

# Chapter 68

## Review of Supply Chain Integration on Green Supply Chain Management (GSCM)

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### ABSTRACT

*The world economy operates on a capitalist market system where more and more natural resources are strained to produce maximum profits on the basis of achieving the efficiency of the economies of scale. As corporations' awareness increases on the jeopardizing impact they have caused to the deteriorating environment, more corporations have established a more eco-friendly operation. Greening the supply chain is one significant example of such moves. Realizing the green supply chain tendency in the industry, this proposed chapter focuses on highlighting the supply chain integration with business partners (suppliers, shippers, distributors, and customers) on Green Supply Chain Management (GSCM) practices. The chapter shows the literature supporting the important integration of GSCM as it enables corporations to gather collective strength, skills, and capabilities in achieving its ecological as well as business objectives. Both practitioners in companies and corporations might find this review useful, as it outlines major lines of research in the field.*

### INTRODUCTION

The focus of this chapter is to look into one of the most important assets of a company, its supply chain and how the supply chain could be enhanced by integration. Supply chain is the network created amongst different companies that produce, handle or distribute a particular product. It includes all the necessary steps for a specific good or service from the supplier to customer (Gold & Seuring, 2011). Hence, it is crucial to manage the supply chain, as optimized supply chain would result in companies achieving lower costs. It is also important to note the distinction between supply chain and logistics. While logistics

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look into the distribution process within the company, supply chain includes multiple companies involving suppliers, manufacturers and retailers. Recent corporate practices have observed the consideration of environmental interest in the supply chain, creating the new term green supply chain (GSC). The greed for profit nature of capitalist economic system has caused numerous detrimental impacts towards the environment. Ignoring the principle of sustainability development - achieving a balance between environment, society and economy, capitalist practitioners centered their interest in economic growth by jeopardizing the environmental wellbeing. Thus, the concept of green supply chain management or GSCM has emerged out of this immediate need. It is apparent now that GSC has become more popular in the developed countries and the adoption rate of GSC across the globe has increased significantly (Mathiyazhagan et al., 2013). In other words, corporate organizations have begun to have raised interest on the environmental impacts caused by the operation and have started to modify their business processes to be more eco-friendly.

The data show that as at April 2005, more than 88,800 facilities worldwide had certified their environmental management system (EMS) to ISO 14001, the global EMS standard, while thousands more had adopted uncertified EMSs (Peglau, 2005). EMSs are strategic management approaches consisting internal policies, assessments, plans and implementation actions and as part of EMS's strategy, supply chain process has been rethink and restructured (Darnall, Jolley & Handfield, 2008). Nevertheless very similar to supply chain, this considerably new practice of green supply chain requires extensive monitoring and frequent assessment in order to achieved desired outcome.

Previous researches have suggested that the implementation of green supply chain management (GSCM) could be the best tool for optimizing the ecological, as well as the social and economic performance of the corporation (Rao & Holt, 2005; Mathiyazhagan, Govindan, NoorulHaq & Geng, 2013; Gardas & Narkhede, 2013). However apart from having green internal practices, stakeholder integration should be a priority to achieve corporate green supply chain aspiration (Pedersen, Henriksen, Frier, Søby & Jennings, 2013). Therefore GSCM would require a company to manage and monitor all supply chain members in the process. Nevertheless, integrity has always been a big challenge for GSCM (El-Berishy, Rügge & Scholz-Reiter, 2013) and questions are often raised, are these corporations willing to integrate closely with all supply chain members, sharing information as well business secrets in achieving GSCM ultimate goals?

As previous researches have proven that GSCM has a positive relationship with business economical, environmental, as well as societal performance (Fallah & Ebrahimi, 2014; Ninlawan, Seksan, Tossapol & Pilada, 2010; Zhu et al., 2005; Kumar & Shekhar, 2013), this study would highlight the effect of supply chain integrity to enhance this relationship. Therefore, a content analysis focusing on supply chain integrity was conducted in order to observe the role of integrity in supporting the relationship between GSCM and business performance. This chapter could give descendants insight into conceptualization green supply chain integration for sustainable business performance.

## **BACKGROUND**

Recently there has been a wave, a booming trend of sustainability, where more corporations have publicly announced that they have the best practices that are clean and environmental friendly. In reality, no corporation is able to operate independently and it is misleading to declare a particular company as a green company when the supply chain practice is questionable. For example, it would be unethical for a

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