages society, and traditional business activities adversely impact the environment because of poor

planning and accountability. Deforestation, omission of CO₂ due to business activities, and waste disposal at community places are the primary business activities that destroy the environment. Traditional businesses believe that protecting the environment and community is the responsibility, and government and production activities of companies focus on profitability [9]. This review tries to answer these questions:

- 1- How do GSCM practices improve the financial performance of the firm?
- 2- How do sustainable practices contribute to the firm's competitive advantage?

This study evaluates the impact of GSCM practices on firms' financial performance that followed with the analysis of impact of sustainable practices on firms' performance.

The customer of the current era is well aware of sustainable factors and the company has to implement green supply chain strategies in the organization. The desired research provides companies with guidelines to design sustainable systems [10].

2. Literature review

GSCM involves protecting the environment during the supply chain process because the community's safety is part of corporate responsibility. The supply chain process includes sourcing material, manufacturing textile, and distributing the product. The traditional practices are replaced by those not dangerous for the environment [11]. For instance, the new supply chain process elements are used to use an efficient sourcing process, minimizing harmful material and reusing material during production. There are no standard rules and regulations of green supply chain practices that improve the firm's economic, social, and environmental performance. Still, eco-friendly product designs and infrastructure is part of the green supply chain process. Government must play a role in developing sustainable rules for businesses because climate and community issues prevail in the society at fact pace [12].

2.1. Sustainable practices (economic, social, and environmental) and firm performance

Sustainable practices of businesses are something beyond the supply chain cycle of the company. The modern approach believes that every member of society has the right to live healthy lives. Nestle adopts sustainable practices during the whole supply chain process, starting from farming raw materials. Nestle invests in the training of farmers and makes them capable enough to earn their living in a better way [13]. The desired act of Nestle is a part of sustainable practices. Moreover, protecting the forest and free food for poor communities is another sustainable act of Nestle. Furthermore, the company uses recyclable water in production because water is a scarce resource and the protection of the limited resource is the

responsibility of business. In the current business scenario, innovation in product design is a sustainable feature that satisfies the community because community satisfaction is the source of competitive advantage [14].

Sustainable practices positively impact firms' performance because they create healthy goodwill of the product and business in the customers' minds. Although sustainable activities need more effort in production, they result in long-run cost reduction. Toyota's production system is one the most excellent illustration of sustainable practices. Toyota believes that the protection of the environment is a massive challenge for every business, and sustainability should be part of the corporate strategy of every company [15]. Toyota designed a zero-emission system in vehicles and claimed that 50% to 70% of their cars work on zero-emission vehicles because the emission of CO₂ is dangerous for the environment and depletes the ozone layer. Toyota minimize waste through zero level emission, which enhances the company's sales volume [16].

2.2. Impact of green supply chain practices (GSCM) on financial performance

Scholars argue that customers are willing to pay more for environmentally friendly products. Nike holds a great rank in global sportswear and believes in adopting green supply chain practices. Nike stated that it is vital to convincing suppliers to adopt cost-saving and environmentally-friendly features. For this purpose, Nike proposed a sustainable supply chain cycle that comprises several steps such as "plan, design, sell, use and reuse [17]." The degree of reuse involves the recycling of material. Adobe system is another best illustration of green supply chain practices associated with protecting the climate. The company avoids plastic use during the software packaging and manages to use cardboard in the software packaging to protect the environment [18].

"Shaklee" is an American company that produces nutritional products, and it believes that protection of the environment is beneficial for the business and enhances the quality of life. The company ranks high for its first global initiative of CO₂ emission certification. Moreover, the company's motive is to develop a Co₂ emission-free environment. The firm's performance is associated with the sales volume, which is the symbol of profitability, and cost-savvy activities protect the environment and enhance the company's profitability [19].

3. Hypothesis

- There is a strong association between GSCM and the firm's financial performance.
- There is a strong association between sustainable practices (economic, social, and environmental) on the firm's operational performance.

4. Methodology

The research methodology comprises all the steps between data collection and interpretation. It includes selecting an appropriate research design, accurate sampling and data collection techniques, and the choice of proper analysis tools. The study is exploratory, and the SLR (Systematic Literature review) approach is used to answer the research questions. The conclusive arguments are collected from the literature of 20 articles of authentic journals.

