**Proposal for Research into Supply Chain Management and Integration**

Chapter 1

1. Introduction

In this chapter, I want to introduce the background about central issue of this research and why it is worth studying. After that, definition of supply chain and its integration are described. My discussion will generate research questions and a purpose for this thesis which will end this chapter.

1.1 Background

The importance of supply chain management (SCM) and information technology are increased day by day. As information technology evolves, firms tend to become more integrated. Therefore, it is important for improving performance of supply chain that there should be effective supply chain integration with effective information sharing (Zhou and Benton, 2007). Partnership between firms is an increasingly essential for finding and maintaining competitive advantage. This could be achieved by extensive social, technical, service, and economic ties in due course (Mentzer et al., 2000).

According to Hakansson and Persson (2004), we can identify at least three different trends in growths of logistics solutions within industry during past years. First, increased integration of supply chain activities across boundaries of the firm aimed at reducing costs which discovered the need for closer cooperation and cooperation coordination with suppliers and customers. Another trend characterizing emerging supply structure is the improved specialization of individual companies. Outsourcing of traditional activities including logistics activities is an example of such trend. Finally, the third trend concerns change and innovation. Importance of response to market changing demands has forced companies to be more agile, responsive, and intelligent.

Companies have relentlessly restructured and re-engineered to increase organizational effectiveness and satisfy key customers. Deficiency of the resources and competencies required to achieve competitive success has led organizational managers to look beyond their companies’ organizational limitations to estimate how the resources of our suppliers and customers can be used to create outstanding worth. SCM initiatives are the efforts to line up objectives and put together resources across company boundaries to bring better value (Fawcett and Magnan, 2002).

1.2 Supply Chain Management (SCM)

Marketing

Logistics

Purchasing

Finance

R&D

Production

Tier 2 Supplier

Tier 1 Supplier

Manufacturer

Customer

End User/ Consumer

Production Flow

Information Flow

A supply chain is a sequences of different activities which starts from purchasing of raw materials from suppliers, and then it is transported to industry for manufacturing finished product, and then transportation of these products to customers (Tarokh and Soroor, 2006).

Figure 1-1 A supply chain model

Source: (Zhao et al., 2006)

Importance of managing supply chains is increasing rapidly between companies and researchers around the world. Although its widespread recognition leads to several kinds of definitions by different industries and academics, there seems to be a meeting towards the central theme of supply chain management (SCM). According to Zhoa et al., (2006) supply Chain management is an combinatory philosophy that manages the flow of material and information from suppliers to consumer. It can thus define as the integration of all business activities from suppliers to consumers that adds value to customers as well as stakeholders (Cooper et al., 1997). Supply chain management is a logical, strategic synchronization of the traditional business functions within a company and across business; the aim is to improve the long-term performance of both company and the supply chain (Mentzer et al., 2001).

There are several other definitions for SCM. Stank et al. (2001) highlights the importance of integration:” The new vision of supply chain management links all the players and activities involved in converting raw materials into products and delivering those products to consumers at the right time and at the right place in the most efficient manner”. Larson and Rogers (1998) incorporate various ideas into the following definition:” Supply chain management is the coordination of activities, within and between vertically linked firms, for the purpose of serving end customers at a profit”. Bowersox et al. (1999) define SCM as “a collaborative-based strategy to link inter-organizational business operations to achieve a mutual market opportunity”.

Burgess et al. (2006) had a structured review on SCM literature and state that there exist a set of dominant characteristics: a reliance on manufacturing and consumer goods industries for empirical as well as analytical illustration; a conceptual framing of SCM mostly as a process; a predomination of transaction cost economics and strategy- based competitive advantage theoretical grounding; the presence of mostly descriptive- type theories; strong positivist paradigmatic stances in the research methods employed; and, the utilization of analytical conceptual, as well as empirical statistical sampling and case study methods.

1.3 Supply Chain Integration

The most widely recognized definitions of integration given by Kahn and Mentzer (1998) is “Integration is a process of bringing together the key activities of all departments of the organization”. According to Bagchi et al. (2005) supply chain integration is “complete collaboration between members of supply chain network at all levels of organizational decision-making”. Cagliano et al. (2006) proposed that supply chain integration is strictly concerned with the coordination mechanisms and in particular implies that business processes should be simplified and interrelated both within and outside the company boundaries.

