

# Factors affecting Green SCM Implementation in MSME's:

Manoj Kumar, Vivek Kumar and Pradeshi Ram

Department of Mechanical Engineering, Mewar University

[manojbhati1327@gmail.com](mailto:manojbhati1327@gmail.com), [vivek.109047002@gmail.com](mailto:vivek.109047002@gmail.com), [pradeshiram@mewaruniversity.co.in](mailto:pradeshiram@mewaruniversity.co.in)

## Abstract:

The study aims to identify and list the major drivers that help achieve successful implementation of Green Supply Chain Management (GSCM) in Micro, Small and Medium Enterprises (MSME). A literature review is provided to identify, select and make an analysis and summary of all suitable studies in the area of GSCM. Drivers to implement GSCM have been identified through extensive literature review. The existing knowledge base is somewhat fragmented. This is a relatively unexplored topic within mainstream green supply chain management and one which could provide rich opportunities for further exploration. Total of nine major drivers has been identified in the literature review. These drivers positively influence implementation of GSCM in the firm. Beside those identified drivers there may be other issues that need to be researched. There is scope to enhance this study by taking into consideration different type of industries i.e. large scale and by extending number of papers reviewed. By identifying key issues for MSME's, managers can better prioritize issues to make implementation process smooth without disruption. Strategic implementation of green supply chain management will help Indian manufacturing enterprises enjoy cost and efficiency benefits. As there are no recent state-of-the-art reviews in green supply chain management, this paper contributes to systematizing and consolidating what has been done in recent years and uncovers interesting research gaps for future studies in this emerging field.

**Keywords:** Supply Chain Management (SCM), Green Supply Chain Management (GSCM), Micro, Small and Medium Enterprises (MSME).

## 1 Introduction

Micro, Small and Medium Enterprises (MSME) sector has emerged as a highly vibrant and dynamic sector of the Indian economy over the last five decades. MSME's not only play crucial role in providing large employment opportunities at comparatively lower capital cost than large industries but also help in industrialization of rural & backward areas, thereby, reducing regional imbalances, assuring more equitable distribution of national income and wealth. MSME's are complementary to large industries as ancillary units and this sector contributes enormously to the socioeconomic development of the country. (Annual Report MSME's 2011-12)

The primary responsibility of promotion and development of MSME's is of the State Governments. The role of the Ministry of MSME and its organizations is to assist the States in their efforts to encourage entrepreneurship, employment and livelihood opportunities and enhance the competitiveness of MSME's in the changed economic scenario. The schemes/programs undertaken by the Ministry and its organizations seek to facilitate/provide: i) adequate flow of credit from financial

institutions/banks; ii) support for technology upgradation and modernization; iii) integrated infrastructural facilities; iv) modern testing facilities and quality certification; v) access to modern management practices; vi) entrepreneurship development and skill upgradation through appropriate training facilities; vii) support for product development, design intervention and packaging; viii) welfare of artisans and workers; ix) assistance for better access to domestic and export markets and x) cluster-wise measures to promote capacity building and empowerment of the units and their collectives.(Annual Report MSME’s 2012-13)

MSME’s have been globally considered as an engine of economic growth and as key instruments for promoting equitable development. The major advantage of the sector is its employment potential at low capital cost. MSMEs constitute more than 90% of total enterprises in most of the economies and are credited with generating the highest rates of employment growth and account for a major share of industrial production and export. The MSME sector in India is highly heterogeneous in terms of the size of the enterprises, variety of products and services, and levels of technology. (Annual Report MSME’s 2012-13)

### 1.2 Definition of MSME’S

According to what was stated in the provision of Micro, Small & Medium Enterprises Development (MSMED) Act, 2006 the Micro, Small and Medium Enterprises (MSME) are classified in two groups. SME refers to “an enterprise that has completed company registration or business registration in accordance with the requirements of the law, and which conforms to the classification in Table 1”.

