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Green Supply Chain Management: An Empirical Study of Green Distribution and Procurement and Operational Performance within Nigerian SMEs

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ABSTRACT

This study examined the impact of green distribution and green procurement on environment and operational performance of Small and Medium Scale Enterprises (SMEs) in Oyo state Nigeria. The study adopted survey research design, the total population of the study comprises of 4,520 SMEs operators operating in Oyo state Nigeria, out of which 10% (455) were chosen. Stratified random sampling techniques were employed and data collected were analysed using regression and correlation analysis. The result of the study shows that Green distribution do influence environmental performance of SMEs. The results also revealed that, Green procurement has positive impact on environmental performance of SMEs. The study concluded that there is positive relationship between green supply and procurement efficiency and effectiveness of SMEs operating in Nigeria. The study therefore recommends that SMEs operators should embrace green supply management to enhance efficient green supply and procurement. Effectiveness and operational performances

KEYWORDS: Green distribution, Green supply chain management, SMEs

Introduction

Operational performance of an enterprise is the capability of an enterprise to deliver products or services to its customers in the most cost-effective manner possible while still ensuring the high quality of its products, service and support. Green supply chain integration is inextricably linked to communication systems, and it means that internal and external business processes should be streamlined and interconnected (Romano, 2003). Companies that rely heavily on external sources for strategic operations, in particular, must be closely aligned with their suppliers as a result of concentrating on their core competencies. Issues of global warming and emissions, had compelled many businesses to adopt the idea of Green Supply Chain Management (GSCM) to enhance their operational efficiency, in accordance with the required environmental standards, with the aim of conserving scarce resources and energy (Hsu and Hu, 2008).

The identification of effective and critical practices to obtain the value within the supply chain that affects organizational efficiency and achieves competitive advantage by improving internal processes and relationships with suppliers and customers is required for successful green supply chain management (Ayuso et al., 2013).

Many processes are involved in green manufacturing. It starts with "resource and energy conservation in product design, as well as the use of recyclable parts and components and the avoidance of harmful substances (Zhu et al., 2005). Environmental issues have become a significant source of concern for states, families, and businesses and many nations of this world. Most environmental issues, such as global warming, ozone depletion, solid waste, and air pollution, are attributed to business organizations and the transportation industry with poor management of these factors that causes them (Patil et al., 2018). When people think of eco, they usually think of the simple steps of recycling, reusing, and reducing. About two decades ago, businesses all over the world began to recognize the growing importance of sustainable growth. Many businesses have made environmental measures a core part of their operations, incorporating concepts like environmental sustainability, responsible manufacturing, triple bottom line, improved environmental enforcement, environmentally sustainable waste management, and others into their overall business plans and continuous business operation to guarantee sustainability (Bacallan, 2000; Rao and Kondo, 2010).

The green supply chain help companies to contribute towards sustainability for their own operation. On the other side this initiative would directly lead to greening of industry which is so desperately needed in today's world. In Nigeria like most of Africa, for many organizations, green supply chain approach has been a popular way to demonstrate their commitment to the environmental sustainability of the environment and operations (Ojo et al., 2013). It is also known, that company. and its business partners are always considered as one single system to deliver the product or the service, any shortfall on the part of sustainability initiative from business partners is taken as the company's failure to ensure sustainability. This is why the state-of-the-art companies have tried to integrate the sustainability initiative in a complete manner along the entire GSCM practices. Nigeria generally have been more popular with large organizations with high state of distribution and supply operations. However, for these SMEs, who form the backbone of manufacturing sector in Nigeria, these endeavors of green supply. distribution and procurement have not been much in priority primarily because of lack of awareness and the perception that environmental initiatives are costly.

Problem Statement

Green supply chain management practices have been at its lowest ebb in Nigeria but mostly considered by some of the notable Multinationals organization operating in the country while some of the local organisation and SMEs operation have not fully key into this initiative. However, the SMEs, form the pillar of growth of manufacturing sector in Nigeria, these efforts have not been much due to lack of recognition and the poor understanding of the importance environmental sustainability through the green supply chain management.

Therefore, this study seeks to unravel some of the issues why this is so and strategy to employ to influence and encourage the practice of GSCM practices and operational performance of SMEs in Nigeria. This gap, is what this paper seek to provide solution to among other.

