

Drivers of Green Supply Chain Management in an Emerging Economy like Nigeria

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Abstract: Generally, green practices in supply chain management are comprised of actions that reduce or eliminate waste and pollution, eliminate hazardous materials, consider product life-cycles, review supplier environmental performance, emphasize compliance, minimize the environmental impact of the firm's operations, and remediate environmental problems. The main objective of the study is to discuss the drivers of green supply chain management (GSCM) in an emerging economy like Nigeria. The study relies on Stakeholder theory, and corporate environmental responsibility theory as its theoretical frameworks of analysis. The research methodology adopted was qualitative research method. Research design is a combination of descriptive and narrative designs. The sources and method of data collection were secondary. Descriptive and narrative approaches form the data analysis with no statistical presentations. The findings of the study show among other factors government rules and legislations, pressures from competitors, social and environmental responsibility, customers awareness and public pressure, and economic benefit are the drivers of GSCM in the emerging (developing) countries. One of the recommendations of the study is that organizations should go deeper in the implementation of sustainable supply chain management (SSCM), which encompasses environmental, economic and social compliances in supply chain management activities.

Keywords: Supply Chain Management, Green Supply Chain Management, Emerging Economy, Environmental Sustainability, Drivers, Nigeria.

1. INTRODUCTION

Traditionally, developing countries are much concerned with economic growth and development. Less attention is paid to green supply chain management. This has caused less allocation of resources for environmental issues. The outcomes are the issues of water contamination, soil erosion, and environmental pollution. However, many of the developing countries have enforced some environmental regulations and control to reduce the environmental impacts such as air and water pollution and disposal of waste materials (Maignan & Ferrell, 2001). Examination of the drivers and pressures for adoption and improving environmental performance in their supply chain management practices is predicated on a number of external and internal groups or stakeholders. These are a number of possible groups that will influence organizational adoption of green supply chain management (GSCM) and other environmental practices (Zhu et al. 2005).

Supply chains of consumer packaged-goods companies account for 80% of greenhouse gas emissions and 90% of the negative impact on natural and geological resources globally (Titia & Swartz, 2016). Not going green in supply chains engenders the negative environmental impacts that could also affect the profitability of firms (Huq et al., 2016; Titia & Swartz, 2016; Tseng, Lim, & Wong, 2015).

This study defines "drivers" as motivating factors that influence organizations to adopt green supply chain initiatives. Prior studies identified several drivers that motivate organizations to adopt environmental initiatives. These drivers generally emanate from pressures of external and internal stakeholders such as government, investors, customers, suppliers, community groups, and employees as well as from organizational culture or moral values to do the right things. We hereby propose a second-order green supply chain driver construct.

That is, we conceptualize the drivers of green supply chain adoption as a multidimensional concept that measures the extent to which a set of motivating factors encourage firms to adopt green supply chains. This second-order construct measures motivations and incentives in four areas namely regulatory measures, competitor pressures, normative (customer pressures) and cultural-cognitive (socio-cultural responsibility). It also appears most appropriate for explicating the effect of the green supply chain drivers and how they might influence specific green chain initiatives. These four constructs collectively measure latent drivers of green supply chain initiatives.

The specific problem is that the implementation of green in supply chains in a developing economy, is a challenge (Ojo, Mbohwa, & Akinlabi, 2015; Shitu & Mohd-Nor, 2017; Touboulic & Ejodame, 2015). What supply chain practitioners know about green supply chain management implementation and practice from the developed contexts may not apply to all developing and emerging economies (Pereseina, Jensen, Hertz, & Cui, 2014; Silvestre, 2015; Touboulic & Ejodame, 2015) leading to environmental

implementation challenges. But the motivating factors identified in this study would help organization in their green supply chain management practices. With increasing awareness of environmental protection worldwide, and the emerging economies in particular, the green trend of conserving the Earth's resources and protecting the environment is overwhelming (Sarkis & Tamarkin, 2005).

Green supply chain management practices incorporate green purchasing, green manufacturing/production, green distribution, green procurement, green transportation, green marketing, green transportation, green packaging, green design, reverse logistics, and environmental sustainability. The objective of this study is to discuss the driving forces that put organizations in the emerging (developing) countries like Nigeria, to adopt and implement sustainable environmental friendliness in their supply chain management practices.

