



A Revisited Retail Supply Chain Management (SCM) Practices: A Conceptual Framework

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ABSTRACT

This paper aims at providing a comprehensive review of Retail Supply Chain Management practices. Retailing is the last step of a supply chain. As retailers maintain regular contact with the customers, they have become an important part of supply chain and it has forced the retailers to develop their own supply chain. The retail supply chain is somewhat different in a sense that retailers deal with variety of products. They procure goods from many suppliers then store them in their warehouses or distribution centers, ship to the outlets and finally consumers buy the products from these stores. Consequently retailers are increasing their focus on their supply chain as a strategic factor. This focus has primarily emphasized cost reduction and risk minimization for business growth and better customer satisfaction. Proactive retailers are trying to manage their supply chain in a responsible way by adjusting business policies based on changing customer preferences. For satisfying today's more demanding customers, retailers are adopting all modern technologies related to strategy development, collaboration, operational innovation and efficiency that are necessary for the retailers to manage their supply chain properly.

Keywords: Supply chain, retailing, inventory management, IT, collaboration.

1. INTRODUCTION

The concept of SCM has received much attention from academicians, consultants, and managers from all businesses in recent years. Organizations have started realizing that proper SCM is the key to building sustainable competitive advantage for their goods and services in an increasingly crowded marketplace. The concept of SCM has been considered from different points of view in different bodies of literature such as purchasing and supply management, logistics and transportation, operations management, marketing, organizational theory, and management information systems (Suhong Li et al, 2006). In spite of huge importance, there is a lack of generally accepted rules to govern SCM

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practices in organizations. The reason is the interdisciplinary nature of SCM and the evolutionary nature of SCM concept. SCM has been evolved from two different wings; one is purchasing and supply management, another one is transportation and logistics management. According to purchasing and supply management, SCM is synonymous with the integration of supply base that evolved from the traditional purchasing and materials functions. In the perspective of transportation and logistics management, SCM is synonymous with integrated logistics systems, and hence focus on inventory reduction both within and across organizations in the supply chain.

Eventually, these two perspectives evolved into an integrated SCM that integrates all the activities along the whole supply chain (Colby and Marguarette, 2005). Research also revealed the evolutionary and complex structure of SCM practices. Much of the current theoretical/empirical research in SCM focuses on only the upstream or downstream side of the supply chain, or certain aspects/perspectives of SCM (Suhong Li et al, 2006). To avoid the complexity, all the drivers of supply chain should be coordinated in a way so that they can focus on a single goal of maximizing supply chain profitability. Firstly, competition has become a high dimension; it evolved to an inter-supply-chain level so SCM has more and more importance and it has become a central part of the strategic management process (Hult et al., 2007). Secondly, it has become clear that effective supply chain management provides the possibility to deliver increased revenue (extended markets and accelerated product/ service innovation), lower costs (lower cost for materials, production, inventory, transportation, or taxes), reduced assets (leveraging outsourcing or improved asset utilization), but successful supply chain strategies require more than the traditional cost-reducing focus (Linton et al., 2007). Thirdly, more scholars and practitioners have thought that Supply Chain Management has to integrate responsibility into its process and has to relate to sustainability management (e.g. Linton et al., 2007; Corbett, 2009; Mueller et al., 2009; Gold et al., 2010; Closs et al., 2011).

The analysis to uncover the key components of an excellent supply chain in the retail industry is multi-faceted (Martin Gullberg & Peter Lundvall, 2003). The design of an excellent supply chain is highly dependent on a particular company's business strategy. Organizations should focus on the importance of strategy in evaluating a supply chain, including focus and fit on the activities that differentiate a company from competitors (Kenneth and William, 2013). Moreover while designing supply chain for retailing; opportunities for innovation should be addressed as well as opportunities for improved efficiency. These factors along with understanding the functional or innovative nature of the products being sold, illustrate the ideas that will constitute an excellent supply chain that supports a retailer's business strategy. In analyzing the retail industry and the internet retail segment, many areas are taken into account, including

collaboration efforts, use of technology, supply chain design, and operational efficiency (Colby and Marguarette, 2005). Information technology has enabled these efforts and continues to drive increased communication across all parties in the supply chain (Wu I L et. al, 2013). However, lately several trends have been observed in relation to the Supply Chain Management practices. Under these backdrops this paper attempts to give an overview of the issues that are pertinent to retail supply chain management practices.

