Innovations

Effect of Green Supply Chain Management on Marketing Performance of Unilever Nigeria PLC

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Abstract

The study examined the effect of green supply chain management on marketing performance of Unilever Nigeria Plc. The study's research design approach was a cross-sectional survey method used in this study. Stratified random sampling technique was used for the study. Structured questionnaire was the research instrument used for the study. The population of the study comprised of 1,252 employees of Unilever Nigeria Plc, Lagos, Nigeria. The sample sizeused for the study consisted of 291 employees of the company. Copies of validated structured questionnaire were used for data collection. A test-retest approach was utilized to determine the research instrument's reliability. Descriptive statistics and multiple regression analysis are the statistical techniques of data analysis used. Findings showed that reverse logistics, green purchasing and product eco-design have significant positive relationship with marketing performance. The study concluded that green supply chain management practice has positive effect on marketing performance. It was recommended that companies need to invest substantial resources in decreasing their environmental effect, creating and implementing alternative techniques, minimizing energy usage, simplifying packaging, and increasing the use of recycled material, among other things.

Keywords: Green Supply Chain Management, Reverse Logistics, Green Purchasing, Product Eco-Design.

Introduction

Industrialization has long been thought to be the path to prosperity and a better life, but research has shown that, while it improves living conditions in some areas, it also has an influence on the environment, contributing to climate change. Industrialization encompasses not only technology improvements, but also economic and social transformations in human society. Industrialization carries with it both benefits and drawbacks. It poses a serious threat to human health and the health of future generations. As a result, businesses and consumers are leaning toward environmentally friendly products, which are our last opportunity to make the world a more sustainable place for us (Ahmed, Asim, &Manzoor, 2020).Green supply chain management (GSCM) is a collection of business practices that help organizations enhance their environmental performance and, as a result, their image. As a result, more companies are emphasizing the importance of establishing and strengthening green practices (Chen &Kitsis, 2017; Taylor &Vachon, 2018). The majority of companies try to optimize resource efficiency while limiting negative consequences on human health, productivity, and the environment. Supply chain management is a manufacturing company's main activity. Customer expectations are taken seriously by many manufacturers, and present customers are well-informed and primarily concerned about the environment. They exert pressure on businesses to avoid environmentally harmful practices and to protect the environment (Mallikarathna, &Chathurani, 2019).Customers are becoming increasingly conscious of environmental issues and seeking environmentally friendly products (Thoo, Huam, Zuraidah&Siti, 2015).

While sustainability is a popular subject right now, some companies are already excelling at it. Unilever's well-known consumer brands include Luxand Lifebuoy soaps, Omo detergent, Blue band margarine, Close-up toothpaste, Vaseline petroleum jelly, Lipton beverages etc. Unilever valued a sustainable supply chain long before the rest of the world did – the company preferred providing food and hygiene to developing countries as early as the early 1900s – but in 2010, the company went all-in, launching the Unilever Sustainable Living Plan, with the goals of helping more than one billion people improve their own health and well-being, halving the environmental footprint associated with products, and achieving 100 percent green staining.

In only a few years, Unilever has worked with its business partners and stakeholders to send zero trash to landfills around the world. Other sustainable supply chain accomplishments include: By

lowering CO2 emissions by one million tons, the company has saved $267 million. Green procurement accounts for 64% of all palm oil utilized in their production operations. In Europe, the corporation buys all of its electricity from renewable sources. Unilever's leadership quickly understood that a large chunk of their environmental footprint was outside their direct control, thus supplier alliances became a top priority.

Green issues are important from a macro perspective because they influence the design of new green products as well as the formation of markets for environmentally friendly products (Petljak et al., 2018).From the inbound logistics phase of material management to the outward logistics stage of consumer disposal and reverse logistics' closing-the-loop concept, GSCM is designed to incorporate environmental criteria into decision-making. Product design, resource selection and procurement, manufacturing procedures, final product distribution to customers, and post-consumer disposal are all covered under supply chain management (Srivastava, 2007). GSCM is more than just being environmentally sensitive; it is also a good business strategy and a commercial value driver. GSCM has been operationalized in a variety of methods by the researchers.

The Green Supply Chain Management Practice (GSCMP) maximizes resource efficiency and is seen as a solution to environmental challenges and consumption patterns throughout the supply chain. Adoption and performance evaluation of GSCM are important for survival in an increasingly competitive environment. Green supply chain management solutions were developed in response to the negative effects of supply chain management (SCM) practices on the environment (Kaur, Sidhu, Awasthi, Chauhan&Goyal, 2018). According to the researchers, GSCM approaches should be embraced and deployed for a variety of reasons. Government, market, and supplier customer needs, as well as social pressure to protect the environment (Mumtaz, Ali, &Petrillo, 2018) and boost the firm image (Longoni&Cagliano, 2018), are examples of these variables (Mathiyazhagan, Datta, Singla, &Krishnamoorthi, 2018).