<b>Manufacturing Sector</b>	
<b>Enterprises</b>	<b>Investment in plant &amp; machinery</b>
Micro Enterprises	Does not exceed twenty five lakh rupees
Small Enterprises	More than twenty five lakh rupees but does not exceed five crore rupees
Medium Enterprises	More than five crore rupees but does not exceed ten crore rupees
<b>Service Sector</b>	
<b>Enterprises</b>	<b>Investment in equipments</b>
Micro Enterprises	Does not exceed ten lakh rupees:
Small Enterprises	More than ten lakh rupees but does not exceed two crore rupees
Medium Enterprises	More than two crore rupees but does not exceed five core rupees

**TABLE 1.1 - Classification of a SME**

## 2 Literature review

### 2.1 Supply Chain Management (SCM)

Supply chain management (SCM) is a technique that is linked to the adoption of the lean production system (Cox, 1999). By definition, supply chain management strives for the efficient management of supply chain assets, products, information and cash

flows in order to maximize the surplus that results from the difference of the price paid by a consumer and all the operational costs that accrue throughout the supply chain (Chopra and Meindl, 2007). Thus, the competition for market shares is no longer between single forms, but increasingly between supply chains (Taylor, 2003).

The approach of SCM is derived from the fact that there are dependencies between levels in channels from the point-of-origin to the point-of-consumption (Lambert *et al.*, 1998; Hakansson and Snehota, 1995). Usually in SCM, the point-of-origin refers to suppliers or manufacturers (Carter *et al.*, 1995; Ellram and Cooper, 1993; Novack and Simco, 1991) while the point-of-consumption refers to consumers, customers or end-users in a supply chain (Min and Mentzer, 2000; Lambert *et al.*, 1998).

Ganeshan, and Harrison, (1995) has defined Supply Chain Management(SCM) as a chain of facilities and distribution alternatives that performs the functions of obtainment of products, transformation of these products into intermediate and finished goods, and the distribution of these finished goods to customers. Lee and Corey (1995) declare that Supply Chain Management (SCM) incorporates the integration of activities taking place among facilities network that acquire raw material, transform them into intermediate products and then final goods, and deliver goods to customers through a system of distribution. According to Christopher (1998) supply chain refers to the organizations network that are involved in the diverse processes and activities that generate value in the form of goods and services in the hands of the end customer.

Supply chain management is the management of a network of interconnected business involved in the ultimate provision of product and service packages required by end customers and cover all the necessary movement and storage of raw material, work-in-process inventory, and finished goods from the point of origin to the point-of-consumption (Cetinkaya *et al.*, 2011).

## 2.2 Green Supply Chain Management (GSCM)

Green Supply Chain Management is defined as a buying firm's plans and activities that integrate environmental issues into SCM in order to improve the environmental performance of suppliers and customers (Bowen *et al.*, 2001). Greening the supply chain is one of the three major issues of sustainable SCM besides the economic and social dimensions (Seuring and Muller, 2008)

The issues of environmental pollution accompanying industrial development must be addressed with supply chain management, and thereby contribute to a GSCM initiative (Sheu *et al.*, 2005). Presently, industries cannot overlook environmental issues (Chien and Shih, 2007). GSCM is a remarkable concept to increase environmental performance and reduce environmental impacts (Srivastava, 2007). The GSCM consists of all product processes – raw material purchasing, product manufacturing, recycling, reusing and remanufacturing – and these processes must comply with environmental protection regulations (Kainuma and Tawara, 2006).

Most Indian industries will have to develop supply chains from an environmental sustainability point of view by modifying traditional SCM to GSCM through initiation of green procurement strategies (Mudgal *et al.*, 2010). Procurement/purchasing decisions will affect green supply chains through the purchase of materials which are either recyclable/reusable or have already been recycled (Chien and Shih, 2007). GSCM cuts across varied boundaries (business activities integrating sourcing, making, and delivery processes) of supply chain management (Min and Kim, 2012). Environmental or green purchasing or procurement can be referred to as the integration of environmental considerations into purchasing policies, programs and actions to reduce waste and to help achieve a GSCM (Varnas *et al.*, 2009).

Srivastava (2007) defined GSCM as integrating environment thinking into supply chain management, including product design, material sourcing and selection, manufacturing processes, delivery of the final product to the consumers, and end-of-life management of the product after its useful life.

Sarkis (1998) pointed out green supply chain includes the internal logistics of enterprise, materials management, external logistics, packing and reverse logistics. Nagel (2000) put forward that the green supply chain covered the whole process of the production and utilization. He emphasized on the construction of a stable and long-term strategic relations in the scope of the whole supply chain.

