Supply Chain Management and Value Creation

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Abstract: In recent years strategic planners have come to realize that, in line with the management concepts, mission statements must be customer-oriented, since the customers have been dealing with the firm actually. Compared with the traditional information system, the development of Internet technologies has brought easier and faster access for interactions between ultimate customers and suppliers. Based on the primary supply chain model, this paper attempts to explore the phenomenon that value creation becomes the critical issue related to the supply chain management. Wal-Mart’s performance is then analyzed to make some essential suggestions for the Web-based supply chain management. In this customer-centric and electronic business, the key to success is concluded to add values through advanced technologies to the ultimate consumers.

Keywords: Supply Chain Management, Value, Customer

1 Introduction

According to the Council of Supply Chain Management Professionals (CSCMP), Supply Chain Management encompasses the planning and management of all activities involved in sourcing and procurement, conversion, and all Logistics Management activities. During recent decades, current business has witnessed a lot unprecedented changes. The most remarkable one is that the market has entered the era of inter-networked competition, in which individual businesses do not compete as simply autonomous entities, but through their supply chain. In order to succeed in the 21st global marketplace, the supply chain management should be efficiently executed and managed to create values.

By analyzing the overall process of supply chain, management should shift its focus from the mere cost reduction to value creation. Along with Internet technologies, Web-based supply chain management deserves to be an essential tool coordinating the specific participants beyond traditional company boundaries. With a detailed case study on Wal-Mart’s performance, this paper sheds light on such dedicated solutions so as to provide some practical applications to help companies to deal with the challenges effectively.

2 Interpretation on Supply Chain Management

Supply chain management refers to the managements of all key supply chain activities from the flow of physical product to the relative information such as purchasing, distribution, customer service and sales forecasting (Supply Chain Basics, Online). By the joint efforts of supply chain participants, firms that engage in supply chain management are reaching beyond the limits of their organization’s hierarchical structure and creating a new network form of organization among the members of the supply chain. The aim of supply chain management is described by Kaufman (1999, p.14) as to “... remove communication barriers and eliminate redundancies” through coordinating, monitoring and controlling processes. In essence, Supply chain management has been originally developed as a way to reduce costs, focusing on very specific elements in the supply chain and tries to identify opportunities for process efficiency. Generally speaking, the comprehensive model of supply chain management integrates three major flows (see Figure 1), namely, the product flow, the information flow and the finance flow.
The product flow refers to the movement of goods from a supplier to a customer, as well as dealing with customer service needs. In other words, the raw material is procured from the suppliers, transformed into finished goods, and then transported to distribution centers, and ultimately, customers. Businesses need to make sure that their products are delivered to customers on time and that the raw materials they use to produce their goods arrive when needed. By monitoring all relevant elements of product flow, efficient supply chain coordination can play an important role in maintaining and improving product quality, further increasing the value of the product or service to the ultimate consumer.

The information flow includes transmitting orders and updating the delivery status. With simultaneous data exchange aided by the information technologies, every supply chain member can initiate quick responses to specific circumstances. Clear communication up and down the supply chain can keep each participant informed of what the ultimate consumer demands. The participants can then plot a strategy to meet those needs. All the supply chain members share information and cooperate to create enough value that each level of supplier can benefit from the reduced cost and more efficient operations.

The finance flow involves credit terms, payment schedules, and consignment and title ownership arrangements. It is helpful that the financial department get involved in calculating the cost of purchase, operation, marketing and other activities input and out put in the supply chain operation. By monitoring the funds of whole business process, enterprise can truly realize the profit optimization.

In a nutshell, Supply Chain Management is an integrating function with primary responsibility for linking major business functions and business processes within and across companies into a cohesive and high-performing business model. Nowadays, the market is no doubt customer-oriented one, so it is the final consumers that pull the whole supply chain and determine the quantity and quality of goods and or services delivered by the supply chain. From a holistic point of view, supply chain management aims to add value in the form of benefits to the ultimate consumer at the end of the supply chain. In essence, enterprises have to coordinate supply management, operations and integrated logistics into a seamless pipeline and extend its reach beyond its capacity and efforts to meet the consumers’ demands.