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Researchers looked at the CSFs for GSCM implementation and determined a number of essential elements to consider when putting these practices in place. Researchers have detected two types of CSF impacts: internal and external influences. An example of a crucial internal success element for GSCM execution is management commitment (Agyemang et al., 2018), understanding of the GSCM's implementation effects (Irum, Qureshi, Ashfaq, Sami, Bhatti, & Umar, 2018). On the other side, it's government, market, supplier, customer, and environmental issues, as well as corporate external pressures (Zhu, Sarkis, & Lai, 2013), in the execution of the GSCM, they were treated as external issues (Mathiyazhagan et al., 2018).Customers are important to a company's long-term success. As a result, it will be worthwhile to look into the influence of green supply chain management (GSCM) methods on the marketing performance of Unilever Nigeria Limited.

Statement of the Problem

Despite the fact that multiple studies have demonstrated the importance of GSCM implementation in addressing environmental concerns and challenges, some businesses remain doubtful of its feasibility, while others confront severe impediments. As a result, organizations are finding it more difficult to deal with various internal and external developments at the same time. Profit cannot be the sole motivation for a company's long-term existence and growth. Meanwhile, they must consider social, economic, and environmental considerations. Industries are ready to shift from traditional strategies to new ways of dealing with environmental concerns and gaining customers' trust; one notable shift is the transfer from supply chain management (SCM) to global supply chain management (GSCM).

Businesses may benefit from switching from SCM to GSCM, but there are a number of challenges to solve, including cost constraints and support manufacturing. According to Unilever executives, what is assessed and rewarded gets done. They realized that putting sustainable supply

chain and green procurement efforts on the back burner until they had more time would assure that they would never be executed. Making sustainability a corporate aim ensures that it will be a focal point for the organization regardless of what else is going on. It was challenging to get suppliers on board, but changing how Unilever products are used downstream proved much more difficult. Unilever started by focusing on the "five levers of change": making it intelligible, simple, appealing, rewarding, and habit-forming.That was a wonderful start, but corporate leadership knew that putting those five levers into action would require assistance from downstream partners.

Objective of the Study

The general objective of the study is to examine the effect of green supply chain management on marketing performance of Unilever Nigeria Plc. The specific objectives are to:

i. Evaluate the effect of reverse logisticson marketing performance.
ii. Ascertain the influence of green purchasing on marketing performance.
iii. Determine the effect of product eco-design on marketing performance.

Research Hypotheses

$H1_a$: Reverse logistics has a positive significant relationship with marketing performance.

$H2_b$: Green purchasing has a positivesignificant relationship with marketing performance.

$H3_c$: Product eco-design has a positive significant relationship with marketing performance.

Review of Related Literature

Concept of Green Supply Chain Management

In the industry, the terms Supply Chain Environmental Management (SCEM) and Green Supply Chain Management (GSCM) are frequently used to describe the monitoring of suppliers' environmental performance. On the other side, the practice of mindful trading has gotten a lot of press recently. A rising number of businesses are considering incorporating ecological principles into their policy designs (Zhu, &Sarkis, 2004).Companies are offered a number of incentives to help them become more environmentally conscious. The GSCM concept was introduced and implemented for a variety of reasons (Wu, 2213),Just a few examples include market

probabilities, trading efficiency, regulatory compliance, and risk management (Yang, & Lien, 2018).

GSCM emerges as a crucial new technique for businesses to reduce their environmental impact at any stage along a product's manufacturing chain and throughout its life cycle (Longoni, Luzzini, &Guerci, 2018). Mumtaz et al. (2018) conducted research in Pakistan to see how GSCM practices affect organizational performance. They examine four GSCM techniques. The first category is known as internal practices, and it includes procedures that the corporation has established, such as organizational help. The second is about how third parties, like as suppliers, consumers, and the government, behave. Finally, there was investment recovery, which dealt with excess and waste materials, as well as ecodesign, which is the process of developing and manufacturing ecologically friendly products.Agyemang et al. (2018) looked into the barriers to GSCM adoption in the West African cashew industry and discovered three major issues: a lack of top-level commitment, integrated management information, and traceability mechanisms. The research was based on a sample of Chinese businesspeople.

Product recycling, organizational involvement, and life cycle management are three important GSCM aspects, according to Hu & Hsu (2010). Hu & Hsu use supplier management as an example of GSCM external factors (2010). Green design and green production, according to Pourjavad&Shahin (2018), are the most important components that have a significant impact on corporate success. Green purchasing, green logistics, and supplier collaboration are the three dimensions of GSCM, according to Petljak et al. (2018). In the literature, drivers of GSCM have been identified as influences that motivate firms to include green practices into their SCM (Dhull&Narwal, 2018).These and other drivers were examined and evaluated in the current study under the CSFs of GSCM implementation, according to past studies (Luthra, Garg, &Haleem, 2016; Raut, Narkhede, &Gardas, 2017; Mathiyazhagan et al., 2018; Prasad, Pradhan, Gaurav, Chatterjee, Kaur, Dash, &Nayak, 2018).