In order to provide solution to this research gap the following research questions were answered in this paper (1) to what extent does green distribution influences environmental performance of SMEs? (2) to what extent do green supply chain management procurement practices impact on environmental performance of SMEs? The following research objectives were attended to in this study (1) to examine the impact of green distribution on environmental performance of SMEs (2) to investigate the relationship between green chain supply management practices and environmental performance of SMEs in Oyo state Nigeria.

Literature Review

Green Supply Chain Management and Operational Performance

GSCM has been described as anything from green purchasing to integrated supply chains that flow from the supplier to the producer to the consumer, as well as reverse logistics, or "closing the loop" as defined by supply chain management literature (Zhu et al., 2005). GSCM incorporates environmental considerations into the supply chain management process. It covers a wide range of phases, including product design, material procurement and selection, production processes, product distribution, and product end-of-life management (Srivastava, 2007; Ojo et al., 2013).Supply chain management has the ability to reduce project fragmentation, increase project efficiency, shorten project time, and thereby lower total project expense, at the same time increasing customer satisfaction. GSCM has been introduced as an antidote to be the best global practice. By taking a life cycle approach to product design, commodity, sourcing, production, and sales and recovery, green supply chain management seeks to increase overall environmental benefit. This initiative also aids the company's long-term growth and progress (Shi et al., 2012). The consideration of this practise as the major environmental initiative elements has become a common and notable term for sustainable environment.

Green Procurement

Green procurement which is also under greening supply chain practice has numerous benefits to many organizations, ranging from cost reduction, to integrating suppliers in a participative and decision-making process which promotes environmental innovation (Rao, 2002). Green purchasing strategies are adopted by organizations in response to the increasing global concerns of environmental sustainability. Green purchasing emphasizes on reduction of waste produced, material substitution through environmental sourcing of raw materials, waste minimization of hazardous materials and so on. The involvement and support of suppliers' is crucial to achieving such goals. Therefore, companies are increasingly managing their suppliers' environmental performance to ensure that the materials and equipment supplied by them are environmentally-friendly in nature and are produced using environmentally-friendly processes.

Min and Galle (1997) study "green purchasing" to determine the key factors affecting an enterprise's choice of suppliers, the key barriers and the obstacles to green purchasing initiatives.
However, they also identify the critical weaknesses of this approach as resource and cost implications, lack of physical facilities, lack of mentoring skills, and trained personal to deliver such mentoring initiatives.

Green Distribution

Green distribution (GD) is the incorporation of environmental thinking into product design, packaging and product labelling. Green distribution involves green packaging and green logistics. The mode of transport of a product is determined by the packaging characteristics which include size, shape and materials. Reduced material usage, increased space utilization and reduced handling procedures are some of the advantages that are achieved through better packaging (Ninlawan et al., 2010). Environmental labelling/Eco-Labelling is another Practice of the Green distribution, which entails describing the information a product provides about environmental impact associated with the production or use of the product. Terms such as 'recyclable', 'eco-friendly', 'environmentally safe' are vague and may create cynicism among consumer. The large number of symbols/labels adds to consumer difficulty in assessing the comparable advantages of different product. However, some labels are incomplete in terms of proving full environmental disclosure.

Challenges of Green Supply Chain Management

Wilkerson (2010) assets there are five major challenges that companies face in adopting the green supply chain management which are: For companies to adopt GSCM they have to comply with quite a number of standards such as ISO Standards, ISO 14065, Environmental Protection Agency (EPA) Greenhouse Gas Reporting Rule and many others. Companies find it hard to comply with all of the standards and hence they may only adopt part of them. Knowledge about which standards or rules to apply should be the first step for a company that is newly adapting to GSCM. Another challenge is the issues of creating awareness to the members involved in the supply chain. Green awareness has been improving but still people need to know more about the GSCM. Implementation is another challenge of green supply management. This is because the organizations do not know the standards that are to be followed. Communication strategies should be planned at the earliest point in the Green Supply Chain planning process. The communications strategy will help the organization to keep long term compliance and reducing emissions. Other challenges which have been cited by other authors include: Economic factors such as inflation, interest rates, GDP (Gross domestic product) and the level of employment have a greater impact on the economy.
Most organizations prefer doing their normal routines rather than adapting green practices because they view them expensive to the organization and in return translated to customers in form of high costs (Min and Galle, 1997).