There are mainly two types or levels of integrations – internal integration and external integration. Internal integration means the integration within the organization i.e. between various departments, whereas external integration concerned with collaboration between organizations (Chen et al., 2007). Some researchers have approached the concept from other perspectives. According to Bowersox et al. (1999) in the context of supply chain, integration can be classified into six different integrations i.e. internal, supplier, customer, technology and planning, relationship, and measurement.

It is essential to answer the supply chain problems, as companies wanted to further improve their operational performance. Without resolving the supply chain issues the companies performance cannot be improved. Thus, external solutions began to emerge (e.g. outsourcing, vendor managed inventory, etc.). Moving ahead, firms understand that they could benefit more from wider collaboration with both suppliers and customers at different stages in the supply chain. From the perspective of supply side, if companies want to reduce their cost and greater efficiency a closer collaboration with suppliers are required. On demand side, the lead time and inventories can be reduced with the help of rapid response logistics and joint planning, forecasting, and replenishment (CPFR). The theme of much of this evolution has been on the notion of integration of activities and processes between members of the supply chain where a Major facilitator is the reciprocity of info (Smart, 2008). Certainly, integration is necessary for successful management of supply chains.

1.4 Problem Discussion

The most supply chain management literature illuminate that “the more integration, the better the performance of the supply chain” (Bagchi et al., 2005). SCM concept is defined as “integration of business processes” (Cooper et al., 1997). According to Lee (2000) the integration of supply chain does not only reduce costs, but it also worth full for the company, and all its shareholders. The ideal condition is that the whole process across the supply chain is designed, managed and unified as a unit.

However, different peoples have different opinions, some are disagree with that integration and close cooperation with suppliers and customers is the best resolution in every case. Bask and Juga (2001) think that we have to to reevaluate the dominant vision of integrated supply chain management and propose that polarization of strategies in supply chains can lead to separation and give rise to semi-integration rather than full integration. For others intensive integration might not be in every area of SCM but it can be in some special areas such as quality management and performance measurement while in other areas it is valuable to have limited integration. Bagchi and Skjoett Larsen 2002 suggest a contingency approach to supply chain integration they suggest that there should be balance in the supply chain the maturity of the industry the degree of competition in the industry and the level of integration in a supply chain may be depend on nature of the products.

As it can be seen from the discussion that there is little evidence of research mapping the actual level of integration among partakers in a supply chain. In fact, there are number of vague items in this context. For instance, one is not sure that whether manufacturers can be satisfied with limited information sharing with supply chain partners, or they required high collaboration with suppliers and customers. It is also not identified that in which areas manufacturers like to share information with their partners and how this collaboration made effect on performance of supply chain management. The role of information technology (IT) should also be clarified. Above all, manufacturers want to know that whether implementation of IT and collaboration with suppliers and customers will improve the performance or not?

1.5 Research Aims and Objectives

The objective of this research is to understand the real essence of supply chain integration; accordingly, I aim to assess the effect of supply chain integration on manufacturing industries’ performance. The main questions are: to study different models and the extent to which Pakistani firms have information integration with their supply chain partners; the areas that they involve their key suppliers and customers in decision-making.

As a result, the following research questions have been formulated:

To study the different models of supply chain in order to investigate that in which areas and to what extent manufacturing firms involve key suppliers and customers in decision-making? And what are their limitations.

To assess the future needs of Supply Chain Management.

How to meet the challenge of key customer integration requirements.

How does supply chain integration affect performance?

To what extent do Pakistani firms have information integration with their supply chain partners and what role information technology plays in supply chain integration?

1.6 The organization of the Thesis

As a service to the reader of the thesis an easy overview of the structure is presented to make it easier to find different chapters:

Chapter 1: This chapter contains; the introduction and background on the study, the Aims and Objectives of the thesis.

Chapter 2: IT contains a general idea of earlier research in specific dimensions of supply chain integration is discussed here that are related to the research problem.

Chapter 3: represents the view on methodology, interpretation and science.

Chapter 4: The empirical data from various manufacturing industries through questionnaire is given in this section.

Chapter 5: In the final section, a generalized the conclusions upon to the research questions is presented.