2. CONCEPTUAL CLARIFICATION OF GSCM

The concept of Green Supply Chain Management (GSCM) is relatively new in developing countries. Recent literature has shown that there are still limited research studies on GSCM adoption and implementation based on the developing country context. Srivastava defines the term green supply chain management as a way of initiative improvement, covers supply chain activities from the procurement of raw materials for product design, manufacturing processes to delivery final products and also relates to reverse logistics in reducing sources of wastes (Srivastava, 2007). Moreover, this sometimes involves all business partners such as material suppliers, service contractors, distributors and final users to reduce environmental risks from their activities (Yee & Fernando, 2015).

Adding the concept of green to the supply chain invokes the consideration of natural environment in to the process. Similar to the supply chain, the green supply chain has its boundary and scope ranging from green procurement to integrated green supply chain to green distribution flowing from supplier to manufacturer to customer (Karthick, 2011). Green supply chain management, also known as environmental supply chain management (ESCM) (Seuring, 2004), combines green purchasing, green manufacturing/production, green distribution and environmentally-oriented reverse logistics (Sarkis & Tamarkin, 2005).

Green supply chain management (GSCM) is an up-to-date and accepted trend practice which smoothens the progress of environment sustainability globally, since it presents a holistic model in which products, distribution, consumption and disposal of products and services are implemented in a manner that is less damaging to the environment with increasing responsiveness concerning the presumption of global warming, non-biodegradable solid waste, harmful impact of pollutants etc. (Ikegwuru & Henshaw, 2020) Testa and Iraldo (2010) state that green supply chain management (GSCM) possibly will lend a hand to boost brand image, cultivate first-rate relations with stakeholders, and perk up the motivation of workforce.

According to Zhu, Sarkis and Lai, green supply chain management incorporates environmental considerations into materials management and logistics functions at each stage of an organization's supply chain management. In some cases, GSCM is simply green purchasing relationship between a buyer and vendor. In other case more extensive concepts of 'closed-loop' supply chains are employed which consider GSCM to be an unending logistics cycle of materials and products use, reuse and management (Zhu et al. 2008). Green supply chain refers to the way in which innovations in supply chain management and industrial purchasing may be considered in the context of the environment (Zhu & Sarkis 2004). GSCM involves traditional supply chain management practices, which integrate environmental criteria, or concerns, into organizational purchasing decision and long term relationships with suppliers. A green supply chains aim at reducing the wastes within the organization in order to conserve energy and prevent the dissemination of dangerous materials into the environment (Ho et al., 2009).

It integrates SCM and environmental protection objectives resulting in increased supply chain profitability and market shares and reduces ecological inefficiencies and risks (Kumar, Hong, & Haggerty, 2011). GSCM not only makes social sense but also business sense (Mefford, 2011). GSCM integrates the SCM and environmental protection concepts. It adopts the definition of supply chain management by adding the green component to it (Frödell, 2011).

3. THEORETICAL UNDERSTANDING

Corporate environmental responsibility theory (CERT) helps to understand the evolution of the relationship between the business environment and the natural. The foundation for the current scholarly thoughts on corporate environmental responsibility focuses on the relationship between business and the natural environment and it has its origins in the concept of corporate social responsibility (CSR). CSR is broadly defined as the responsibility expected of businesses to maintain the social norms of the communities in which they operate and behave at a level that is compatible with prevailing social values and expectations of performance (Rao & Holt, 2005). In this context, Davis (2009) and Lacroix and Stamatiou (2007) observe that every society

concurrently expects businesses to work for the betterment of the society while remaining a profitable business entity. The social performance demands on businesses have expanded to include environmental values and responsibilities, as concerns over the negative environmental impact of commercial and manufacturing activities have grown (Preuss, 2005; Rugman & Verbeke, 1998).

Thus Preuss (2005) offers a model of GSCM with corporate environmental responsibility as central to the implementation of GSCM practices.

Theoretical review of literature submits that a corporation's social responsibility, responsiveness to demands from the communities in which it operates, and performance are all related (Rao & Holt, 2005; Lacroix & Stamatou, 2007). Rao & Holt (2005) further identify environmental management as a key indicator of CSR. This is because organizations that take steps such as: collection of used packages for proper disposal, eco-labeling of products, accept recycling and re-use of packages, use organic packages and educate customers on proper disposal of used packages as a mechanism of reducing the impact of their operations on the natural environment are generally seen positively by the society (Lacroix & Stamatou, 2007). The result of this is shown on the increase on the organization's market share and customer network and loyalty, which in turn contribute positively to the organization performance (Rao & Holt, 2005).