3 Value Creation Enhanced by Internet Technologies
Fortunately, economic organizations are gradually evolving from the hierarchical structures used since the Industry Revolution to new, more flexible network structures. These network structures are, in many cases, made possible by adding value that companies realize when they use Internet and Web technologies to carry out business processes. During recent decades, Supply chain management has witnessed the evolution of integration model that functions as a corporate entity, spanning a virtual enterprise without reference to traditional company boundaries, and driven directly by customer demand via electronic platforms.

3.1 Increase Efficiency in Supply Chain

Efficient supply chain management really occurs, when participants establish long-term relationships with the objectives and probable outcomes of reduced inventory, shorter lead times and better service to the customers. The power of the Internet and the simplicity of a Web browser are preferred to create value throughout the extended supply chain, improving visibility, flexibility, and collaboration.

By utilizing the Internet and a simple Web browser interface, the virtual supply chain is enabled with visibility into the complete manufacturing process and with the tools to manage it. The key to the implementation is that all data is stored and accessible electronically. Through well-established information network, electronic ordering system provides the availability and greater transparency through the supply chain. As for respective suppliers, they are convenient to acquire stock information, track their orders directly on the Internet rather than waiting for a lone time within the traditional procurement model. In addition, flexibility deserves to be the paramount issue in this electronic environment. With the aid of Internet technologies, suppliers can respond to customer needs, drive quick changes to process and design, and shorten lead times in their manufacturing cycle across the extended supply chain. Applying Web-centric supply chain management, collaboration becomes a multi-way, real-time exchange of information between manufacturers, suppliers, outsourced manufacturers, and end customers. By sharing this data, supply chain management has the potential to improve the time-to-market of products, reduce costs, and allow all parties in the value chain to better manage current resources and plan for future needs.

3.2 Orientate towards Ultimate Consumer

The application of Internet and Web technologies in managing supply chain has yield critically increased process speed, reduced costs, and increased flexibility. All these attributes combine to help a coordinated supply chain to produce products and services that better meet the demands of the ultimate consumer. The goal of strategic supply chain planning is defined as “… to arrive at the most efficient, highly profitable supply chain system that serves customers in a market” (Hicks, 1999, p.26). In other words, one of the main goals of supply chain management focuses on satisfying the consumer at the end of value chain.

In this customer-centric supply chain, the key to success is definitely the intensified customer links with advanced technologies. Going a step further, clear communications with the major consumers, and quick responses to those communications, are key elements of successful supply chain management. Since Internet technologies are tools that improve communication at a very low cost, they are ideal aids for enhancing the value creation of a highly coordinated and effective supply chain. Innovative concepts on supply chain management aim to deliver value, using Internet and Web technologies to make “up-to-the-second” customer data available, and applying data-warehousing technology to aggregate transaction information, to merge the information with Customer Relationship Management solutions, and eventually to provide key performance indicators for prospective improvement. Designed to support the analytical process, the customer database could be to a large extent flexible and efficient by storing data at the lowest level. By penetrating the purchase behavior and basic demographic data, segmentation of customer can be fulfilled to monitor purchasing patterns, such as purchasing repertoires and preferences. This data mining software may offer the customer—on a one-to-one basis—a series of special offers, thus encouraging further purchasing activity. Within such sophisticated model, the company can analyze that data to provide profiles on customers, attach values to these customers,
indicating which are the most and least profitable.

4 Feasibility Study on Wal-Mart’s Performance

More recently, many manufacturers and retailers have embraced the concept of supply chain management to improve efficiency across the value chain (Tan, 2001). Increasing numbers of companies are turning to Web sites and Web-based applications as parts of the Supply Chain Management (SCM) solution. Spurred by the growth of e-commerce, a Web-based supply chain management model has emerged in response to customers’ needs for products or services. In the following, Wal-Mart’s performance will be analyzed empirically in order to shed some light on the value-added supply chain management.

4.1 Background

Wal-Mart was one of the largest retailing companies in the world, with the employee strength of approximately 1.28 million or more. The company’s founder, Sam Walton had always focused on improving sales, constantly reducing costs, adopting efficient distribution and logistic management systems and using innovative information technology (IT) tools. By 2002, Wal-Mart had emerged as the largest company in the world in terms of revenues. Analysts attributed this phenomenal growth to Wal-Mart’s continued focus on customer needs and reducing costs through efficient supply chain management practices. The company was able to offer a vast range of products at the lowest costs in the shortest possible time. This goal was achieved mainly due to its highly automated distribution centers and its computerized inventory system.

