

# Building a Customer-Centric Supply Chain Strategy: Enhancing Competitive Advantages

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*Customers are crucial to any business, as without customers, there will be no sales; and without sales, there will be no revenue and profits. Hence, there is a lot of attention on 'customer-centricity'. With competition now at the supply chain level, competitive advantage comes from the ability of supply chain partners to co-ordinate and integrate strategies aimed at satisfying the ultimate customers of the supply chain at a relatively low total cost. Customer-centric supply chain strategy provides an approach to respond to these challenges as it strives to match supply and demand, thereby driving down costs and simultaneously improving customer satisfaction. This study works in this direction to underline the significance of customer-centric supply chain strategy. The study also provides supporting matrix to underscore the various attributes of customer-focused supply chain strategy; develops 4Rs (responsiveness, resilience, reliability and realignment) framework for building customer-centric supply chain strategy; and formulates a value creation framework to emphasize the overall benefits in terms of improved firm performance.*

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## Introduction

In today's highly competitive business environment, organizations are struggling to survive as Product Lifecycles (PLCs) have become shorter, clock-speed has become faster, and the consequences of disenchanting a customer have become more severe. Thus, organizations are looking for ways to be more creative, competitive and innovative as these factors affect their performance. There are various drivers influencing the performance of the organizations. One of them, customer-centric performance, is the organization's performance as perceived by its customers. Accordingly, dependability, responsiveness, delivery speed, customization, and customer satisfaction are manifests of customer-centric performance (Evans and Lindsay, 2005). Slogans such as "The Customer Comes First" or "The Customer Is the King" are quite common in the business world. These slogans are used to emphasize the role of a customer to the stakeholders such as owners and employees of a service firm (Olsen *et al.*, 2014).

In the current era of competitive global scenario, developing a successful supply chain strategy is critical to an organization's long-term success. The management of supply chains has become increasingly important as well as complex in the context of globalization, new product development, diffusion of innovation and changing customer preferences. Thus, organizations are looking for ways to be more creative, competitive and innovative as these factors affect the performance of the organizations. Supply chain covers all movement and

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storage of materials and goods including inventory of raw materials as well as work-in-process, and finished goods from point of origin to point of consumption. Any initiative to improve supply chain performance attempts to match supply and demand, thus simultaneously driving down costs and improving customer satisfaction. Customers are crucial to any business as without customers, there will be no sales; and without sales, there will be no revenue and profits. Hence, there is a lot of attention on 'customer-focus' or 'customer-centric' approach. There are various drivers influencing the performance of the organizations, and customer-centric performance (i.e., the organization's performance as perceived by its customers) is one of them.

## Literature Review

Supply chain is a network of organizations that are linked to deliver value in goods and services to the end consumer (Christopher, 2011). Chow *et al.* (1994) and La Londe and Masters (1994) defined a supply chain as a chain of entities that connects upstream and downstream to deliver goods to end-users. According to Agarwal and Shankar (2002), a supply chain is an interconnected set of relationships from customer to supplier, through a number of intermediate stages such as sourcing, manufacturing, and warehousing and distribution, and it is a network of companies which influence each other. Sundaram *et al.* (2010), emphasized supply chain as an integration of processes and resources to deliver value-added products and services to end-users. Supply Chain Management (SCM) is "the management of upstream and downstream relationships with suppliers and customers in order to create enhanced value in the final marketplace at low cost to the supply chain as a whole" (Christopher, 2011). In the context of SCM, firms can enhance performance by focusing on creating value for the ultimate customer (Mentzer *et al.*, 2001). Firms can experience improved performance through SCM by integrating key business processes from end-users to suppliers and vendors, by providing products, services and information that add value to customers (Othman and Ghani, 2008).

While increased customer expectations require higher customer orientation (Terlunen *et al.*, 2015), firms that fail to satisfy their customers' needs and expectations eventually suffer performance deterioration (KPMG Nunwood, 2017). Firms that cannot satisfy their customers are likely to lose market share to rivals who offer better products and services at lower prices (Simona and Gómez, 2014). Conversely, successful firms are usually "rewarded with more business from customers and with more capital from investors" (Anderson *et al.*, 2004). Customer-focused firms rely on developing strategies towards increasing customer satisfaction (Rajagopal and Raquel Castano, 2015). Satisfying customers is critical to a firm's success. Customer satisfaction is an antecedent of customer retention/loyalty (Szymanski and Henard, 2001). Higher customer satisfaction leads to increased transactions (Bolton and Lemon, 1999), willingness to purchase additional services (Anderson *et al.*, 1997), as well as reduced price elasticity (Anderson, 1996) and transaction costs (Anderson *et al.*, 1994).

