

**Research Article****Green Supply Chain Management and Sustainability: A Proposed Model of Stakeholder Pressure****Faiza Irum**

IBA, Gomal University, Pakistan
Email: faizairum1@gmail.com

Citation

Irum, F. (2024). "Green supply chain management and sustainability: A Proposed model of stakeholder pressure." *Digital Management Sciences Journal*, 1(2), pp 132-142

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Abstract

The aim of the study is to investigate the relationship between green supply chain management practices, stakeholder pressure and sustainability and its dimensions (economic, social and environmental). For this purpose quantitative survey was used. Data was collected from 200 firms in which manufacturing and services industry were included. Nonprobability sampling technique was used. SPSS was used for analysis of the data. It was found that 200 completed questionnaires were analyzed. Highest mean score was recorded for economic performance followed by the GSCM. Moreover there is significant correlation found between GSCM, stakeholder pressure and sustainability. It is concluded that firms should produce the eco-friendly products and services if concerns are shown by the stakeholders such as customers, creditors, suppliers, employees.

Keywords: Green Supply Chain Management, Stakeholder Pressure, Sustainability, Manufacturing Sector.

1 | Introduction

International concern for environmental problems has raised in developing countries from 2012 onwards according to a survey conducted in 18 countries which results showed that India, china, south Korea and brazil have more sustainable / responsive customers (Jabbour et al., 2017). Increased population has put the world to the scarcity of the resources and around the globe environmental issues. Walker et al(2008) reported that all governments and organizations even human being at their individual level have come forward to save the nature from the destruction caused by the industrial pollution. Society forced the industrial sector to look over their whole production to delivery process. As a result of this action, green supply chain management idea has introduced (Adriana, 2009). Green supply chain management includes all process from product idea to raw material supply, manufacturing process to final product delivery to the market and post delivery feedback from the customers in the form of reuse, recycling the product (Srivastava, 2017). So, GSCM has a very wide scope nowadays as compared to previous years where only green buying reverse management was used (Sarkis,1999). Hazardous business operating activities largely produced environmental pollution that why business are now more concerned for their environmental performance in the long run (Hassan et al.,2016). Organizations are now struggling for their production efficiency through GSCM practices. SMEs in the Malaysia are less keen to go for green practices like the large organizations. A registered EMS of any organization would guide not only the influence of their operating activities but also how to overcome it 9Yaqob et al., 2013). Due to the perfect competition and pressure from the end users to adopt environmentally friendly products and policies, organizations are now practicing sustainable performance in the form of economic, environmental and social performances (Artha and Mulyana,2018).

Earlier supply chain management (SCM) was dealt with inventory management, but GSCM was adopted due to great environmental changes and pressure from society (Aruna,2018). Vijay Vargy (2017) argued that an organization would better perform by acquiring ISO14001 registered EMS to perform better GSCM practices. So, organizations would survive through the highly competitive world because of GSCM practices. Eco-design or green design practices would boost environmental performance. As it involves the proper allocated usage raw-material, control use of hazardous chemicals in the process of production and minimum discharge of wastes (Asif et al., 2018). In order to minimize environmental pollution, environmental protection energy sources like solar, and biodegradable sources can be used in firms production. Furthermore, these green practices would bring a firm easy access for recycling, reproduction, reuse of all the product in the green markets (Amemba et al.2013, Zhu et al.,2007).

Satisfying customers' demand is in the favor of company as customer would accept the company's products as per their demand to make it most successful product in the market and results in firms' profitability (Kassinis and Vafea,2006). Small enterprises can go for well distribution activities by positive environmental control. All this is possible by following their customer's guidelines in a close competitive environment (Chan et al.,2012). Customer cooperation is the favourable liability for the organization for the reuse and recycling of the products on behalf of the more responsible customers who understand it more cautiously (Lai et al., 2014). More reliance on the customer's cooperation is in the favor of organizations as the customers are the only believers for new product sale. They would boost it by their purchase and also by in the form of post utilization feedback (Jabbour et al.,2017).

1.2 | Problem Statement

Organizations are now struggling for production efficiency in order to meet the customer demands for green practices and nevertheless to overcome the associated operating cost. So, how the adoption of green supply management practices would affect the firm's sustainable performance in the long run and also how the stakeholders' pressure would play its role in this relationship? This is the major problem statement and objective to explore in our study.