4.2 Feasible Measures Conducted by Wal-Mart

4.2.1 Improve the Visibility in Supply Chain

With the application of Web-enabled supply chain management, the company, customers, suppliers and even the retail stores can have immediate access to the order and inventory information broadcast on the organization’s intranet and internet as well. It is beneficial to improve the visibility in the supply chain, especially enhance the customer services, order fulfillment on sell-side, and further intensify the inventory management, the efficiency of procurement on buy-side.

On one hand, by putting customers’ order status information on the web, Wal-Mart can decrease its cost by eliminating the need to answer emails or phone calls about order status. In addition, with a customer feedback, Wal-Mart can identify that most customers believe that the solution adopted now can provide a much better satisfied customer service in terms of rich information than ever before. In this sense, trustworthiness and loyalty has been cultivated between ultimate consumers and suppliers as a whole. On the other hand, under the background of E-commerce, Wal-Mart procures goods directly from manufacturers, bypassing all the intermediaries. As Maclver (2001, quoted in Groucutt & Griseri 2004, p.102) suggests that ‘procurement through e-marketplaces is just the start of what many believe is the single biggest change in business opportunity for over a century’. By making the process transparent with information technology, the retailers may be certain that the manufacturers are doing their best to cut down costs. Once satisfied, Wal-Mart believes in establishing supply alliance, which is the possible determinant of economic success. Leveraging the power of IT gives all the supply chain participants the “end-to-end” visibility and proactive alerts to take timely decisions. Truly, Web-based implementation helps the company decrease the costs and increase the customer values.

4.2.2 Optimize the Inventory

With the web-based technology, monitoring and managing the flow of inventory through a multi-party supply chain is now possible (E-commerce Overviews Series: Web-based supply Chain Management, 2004, p.2). As for Wal-Mart, IT indeed helps them control over their “virtual warehouses” the “dynamic inventory” which is in transit and responds as per the market requirements. Instead of cutting inventory across the board, Wal-Mart makes full use of IT capabilities to make more inventories available in the case of items that customers want most, while reducing overall inventory level. Simultaneously, Wal-Mart networks its suppliers through Web technologies. When a product is
purchased, in several seconds estimated roughly, all Wal-Mart’s partners in supply chain are able to be notified of this transaction. Therefore, the company can replenish items on the Wal-Mart shelf in less than three days – not from the central warehouse to the shelf, but from the manufacturer to the shelf. In this sense, with the advanced information technologies, the company can automatically realize immediate replenishment by identifying the items which are low in stock, and monitoring the finished goods in stores as well. On account of this efficient supply chain management, Wal-Mart can not only optimize the levels of inventory to reduce the total cost, but meet the customers’ demands to a large degree.

4.3 Streamline the Management Process

As a huge organization with thousands of retail stores and several supply partners, it is important to build an efficient department taking charge of the information collection and data analysis. In a very short time, the Wal-Mart’s Headquarter (HQ) is able to analyze the information of the order and then send the relative information to the different parts of the supply chain. Because of the sharing of the information, partners in the supply chain can have a good collaboration which can lead a much more streamlined supply chain. Compared with a dispersed style, the centralized supply chain management is preponderant in the light of efficient information collection and data distribution. By becoming aware of how other participants in the supply chain conduct their activities, HQ can identify new opportunities for cost reduction, product improvement, or channel reconfiguration. On the contrary, if adopting the dispersed one, although the retail stores can gain the information via the Internet, it is hard for them to analyze the information from the whole point of view and make the most reasonable decision for the entire supply chain.

5 Conclusions

After re-examining the main flows of supply chain, value creation has been highlighted concerning the coordinated supply chain management. In the Information Technology (IT) climate we currently face, companies must focus on gaining the customer satisfaction through advanced operation models. By improving visibility, flexibility, and collaboration throughout the extended supply chain, IT applications add value to ultimate consumers and realize the profit optimization eventually. Furthermore, Wal-Mart’s history of remarkable performance on Web-based supply chain management serves as a good example, especially their continuous focus on meeting and surpassing the needs of customers. In a nutshell, Web-based supply chain management should aim to enhance the functionality of current supply chain and cut down the cost of inventory and delivery, thereby adding value at every stage and process.

References