Manufacturing companies in India, for example, are involved in a variety of industries (Mumtaz et al., 2018), important determinants for GSCM adoption have been investigated in Croatian food retail outlets (Petljak, Zulauf, Tulec, Seuring, & Wagner, 2018), automobile industry in China (Dou, Zhu, &Sarkis, 2018), cashew industry in West Africa (Agyemang, Zhu, Adzanyo, Antarciuc, & Zhao, 2018), construction industry in India (Mathiyazhagan et al., 2018), and

electrical and electronic companies in Taiwan (Hu & Hsu, 2010). Several studies examining GSCM implementation were conducted in the same context, using samples of firms from various countries (Wang, Wang, Zhang, & Zhao, 2018).

Jayant and Tiwari reviewed 365 papers on GSCM from 1996 to 2016 and found the following GSCM-related parameters (2018): Green procurement, ecological design, ecological processes, green purchasing, green production, and green marketing are all examples of green acquisition. GSCM techniques include internal environmental management, eco design, green purchasing, consumer participation, and investment recovery (Yildizankaya&Sezen, 2019; Zhu &Sarkis, 2004). Foo et al. (2019) categorized green practices into five categories: green design, green sourcing, green manufacturing, green distribution, and reverse logistics. Wang et al. (2018) presented the GSCM framework, which is based on internal and external green practices.

Marketing Performance

GSCM activities have been found to boost performance in many studies; however, the issue is compounded by the fact that different GSM practices have been studied and performance has been classified differently by specialists (Kliestikova, Krizanova, Corejova, Kral, &Spuchlakova, 2018; Filimonova, Komarova, &Mishenin, 2020). Environmentally friendly practices have a favorable impact on performance depending on the type of GSCM, as the responsive effect has a positive impact while the assertive effect has no discernable benefit (Laosirihongthong, Dotun, &Keah, 2013).The low-cost strategy has a negative impact on GSCM performance because suppliers have a positive impact (Vachon&Klassen, 2005). Based on GSCM practices, the company's performance can be divided into four categories: environmental, operational, economic, and organizational.

Reverse Logistics

Employee recognition of reverse logistics' strategic importance has been recognized as a critical trend in GSCM, and it has been established that good reverse logistics networks can provide appealing financial benefits while also increasing a company's competitiveness (Büyüközkan&ifçi, 2012). Because reverse logistics has such a large impact on greening the

supply chain, its growth often lags behind that of other GSCM components (Xie, & Breen 2012). However, most developing nations are still in the early stages of reverse logistics development, as per Hung & Wang (2009), regardless of the fact that they are increasingly responsible for a significant portion of global production.They went on to remark that most reverse logistics research is done in wealthier countries. According to previous research, the following reverse logistics practices exist: 1) returns and reprocessing; 2) recovery, recycling, and reuse; 3) redistribution; 4) final product elements; and 5) packaging materials (Laosirihongthong, Adebanjo, &Choon, 2013). As a result, from the perspective of the supply chain's focal company, reverse logistics services apply to both upstream and downstream supply chains (Hung, & Wang, 2009).

Eco-Design

Eco-design (ED) is a term used to describe activities done during the product development process with the purpose of lowering a product's environmental impact throughout its life cycle, from raw material acquisition to manufacturing, consumption, and eventually product disposal (Zaid, Jaaron, & Bon, 2018). As per Golicic and Smith (2013), an environmental program proposed by the United Nations in 1997 stated that ecofriendly designs should incorporate environmental aspects at each stage of the product development phase so that the product has the least environmental impact throughout its life cycle. As a result, green design is an important part of the GSCM's policy (Chardine-Baumann &Botta-Genoulaz, 2014).

Green design, according to Seuring& Müller (2008), aims to reduce a product's environmental impact while preserving its cost and use. Eco-design concepts include creating items that use less material and energy, can be reused, recycled, and its elements and parts may be recovered, and use fewer hazardous materials and production techniques (Zhu &Sarkis, 2004; Zhu et al., 2005; Zhu et al., 2013; Zhu et al., 2008).

Green design, according to Tseng et al. (2013), is the production of ecologically conscious products or services. It necessitates a careful evaluation of design issues such as waste management, resource conservation, and pollution prevention.According to Lin, green design is linked to product safety, risk management, resource conservation, waste management, and pollution control (2013). A well-designed product, according to Büyüközkan&ifçi (2012),

prevents the use of hazardous or restricted materials during manufacturing and reduces waste. The design of disassembly, according to Tseng et al. (2013), will serve as a firm foundation for the design of remanufacturing and recycling.

