

Chapter 8.10

The Future of Supply Chain Management: Shifting from Logistics Driven to a Customer Driven Model

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ABSTRACT

This chapter initiates the concept of a customer-centric model in supply chain systems. It discusses various constraints of present-day supply chain systems resulting from their roots being in logistics management and suggests an alternative next-level paradigm of a customer-centric matrix model. This chapter further demonstrates how this model would add value to the customer by taking the example of a healthcare information management system. The chapter also delves into the limitations of and anticipated issues and challenges in implementing the suggested model. Finally, the chapter hints at some broad directions for future research and action in the field. Emergent behavior is what happens when an interconnected system of relatively simple elements begins to self-organize to form a more intelligent and more adaptive higher-level system (Johnson, 2001).

INTRODUCTION

Supply chain systems have come a long way from their initial days when their sole purpose was to support the inventory management function in terms of controlling inventory carrying and fulfillment costs, while making inventory management more efficient and effective. However, as the roots of Supply Chain Management (SCM) lie in managing supplies or inputs to a process or an enterprise, most of the developments (solutions, tools, and technologies) in this field obviously have been around effective management of supply chain toward better, faster, and more cost-effective fulfillment of customer demand.

While this focus on logistics and inventory management has certainly helped business, it still falls short of making the best use of the current tools and technologies for businesses. In order to provide this SCM advantage to businesses, the next level of evolution for the concept of supply chain would be to focus on the needs of

the ultimate consumer in contrast to the needs of interim customers (i.e., manufacturers) that are the present-day focus. This chapter seeks to explore the possibilities of elevating the focus of SCM from a logistics-driven model to the next level of customer-driven model, thereby enhancing the value delivered to the end customer. The issues and challenges expected in the process also are delved into.

The chapter reviews some of the latest literature available on SCM, describes various models of supply chain since its origin, enumerates the limitations of the existing supply chain model, and suggests a customer-centric model. Furthermore, it goes on to discuss the challenges in the implementation of this model and the constraints of this model that will have to be addressed. Supply and procurement of healthcare services as well as a health care information management software developed by the author for the creation and management of virtual healthcare communities in line with the suggested customer-centric model is used as an illustration throughout the chapter.

ORIGINS

As per one definition, SCM is the coordination of the demand and supply of products and services between a supplier's supplier and a customer's customer. It involves the flow of products, information, and money between the trading partners of a company's supply chain. The proactive improvement in the efficiency and effectiveness of the flow of goods, services, and knowledge across all stakeholders achieves the goal of reducing total costs and obtaining a competitive advantage for all parties.

Supply chain is the network of facilities (warehouses, factories, terminals, ports, stores, and homes), vehicles (trucks, trains, planes, and ocean vessels), and logistics information systems connected by an enterprise's suppliers' suppliers and its customers' customers. Supply chain

flow is optimized when material, information, and money flow simultaneously in real time and without paper.⁵

SCM revolves around efficient integration of suppliers, manufacturers, warehouses, and stores. Other definitions are more comprehensive and detailed:

The challenge in supply chain integration is to co-ordinate activities across the supply chain encompassing these various players, whose systems are bound to be disparate right from the beginning. It is only with such integration that the enterprises can improve performance, reduce costs and increase their service levels to the end-user, the customer. These integration challenges are met not only by coordinating production, transportation, and inventory decisions but more generally by integrating the front-end of the supply chain, customer demand, to the back-end of the supply chain, the production and manufacturing portion of the supply chain. (Simchi-Levi et al., 2003)

As it can be seen from our discussion thus far and from the voluminous literature on supply chain, the focus is constantly on the network of facilities, logistics, supplies, and suppliers. This is due to two main reasons: (1) the origins of the concept of supply chain lie in logistics and in inventory. and (2) the supply chain is related mostly to manufacturing or tangible goods, and thereby, the developments in the services sector and in the knowledge economy are overlooked.

Some thoughts are emanating gradually on the use of supply chains for customer satisfaction. For instance, "efficient integration of suppliers, manufacturers, ... so that enterprise can increase service level" (Simchi-Levi et al., 2003) and "maximize customer service and minimize cost of the same" (Frazelle, 2002). The closest one gets to customer focus is in the following statement:

[A] supply chain consists of all parties involved, directly or indirectly, in fulfilling a customer

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