The definition and scope of GSCM in the literature has ranged from green purchasing to integrated green supply chains flowing from supplier to manufacturer to customer, and even RL (Zhu and Sarkis, 2004). GSCM is defined as ‘integrating environmental thinking into supply-chain management, including product design, material sourcing and selection, manufacturing processes, delivery of the final product to the consumers as well as end-of-life management of the product after its useful life’.

### 2.3 Difference between Conventional SCM and Green SCM

Conventional SCM usually concentrated on economy and control of the final product but seldom considers its ecological effects ( Nones, Morques and Evgenio, 2004). In comparison, GSCM is green, integrated, ecologically optimized and takes into consideration of human toxicological effects as well. Companies put ecological requirements as the main criteria for products and productions and ensure economic profitability and sustainability. Differences between conventional SCM and GSCM are summarized in table 2.1 (Ho and Shalishali, 2009)

S.No	Characteristics	Conventional SCM	Green SCM
1	Objectives Value	Economic	Ecological
2	Ecological Optimization	Integrated Approach	High Ecological Impacts
3	Supplier Selection Criteria	Price Switching Supplier Short Term Relations	Eco logical Aspects Long Term Relations
4	Cost Prices	Low	High
5	Speed and Flexibility	High	Low

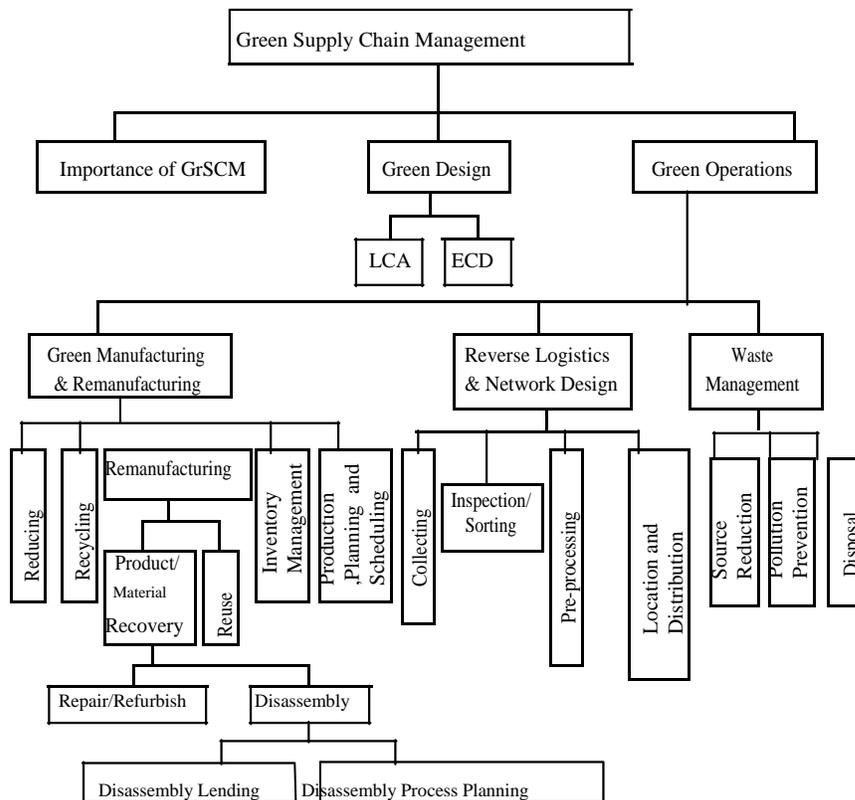
**TABLE 2.1 Difference between conventional and Green SCM**

### 2.4 Benefits of GSCM

The benefits of GSCM have been identified for different members of supply chain, whole society and the environment and tabulated in Table 2.2 (Stevens, 2002; Duber-Smith, 2005).

Environment	Supplier	Manufacturer	Customer	Society	Stakeholder	Supply Chain
Low Pollution	Low Cost Prices	Low Cost Prices	Low Cost of Ownership	Less Consumption of Resources	Motivation of Stakeholder for the Environment	Competitive Advantage
Overcoming Prejudice and Cynicism	Less Rejection Better Image	Easy to Manufacture Better Image  Sustainability of Resources/Increased Efficiency Adapting to Regulation and Reducing Risk Brand reputation Return on Investment Employee Morale	Convenience and Fun  Feel Good and Quality of Life	Better Compliance		

**TABLE 2.2 Benefits of GSCM**



**Figure 1: Implementation of GSCM (Srivastava, 2007)**

## 2.5 IMPLEMENTATION OF GSCM

Studies have been reported in literature on many issues related to implementation of GSCM in (Figure 1).