Eco-design aims to make things that enhance environmental awareness and waste management, according to Mohtashami, Aghsami, and Jolai (2019). Jassim, Al-Mubarak, and Hamdan (2020) define eco-design as an environmental management system that incorporates environmental issues into procurement operations.

Eco-design adoption allows the company to improve resource efficiency and reduce waste by modifying product dimensions and allowing product recycling (Khan &Qianli 2017). Changing the product size and making it recyclable, according to Gábriel (2016), does not risk crucial product attributes such as cost and performance. Thamsatitdej, Boon-itt, Samaranayake, Wannakarn, and Laosirihongthong (2017) claim that eco-design aids a company's integration of the notion of sustainability throughout the supply chain, resulting in improved environmental performance. According to Saeed, Jun, Nubuor, Priyankara, and Jayasuriya (2018), eco-design has a positive relationship with environmental performance, and reducing a product's environmental effect increases environmental performance.Overall, eco-design is necessary for the growth of new markets and the promotion of product innovation that leads to positive consequences (Das 2018; Kim & Chai 2017).

Green Purchasing

Green purchasing (GP) is a term used to describe environmental approaches for reducing waste and increasing the renewal of acquired goods (Min & Galle, 2001). Green purchasing takes into account environmental considerations in a variety of methods, purchasing rules, and programs. As a result, green purchasing guarantees that things acquired are environmentally friendly, with non-toxic components, recyclability, and reusability (Foo et al., 2019). Engaging with suppliers is at the heart of green purchasing. Companies might provide suppliers design standards for green bought items that must contain environmental issues (Shao &Ünal, 2019). Green purchasing strategies include eco-labeling, environmental cooperation with suppliers, supplier environmental audits, supplier environmental management system certifications, and second-tier supplier environmental evaluation (Zhu et al., 2005; Zhu et al., 2013; Zhu et al., 2008).

Green purchasing is defined as an organizational process that involves acquiring raw materials for use in the manufacturing process while simultaneously considering environmental factors (Abdel-Baset, Chang &Gamal 2019). Businesses that employ green purchasing, according to Le (2019), can carefully select things and services from suppliers who are less harmful to the environment. Including potential suppliers in the early stages of raw material procurement is crucial. By integrating the supplier early in the process, the organization can avoid acquiring environmentally harmful goods (Altaf, Ali & Weber 2020; Neramballi, Sequeira, Rydell, Vestin& Ibarra 2017).

Engaging with suppliers, according to Jassim et al. (2020), can assist reduce environmental impact by purchasing green and recyclable materials. According to Yu, Zhang, and Huo (2017), collaboration with suppliers can also help solve environmental issues and improve environmental performance. Al-Ghwayeen&Abdallah (2018) investigated the impact of green supply chain practices on green performance and discovered that green purchasing is positively connected with environmental performance. Finally, De Sousa Jabbour, Vazquez-Brust, Jabbour, and Latan (2017) propose a relationship between environmental performance and green purchasing.

Theoretical Review

The natural resource-based approach served as the theoretical framework for this inquiry (Hart & Dowell, 2011). The NRBV is based on the resource-based perspective (RBV) of the company (Barney, 1991; Wernerfelt, 1984a). Firms with superior resources, according to the RBV, gain a competitive advantage (Wernerfelt, 1984b, 1995). VRIN, on the other hand, contributes to long-term competitive advantage by being valued, unusual, non-substitutable, and inimitable (Barney, 1991). Despite the fact that the RBV is one of the most comprehensive frameworks for explaining competitive advantage, Hart claims that it ignores the importance of a firm's relationship with the environment (1995).

He asserted that, in the coming decades, competitive advantage will most likely be built on attributes such as waste reduction, green product design, and technological development collaboration with poor countries. This is now the case, and GSCM is the expression of NRBV, according to us. The fundamental concepts of NRBV have been widely accepted throughout study (Chan, 2005; Cousins et al., 2019; Kim & Kraft, 2017; MalekiMinbashrazgah&Shabani, 2019).

Method

The study used a cross sectional survey research design approach as its survey research design method.It was adopted because it helped the researchers to collect data at a particular point in time. The population of the study comprised of 1252 staff of Unilever Nigeria Plc, . The sample size was ascertained by using Krejcie& Morgan (1970) sample size determination table. The approximate number of two hundred and ninety-one (291) respondents formed the sample size of the study. Stratified random sampling technique was used for the study. This technique, appreciates that a heterogeneous sample population have various homogeneous classes within it. Copies of validated structured questionnaire were used for data collection. Three separate measures relating to the study variables are included in the questionnaire form.To validate the instrument for data collection, the questionnaire was given to renowned expert in the field of marketing to cross check. A test-retest technique was utilized to determine the instrument's reliability. Cronbach's Alpha test score was set at 0.7 as the recommended coefficient value (Hair, Bush and Ortinau, 2006). All of the items yielded favorable, reliable outcomes (reverse logistics:0.719, green purchasing: 0.722 andproduct eco-design:0.717) in general since they were above 0.7 it is said that the instrument is reliable. The statistical techniques of data analysis employed includes: descriptive statistics and multiple regression analysis.