Sustainable supply chain practices adopt supply chain functions such as production, product design, and purchasing by considering sustainable factors. The project is planned and controlled so that the deliverables of the project are beneficial for stakeholders and society as well. The sustainable factors are generally of three types divided into different dimensions [20]. Firstly, environmentally sustainable practices are vital to plan and execute the project, such as using resources that could not harm the climate and do not create pollution. The businesses of the modern era pay attention to environmental practices at the time of purchase of equipment and other material because the customer is willing to pay higher for environmentally friendly practices [10]. The construction industry follows ecologically friendly rules such as using recyclable material and impellent power-saving equipment in the property and minimum logistic operation for material shifting because logistic activities and transportation cause pollution. Sustainable practices reduce the project's cost and benefit the environment [12].

Sustainable practices participate in the economic growth of high return on investment, employee benefits, and cost-saving techniques. The prime motive is to maximize shareholders' wealth by adopting cost-efficient methods such as purchasing energy-efficient material during the construction project [1]. Economic practices are closely linked with environmentally friendly practices such as the use of recyclable material is beneficial for the environment and consumes low cost as well. However, sustainable practices do not limit the utilization of physical resources, but the employment opportunities for society are part of sustainable practices [13].

Community protection and benefit are the responsibility of every business because social benefits are the source of competitive advantage for companies. The socially sustainable practices comprise awareness programs, educational programs, and development programs for the community [15]. From the construction point of view, housing schemes and infrastructure development at low rates are a positive act for those who can't afford the expensive place. Social practices are vital in the real estate and construction sector because of the high involvement of daily wage people [17]. Appropriate labor policies and the high wage rate are essential community practices because daily wage workers are part of the community. Moreover,

the fair-trade policies which are not harmful to the community are part of sustainable practices as well. Organizations adopt those activities that are beneficial for all company stakeholders, and one of the major stakeholders is customers [18].

Traditional businesses do not pay much attention to sustainable practices because of the lack of awareness amongst the business community. Moreover, the enterprises of the classic era believe that investment in environmental and social practices is costly for business, and it is the responsibility of the government to protect the community and environment. On the contrary, modern era businesses consider environmentally friendly practices a source of competitive advantage. Moreover, businesses further believe that community protection is the responsibility of both government and the business community [19]. Sustainable factors reduce the company's operation cost, which ultimately enhances the company's profitability. The minimum transportation and storage cost reduces the overall cost of the company [20].

Businesses must adopt those practices suitable for health, human safety, and community development. Project management involves several activities such as resource planning, execution, accountability, and corrective actions. The project manager must ensure that all activities benefit the stakeholders and society [11]. Although profit maximization is the aim of every business, the business practices must be ethical, contributing to society's development. Corporate Social Responsibility (CSR) is a concept of social welfare which is mainly associated with businesses. The current business is highly competitive, and customer is well aware of environmental protection. Companies especially adopt welfare activities such as forestation and appropriate decomposition of waste to develop goodwill of the brand in the mind of customers [14].

In the construction industry, a lot of waste is involved, which does not add any value to the customers but proves costly to the environment, such as the use of harmful chemical material excessive use of the vehicle over the production of the material [15]. It is the responsibility of the businesses to adopt green production and housing strategies that do not involve waste, such as fewer use of chemicals and use of energy-efficient machinery as well. From an economic point of view, the construction industry tends to occupy maximum labor, and protection of labor rights is mandatory to maintain a healthy working environment. Social and environmentally sustainable practices are beneficial for businesses in a couple of ways. Firstly, it enhances the goodwill and reputation of the company because a customer of the present era is conscious of the protection of community and cleanliness of the environment and prefers to purchase products from those businesses serving the environment besides their business activities [19]. Secondly, sustainable practices contribute to the country's economy, and the country's economic development is beneficial for companies in the

long run. Sustainable activities fulfill the need of customers and allow an organization to position the product differently in the mind of customers against competitors [1].