Green Supply Chain Management and Environmental Performance

Environmental performance can be described as the amount of substances and pollutants that are reduced as a result of a company's environmental effects (Kumar et al., 2012). Environmental performance is typically calculated in terms of reduced air pollution, energy consumption, hazardous materials, material use, and adherence to environmental regulations (Zhu et al., 2012). According to Lindenberg and Steg (2007), some companies follow ecological projects because their top executives have an inherent concern for the environment and want to do as much good as possible. Top management is in charge of environmental management leadership in these companies (Hoejmose and Adrien-Kirby, 2012). As a result, GSCM is now recognized as both an environmental policy and a source of inspiration centred on improving employee productivity" and individual satisfaction (Govindan et al., 2014).

Operational Performance of SMEs and the Supply Chain Management

The observable aspects of an organization's process result, such as reliability, output cycle time, and inventory turn, are referred to as operational performance. Company performance metrics such as market share and customer satisfaction are influenced by operational performance (Voss et al., 1997). Profitability refers to a company's ability to make money. The majority of the literature has concentrated on either the relationship between efficiency and profitability or the relationship between performance quality and profitability. The effect of operational efficiency on profitability as a whole has been largely overlooked (Tsikriktsis, 2007).

Conceptual Framework

Figure 1 shows the hypothetical model of the association between green supply chain management, environmental performance of SMEs.

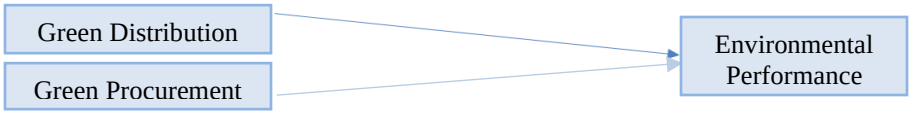

Figure 1: Conceptual Framework on GSCM and Environmental Performance

Empirical Review

According to the findings of Large and Thomsen (2011), the degree of green supplier evaluation and the level of green cooperation have a direct impact on environmental efficiency. Whereas commitment has a direct effect on evaluation, commitment's impact on cooperation is mediated by the purchasing department's capabilities. These findings were derived from 725 questionnaires that were sent out and analyzed using Sequential Equation Modeling.

Cassells and Lewis (2011) discovered that waste and transportation are the key fields where SMEs have an environmental effect in the UK, and their initiative focused on activities to neutralize hazardous waste before it is discharged into the atmosphere, minimize waste and packaging, and increase recycling.

They also want to cut down on fuel and electricity consumption, use an environmentally sustainable delivery system, and reduce emissions.

According to Testa and Irlado (2010), there is a connection between implementing GSCM practices and improving an organization's credibility and brand image. Using Interpretive Structure Modeling, a sample of 4188 facility managers in seven OECD (Organization for Economic Co-operation and Development) countries were investigated (ISM). Although the findings were promising in terms of improving an organization's credibility and brand image, they did not mean that performance was the driving force behind implementing GSCM practices. They designed and manufactured green products and developed the reputation of a trusted eco-brand.

Jain and Gupta (2016) have explored the status of GSCM Implementation in SMEs in different countries such as China and Japan and found that the mode of implementation has been different in different countries. (Rao, 2002; Zhu et al., 2005). Their review also suggests that manufacturing industry in one country becomes different from other countries due to their differences in background and culture because different industry sectors face different pressures.

Methodology

Survey research design was used to carry out this study and the population for the study were the entire registered SMEs operators operating in Oyo State out of which a total of 455 representing 10% of the total population of four thousand five hundred and twenty (4,520) SMEs in Oyo State were chosen across the entire (33) local governments area of the state (SMEDAN & National Bureau of Statistics Collaborative Survey, 2020).Stratified random sampling technique was adopted .within the sampling region for this study which is Oyo state Nigreia. Data were analyzed using both descriptive and inference statistical method using the Pac (SPSS version 20).

Analytical Framework

The analytical model used in this study examine the relationship between green supply chain management and operational performance of SMEs in Oyo state; using the regression analysis in order to account for the objectives of this study, the functional form of the model is hereby specified as follows:

$$EP = f(GD, GP) \quad [1]$$

Equation is transformed into econometric model as thus;

$$EP = \beta 0 + \beta 1GD + \beta 1GP + \varepsilon \quad [2]$$

Where:

EP : Environmental Performance
GD : Green Distribution
GP : Green Procurement
E : Error Term
β0, β1, β2 : Regression parameters

Results and Discussion

Hypothesis 1: HO Green distribution does not have influence on environmental performance of SMEs.