The equation's generic form for predicting MP= $\beta_o + \beta_1 RL + \beta_2 GP + \beta_3 PE +$

Results of Data Analysis

From the 291 copies of questionnaire that were administered, 289 were returned and as valid and considered for analysis, representing a response rate of 99%. 49% of the employees are male and 51% are female. Majority (65%) of the employees are between the ages 18-35. In terms of educational level, most of the employees (62%) are HND/B.Sc holders. 55% of the employees have been working for Unilever between 1-5 years, 45% of them have been working for more than 5 years in Unilever.

Table 1.Multiple regression analysis for green supply chain management practice and marketing performance

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-2.113	.638		-3.313	.001
	Reverse Logistics	.315	.039	.270	8.027	.000
	Green Purchasing	.279	.042	.254	6.581	.000
	Product Eco-Design	.514	.039	.503	13.215	.000

a. Dependent Variable: Marketing Performance

MP = -2.113+ 0.315×RL + 0.279×GP + 0.514×PE

Table 2. Analysis of Variance

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	388.614	3	129.538	399.745	.000[b]
	Residual	92.355	285	.324		
	Total	480.969	288			

a. Dependent Variable: Marketing Performance

b. Predictors: (Constant), Reverse Logistics, Green Purchasing, Product Eco-Design.

Table 3. Model Summary

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.899[a]	.808	.806	.5693

a. Predictors: (Constant), Reverse Logistics, Green Purchasing, Product Eco-Design

Discussion of Findings

Reverse logistics has a favorable effect on marketing performance (= 0.270, P 0.05), according to the regression analysis in table 1. The test result for hypothesis H1 revealed a positive and significant association between reverse logistics and marketing performance (0.000 0.05).

Green purchasing has a favorable effect on marketing performance (= 0.254, P 0.05), according to the results of the regression analysis in table 1. The test result for hypothesis H2 revealed a favorable significant association between green purchasing and marketing performance (0.000 0.05).The result is in agreement with Shao &Ünal(2019) finding that using the green purchasing idea enables firms to provide design standards to suppliers that must integrate environmental aspects for green purchases.

Also the regression analysis result in table 1 showed that product eco-designhas a higher positive effect on marketing performance ($\beta = 0.503$, 0.05). Hypothesis H3's test result revealed a positive significant association between product eco-design and marketing performance (0.000 0.05). The end result is satisfactorywith Khan &Qianli(2017) finding that companies can enhance resource efficiency and reduce waste by altering product sizing and enabling product recycling by eco-design incorporation.

The *F*-ratio in table 2 exhibited that green supply chain management practice statistically significantly predict marketing performance, $F = 399.745$, 0.000 < 0.05. This result showed that the regression model is significant and it is a good fit of the data.

Table 3 shows that the factors of green supply chain management were responsible for 80.6 percent of the change in marketing performance.Findings showed that reverse logistics, green purchasing and product eco-designhas positive significant relationship with marketing performance.

Conclusion

The study concluded that green supply chain management has positive significant effect on marketing performance.Eco-design enables a company to integrate the concept of sustainability

across its supply chain, resulting in better environmental performance. Green purchasing allows a company to carefully choose items and services from a supplier that are less detrimental to the environment. Green supply chain management has long been seen as a critical cornerstone for companies seeking to improve their efficiency.

Recommendations

Strong leadership and tangible methods are essential for the execution of environmentally friendly policies. For a cleaner and more sustainable environment, businesses should place a greater emphasis on green supply chain management.

Businesses should invest significant resources in decreasing their environmental effect, creating and implementing alternative techniques and approaches, reducing energy usage, improving packaging, and increasing the use of reusable materials, among other things.

Other smaller eco-friendly activities, such as greenhouse gas reduction and logistics effectiveness protection, must be reported in addition to the more significant ones. It is also critical for a business to have a moral supply chain.

References

1. Abdel-Baset M, Chang V &Gamal A. (2019). Evaluation of the green supply chain management practices: a novel neutrosophic approach. Computers in Industry 108:210-220.
2. Agyemang M, Zhu Q, Adzanyo M, Antarciuc E, & Zhao S (2018). Evaluating barriers to green supply chain redesign and implementation of related practices in the West Africa cashew industry. Resources, Conservation and Recycling 136, 209-222.
3. Ahmed, W. Asim, M. &Manzoor, S.(2020). Importance and challenges of green supply chain management in healthcare. European Journal of Business and Management Research, 5(2), 1-8.
4. Altaf B, Ali Ss& Weber GW. (2020). Modeling the relationship between organizational performance and green supply chain practices using canonical correlation analysis. Wireless Networks 3:1-18.
5. Barney, J. (1991). Firm resources and sustained competitive advantage. Journal of Management, 17(1), 99-120.
6. Brandenburg, M., Govindan, K., Sarkis, J., &Seuring, S. (2014). Quantitative models for sustainable supply chain management: Developments and directions. European Journal of Operational Research, 233(2), 299–312.