1.3 | Objectives of the Study

- To investigate the relationship between Green supply chain management, sustainable performance and stakeholder pressure
- To investigate the influence of Green supply chain management, upon sustainable performance
- To investigate the moderating role of stakeholders' pressure upon Green supply chain management, sustainable performance

1.4 | Research Questions

Maintaining long run survival by performing successfully the economic, social and environmental performances is highly required by a firm. A firm goes for green practices as per customer's demand. Moreover, in tough competition, to maintain a strong position with all green supply chain management practices, a firm would undergo through all hardships like bearing heavy operating due to green practices. So, the question arises; that to

1. Is there any influence of GSCM practices on sustainable performance?
2. Does stakeholders' pressure moderate between GSCM practices and sustainable performance?

In this study, the main research question is to find out the impact of GSCM practices on a firm's sustainable performance i.e. economic, environmental and social performances. The stakeholders are the main supporters of the firm's products. So, they influence the firm in all respects by putting their pressure on them. So, keeping their influential role in firm, their role is also be explored in this study.

3. How the stakeholders' pressure would moderate the relationship between the firm's GSCM practices and sustainable performance?

2 | Literature Review

2.1 | Theoretical Perspective of GSCM practices

Resource based view theory supported this study. According to RBV organizations possess tangible and intangible assets, these assets help organizations to attain competitive advantage and sustainable performance. In this theory, the element of environment was missing so in addition to this theory a new theory was introduced i.e. natural resource-based view NRBV by adding environment element in the theory. So, this study got support from RBV and NRBV.

2.2 | Green Supply Chain Management



Green supply chain management fulfils all processes of a product life cycle from idea generations and selection to raw material selection, manufacturing, market delivery stage and final recycling after the usage. Cankaya, S.Y, and Sezen, B(2018) described GSCM in eight different dimensions.

1.Green Purchasing

Selection of the product is not the only thing but considering the environmental issues are also the important matters. Not only appropriate supplier but also the whole supply process would decide the organization's strategic goals for environment concerns (Paulraj, 2011).

2. Green Manufacturing

It involves adoption of all those specialized advanced technological procedures which consumed less energy, material and minimal environmental deterioration like water, air and earth pollution (Routroy, 2009).

3. Green Packaging

As opposite to traditional packaging, green packaging is considering all environmentally friendly materials which are simple, easy to remove wrappings, bio gradable, minimal polystyrene/-----usage (Kung et al, 2012).

4. Green Distribution

It considers all those steps for shipment of a product at the minimal hazard to the environment such as time and fuel conservation, product features like shape, design, weight etc, quality of distribution channel (Sarkis, 2003).

5. Green Marketing

It includes all the promotional activities for the product without disturbing the environment like design and promotion of the product in the best possible way (Ferrel, 1993).

6. Investment Recovery

Removing the scrape and waste materials for resale to earn some amount from their resale comes under this category (Zhu and Sarkis, 2004).

7. Internal Environmental Management

Environmental protection policies made by the top-level management and middle level management and their activities for internal cooperation and support come under this category (Chan et al., 2012).

8. Environmental Education

It is considered as an important weapon by targeting the personnel of the organization to educate them for environment friendly policies adopted by the company. It would be in the favour of the

company to train their employees for targeted environment policies by changing their attitudes (Sammalisto and Brorson,2008).

2.3 | GSCM and Environmental Performance

This measures the extent to which a firm's affect the environment by its activities such as manufacturing, supply, distribution and final consumption of the product. Minimum the removal of the wastage like water, air, dangerous chemicals into the environment, more successful is the firm in its operating activities (Azapagic,2003).

Sometimes, firms green practices do not add to the profitability but only increased the operational, maintenance and training costs which is not in the favour of the firm. If a firm is not enough capable to perform recycling then its all green practices are not fruitful for the firm (Christmann, 2000). Zhu and Sarkis (2004) argued that firms GSCM practices significantly boost the economic and environmental performances. Customers demand for firms green products play a vital role. As if there is no demand for firms green products then it would be a great loss for firms profitability and firms investment for green products initiations would be in vain (Morgan, 2004). Applying GSCM practices and eco-practices would add to the proper and economic use of material, energy resources like oil, gas, water. For the survival in the perfect competition, a firm must have include the firms environmental green practices plans to the long term strategic plans which would help in contingent situation (Banaerjee, 2001, Hart,1995). However, Rao and Holt (2005) argued that there are evidences that GSCM practices only add to the firms environmental performance but not to the financial performance. So, in short, there are many views about a firm's environmental performance and financial performance which need to be further investigated.