## 2.6 IDENTIFIED DRIVERS OF GSCM

### 2.6.1 Organizations Perspective

There is a range of different organization-related green supply chain management drivers. Personal commitment of individuals (including founder and owner) has been found to be positively related to green supply chain management (New *et al.*, 2000). Having analyzed a leading organization in the environmental field, (Wycherley, 1999) found that the environmental activities undertaken at the site were seen as a 'way of life'. The personal and ethical values of the founder of the company filtered through the whole organization. Interestingly, not top management but middle management's support is positively related to environmental purchasing (Carter *et al.*, 1998). Operational and environmental improvement has been found to be positively related to employee involvement (Hanna *et al.*, 2000).

Internal pressures, especially enterprise's environmental mission and internal multinational policies, are considered very important, and all means for three industries are equal or close to those of regulations. However, electronic companies in China are not well aware of the importance of potential liability for disposal of harmful materials with the industry mean of 3.94, which is consistent with the results of previous literature by Zhu and Geng (Zhu Q and Geng Y, 2001).

Members of top management are instrumental in encouraging firms to evaluate their role in society and are responsible for the firms' environmental management leadership (Anderson and Bateman, 2000; Lawrence and Morell, 1995; Winn, 1995). They are also a strong internal political force that can foster corporate environmentalism (Banerjee *et al.*, 2003). Bansal and Roth (2000) state that top management team members (Anderson and Bateman, 2000; Lawrence and Morell, 1995; Winn, 1995) and company values (Buckholz, 1991) are instrumental in encouraging these firms to evaluate their role in society.

### 2.6.2 Legislative and Regulatory Compliance

A significant body of research indicates that government regulation and legislation is a major driver for companies' environmental efforts (Beamon, 1999; Green *et al.*, 1996; Zhu *et al.*, 2005). A significant body of research indicates that government regulation and legislation is a major driver for companies' environmental efforts (Beamon, 1999). A buying firm's involvement in green purchasing is positively related to their perception of the importance of environmental compliance (Min and Galle, 2001). Previous research by Lawrence and Morell (1995) showed the importance of legislation as a driver for corporate ecological responsiveness has been widely recognized (Bansal and Roth, 2000). Proactive efforts towards environmental regulation are more likely to be drivers of successful green supply chain management projects (Bowen *et al.*, 2001a; Carter and Dresner, 2001).

### 2.6.3 ISO 14000 Certification

Handfield *et al.* (2002) found that the movement towards greater environmental responsibility is a result of several recent developments including the introduction of the ISO 14000 certification standard and the escalating emphasis on waste reduction from external or governmental agencies. Since the release of the ISO 14001 standard there has been additional pressure on some industry

supply chains to address environmental performance through the use of environmental management systems (Zuckerman, 2000; Gordon, 2001). Many Chinese companies acquired ISO14001 certification to meet environmental requirements from their foreign customers, which also helps them to market their products to other customers (Zhu Q and Geng Y, 2001). Christmann and Taylor suggested that export and sales to foreign customers are two major drivers for improving the environmental performance of Chinese enterprises (Christmann and Taylor, 2001)

#### **2.6.4 Pressure by Customers**

In the 1990s, the focus was on consumer purchase behavior. Customers, local communities, environmental interest groups and even the natural environment itself encourage companies to consider ecological impacts in their decision making (Berry and Rondinelli, 1998; Lawrence and Morell, 1995; Starik, 1995). Berns *et al.* (2009) found that consumer concerns about sustainability were a significant impact on the businesses in their study. In investigating the role of purchasing in environmental management, it was found that customer demands that take a long-term supply chain perspective have a more positive influence on environmental management in contrast to customer requests which involve an unreasonable timeframe (Carter and Dresner, 2001). In a study of furniture industry, customers (manufacturers of furniture) encouraged suppliers to improve their environmental performance (Handfield *et al.*, 1997). These customers were in turn driven by end-consumers requesting more green products. Similarly, vehicle manufacturers encouraged strategic suppliers to obtain accreditation, such as the Eco-Management and Audit Scheme (EMAS) (Lamming and Hampson, 1996). Customers exert pressure on organisations to engage in environmental supply chain practices (Green *et al.*, 1996; New *et al.*, 2000). Small companies are especially under pressure from their customers (Hall, 2001)