This explains the fact that firms can succeed financially when they focus on social responsibility. This happens because CSR has some advantages that include but not limited to lowering the potential for costly litigation and helps firm's reputations but helps organizations identify wasteful activities that, if eliminated, would make the firm more efficient (Hoffman, 2000). Harris (2007) defines GSCM practices as firm practices geared towards internalizing firm's environmental responsibility to the society. He singles out green procurement, green manufacturing and green distribution as some of the practices with the potential of responding to the society environmental demands and at the same time improves the performance of the firm. It is important to mention here that the intersection of social, economic, and environmental responsibility in the firm is what Elkington (1997) as cited in Harris (2007) calls the triple bottom line.

4. METHODOLOGY

The research methodology for this paper is qualitative research method. Research design is a combination of descriptive and narrative designs. The sources and method of data collection were secondary. Descriptive and narrative approaches formed the data analysis with no statistical presentations.

5. DRIVERS OF GREEN SUPPLY CHAIN MANAGEMENT IN EMERGING ECONOMY

5.1. Economic Benefits

Economic benefit can be a driver of GSCM and represents the ability to reduce unit costs of manufactured goods or services rendered without affecting its intended use or reducing the product's quality (Bhool & Narwal 2013). "It is important to consider that cost reductions should not be associated with reductions in the quality of products" (Liu et al., 2013, p. 32). The removal of non-value adding components of products can lead to cost reductions. Economic benefit can further be obtained by using less energy, water and raw materials in the production process, which will not only preserve the environment but also lead to a reduction in production cost (Kamolkitiwong & Phruksaphanrat, 2015).

The implementation of GSCM is commonly considered a win-win situation by reducing costs, improving operational efficiencies and improving the reputation of the organisation (Routroy 2009). Benefits such as cost savings, increased customer satisfaction, new market opportunities, improved corporate image and higher profits can all be achieved through the implementation of GSCM practices (Agan et al., 2013). Rao and Holt (2005, p. 912) also state that "implementing GSCM gives the potential to lead to competitiveness and economic performance."

5.2 Government Rules and Legislations

The Rule of Law is a system of government where a society adopts a set of good, just and fair laws on which the society and its government is then governed (Bhool & Narwal, 2013). Government legislations set the rules of the game and organisations are obliged to follow regulations which may be national, regional and international, and simultaneously satisfy customers requirements (Luthra et al., 2011). These official mechanisms take the form of standards, laws, procedures and incentives set by regulatory institutions to inspire firms to become environmentally responsible. Literature supports the idea that requirements imposed by government and regulatory bodies provide ultimate incentives for firms to adopt green supply chains (Bansal & Roth, 2000; Hall, 2000).

Government rules and legislations act as drivers that encourage organisations to limit the use of non-renewable resources and to limit greenhouse gas emissions. Jaffe as cited in Chien and Shih (2007) states that environmental policies targeted directly at emissions are the most important single element of a cost-effective environmental policy strategy. Regulations increase the threats of fines for non-compliance among companies (Konar & Cohen as cited in Agan, Acar, & Borodin, 2013). Bhoon and Narwal (2013) also argue that regulations increase the costs of organisations that do not implement green practices through penalties and fines. Coercive isomorphism that is developed through informal and formal pressures exerted from outside the firm through regulatory measures and incentives can enable a firm to adopt green purchasing practices. For example, government agencies form a powerful institution that may coercively influence the actions (or lack of) of an organization through fines and trade barriers (Riverta et al., 2006).

Kilbourne et al. (2002) indicate that coercive pressures are crucial to drive organizations to initiate environmental management practices such as green purchasing, design for the environment and reverse logistics. Sarkis et al. (2011) discuss how in developed countries such as the USA, coercive pressures through laws and regulations improve environmental awareness, and thus drive environmental management practices. Clemens and Douglas (2006) also show that regulations in developed countries cause an increase in institutional pressures for firms in developing economies to improve their environmental activities. Hsu et al. (2013), writing on the outbound side of the green supply chain, explain that competitive pressure is forcing many organizations in Nigeria, Malaysia and some other developing countries to invest in reverse logistics activities such as recycling, refurbishing and remanufacturing.

For example, Nigerian government in 2011 came up with National Environmental Standard and Regulation Enforcement Agency (NESREA). The Nigerian government in order to address the environmental impacts of packaging through NESREA instituted legislation and programmes that aim to minimize the amount of packaging that enters the waste stream. In many instances, such pressures have forced firms in emerging economies to institute environmental activities that have surpassed expectation.