2.4 | GSCM and Economic Performance

Zhu et al (2008) described economic performance as how much firm's manufacturing operation is technically advanced to produce goods at minimum cost of production, less waste removal and its recycling. Getting concern for greening the environment also involved some cost to the firm but Bowen et al (2001) argued that it would not affect the short term profit and sales.

2.5 | GSCM and Social Performance

To create a more positive look in the society, an organization must perform its social responsibility. In the past, it was ignored but it has importance for a business to take care of society like building hospitals, schools, growing more plants in the factory area, parks and educate its human resource. These all would increase the goodwill of the organization (Eltayeb et al., 2011, Rajeev et al., 2017).

Cankaya , S.Y and Sezen, B(2018) presented a model to found the GSCM practices dimensions on sustainability performance dimensions. From the eight dimensions GSCM in the model such as green purchasing, green manufacturing, green packaging, green distribution, green marketing, investment recovery, internal environmental management and environmental education, only five were positively linked with environmental performance. These were green production, green marketing, green packaging and distribution, internal environmental management and investment

recovery while only three dimensions were in positive relation with economic performance such as green production, green distribution and packaging and environmental education. GSCM four dimensions showed their positive link with social performance which were green production, green distribution and packaging, internal environmental management and investment recovery.

Rasit, Z.A et al (2019) investigated the GSCM practices in SME's manufacturing sector of Malaysia. The empirical results of the study showed the strong impacts on SME's sustainability performance. Among all dimensions, only eco-design and environmental cooperation practices were in strong link with sustainable performance. Results also revealed that Malaysian SME's adopted ISO14001 which is a valuable asset guiding towards green practices of the firms. Khan, S.A.R and Qianli, D (2017) found the green practices of firms in Pakistan perspectives. Out of five, only four, such as green manufacturing, eco-design, cooperation with customers and green information system were found in more prominent relationship with firm's performance. However, green purchasing affected negatively firm's financial performance because government is not providing any subsidies to the firms for green purchasing. As green purchasing involves large costs, so, firms in Pakistan inspite of customer's awareness, could not go for green purchasing which in turn affects adversely the firm's financial performance.

2.6 | Stakeholders Pressure

Today many organizations take steps for their environmental performance betterment by making variations in their products quality and manufacturing process because the end consumers influence organizations to do so. Customers as stakeholders are more powerful (Lai et al.,2012). Stakeholders are the groups that influence company's management to follow environmentally friendly policies. Not only, they put pressure on company's management but also the company's actions affect their rights. Both external and internal stakeholders are at risk by the company's decisions. External groups like company's supplier can lose the market value of its product due to company's non-green performances (Sarkis et al., 2011, Huiying Zhang Fan Vang, 2016, Rivera-Camino,2007).

Sustainable performance is not possible without mutual internal cooperation in the organization. Moreover, top level management 's policies play a key role in firms' sustainable performance. Nevertheless, the firms suppliers act a strong role in fulfilling the environmental objectives. Firms' supplier as stakeholders strengthens the firms position by their cooperation in firms operating and strategic activities by GSCM practices. So, all these collective/ mutual internal external efforts would ease the GSCM practices and would bring a more positive and greener image of the firm in the market (Neramballi et al.,2017, Kim and chai, 2017, chin et al., 2015, Rahim, Fernando and saad.,2016, dubey et al., 2014). Kumar et al (2014) stated that increased environmental pollution has made the customer aware for firms green practices. Firms are now compelled for control waste discharge, minimum material wastage and minimum pollution in all form like air, water and soil but also on the other side, GSCM practices are not an easy job. A good technological operating system requires heavy costs to be installed that would reduce the firm's profitability due to increased operating cost that would reduce the firm's profitability due to increased operating and employees training cost (Walley and Whitehead,1994).