#### **2.6.5 Gaining Competitive Advantage**

An increasing number of firms are engaging in ‘green marketing’ to gain or maintain a competitive advantage. Previous research found that excellence in protecting the environment created opportunities to achieve competitive advantage (Starik and Marcus, 2000). Walton *et al.* (1998) reviewed integrating environmental management with the day to day processes of the organization and concluded that purchasing and supply chain managers can have a major impact on the ability of a company to establish and maintain a competitive advantage through environmentally friendly practices (EFP). Competitors, as potential environmental technology leaders, may be able to set industry norms and/or legal mandates and thus clearly have the ability to drive environmental innovation (Henriques and Sadorsky, 1999). A proactive environmental strategy can help a firm to gain competitive advantage through the development of supply management capabilities (Sarkis, 2003; Ferguson and Toktay, 2006)

#### **2.6.6 Improve Firm Performance**

A policy of environmental purchasing may not be undertaken because of a desire to ‘save the world’, but because it reflects a way to gain competitive advantage, improving the financial performance of the firm (Gonzalez-Benito and Gonzalez-Benito, 2005; Rao and Holt, 2005). Orsato (2006) states that ‘‘managers need to identify circumstances that favor the generation of both public and corporate benefits of sustainability initiatives.’’

#### **2.6.7 Environmental Collaboration with Suppliers**

It has been suggested that suppliers can help to provide valuable ideas used in the implementation of environmental projects, but they generally do not act as a direct driving force (Carter and Dresner, 2001). The lack of previous empirical research may be because this driver has yet to be investigated, or because suppliers simply do not hold much sway with environmental supply practices. However, whilst suppliers may not be the drivers, integration and cooperation in supply chains can support more effective management of environmental issues (Klassen and Vachon, 2003; Theyel, 2001; Vachon and Klassen, 2006).

### 2.6.8 Collaboration between product designers and suppliers to reduce and eliminate product environmental impacts

Supplier’s advances in providing environmentally friendly packages, supplier’s advances in developing environmentally friendly goods and environmental partnership with suppliers were on the list and ranked 8, 9 and 10. Zhu and Geng found factors related to suppliers were ranked similarly. However, further analysis indicated that companies in China consider these factors less important than those counterparts in the USA (Zhu Q and Geng Y, 2001).

### 2.6.9 Marketing

Marketing is a relatively important driver of GSCM in Chinese enterprises. To obtain more sustainable solutions, environmental properties of products and services must meet customer requirements(Lo CW, Leung SW, 2000).Using survey data from firms in China, Christmann and Taylor concluded that multinational ownership, multinational customers, and exports to developed countries increase self-regulation of environmental performance (Christmann P, Taylor G., 2001). Chinese consumers are developing an increasingly heightened environmental awareness and are starting to prefer ‘green’ products (Bovea MD, Wang B, 2003). Thus, Chinese enterprises producing final products have considered Chinese consumers’ environmental awareness as an important pressure.

## 3 Comparative Analysis

### 3.1 T-test

The T-test procedure performs t-tests for one sample, two samples, and paired observations. The one-sample t-test compares the mean of the sample to a given number. The two sample t-test compares the mean of the first sample minus the mean of the second sample to a given number. The paired observations t-test compares the mean of the differences in the observations to the population mean. T-test is the ratio of variance between groups to variance within groups. Result of one sample t-test is shown in table 4.11.

**Table 3.1 T-test**

	T	Df	Sig(2-tailed)	Mean Difference
<b>Economic</b>	11.924	71	.000	0.1958
<b>Environmental</b>	11.506	71	.000	0.2833
<b>Operational</b>	12.143	71	.000	0.3000
<b>Intangible</b>	10.093	71	.000	0.2750
<b>Organization</b>	11.385	71	.000	0.2916

<b>Regulatory</b>	9.288	71	.000	0.2583
<b>Customers</b>	11.420	71	.000	0.2888
<b>Competition</b>	4.238	71	.000	0.2187
<b>Society</b>	1.913	71	.000	0.1458
<b>Suppliers</b>	12.674	71	.000	0.3416
<b>Marketing</b>	-0.376	71	.943	-0.0231