In developed business environments such as the United States, the retail industry is peak. Businesses pay significant attention to green practices, including low waste and high customer value. Social and community practices bring more employment, resulting in a better living standard. Sustainable practices depend on an organization's policies, and current business policies are environmentally friendly and employee-centered [2]. However, fewer businesses are not paying attention to the sustainable factors and follow the traditional business models for their growth. A transparent dropdown is observed in the sales of those businesses that follow conventional business models because of the change in business dynamics. The study aims to evaluate the impact of sustainable factors social, environmental, and economic factors on the execution of project management plans. The studies further highlight the benefit of adopting sustainable practices for construction businesses [3].

The research contributes to the field of academics and business as well. From a theoretical point of view, the desired study extends the literature for future scholars. The selected research suggests strategies to reduce supply chain waste from a business perspective.

5. Recommendation

Based on the above discussion, the following recommendations are drawn.

- Companies should adopt sustainable practices because the business's success depends on the community's lifestyle.
- Company should convince a supplier to make sustainable practices part of corporate supply chain strategy to achieve competitive advantage.

6. Limitation

The limitation of the study is as follows.

- Time: Time is the major constraint in the research. The shortage of time affects the accuracy of the analysis.
- Lack of access to data resources: The lack of access to authentic data resources affects the quality of a systematic literature review.

7. Conclusion

The above analysis and discussion concluded that the supply chain is the backbone of every business. The implementation of green practice improves the company's performance and plays a part in the community's betterment. The green supply chain (GSCM) incorporates environmentally friendly product design, recyclable materials during production, waste minimization measures in logistic

operations, and product delivery into the whole supply chain process. The sustainable supply chain methods believe that businesses should employ environmentally friendly and community-serving strategies since environmental preservation is the company's duty. Lean manufacturing, reduced energy use, and an efficient work process are GSCM methods. The typical supply chain method entails high manufacturing costs and material waste owing to poor planning; extensive logistical routes are costly and bring little value to the client. To achieve a competitive edge in today's business world, firms must include sustainable practices in their company strategy. Macdonald's, for example, took the initiative to utilize recyclable materials to conserve resources. Furthermore, another effort that uses sunshine to power its operations saves energy for the country. The primary dimension of GSCM is lean manufacturing, which involves reducing waste in the manufacturing process. Excessive transportation provides no value to the consumer and is costly to a business during the supply chain process.

References

- [1] Diab S, AL-Bourini F, Abu-Rumman A (2015) "The impact of green supply chain management practices on organizational performance: A study of Jordanian food industries" *J Manag Sustain* (vol. 5, no. 1, pp. 149–157) <https://doi.org/10.5539/jms.v5n1p149>
- [2] Abu Seman NA, Govindan K, Mardani A, Zakuan N, Mat Saman MZ, et al. (2019) "The mediating effect of green innovation on the relationship between green supply chain management and environmental performance" *J Clean Prod* (vol. 229, pp. 115–127) <https://doi.org/10.1016/j.jclepro.2019.03.211>
- [3] Lopes de Sousa Jabbour AB, Vazquez-Brust D, Jose Chiappetta Jabbour C, Latan H (2017) "Green supply chain practices and environmental performance in Brazil: Survey, case studies, and implications for B2B" *Ind Mark Manag* (vol. 66, pp. 13–28) <https://doi.org/10.1016/j.indmarman.2017.05.003>
- [4] Choi D, Hwang T (2015) "The impact of green supply chain management practices on firm performance: the role of collaborative capability" *Oper Manag Res* (vol. 8, no. 3, pp. 69–83) <https://doi.org/10.1007/s12063-015-0100-x>
- [5] Tachizawa EM, Gimenez C, Sierra V (2015) "Green supply chain management approaches: drivers and performance implications" *Int J Oper Prod Manag* (vol. 35, no. 11, pp. 1546–1566) <https://doi.org/10.1108/IJOPM-01-2015-0023>
- [6] Younis H, Sundarakani B, Vel P (2016) "The impact of implementing green supply chain management practices on corporate performance" *Univ Wollongong Dubai* (vol. 26, no. 3, pp. 216–245) <https://doi.org/10.1108/CR-04-2015-0024>
- [7] Jabbour ABL de S, Frascareli FC de O, Jabbour CJC (2015) "Green supply chain management and firms' performance: Understanding potential relationships and the role of green sourcing and some other green practices" *Resour Conserv Recycl* (vol. 104, pp. 366–374) <https://doi.org/10.1016/j.resconrec.2015.07.017>