Table 1 shows the model summary of the regression analysis of interaction between green distribution and environmental performance of SMEs with (R) value of 0.674. This indicates positive interaction between green distribution and SMEs environmental performance. Magnitude of the interaction is also statistically significance at 5% level of significance.

Table 1: Analysis of the Interaction between Green Distribution and Environmental Performance of Small and Medium Scale Enterprises

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.67[a]	0.45	0.42	0.68	1.90

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	33.59	10	3.36	7.24	0.00[b]
	Residual	206.13	444	0.46		
	Total	239.71	454			

Note: a. Dependent Variable: Green Distribution
b. Predictors: (Constant), Environmental Performance of SMEs
Source: Author's Computation (2020). using SPSS

The R Square value of 0.454 means that, green distribution account for about 46% of environmental performance among the Small and Medium enterprises in Oyo state. While the remaining 54% variations are caused by other factors or variables which are not included in this model but captured under stochastic error term. This implies that green supply and its components 46% contribution enhances environmental performance of SMEs in Oyo state Nigeria. Durbin Watson statistics result fell close to two that is, (1.904). This is evidence that there is no presence of autocorrelation in the model. This means the model is free from serial correlation that may make this result doubtful.

The table 1 also revealed the overall significance this model is F (10,455), 7.235, P-value or sig value > 0.05 (Sig .000). This indicates strong evidence against the null hypothesis, as there is greater than 5% probability that null hypothesis is rejected. F – Statistical indicates that the overall regression model is highly statistically significant in terms of its goodness of fit since the value of F_{tab} (10,454) >F_{cal} (7.235).

Table 2 shows the regression coefficients of the contribution of each independent variable to criterion variable. The results show that standardized beta coefficient is 0.271. This means that the organizations supply chain has the ability to minimize total cost to final consumer's due to knowledge sharing makes strong unique contribution in explaining green distribution among the SMEs, when the variance explained by all other variables in the model is controlled.

Table 2: Contribution of Each Predictor Variable on SMEs Performance

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	1.85	0.34		5.38	0.00
Environmentally friendly transportation i.e. well serviced vehicles which minimize air and noise pollution (GDPEv2)	0.01	0.05	0.02	0.25	0.81
Using vehicles or transportation modes that carry more load in order to reduce the number of trips made to the customer site (GDPEv3)	-0.05	0.04	-0.07	-1.39	0.17
Cooperating with vendor to standardize packaging Delivering directly to users' site (GDPEv4)	0.07	0.04	0.08	1.46	0.15
Use environmentally friendly packaging materials e.g. biodegradable packaging materials (GDPEv5)	0.02	0.04	0.03	0.57	0.57
Promoting and adopting returnable packaging methods (GDPEv6)	0.04	0.04	0.06	1.14	0.26
Promoting recycling and reuse programs among packaging and distribution employee (GDPEv7)	0.03	0.05	0.04	0.65	0.52
Active involvement in the reduction of waste (GDPEv9)	-0.07	0.04	-0.09	-1.59	0.11
Engaging in production processes free from the emission of harmful substances (GDPEv10)	0.18	0.04	0.24	4.30	0.00
Use of renewable sources in production and reuse of materials (GDPEv11)	0.03	0.03	0.05	1.04	0.30
The organizations supply chain has the ability to minimize total cost to final consumer's due to knowledge sharing (GDPEv15)	0.29	0.06	0.27	5.17	0.00

Note: a. Dependent Variable: Environmental Performance of Small and Medium enterprises
Source: Author's Computation (2020)

One percent increase in the supply chain has the ability to minimize total cost to final consumers' through knowledge sharing led to 27% increase in rate of performance of the SMEs in Oyo state. The results of contribution of engaging in production processes free from the emission of harmful substances show that standardized beta coefficient 0.235. This mean one percent increase in the number of production free process from the emission led to 24% increase in performance of the SMEs business in Oyo state. Active involvement in the reduction of waste revealed 0.085 to SMEs performance. One percent increase in waste reduction led to nine percent reduction in rate of performance of the SMEs. Cooperating with vendor to standardize packaging delivering directly to users' site indicates 0.075 to SMEs performance. One percent increase in standardize packaging led to eight percent increase the rate of performance of the SMEs. Using vehicles or transportation modes that carry more load in order to reduce the number of trips made to the customer site revealed -0.071 to the SMEs performance. One percent increase in transportations led to seven percent reduction in the rate of the performance SMEs.

