Introduction

1.1 Greening the Supply Chain in Small and Medium Enterprises (SMEs)

The last decade has witnessed the univocal demand and growth of Supply Chain Management (SCM). The competition between industries has come to the center stage around SCM with rapid advances in Internet technology, logistics systems, production techniques and so on, in the global market. At the same time, rise in environmental consciousness has resulted in the requirement for resource conservation and environmental protection in context of SCM, all around the world. The concept of Supply Chain Management was coined by Oliver and Webber in the beginning of 1980s (Delfmann and Albers, 2000). Supply Chain Management has traditionally been defined as a process of converting the raw materials into the final products and then transfer of these products to the end users. In addition to deep concern on tangible product flow, some prominent researchers have also emphasized on the intangible importance of information flow through supply chain management. This intangible importance put stress on trust building, market exchange needs, supplier base reduction, product development, operating efficiency improvement and strategic positioning leverage (Berry et al., 1994; Bowersox et al. 2002) within the industry and all across the chain. Due to this, supply chain structure becomes more complex. Moreover, Welford (2002) said, that in today’s globalised world, supply chain relationship has become more critical in light of the increasing environmental responsibility everywhere. Thus, it is important to mention here that in the current scenario, environmental concerns and sustainability have become major elements of business practices.

Due to fierce global competition, industries especially multinational and large ones are continually looking for techniques to improve their supply chain management systems for the purpose of improving quality & productivity, reducing costs and maintaining sustainability in the long run. For instance, Toyota Motor Manufacturing Company established the Kentucky plant that uses recyclable plastic containers to ship over 90% of its parts and materials from over 170 suppliers. Toyota prefers these returnable plastic pallets and containers as they meet the requirements of a group named, Automotive Industry Action Group (AIAG). AIAG specified this requirement
for maximum utilization of space in truck and to minimize the environmental impact on local landfills. The container system has performed well after applying this operation and also helped to attain cost-efficiency in that plant (Wu and Dunn, 1995). Another instance can be seen in the pharmaceutical enterprise, Novartis. They have performed a profit-risk analysis for their core production systems and released their analysis results in public which are really amazing. In addition, they have also developed a target report system known as Safety, Energy and Environmental Production (SEEP) for auditing and monitoring. SEEP has been able to get 90% of the real-time emission information from the branches of different enterprises all around the world. Furthermore, Novartis has put stress on its workers to achieve better environmental performance (Narasimhan and Carter, 1998).

1.2 Research Motivation: Go Greener in Indian SMEs

India is a developing country and requires progress in every field including SMEs. However, the ever increasing rate of growth has given rise to severe environmental contamination in India which has now become one of the most polluted countries in the world. Due to rise in environmental deterioration during economic development in the last decade, the issue of environmentalism has become very popular in India. The Indian government has also started focusing towards the environmental concerns which clearly indicates the impact of increasing pollution in India. Many programmes and policies have been formulated in recent years such as Green credit policy in which banks are restraining themselves from providing loans to those enterprises which are more energy consuming and pollution intensive. The Green guidelines for Indian industries are thus becoming more & more exhaustive.

Nowadays, large enterprises are making tremendous advances in environmental friendly manufacturing in India. Literature review also suggests that the large enterprises have made great progress by bringing down the waste generated by their production. These efforts towards environmental friendly production result in cost reduction and more profits for the industry, thereby, promoting all enterprises to increase their competitiveness in the market. Moreover, shaking hands with WTO (World Trade Organization) has exerted more environmental pressure on Indian enterprises as global supply chains are more complex and diverse. Due to this scenario, many Indian enterprises are coming-up with strategies for improving their supply chain
management keeping in mind that with the improvement of their environmental image, cost will be reduced and productivity will be increased.

Although, large and multinational enterprises are developing and becoming more environmental friendly, small and medium enterprises (SMEs) are still lagging behind in this race. This is due to the shortage of skills, knowledge, expertise, human resources and finances to make the desired changes related to environment. (Lee, 2008). Moreover, as we can see that SMEs are in huge number around the world, there is a growing need to consider environmental practices in SMEs for their sustainability. This motivates us to further explore this area and suggest some concrete framework that provides guidance for considering environmental issues alongwith other practices in SMEs of India.

1.3 Background

a) Indian Small and Medium Enterprises (SMEs): Indian SMEs constitute a highly vibrant and dynamic sector of the Indian economy over the last few decades. They play a significant role in rendering large employment opportunities and offering more industrialization in rural areas. SMEs also support large industries as auxiliary units and this sector has always contributed in socio-economic development of the country. They also play a crucial role in nation development through significant export earnings, high contribution to domestic production, location-wise mobility, less intensive imports and low investment requirements. Their strengths also include competitiveness in domestic and export markets, technology oriented, capacities to develop appropriate indigenous technology, operational flexibility, import substitution, contribution towards defence production and they generate new entrepreneurs by providing training and knowledge (SME Knowledge Forum, 2015).

Despite their inherent capabilities and high enthusiasm to grow, SMEs of India are facing many problems like technological obsolescence, sub-optimal scale of operation, increasing domestic & global competition, supply chain inefficiencies, working capital shortages, insufficient skilled manpower, not getting trade receivables from large and multinational companies on time, turbulent and uncertain market scenario and changing manufacturing practices. Keeping these issues in mind, SMEs of India need to adopt innovative strategies in their operations. Only those who
have a strong technological base, innovative, inventive and having a willingness to change themselves can withstand the present scenario.

b) **Supply Chain Management (SCM):** This process includes oversight of materials, information and finances as they move in a sequence from supplier to manufacturer, then to wholesaler, further to retailer & finally to consumer (Search Manufacturing ERP, 2010).

Basically, SCM is about managing business activities and relationships

(1) within the organization,

(2) with immediate suppliers,

(3) with second & third tier suppliers, and

(4) with the entire supply chain.

Thus, SCM has mainly two dimensions.

- Coordinating the various business activities within a supply chain member,
- Coordinating the business activities between various supply chain members.