2. STRUCTURE OF RETAIL SUPPLY CHAIN

A retail supply chain comprises many vendors that supply various types of products. These products are delivered to distribution centers. After that, products are consolidated with other products and shipped from distribution centers to retail outlets. A distinguishing component of retail supply chains is that retailers have store outlets through which consumers purchase products (Colby and Marguarette, 2005). This is somewhat different from business-to-business supply chains, where products are delivered to the customers without using any intermediaries. In manufacturing supply chains, raw materials suppliers often ship directly to their manufacturing customer, who then may ship finished goods directly to another manufacturer or customer (Vijay and Keah, 2005). Depending on the agreement between the different partners in the supply chain, the inventory ownership and ownership transfer varies. For most traditional supplier and retailer relationships, the suppliers relinquish ownership once the supplies reach the retailer's distribution center. (A. Gunasekaran, 2005). A general framework of retail supply chain is given below for easy understanding.

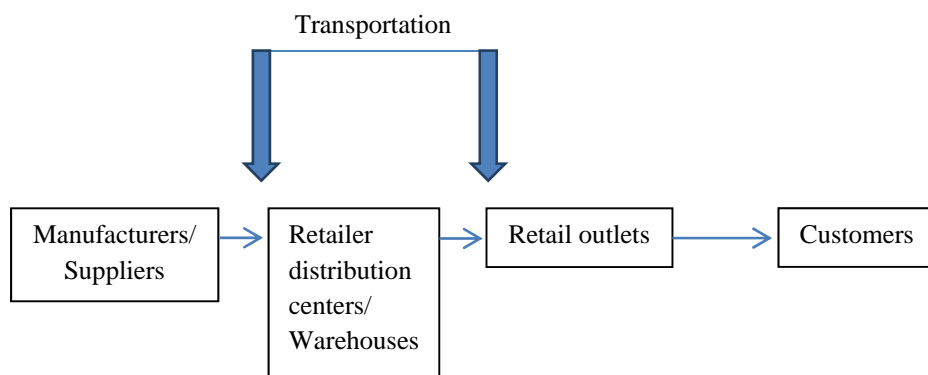


Figure 1: Retail Supply Chain

The figure shows the general network of retail supply chain. The retail supply chain is somewhat different in a sense that retailers deal with variety of products. They procure goods from many suppliers then store them in their warehouses or distribution centers, ship to the outlets and finally consumers buy the products from these stores. For transferring the goods from the point of production to the point of consumption, retailers take transportation services from others or can manage it by their own.

2.1 Retail Inventory Management

Inventory management is one of the pivotal tasks of retail supply chain management. Retailers are always busy with lessening the risk of stock outs by carrying buffer inventory for items with high demand. Retailers are now realizing the cost of losing sales along with the costs of holding idle inventory. As retailers mostly deal with fast moving consumer goods, they always need to adjust supply chain strategies as per market demand. Initiatives are being taken to increase the velocity of products through the supply chain and increase the accuracy of inventory management. Cross docking and distribution center (DC) bypass are two initiatives to increase product velocity (Colby and Marguarette, 2005). In cross docking system, products are not stored in warehouses rather these are shipped to sales points from the suppliers. In this system the products are distributed to different vendors from specific points. In a DC bypass process, vendor shipments are made directly to retailers without being stored within a DC. The DC bypass is also referred to as a direct-to store process. Both practices decrease the lead time of delivering orders to the retailer as well as reduce total supply chain costs.

However, VMI is a new technique for retail inventory management. Vendor-managed inventory (VMI) is one of the most widely discussed partnering initiatives for improving multi-firm supply chain efficiency, also known as continuous replenishment or supplier-managed inventory, it was popularized in the late 1980's by Wal-Mart and Procter & Gamble and VMI became one of the key programs in the grocery industry's "quick response" (Matt Waller, *et.al.*2001). VMI partnership enables the suppliers to make vital decisions regarding inventory replenishment for retailers. This means that the vendor monitors the buyer's inventory levels (physically or via electronic messaging) and makes periodic resupply decisions regarding order quantities, shipping, and timing(Matt Waller, *et.al.*2001). Indeed, the purchase order acknowledgement from the vendor may be the first indication that a transaction is taking place: an advance shipping notice informs the buyer of materials in transit. Under this situation buyers give up control of key resupply decisions and sometimes even transfer financial responsibility for the inventory to the supplier. Actually this VMI transfers the responsibility of inventory management from the retailers to the suppliers who may be obliged to meet a specific customer service goal.

2.2 Retailing and Information Technology

Members of retail supply chain are using information technology as part of their strategy to improve supply chain performance and survive in the competitive environment. Information shared among partners of retail supply chain includes point of sale data or forecasts over a certain period of time. Suppliers and retailers that collaborate extensively share inventory status data as well (Martin Gullberg & Peter Lundvall, 2003). The practice of using information technology in retailing started in the 1980's with electronic data interchange and the use of scanning barcodes to keep more accurate track of sales throughout the industry. The use of information technology has helped increase the speed of activities within the retail supply chain by providing more accurate data and a faster way of transmitting these data. The ability to respond to customer changes and other sources of supply chain variability has become more efficient with the use of technology. Increased awareness and importance of information among the partners in retail supply chain have made them more dependent on technology. It also contributes to effective communications and costs cutting efforts.