The results of contribution of the promoting and adopting returnable packaging methods showed that standardized beta coefficient 0.061. This mean one percent increase in the number of returnable packaging led to six percent increase in the performance of the SMEs. Use of renewable sources in production and reuse of materials showed that standardized beta coefficient 0.052. This mean one percent increase in the number of renewable sources of production of reuse materials led to five percent increase in performance of the SMEs in Oyo state. Promoting recycling and reuse programs among packaging and distribution employee showed that standardized beta coefficient 0.039. This mean one percent increase in the number of packaging and distribution employee led to four percent increase in the performance of SMEs in Oyo state.

The use of environmentally friendly packaging materials like biodegradable packaging materials revealed 0.030. One percent increase in environmental packaging of materials periodically led to three percent increase in rate of SMEs performance. Environmentally friendly transportation i.e. well serviced vehicles which minimize air and noise pollution revealed 0.015. One percent increase in serviced vehicle led to two percent increase in rate of SMEs performance.

From the results obtained from table 4.7, the p-value calculated for 0.000 is lesser than 5%, 0.05 critical value. Hence the null hypothesis was rejected. The Study therefore concluded that, Green distribution do have influence on environmental performance of SMEs.

Hypothesis 2: HO Green supply chain management practice does not have impact on environmental performance of SMEs.

Table 3 shows the model summary of the regression analysis of interaction between green procurement and environmental performance of SMEs with (R) value of 0. 647.This indicates positive interaction between green supply chain management practices and Environmental Performance of SMEs.

This magnitude of the interaction is also statistically significance at 5% level of significance. The R Square value of 0.418 means that, green procurement account for about 42% of environmental performance among the SMEs in Oyo state. While the remaining 58% variations are caused by other factors or variables which are not included in this model but captured under stochastic error term. Durbin Watson statistics result fell close to two that is, (1.957). This is evidence that there is no presence of autocorrelation in the model. The table 3 also revealed the overall significance this model is F (6,453), 13.156, P-value or sig value > 0.05 (Sig .000). This indicates strong evidence against the null hypothesis, as there is greater than 5% probability that null hypothesis is rejected. F – Statistical indicates that the overall regression model is highly statistically significant in terms of its goodness of fit since the value of F_{tab} (6,453) >F_{cal} (13.156).

Table 3: Analysis of the Interaction between Green Supply Chain Management and Environmental Performance of SMEs

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.65[a]	0.42	0.41	0.72	1.96

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	41.14	6	6.86	13.16	0.00[b]
	Residual	232.99	447	0.52		
	Total	274.13	453			

Note: a. Dependent Variable: Green Procurement

b. Predictors: (Constant), Environmental Performance of Small and Medium Enterprises

Source: Author's Computation (2020). using SPSS

Table 4 shows the regression coefficients of the contribution of each independent variable to criterion variable. The results showed that standardized beta coefficient 0.196. This means that purchase products that are energy efficient or products which require less energy to manufacture seems to be more economical, when the variance explained by all other variables in the model is controlled. One percent increase in the purchase products that are energy efficient led to 20% increase in the rate of performance of the SMEs in Oyo state. The results of contribution require suppliers to limit packaging to the minimum necessary to protect the items supplied show that standardized beta coefficient 0.193. This means one percent increases in the number of require suppliers to limit packaging led to 19% increase in performance of the SMEs business in Oyo state. Company considers GSCM as a strategic priority revealed 0.162 to SMEs performance. One percent increase in strategic priority led to 16% increase in the rate of performance of the SMEs. Purchase materials or parts from suppliers who are compliant with environmental related legislation enhance the performance of firm, revealed -0. 069. One percent increase in purchase materials or parts from suppliers who are compliant led to seven percent reduction in the rate of the performance SMEs.