“Regulatory pressures are argued to be one of the major drivers of the implementation of green supply chains” (Rehman & Shrivastava 2011, p. 317). Routroy states that “government regulations can act as drivers in the implementation of green supply chains. Governments have the power to act as drivers in the implementation of green supply chains in three aspects” (Routroy, 2009, pp. 22-23). Global environmental requirements have shifted from pollution controls at manufacturing plants to the actual life cycle of the products. This increases the scope of involvement by governments to engage in green supply chain initiatives. Lee (2008) points out that governments can encourage organisations through tax-cut incentives and infrastructure developments for environmentally friendly complexes. This illustrates the power governments can exert as drivers of the implementation of green supply chains.

5.3 Pressures from Competitors

Large and successful firms in an industry usually face intense scrutiny from competitors and external environmental activists (Zhu & Sarkis, 2007). Hence many organizations work in an environment that includes pressures from their competitors that induce organizations to adopt green initiatives to combat competition and gain competitive advantages (Canning & Hanmer-Lloyd, 2001; Carter & Ellram, 1998). Heese et al. (2005) emphasize that a firm can often gain a competitive edge over their competitors by introducing product take-back. Using its market acuity, reputation, superior access to original parts, and potential to efficiently refurbish used products in-house, a manufacturer that takes back and resells refurbished products creates an additional source of income (Zhu et al., 2008a, b). Hart (1995) suggests that firms should focus on cooperative actions in order for green initiatives to gain sustained competitive advantages. Hart’s study emphasizes that a cooperative orientation in pollution prevention, product stewardship, and sustainable development strategies is required to achieve sustained competitive advantage.

Additionally, many organizations that are subject to constant pressure from their competitors are now forced to incorporate design for the environment requirements in their role as supply chain partners (Yalabik & Fairchild, 2011). However, the success of such design requires cross-functional cooperation within a firm (within teams and across different functional units) and cooperation with external partners (Zhu et al., 2005). Thus, many Malaysian companies that work with their European and US counterparts are forced to comply with material bans and design requirements to successfully serve these markets. Hsu et al. (2013), observe that recycling and reuse are now key strategies that have been adopted by several organizations in Southeast Nigeria and Asia with an objective of reducing packaging for household goods.

Pressure from competitors engenders competition in business, and competitive advantages is what keeps any business going in the industry it finds itself. To achieve this the business has to apply green image. Green image is a driver of GSCM that provides a "greening image" where a manufacturing product is to be used (Bhoon & Narwal, 2013). More importantly, green image refers to the positive recognition by customers of organisations that engage in manufacturing processes that are environmentally friendly. GSCM implementation can improve both the image and reputation of the organisation simultaneously (Chin, Tat & Sulaiman,

2015). An organisation will not only gain a competitive advantage by attracting customers through the right green image, but also be eligible for benefits such as the facilitation of loans, a reduction in taxes and greater chances to obtain government tenders. Based on the above it can be concluded that the projection of the right green image and the can lead to increased revenue and cost reductions, which will in turn increase the competitive advantage of an organisation.

5.4 Social and Environmental Responsibility

A firm may perceive a voluntary obligation to society in order to achieve harmony with social expectations, norms and codes of conduct that dictate acceptable business behaviors (Jones, 1999). Research has noted that multinational corporations have a sense of responsibility towards the society in which they operate (Murphy & Poist, 2003). These firms therefore adopt green practices to establish a socially acceptable image that is consistent with the obligations and values of the society in which they function. Additionally, researchers have also noted that firms are obligated to meet their corporate objective of social responsibility through developing environmentally friendly products. Our literature review in the business ethics field concurs that socio-cultural responsibility refers to the belief that good citizenship requires firms to support the welfare of the society and not harm it (Florida & Davison, 2001).

Therefore, our socio-cultural responsibility construct includes the firm's moral obligation to the society. "Social and environmental responsibility is that driver of GSCM which initiative to asses and take responsibility for the organisation's effect on the environment and impact on social welfare" (Bhool & Narwal 2013, p. 245). In current markets, organisations feel socially and environmentally responsible and engage in corporate social responsibility (CSR). It is a set of voluntary policies, codes or guidelines, initiated and driven by the organisation (Broomhill, 2007).