7. *Büyüközkan G,&Çifçi G. (2012). Evaluation of the green supply chain management practices: a fuzzy ANP approach. Production Planning & Control. 23(6):405-418.*

8. *Büyüközkan, G. &Çifçi, G. (2012). A novel hybrid MCDM approach based on fuzzy DEMATEL, fuzzy ANP and fuzzy TOPSIS to evaluate green suppliers", Expert Systemswith Applications,39(3), 3000-3011.*

9. *Chan, R. Y. (2005). Does the natural-resource-based view of the firm apply in an emerging economy? A survey of foreign invested enterprises in China. Journal of Management Studies 42(3), 625-672.*

10. *Chardine-Baumann, E., &Botta-Genoulaz, V. (2014). A framework for sustainable performance assessment of supply chain management practices. Computers & Industrial Engineering, 76, 138-147.*

11. *Chen, I. J., &Kitsis, A. M. (2017). A research framework of sustainable supply chain management: The role of relational capabilities in driving performance. The International Journal of Logistics Management, 28(4), 1454-1478.*

12. *Cousins, P. D., Lawson, B., Petersen, K. J., & Fugate, B. (2019). Investigating green supply chain management practices and performance. International Journal of Operations &Production Management, 39(5), 767-786.*

13. *Das D. (2018). The impact of sustainable supply chain management practices on firm performance: lessons from Indian organizations. Journal of Cleaner Production 203:179-196.*

14. *De Sousa JabbourAbl, Vazquez-Brust D, JabbourCjc&Latan H. (2017). Green supply chain practices and environmental performance in Brazil: survey, case studies, and implications for B2B. Industrial Marketing Management 66:13-28.*

15. *Dhull, S, &Narwal, M. (2018). Prioritizing the drivers of green supply chain management in Indian manufacturing industries using Fuzzy TOPSIS method: Government, industry, environment, and public perspectives. Process Integration and Optimization for Sustainability 2(1), 47-60.*

16. *Dou Y, Zhu Q, &Sarkis J (2018). Green multi-tier supply chain management: An enabler investigation. Journal of Purchasing and Supply Management 24(2), 95-107.*

17. *Filimonova, I., Komarova, A., &Mishenin, M. (2020). Impact of the global green factor on the capitalization of oil companies in Russia. OeconomiaCopernicana, 11(2), 309-324.*

18. *Foo, M. Y., Kanapathy, K., Zailani, S., &Shaharudin, M. R. (2019). Green purchasing capabilities, practices and institutional pressure. Management of Environmental Quality: An International Journal, 30(5), 1171-1189.*

19. *Gábriel M. (2016). Green supply chain management – motivation, methods and expectations - in Hungarian automotive OEMs. Theory, Methodology, Practice 12(1):37-45.*

20. *Golicic, S. L., & Smith, C. D. (2013). A meta-analysis of environmentally sustainable supply chain management practices and firm performance. Journal of Supply Chain Management, 49(2), 78-95.*

21. *Gotschol, A., De Giovanni, P., & Esposito Vinzi, V. (2014). Is environmental management an economically sustainable business? Journal of Environmental Management, 144, 73–82.*