Table 4: Contribution of Each Predictor Variable on SMEs Performance

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	2.21	0.25		8.69	0.00
Purchase materials or parts from suppliers who are compliant with environmental related legislation enhances the performance of your firms	-0.06	0.04	-0.07	-1.40	0.16
Purchase products that are energy efficient or products which require less energy to manufacture seems to be more economical	0.21	0.05	0.20	3.94	0.00
Require suppliers to limit packaging to the minimum necessary to protect the items supplied	0.18	0.05	0.19	3.87	0.00
Develop and maintain a database of suppliers in which information relating to environmental conduct is maintained	0.01	0.05	0.01	3.09	0.03
Considering suppliers who have acquired or are in the process of acquiring ISO certification	0.01	0.04	0.02	0.34	0.74
Your company considers GSCM as a strategic priority	0.14	0.05	0.16	3.05	0.00

Note: a. Dependent Variable: Environmental Performance of Small and Medium enterprises
Source: Author's Computation (2020)

Considering suppliers who have acquired or are in the process of acquiring ISO certification show that standardized beta coefficient 0.017. This means one percent increase in the number of suppliers who have acquired or are in the process of acquiring ISO certification led to two percent increase in performance of the SMEs. Meanwhile, develop and maintain a database of suppliers in which information relating to environmental conduct is maintained show that standardized beta coefficient 0.005. This means one percent increase in the number of database of suppliers led to about 0.5% increase in the performance of SMEs. From the results obtained from table 4.9, the p-value calculated for 0.000 is lesser than 5%, 0.05 critical value.

Hence the null hypothesis was rejected. The Study therefore concluded that, Green procurement has impact on environmental performance of SMEs in the selected study area.

Conclusions

Findings from this study reiterate the fact that, Green Supply chain practices have positive significant impact on SMEs environmental performance, efficiency and effectiveness. This is premised on the fact that positive interaction between green distribution and SMEs environmental performance, of which the magnitude of the interaction is statistically momentous. Meanwhile, cooperating with vendor to standardize packaging delivering directly to users' site indicates and with the use of vehicles or transportation modes that carry more loads in order to reduce the number of trips made to the customer site were also significant to SMEs performance. Equally, positive interaction occurred between green procurement and environmental performance of SMEs. Besides, positive interaction occurred between green procurement and efficiency and effectiveness of SMEs in Oyo State. Green Procurement Management has positive relationship with SMEs efficiency and effectiveness. The study found that there is significant relationship between green supply chain management and SMEs effectiveness and efficiency. Consequently, having empirically examined the impact of green supply chain on environmental performance of SMEs in Oyo state, and in line with the findings of this study, it is therefore, concludes that there is significant impact and relationship between green supply chain (Green distribution and Green procurement) practices and SMEs in Oyo State. This has been supported through several studies as well (Shuai and Wang, 2007; Muma et al., 2014; Hamed et al., 2017; Patil et al., 2018).

Based on the findings of this study, it is recommended and has to be accepted that the relationship between environmental performance of SMEs in Oyo state, SCM practices and the two contributing factors as examined in this study is of essential rank to SMEs. Green distribution does have influence on environmental performance of small and medium enterprises in Oyo state. In light of this, it is critical that SMEs operators should be educated regarding the importance of these factors.

The analyses showed in this study indicated that green procurement is of one the dimensions that predisposed the green supply chain management of small and medium enterprises in Oyo state, Nigeria, which in turn, impacts the efficiency and effectiveness measured.

Therefore, it is one of the factors generally considered critical to the achievement of SMEs efficiency and effectiveness. The SMEs' operators and directors should recognize the need to evaluate their green supply chain management systems to determine if the operations carried out are actually effective and efficient to enhance operational efficiency and environmental sustainability.

References

Ayuso, S., Roca M. and Colomé, R. (2013). SMEs as "transmitters" of CSR Requirements in the Supply Chain. *The International Journal of Supply Chain Management*, *18*(5), 497–508.

Bacallan, J.J., (2000), *Greening the supply chain, Business and Environment. 6*(5), 11–12.

Cassells, W.S., and Lewis, R.M., (2011). Collaboration planning in a supply chain. *Supply Chain Management: An International Journal, 11*(3), 249-258.

Govindan, S., Malhotra, A., and Sawy, O. A. EL. (2014). Coordinating `for Flexibility in e-Business Supply Chains. *Journal of Management Information Systems, 21*(3), 7-45.

Hamed, AA; Bohar, A.M and Siam, M. (2017). Impact of supply chain management and information systems on operational performance: Empirical Evidence from SMES in Saudi Arabia. *International Journal of Supply Chain Management 6*(3), 232-238.

Hoejmose, S. U., and Adrien-Kirby, A. J. (2012). Socially and environmentally responsible procurement: A literature review and future research agenda of a managerial issue in the 21st century. *Journal of Purchasing and Supply Management, 18*(4), 232-242.