Environmental issues are being looked at more seriously and CSR is an effective way to make an organisation stand out above its peers. Corporations that want to enhance their image often publicise their environmental conservation activities to show their commitment to their stakeholders and the public (Agan et al., 2013). Rehman and Shrivastava (2013, p. 320) state that "organisations look at strategies such as CSR to enhance their reputation and brand image. The goal to differentiate and promote the organisation's image makes CSR a driver in the GSCM implementation."

Switching to environmentally friendly components to minimize the environment impact or instituting efficient ways to verify sourcing of raw materials is now considered a crucial task by manufacturers. Due to the intense global competition, manufacturing firms operating in Nigeria and other developing countries now have opportunities to learn from their overseas customers and competitors. The pressure of socio-cultural responsibility has motivated firms for example, in Nigeria to produce products with reduced material consumption and energy during use. It has also created awareness among supply chain members to institute channels to return products for recycling and remanufacturing.

5.5 Customers Awareness and Public Pressure

Consumers are beginning to question the environmental effect of the goods that they buy, and expect firms to pursue a minimum green standard in their product and process designs (Tate et al., 2010). The extant literature also indicates that pressures from downstream supply chain members and consumers force firms to adopt green supply chains (Christmann & Taylor, 2001; Blumberg, 1999; Wolf, 2011) initiatives. From an institutional theory perspective, normative pressure causes organizations to confirm and be perceived as more legitimate and trustworthy (Sarkis et al., 2011). This pressure is exerted by external stakeholders such as customers who have a vested interest in the firm (Vachon et al., 2009).

For Malaysian and Nigerian manufactures, customer requirements form the core normative pressure to adopt green supply chain initiatives (Eltayeb & Zailani, 2011). Similar to other developing economies, manufacturers in Nigeria, Malaysia, Singapore etc. face a diverse range of waste disposal challenges. The lack of waste management legislation leads to an often confused and unregulated means to dispose waste (Lee & Klassen, 2008). To address this issue, several consumer and nonprofit organizations in Malaysia attempt to promote the concept of industrial ecology where a closed-loop approach is encouraged to recover all the waste through proper recycling and reuse. Hajikhani, Wahat, and Idris (2012) argue that customer demand for green products and services is seen as one of the most significant drivers for green initiatives. Customers are becoming increasingly aware of the negative impact caused by certain businesses activities on the environment. The public and customers exert pressure on organisations to implement greener supply chains, ultimately reducing the harm these entities have on the environment.

Trowbridge (2001, p. 124) states that "end consumers request green products and/or the implementation of environmentally friendly practices." Paco, Raposo, and Filho (2009, p. 17) also mention that "customers take the environment into consideration when making purchase decisions." Customers demand green products by asking for ISO 14001 certification (Agan, Acar, &

Borodin, 2013). There is general agreement among these authors that customers act as drivers for organisations to adopt GSCM practices.

The media plays a vital role in informing and educating the public on environmental degradation, therefore customers concern themselves with environmental issues at an increasing rate (Hansen 2011). This may lead to the public buying less products they perceive to be environmentally harmful. Liu, Zhang, Wang, Chen and Shen (2013) argue that customers do not only need good quality products but require these products to be environment-friendly. This drives organisations to look at the implementation of GSCM practices and affects the entire manufacturing process from design to the end-of-life of the product.

6. CONCLUDING REMARKS

Increases in environmental problems require companies to be more aware towards the environment and take precautions regarding the problems. As a result, companies have started to embrace the concept of green supply chain which includes environmental issues rather than the concept of supply chain which is based on profitability. Green supply chain management (GSCM) has emerged as an important component of the environmental and supply chain strategies. In order to make a supply chain green, it is necessary to consider all practices that involved in the GSCM.

Nigeria as an emerging economy among comity of nations has physical environment that is generally subjected to various forms of abuse and debasement resulting to water and air pollution and soil degradation as evidenced by large number of heaps of domestic and industrial wastes in major and minor towns of the country. These heaps of refuse (waste) are attributed to inadequate and inefficient reverse logistics management programmes of firms.

7. RECOMMENDATIONS

First, the phrase “business as usual” is no longer obtainable globally in the way business was done and in supply chain management practices due to the impacts of Coronavirus (COVID-19). It is recommended that countries of all classifications (that is, both developed and developing countries) should review their national regulations and statutory instruments to green supply chain management to be COVID-19 compliant.

Second, green supply chain management (GSCM) is just a part of the whole. The whole is sustainable supply chain management (SSCM). It is therefore further recommended that organizations in the developing countries should initiate and implement sustainable supply chain management, which goes further to incorporate not just the environment but also the economic and social aspects of the business.

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