2.7 | Hypothesis

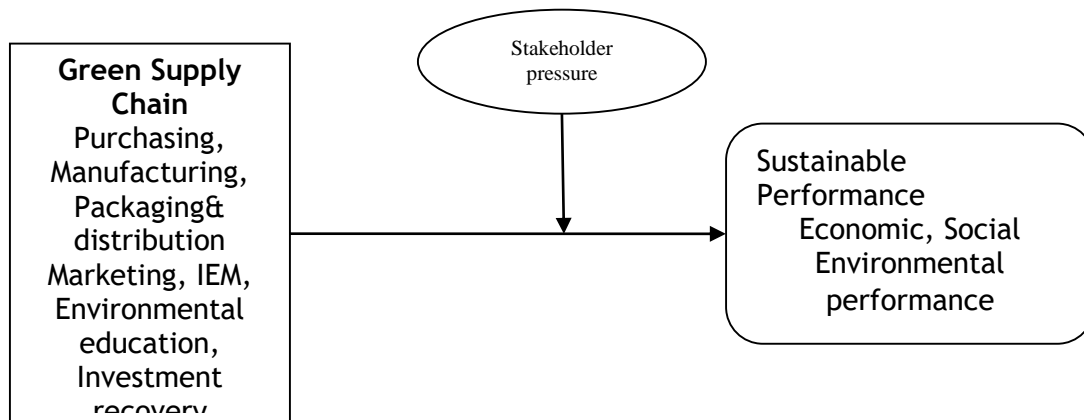
Based on above literature, following hypothesis are developed.

H1: GSCM is positively related to economic performance.

H2: GSCM is positively related to social performance.

H3: GSCM is positively related to environmental performance.

2.8 | Theoretical Framework



3 | Research Methods

3.1 | Research Design

Two main research designs, i.e. quantitative and qualitative design are the most common designs and strategies used by the researchers. In this study survey research design using structured questionnaire has been used. The aim of the quantitative survey is to save time, reduce costs and collect the data in limited time from a big population.

3.2 | Population and Sampling

Nonprobability convenience sampling technique was used. The unit of analysis was organizations.

3.3 | Measures/instruments

Instrument for Sustainable performance was adopted from Yusliza et al (2019). It has 15 items. The scale for green supply chain management practices are adopted from Cankaya and Cezen (2019) while stakeholder pressure was adopted from Yusliza (2019).

3.4 | Data Analysis tools/techniques

SPSS was used for analyzing the primary data.



4 | Results

Table 1

Demographic Information

Variables	N	%age
Male	170	85%
Female	30	15%
Manufacturing	151	75.5%
Services	49	24.5%
Age of the firm 1-5 years	50	25%
Age of the firm 6-10 Years	70	35%
Above 10 Years	80	40%

Table 2

Correlation

Variables	Mean	1	2	3	4	5
GSCM	4.56	1				
Stakeholder Pressure	4.01	0.46**	1			
Social Performance	3.98	0.55**	0.399**	1		
Environment Performance	4.55	0.61**	0.73**	0.64**	1	
Economic Performance	4.76	0.66**	0.41**	0.59**	0.77**	1

Table 1 presented the personal information of the respondents and manufacturing and services firms. In which majority of the respondents are male, followed by females, most of the firms were manufacturing, and majority of the firms have age of more than 10 years followed by those firms who have age of 6-10 years, and 50 firms have age of 1-5 years respectively. Table 2 presented the mean and correlation. The highest mean is scored by economic performance and followed by GSCM practices; lowest mean is scored by social performance.

5 | Discussion and Conclusion Results

The aim of the current study is to find the correlation between the green supply chain management practices, stakeholder pressure and attributes of sustainable performance. The results shows that there is positive and significant correlation found between the green supply chain management practices, stakeholder pressure and economic, social and environmental performance. These findings are in line with findings of Yusliza et al (2019) also found the significant relationship, in the same way the findings of this study are in line with findings of Cankaya and Sezen (2019). It is concluded that if stakeholder shows concerns the firms should produce eco-friendly products and services.



6 | Limitations and Future Research Directions

The first limitation of this study is the small sample size, it is therefore recommended to use large sample in future. Secondly the data is collected from limited manufacturing and the services industry it is therefore recommended to collect data from hospitality industry. Third, use of sampling technique may limit the generalizability of the results. Therefore using another technique might help the researchers to generalize the results to other sectors as well.

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