- [8] Laari S, Töyli J, Solakivi T, Ojala L (2016) "Firm performance and customer-driven green supply chain management" *J Clean Prod* (vol. 112, pp. 1960–1970) <https://doi.org/10.1016/j.jclepro.2015.06.150>
- [9] Cherrafi A, Garza-Reyes JA, Kumar V, Mishra N, Ghobadian A, et al. (2018) "Lean, green practices and process innovation: A model for green supply chain performance" *Int J Prod Econ* (vol. 206, pp. 79–92) <https://doi.org/10.1016/j.ijpe.2018.09.031>
- [10] Balasubramanian S, Shukla V (2017) "Green supply chain management: an empirical investigation on the construction sector" *Supply Chain Manag Int J* (vol. 22, no. 1, pp. 58–81) <https://doi.org/10.1108/SCM-07-2016-0227>
- [11] Al-Ghwayeen WS, Abdallah AB (2018) "Green supply chain management and export performance: The mediating role of environmental performance" *J Manuf Technol Manag* (vol. 29, no. 7, pp. 1233–1252) <https://doi.org/10.1108/JMTM-03-2018-0079>
- [12] Malviya RK, Kant R (2015) "Green supply chain management (GSCM): a structured literature review and research implications" *Benchmarking Int J* (vol. 22, no. 7, pp. 1360–1394) <https://doi.org/10.1108/BIJ-01-2014-0001>
- [13] Masa'deh R, Alananzeh O, Algiatheen N, Ryati R, Albayyari R, et al. (2017) "The impact of employee's perception of implementing green supply chain management on hotel's economic and operational performance" *J Hosp Tour Technol* (vol. 8, no. 3, pp. 395–416) <https://doi.org/10.1108/JHTT-02-2017-0011>
- [14] Lee SM, Choi D (2021) "Supply chain governance mechanisms, green supply chain management, and organizational performance" *Sustainability* (vol. 13, no. 23, pp. 13146) <https://doi.org/10.3390/su132313146>
- [15] Mangla SK, Kumar P, Barua MK (2015) "Flexible decision modeling for evaluating the risks in green supply chain using Fuzzy AHP and IRP methodologies" *Glob J Flex Syst Manag* (vol. 16, no. 1, pp. 19–35) <https://doi.org/10.1007/s40171-014-0081-x>
- [16] Zhu Q, Feng Y, Choi S-B (2017) "The role of customer relational governance in environmental and economic performance improvement through green supply chain management" *J Clean Prod* (vol. 155, pp. 46–53) <https://doi.org/10.1016/j.jclepro.2016.02.124>
- [17] Shibin KT, Gunasekaran A, Papadopoulos T, Dubey R, Singh M, et al. (2016) "Enablers and barriers of flexible green supply chain management: A total interpretive structural modeling approach" *Glob J Flex Syst Manag* (vol. 17, no. 2, pp. 171–188) <https://doi.org/10.1007/s40171-015-0109-x>
- [18] Schmidt CG, Foerstl K, Schaltenbrand B (2017) "The Supply Chain Position Paradox: Green Practices and Firm Performance" *J Supply Chain Manag* (vol. 53, no. 1, pp. 3–25) <https://doi.org/10.1111/jscm.12113>
- [19] Mishra D, Gunasekaran A, Papadopoulos T, Hazen B (2017) "Green supply chain performance measures: A review and bibliometric analysis" *Sustain Prod Consum* (vol. 10, pp. 85–99) <https://doi.org/10.1016/j.spc.2017.01.003>
- [20] Wu K-J, Liao C-J, Tseng M-L, Chiu ASF (2015) "Exploring decisive factors in green supply chain practices under uncertainty" *Int J Prod Econ* (vol. 159, pp. 147–157) <https://doi.org/10.1016/j.ijpe.2014.09.030>