Kent and Mentzer (2003) explained this trend towards a technology-driven supply chain through the concept of inter-organizational information technology (IOIT). IOIT facilitates the information sharing process between partners. EDI is an example of this type of technology that has become familiar in retail supply chains. Kent (2003) studies the effect of the perception of investments on IOIT, and how these investments have impacted the relationship between partners. The results of his studies indicate that the perceived investments in IOIT by the partners in the supply chain increase the trust level between the partners. Additionally, one of the major projects in retail technology is the piloting and implementation of radio frequency identification (RFID) tags (Lane, 2009). RFID tags are promised to offer several advantages over barcodes including automatic detection, omni-directional data capture, and increased data storage capacity (Lane, 2009). Some believe that RFID will provide "error-free fulfillment, delivery, and visibility" throughout the supply chain (RFID: Powering the Supply Chain, 2002). Because RFID tags are able to hold more information than a barcode, as well as hold dynamic information about the product, more detailed item specific information can be stored. The use of RFID technology will increase product visibility throughout the supply chain. The increased visibility that RFID tags can provide is promised to provide management with more control over the supply chain and responses to consumer demands and unanticipated events in the supply chain are expected to be faster with the use of RFID (Barrat, M. 2004). So retail supply chain is gradually absorbing all technology for smooth information sharing among its partners.

2.3 Retailer and Supplier Collaboration

Collaboration is defined as two or more companies sharing the responsibility of exchanging common planning, management, execution, and performance-measurement information (Anthony, 2000). Collaboration gives suppliers a better understanding and ability to cope with demand variability - an important feature when you are trying to counter the costly bullwhip effect (Disney, S. M, and Towill, 2003). Collaboration with suppliers is a must for retail supply chain because the retailers deal with variety of products and most of them are daily necessities. As retail outlets procure products from many suppliers, there is a possibility to lose control over all hands and to keep pace with the changing demand situations. For this reason retailers and suppliers have become partners in meeting the challenges of fluctuating demand. The impact of the bullwhip effect, where suppliers receive a disproportionate amount of variability based on retailer consumer demand variability, has helped facilitate collaborative efforts to better respond to demand fluctuations (Barrat, M. 2004). These initiatives are aimed at reducing costs for both the retailer and supplier.

The concept of Quick Response (QR) enables suppliers to forecast what retailers are going to order before the order is actually made through information sharing (Ellram, La Londe, and Weber, 1999). QR changes the relationship between the supplier and retailer by connecting the two with new technology. Communication between suppliers and retailers has become more vivid and fruitful with the transmission of Point of sale (POS) data and the use of electronic data interchange (EDI). Point of sale data is increasingly important, allowing suppliers to know the actual consumer demand patterns of fast moving items, which enables suppliers to prepare for the next order before the retailer makes the order (Barrat, M. 2004). The connection between the two entities electronically through the use of EDI allows for quicker information sharing, which then leads to shorter order cycle times. The major difference between the traditional supply chain and the one emerging during this time is the focus on the interaction between the retailer and supplier, rather than on each entity's supply chain practices within their own organization (Carr, A. S., Pearson, J. N., 1999). At present for better collaboration, retailers and suppliers are continuously sharing demand information that was impossible previously. In the mass merchandising segment of the retail industry, retailers realize that their suppliers can supply their products in such a way that significantly reduces costs on the retail end. (Norek.Et.al. 1997). In Norek's results, the four major activities that retailers are requiring from their suppliers or manufacturers were the storage of raw inventory, various packaging activities, organization of products for delivery, and electronic data interchange. Another supplier and retailer partnership initiative is collaborative planning, forecasting, and replenishment (CPFR). Crum and Palmatier (2004) address the issue of demand collaboration between suppliers and retailers.

They emphasize the fact that the focal point of reducing uncertainty should be on knowledge of demand. If partners throughout the supply chain have knowledge of demand, then they know what to expect in terms of selling and supplying the demanded product. This in turn lessens the bullwhip effect that causes high demand variability for partners downstream in the supply chain. Crum and Palmatier (2004) indicate that in order for CPFR to be successful, suppliers and retailers must agree on a demand management process and must open communications entirely. (VMI) Vendor Managed Inventory is another form of retailer supplier collaboration. Waller, Johnson, and Davis (1999) maintain that VMI permits cost cutting in the supply chain for both retailers and suppliers and is also a mechanism that increases customer service level. When retailers participate in VMI, they are allowing their suppliers to know the actual demands of their products and provide automatic replenishment at the retailing or distribution facilities. VMI is effective only when communication and trust exist in the partnership because both incur risks as a result of sharing sensitive information across companies. Therefore, research suggests that in retail supply chain retailers and suppliers should treat each other as partners to maximize the gain for both of them.