22. Govindan, K., Kaliyan, M., Kannan, D., &Haq, A. N. (2014). Barriers analysis for green supply chain management implementation in Indian industries using the analytic hierarchy process.International Journal of Production Economics, 147, 555–568.
23. Hart, S. (1995). A natural-resource-based view of the firm. Academy of Management Review, 20(4), 986-1014.
24. Hart, S. L., & Dowell, G. (2011). Invited editorial: A natural-resource-based view of the firm: Fifteen years after. Journal of management, 37(5), 1464-1479.
25. Horecký, J. (2018). Operation and action of a trade union (in terms of Czech Republic labour law). Central European Journal of Labour Law and Personnel Management, 1(1), 17- 27.
26. Hu, A. & Hsu, C. (2010). Critical factors for implementing green supply chain management practice: an empirical study of electrical and electronics industries in Taiwan. Management Research Review 33(6), 586-608
27. Hung L. K, & Wang Y. (2009). Reverse logistics in the electronic industry of China: a case study. Supply chain management: an international journal. 14(6):447-465.
28. Irum S, Qureshi M, Ashfaq M, Sami A, Bhatti M, & Umar A (2018). A review of green supply chain management practices in Asian Countries. International Journal of Engineering and Technology 7(2.29), 1094-1096.
29. Jassim S, Al-Mubarak M &Hamdan A. (2020).The impact of green supply chain management on firm's performance. Journal of Information & Knowledge Management 19(1):1-16.
30. Jayant A, &Tiwari A (2018). Impact of green supply chain management practices in India. Journal of Industrial Mechanics 2(2):1-14.
31. Kaur J, Sidhu R, Awasthi A, Chauhan S, &Goyal S (2018). A DEMATEL based approach for investigating barriers in green supply chain management in Canadian manufacturing firms. International Journal of Production Research, 56(1-2):312-332.
32. Khan Sar, Nathaniel S & Zhang Y. (2019). Green supply chain performance and environmental sustainability: a panel study. Scientific Journal of Logistics 16(1):141-159.
33. Kim, J., & Kraft, E. (2017). The effects of dedication to enviro17. [ONLINE] Available at: https://doi.org/10.1016/j.jclepro.2017.08.218 (June21st, 2021).
34. Kliestikova J., Krizanova A., Corejova T., Kral P., &Spuchlakova E. (2018). Subsidies to Increase Remote Pollution? Science and Engineering Ethics, 24(2), 755-767.
35. Laosirihongthong T., Dotun A., &Keah C. T. (2013). Green supply chain management practices and performance'. Industrial Management & Data Systems, 113(8), 1088-1109.
36. Lee DH. (2019). Implementation of collaborative activities for sustainable supply chain innovation: an analysis of the firm size effect. Sustainable 11:1-16.
37. Lin, R.-J. (2013). Using fuzzy DEMATEL to evaluate the green supply chain management practices, Journal of Cleaner Production, 40, 32-39.
38. Longoni A, &Cagliano R (2018). Inclusive environmental disclosure practices and firm performance: The role of green supply chain management. International Journal of Operations and Production Management 38(9), 1815-1835
39. Longoni, A. Luzzini, D. &Guerci, M.(2018). Deploying environmental management across functions: The relationship between green human resource management and green supply chain management, Journal of Business Ethics, 151(4), 1081–1095.

40. *Luthra S, Garg D, &Haleem A (2016). The impacts of critical success factors for implementing green supply chain management towards sustainability: an empirical investigation of Indian automobile industry. Journal of Cleaner Production, 121:142-158.*

41. *Luthra, S., Garg, D., &Haleem, A. (2015). An analysis of interactions among critical success factors to implement green supply chain management towards sustainability: An Indian perspective. Resources Policy, 46, 37–50.*

42. *MalekiMinbashrazgah, M., &Shabani, A. (2019). Eco-capability role in healthcare facility's performance: Natural-resource-based view and dynamic capabilities paradigm. Management of Environmental Quality: An International Journal, 30(1), 137-156.*

43. *Mallikarathna, H. K. D. &Chathurani S. C. W. (2019). The impact of green supply chain management practices on operational performance and customer satisfaction. Proceedings of the International Conference on Industrial Engineering and Operations Management Bangkok, Thailand. 2656-2667.*

44. *Mathiyazhagan K, Datta U, Singla A, &Krishnamoorthi S (2018). Identification and prioritization of motivational factors for the green supply chain management adoption: case from Indian construction industries. OPSEARCH 55(1), 202-219.*

45. *Min, H., & Galle, W. P. (2001). Green purchasing practices of US firms. International Journal of Operations & Production Management, 21(9), 1222-1238.*

46. *Mohtashami Z, Aghsami A &Jolai F. (2019). A green closed loop supply chain design using queuing system for reducing environmental impact and energy consumption. Journal of Cleaner Production 242:1-19.*

47. *Mumtaz U, Ali Y, &Petrillo A (2018). A linear regression approach to evaluate the green supply chain management impact on industrial organizational performance. Science of the Total Environment 624,162-169.*

48. *Neramballi A, Sequeira M, Rydell M, Vestin A & Ibarra M. (2017). A comprehensive literature review of green supply chain management. Spain. (Proceedings of the 2nd World Congress on civil, structural, and environmental engineering, 2-4 April 2017).*

49. *Petljak K, Zulauf K, Štulec I, Seuring S, & Wagner R (2018). Green supply chain management in food retailing: survey-based evidence in Croatia. Supply Chain Management: An International Journal, 23(1), 1-15.*

50. *Pourjavad, E, &Shahin, A. (2018). The application of Mamdani fuzzy inference system in evaluating green supply chain management performance. International Journal of Fuzzy Systems 20(3), 901-912.*

51. *Prasad, D, Pradhan R, Gaurav K, Chatterjee P, Kaur I, Dash S, &Nayak S (2018). Analysing the critical success factors for implementation of sustainable supply chain management: an Indian case study. Decision 45(1), 3-25.*

52. *Raut R, Narkhede B, &Gardas B (2017). To identify the critical success factors of sustainable supply chain management practices in the context of oil and gas industries: ISM approach. Renewable and Sustainable Energy Reviews 68:33-47.*