Hsu, C.W. and Hu, A.H. (2008). Green supply chain management in the electronic industry. *International Journal of Science and Technology*, *5*(2), pp. 205-216.

Kumar, L. J., Chattopadhyaya, B. I., and Sharma, N.M (2012) Purchasing must become supply management. *Harvard Business Review, 61*(5), 109-117.

Large, R.O, and Thomsen, C.G (2011). Drivers of green supply management performance: evidence from Germany. *Journal of purchasing and supply management 17, 176- 184*

Lindenberg, S. A. and Steg, C. I., (2007). Using agency theory to design successful outsourcing relationships. *The International Journal of Logistics Management, 11*(2), 21-32.

Min, S., and Galle, R. G. (1997). Supply chain collaboration: What's happening? *The International Journal of Logistics Management, 16*(2), 237-256.

Muma, B.O., Nyaoga, R.B., and Matewere, R.B., Nyambega, E. (2014). Green Supply Chain Management and Environmental Performance Among Tea Processing Firms in Kerico County-Kenya. *International journal of economics finance and management sciences 2*(5): 270-276

Ninlawan, C., Seskan, P., Tossapol, K. and Pilada, W. (2010). The implementation of Green Supply Chain Management Practices in Electronics industry.

Ojo E., Mbowa C., and Akinlabi E. T. (2013). Analysis of green supply chain management in Southafrica and Nigeria: a comparative study. *Internationational conference on integrated waste management and green energy engineering,* Johannesburg. 315-317

Patil, H. R., Javalagi, C. M., Bhagavati, M. T and Venkumar, P., (2018), A Study on Green Supply Chain Initiatives in SME's of North Karnataka. *International Journal of Science Technology & Engineering, 4(*11*), 126 – 131*

Rao, P. (2002). Greening the supply chain: A new initiative in South East Asia. *International Journal of Operations & Production Management*, *22*(6), 632–655.

Rao, P., and Kondo, M. (2010). A study to explore the link between green purchasing initiatives and business performance. Great Lakes Herald, 4(2), 1–20.

Romano, P., (2003). Co-ordination and integration mechanisms to manage logistics processes across supply networks. *Journal of Purchasing & Supply Management, 9,* 119–134.

Shi, Y., Kirwan, P., Smith, J., Robinson, H. P. C., and Livesey, F. J., (2012). Human cerebral cortex development from pluripotent stem cells to functional excitatory synapses. *Nature Neuroscience, 15*(3), 477–486.

Shuai, T. M., and Wang, R. (2007). An integrative framework for supply chain collaboration. *The International Journal of Logistics Management, 16*(2), 257-274.

Srivastava, S. (2007). The effect of supplier manufacturing capabilities on buyer responsiveness: The role of collaboration. *International Journal of Operations & Production Management, 29*(8), 766-788.

Testa, F. and Iraldo F, (2010). Shadows and lights of GSCM (Green Supply Chain Mangement): Determinants and Effects of these Practices Based on Multi-National Study, *Journal of Cleaner Production*, *18*(10), 953-962.

Tsikriktsis, N. (2007). The effect of operational performance and focus on profitability: a longitudinal of the US airline industry. Production of manufacturing & service operations management 9(4), 506-517.

Voss, C. A., Åhlström, P., and Blackmon, K. (1997). Benchmarking and operational performance: some empirical results. *International Journal of Operations & Production Management, 17* (10), 1046 – 1058.

Wikerson, M. M. J. (2010). *Supply chains behaving badly: A dynamic model of inter-organisational supply chain exchange behaviour under rational, relational and chaotic paradigms.* (Doctoral thesis, Lincoln University, Lincolc, New Zealand). Retrieved from http://researcharchive.lincoln.ac.nz/dspace/handle/10182/310

Wu, Y.-C., Chen, C.-H., Mercer, A., and Sokol, N. S. (2012). *let-7-Complex MicroRNAs Regulate the Temporal Identity of Drosophila Mushroom Body Neurons via chinmo. Developmental Cell, 23*(1), 202–209.

Zhu, O., Sarkis, J. and Geng, Y. (2005). Green supply chain management in China: pressures, practices and performance. *International Journal of Operations & Production Management*, *25*(5), 449-68.

Zhu, Q. H, Geng, Y., Sarkis, J., and Lai, K.H. (2012). Evaluating Green Supply Chain Management among Chinese Manufacturers from the Ecological Modernization Perspective. *Transportation Research Part E, 47*, 808-821.