3. PROPOSED STRATEGY FOR RETAIL SUPPLY CHAIN

Basically retailers could follow either of the two proposed approach. First is value driven supply chain that is actually customer oriented and focuses on responsiveness and customer satisfaction. This supply chain is about making things easy for the customers, ensuring availability of required products, adding extra SKUs and delivering goods to customers at their convenience. The second one is cost driven supply chain that is basically efficiency oriented. Here customer is not the focal point rather it focuses on cost minimization and profit maximization. But it is difficult to cut a good figure in competitive business environment without considering customer preferences. Retailers should adopt the value driven supply chain so that they can stand out in the crowd by satisfying the customers in a better way.

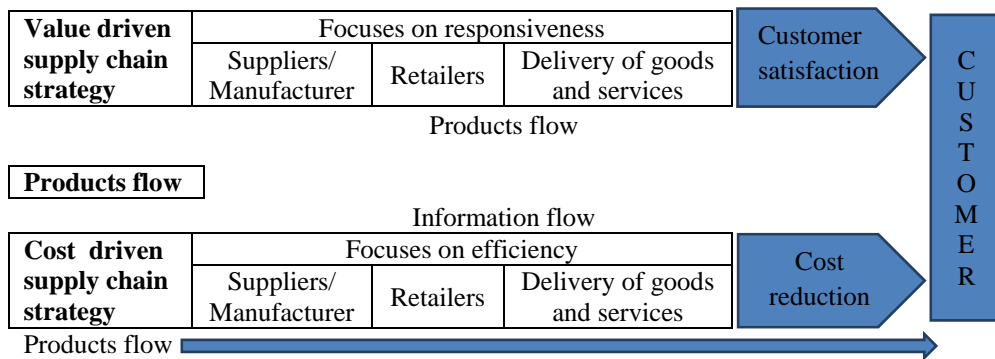


Figure 2: Retail SC Strategy

4. RETAIL SUPPLY CHAIN CHALLENGES

Retailing is the last step of a supply chain. The retail supply chain environment is continuously evolving that creates new challenges for retailers. Major challenges in the retail supply chain include ensuring the right products to the right places at affordable price and available for purchase. Collaboration efforts between partners in a supply chain have arisen as a response to this challenge. To ensure collaboration, collaborative, planning, forecasting, and replenishment (CPFR) has been a process that has tried to link trading partners together more deeply. This process represents both a challenge and an opportunity. It has been a challenge due to the amount of cooperation and trust needed between both parties. The opportunity lies in more accurate management of inventory and quicker responses to supply chain disruptions. Aside from external challenges, there are also internal challenges to companies wishing to improve their supply chains. Another big challenge faced by retailers is that at present customers are very much demanding. If retailers want to provide better services to the customers, they must synchronize their supply chain around meeting the diversified needs of the customers. In order to help synchronize the partners in the supply chain, incentives should be put into place. For major discounters, the selling of shelf space to vendors provides supply chain partners with an incentive to make sure that these shelves are stocked with appropriate products and empty shelves represent lost revenue not only to retailers but also to suppliers (Carr, A. S., Pearson, J. N., 1999). According to Leigh Sparks, (2010), the key challenges for retailers are to make end-to-end customer-centric supply chains visible, to aid efficiency and flexibility, to rethink existing and new activities, and to provide as sustainable a solution as possible based on sound practices and efficient operations.

5. CONCLUSION

Supply chain strategy is integral to retail success. Supply chain management efficiency has now become a key indicator of profitability for retailers. This supply chain management efficiency can be achieved by ensuring smooth collaboration among the different parties in the chain. Proper supply chain strategy presents a source of competitive advantage for firms. Big retailers are spending a lot of money every year to increase supply chain capabilities and to ensure better coordination among drivers. An effective strategy for retail supply chain is one that is aligned with the overall company strategy yet remains flexible enough to adjust to unanticipated changes in customer desires, competitor efforts, and the economy. However, a combination of efficiency and responsiveness is the preferred strategy of today's big retailers. Retailers should always try to provide the appropriate level of product availability at optimal inventory and cost levels. So retail supply chain should combine customer focus and cost focus to survive in the present competitive business environment.

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