### 3.2 One-way analysis of variance

One-way analysis of variance (ANOVA) is used to uncover the main and interaction effects of categorical independent variables on an interval dependent variable and is used when there is a single interval dependent and one independent variable with three or more categories. The key statistic in ANOVA is the F-test of difference of group means, testing if the means of the groups formed by values of the independent variable are different enough not to have occurred by chance. If the group means do not differ significantly then one can infer that the independent variable(s) did not have an effect on the dependent variable. ANOVA assumes that the dependent variable is an approximate interval scale, normally distributed in the population, and the variances of the groups are equal. If the assumptions are not markedly violated, one should make use of parametric one-way ANOVA.

- ✓ Organization is taken as factor.

**Table 3.2 ANOVA**

	<b>Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
<b>Economic</b> <b>Between Groups</b>	6.633	8	.829	7.479	.000
<b>Within Groups</b>	6.984	63	.111		
<b>Total</b>	13.617	71			
<b>Environmental</b> <b>Between Groups</b>	15.433	8	1.929	8.509	.000
<b>Within Groups</b>	14.284	63	.227		
<b>Total</b>	29.717	71			
<b>Operational</b> <b>Between Groups</b>	1.695	8	.212	6.608	.000
<b>Within Groups</b>	2.020	63	.032		
<b>Total</b>	3.715	71			
<b>Intangible</b> <b>Between Groups</b>	10.915	8	1.364	10.123	.000
<b>Within Groups</b>	8.491	63	.135		
<b>Total</b>	19.406	71			

## 4. Associational Statistics

### 4.1 Correlation Analysis

Relationships or associations also play a vital role in data analysis. Whenever it is necessary to determine the relationship between two variables and, if there is one, the nature and strength thereof, measures of associations or correlation analysis must be employed. Correlation analysis is not only directed at discovering whether a relationship exists between two variables, but also analyses the direction and magnitude of the relationship (Diamantopoulos & Schlegelmilch, 1997).

Correlations estimate the extent to which changes in one variable are associated with changes in the other and are indicated by the correlation coefficient ( $r$ ). Correlation coefficients can range from +1.00 to -1.00. A correlation of +1.00 indicates a perfect positive relationship, a correlation of 0.00 indicates no relationship, and a correlation of -1.00 indicates a perfect negative relationship (Welman & Kruger, 1999). The magnitude of the relationship refers to the significance level of the relationship between two variables. The significance level is used to indicate the maximum risk one is willing to take in rejecting a true null hypothesis

**Table 4.1 Correlation Table**

		<b>Economic</b>	<b>Environmental</b>	<b>Operational</b>	<b>Intangible</b>
<b>Organization</b>	Pearson Correlation	.482**	.436**	.469**	.321**
	Significance	.000	.00	.000	.006
<b>Regulation</b>	Pearson Correlation	.491**	.430**	.421**	.310**
	Significance	.000	.000	.002	.008
<b>Customers</b>	Pearson Correlation	.449**	.452**	.476**	.224*
	Significance	.000	.000	.000	.039
<b>Competition</b>	Pearson Correlation	.462**	.500**	.499**	.286*
	Significance	.000	.000	.000	.015
<b>Society</b>	Pearson Correlation	.408**	.414**	.415**	.283*
	Significance	.000	.000	.004	.016
<b>Suppliers</b>	Pearson Correlation	.447**	.488**	.440**	.232
	Significance	.000	.000	.000	.050
<b>Marketing</b>	Pearson Correlation	.397**	.409**	.405**	.270*
	Significance	.000	.000	.000	.022

## 5. Output Factors

As result of implementing green supply chain initiatives, firms enjoyed better performance in terms of its economic, operational and environmental (Handfield, Sroufe and Watson,2005). firm's performance outcomes into four categories:

### 5.1 Economical Outcomes

Financial benefits is gained as a result from green supply chain initiatives (Rao and Holt,2005) .Some researchers think that adoption of green activities will lead to extra costs for the firm and thus reduces profitability. While the opposite has argued improved environmental performance would induce cost savings and increase sales and furthermore improve economic performance (Schaltegger and Synnestevedt, 2002). Socially responsible environmental accountability improves a firm's brand image and thus affects market performance (Klassen and McLaughlin, 1996; Luo and Bhattacharya, 2009; Yang *et al.*, 2011) Historically, practitioners and researchers held the view that dealing with environmental issues would have a negative impact on a firm' s economic performance ( Angell and Klassen, 1999; Feldman *et al.*, 1997). This view is reflected in early theoretical discussions of the topic arguing that firm's had to make a trade-off between increased costs and environmental friendliness (Walley and Whitehead, 1994).