53. *Saeed A, Jun Y, Nubuor Sa, PriyankaraHpr&Jayasuriya MPF. (2018). Institutional pressures, green supply chain management practices on environmental and economic performance. A two theory view. Sustainability 10(5):1-24.*

54. *Seuring, S., & Müller, M. (2008). From a literature review to a conceptual framework for sustainable supply chain management. Journal of Cleaner Production, 16(15), 1699-1710.*

55. *Shao, J., &Ünal, E. (2019). What do consumers value more in green purchasing? Assessing the sustainability practices from demand side of business. Journal of Cleaner Production, 209, 1473-1483.*

56. *Srivastava, S. K. (2007). Green supply‑chain management: a state‑of‑the‑art literature review. International Journal of Management Reviews, 9(1), 53-80.*

57. *Taylor, K. M., &Vachon, S. (2018). Empirical research on sustainable supply chains: IJPR's contribution and research avenues. International Journal of Production Research, 56(1-2), 950-959.*

58. *Thamsatitdej P, Boon-Itt S, Samaranayake P, Wannakarn M &Laosirihongthong T. (2017). Eco-design practices towards sustainable supply chain management: interpretive structural modelling (ISM) approach. International Journal of Sustainable Engineering10(6):326-337.*

59. *Thoo, A. C. Huam, H. T. Zuraidah, S. &Siti, N. L. M. Z. (2015). Green supply chain management practices and sustainability performance. American Scientific Publishers.*

60. *Tseng, M.-L. & Chiu, A.S. (2013). Evaluating firm's green supply chain management inlinguistic preferences, Journal of Cleaner Production, 40, 22-31.*

61. *Vachon S., &Klassen, R. D. (2005). Environmental management and manufacturing performance: The role of collaboration in the supply chain. Journal of Operations Management, 111(2), 299-315.*

62. *Wang J., & Dai J. (2018). Sustainable supply chain management practices and performance. Industrial Management & Data Systems, 118(1), 2-21.*

63. *Wang Z, Wang Q, Zhang S, & Zhao X (2018). Effects of customer and cost drivers on green supply chain management practices and environmental performance. Journal of Cleaner Production 189, 673-682.*

64. *Wernerfelt, B. (1984a). A resource-based view of the firm. Strategic Management Journal, 5(2), 171-180.*

65. *Wernerfelt, B. (1995). The resource‑based view of the firm: Ten years after. Strategic Management Journal, 16(3), 171-174.*

66. *Wu, G. C. (2213). The influence of green supply chain integration and environmental uncertainty on green innovation in Taiwan's IT industry, Supply Chain Management, 18(5), 539–552.*

67. *Xie Y, & Breen L. (2012). Greening community pharmaceutical supply chain in UK: a cross boundary approach. Supply chain management: an international journal. 17(1):40-53.*

68. *Yang, C. I. & Lien, S.(2018). Governance mechanisms for green supply chain partnership, Sustainability, 10(8), 67-78.*

69. *YildizÇankaya, S., &Sezen, B. (2019). Effects of green supply chain management practices on sustainability performance. Journal of Manufacturing Technology Management, 30(1), 98-121.*

70. *Yu Y, Zhang M &Huo B. (2017).The impact of supply chain quality integration on green supply chain management and environmental performance. Total Quality Management & Business Excellence 27:1-16.*

71. *Zaid, A. A., Jaaron, A. A., & Bon, A. T. (2018). The impact of green human resource management and green supply chain management practices on sustainable performance: An empirical study. Journal of Cleaner Production, 204, 965-979.*

72. *Zhu Q, Sarkis J, & Lai K (2013). Institutional-based antecedents and performance outcomes of internal and external green supply chain management practices. Journal of Purchasing and Supply Management 19(2), 106-117.*

73. *Zhu, Q. &Sarkis, J. (2004). Relationships between operational practices and performance among early adopters of green supply chain management practices in Chinese manufacturing enterprises, Journal of Operations Management, 22(3), 265–289.*

74. *Zhu, Q., Sarkis, J., &Geng, Y. (2005). Green supply chain management in China: pressures, practices and performance. International Journal of Operations & Production Management, 25(5), 449-468.*

75. *Zhu, Q., Sarkis, J., & Lai, K. (2008). Confirmation of a measurement model for green supply chain management practices implementation. International Journal of Production Economics, 111(2), 261-273.*

76. *Zhu, Q., Sarkis, J., & Lai, K.-h. (2013). Institutional-based antecedents and performance outcomes of internal and external green supply chain management practices. Journal of Purchasing and Supply Management, 19(2), 106-117.*

77. *Zhu, Q., Sarkis, J., & Lai, K.-h. (2019). Choosing the right approach to green your supply chains Modern Supply Chain Research and Applications.*