### 5.2 Environmental Outcomes

It includes the consequences of green supply chain initiatives from inside and outside the firms on the natural environment (Zhu, Sarkis, and Lai, 2007). Environmental management systems allow organizations to coordinate information required to improve environmental performance. Such systems are expected to lead to higher environmental performance, especially in conjunction with ISO 14001 certification requirements (Melnik *et al.*, 2003; Matos and Hall, 2007). Zhu and Sarkis found that Chinese enterprises having higher levels of adoption of GSCM practices will have better environmental performance improvements (Zhu and Sarkis, 2006). GSCM practices also minimize potentially harmful environmental effects throughout a product's life cycle - e.g., from initial product design to materials disposal (Hart, 1995; Sroufe, 2003; Montabon *et al.*, 2007).

### 5.3 Operational Outcomes

These are the benefits gained from greening the operational level. (Chung and Tsai, 2007). Successful implementation of GSCM practices may help organizations face competition with new opportunities and therefore add value to core business programs (Porter and van der Linde, 1995; Zhu and Sarkis, 2004). A relatively large body of research has explored the relationship between adopting GSCM and operational performance (Pagell and Gobeli, 2009). Porter and van der Linde (1995) argued that there were potential performance opportunities through reducing the waste of materials. Most empirical research looking at the relationship between investments in GSCM and organizational performance has concluded that being green does have a positive impact on performance (Christmann, 2000; Melnik *et al.*, 2003). This has lead to the conclusion that organization that are performing well environmentally also do well in terms of their operational and financial performance (Montabon *et al.*, 20 07). Innovative solutions can totally eradicate waste or harmful raw materials and improve the performance of the company. For example, BIOTA developed the world's first biodegradable water bottle made from corn, a renewable resource (Krajewski *et al.*, 2010). Unfortunately, impact of design activities and EMS on the bottom line may not be as readily identified. Many small business owners doubt that environmental improvements will lead to benefits for their business (Groundwork, 1998).

### 5.4 Intangible Outcomes

It represents consequences and benefits which are much difficult to quantify but does contribute directly and indirectly to the performance of the firms (Eltaye, Zailani, and Ramayah, 2011). Improved environmental performance can positively impact business

performance by enhancing customer satisfaction and customer loyalty (King and Lenox, 2002; Luo and Bhattacharya, 2006). Hillary (2004) identifies a range of benefits of SMEs adopting GSCM, including enhanced quality, cost savings, new customers, and a better company image, among others.

## 6. Discussion and Concluding Remarks

In this paper, an extensive literature review has been carried out to identify various drivers that help in implementation of GSCM practices in Indian MSME's. Nine such major drivers were identified and four output factors have been identified which result after successful implementation of GSCM.

The drivers are: Organizations related drivers, Legislative and regulatory compliance, ISO 14000 certification, Pressure by customers, Gaining competitive advantage, Improve firm performance, Environmental Collaborate with suppliers, Collaboration between product designers and suppliers to reduce and eliminate product environmental impacts and Marketing. Output Factors which were identified in literature survey are Economical Outcomes, Environmental Outcomes, Operational Outcomes and Intangible Outcomes.

This has been a complex topic to review. The existing knowledge base is somewhat fragmented; the term, green supply chain management, is used widely and loosely in the popular press; there are many ways that companies can claim credentials for green production; and there are clearly differing values placed on green production within competitive strategy.

The research presented here is solely devoted to the Micro, Small and Medium Enterprises (MSME) in particular with the objective of identifying the drivers that play a positive outcome in the implementation of Green Supply Chain Management. The findings hold good for any organization in the small and medium scale sector which wishes to leverage the benefits of integration of business processes by implementing Green Supply Chain Management in an organization. This is quite true in case of MSME's because of their inherent peculiarities. The managers and users can be benefited from this study by identifying those drivers to make the implementation procedure smooth without any disruption.

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