SCM is a set of approaches that efficiently integrate and coordinate the materials, information and financial flows across the supply chain so that merchandise is supplied,

produced and distributed in the right quantities, to the right locations, and at the right time, in the most cost-efficient way, while satisfying customer requirements (Hugo *et al.*, 2011). With rapid swings in demand and supply characteristics of the products, the possibility of losses due to delivery of wrong products or delivery of right products but at the wrong time, is very high (Forza and Salvador, 2002). Besides, as the uncertainty in volume or mix requirements of an order increases, suppliers' ability to deliver on time and in the right quality reduces (Thun and Hoenig, 2011). Several different sources of uncertainty have been recognized in SCM literature (Trkman and McCormack, 2009) that create an uncertain business environment for firms. Firms should consider investing in supply chain agility and responsiveness (Braunscheidel and Suresh, 2009; and Oke and Gopalakrishnan, 2009) in order to respond quickly to marketplace fluctuations and to manage disruption risk.

The risk associated with the likelihood that customer demand will change requires that the supply chain develop a degree of flexibility in terms of its ability to respond to the changes (Ronchi *et al.*, 2007; and Tang and Tomlin, 2008). Flexibility is defined as "the ability to change or react with little penalty in time, effort, cost or performance" (Upton, 1994). Supply chain flexibility in the presence of uncertain environments has contributed to better business performance (Martínez and Pérez, 2005). Supply chain flexibility incorporates three dimensions of flexibility—(i) supply flexibility; (ii) manufacturing flexibility; and (iii) distribution/logistics flexibility (Sreedevi and Saranga, 2017). Supply chain flexibility is considered as a competitive response to environmental uncertainty (Merschmann and Thonemann, 2011).

Supply chain strategy is defined as a set of approaches utilized to integrate suppliers, manufacturing, warehouses, and stores so that merchandise is produced and distributed at the right quantities, to the right location, at the right time, in order to minimize system-wide costs while satisfying service level requirements (Simchi-Levi *et al.*, 2008). In the 4<sup>th</sup> edition of Supply Chain Leadership Forum, organized by The Council of Supply Chain Management Professionals (CSCMP) Spain, more than 150 supply chain professionals, representing more than 92 leading companies in over 24 different markets from 15 countries participated. The theme of the forum was "Enabling Customer-Driven Supply Chains" and the focus was on how to implement a customer-centric strategy by sharing knowledge, the best practices, and innovative ways to boost company performance by aligning and integrating supply chains to best serve the customers (CSCMP, 2016).

Supply chain strategy is considered 'a prerequisite' for SCM in any firm, since "top performers have a clear supply chain strategy aligned with overall business objectives and customer requirements" (Varma *et al.*, 2006). Despite its importance and relevance, supply chain strategy is often neglected in practice. Dittmann (2012) found through "a survey on the state of supply chain strategy" that, although 62% of the respondents said that "they have a supply chain strategy", only 18% had "a documented, multi-year" supply chain strategy. This study focuses on CCSCS and develops appropriate competitive priorities to enhance SCM efficiency, effectiveness and competitive advantages.

## Objectives

The major objectives of this paper are firstly, to introduce the concept of the Customer-Centric Supply Chain Strategy (CCSCS) as a process which combines the strengths of supply chain networks by shifting the focus to the customer; secondly, to demonstrate how such strategy meets the challenges of customer value creation in today's fast changing and highly competitive marketplace; and thirdly, to suggest various research frameworks of CCSCS for better understanding customer interface and organizations from inside-out. Finally, this study focuses on how CCSCS improves business performance.

## Customer-Centric Supply Chain Strategy: Building Competitive Priorities

In the traditional supply chain with multiple tiers of suppliers and customers, each operation regarding production as well as distribution setup is planned on the basis of forecasted demand. However, traditional supply chain strategy in which the customer is the final destination of all supply chain processes is no more relevant today, as such efficiency-based, cost-saving supply chains tend to be more vulnerable to unanticipated shifts in customer demand (Lee, 2004). Nowadays, market competition no longer happens between individual companies, but takes place between supply chains (Farahani *et al.*, 2014). Table 1 shows the major differences between traditional supply chains and customer-centric supply chains according to competitive priorities. These competitive priorities of responsiveness, reliability, resiliency and realignment are explained below:

S. No.	Competitive Priorities	Traditional Supply Chains	Customer-Centric Supply Chains
1.	Responsiveness	Modest ability to respond to changes	Strong ability to be proactive as well as responsive to changes
2.	Resiliency	Often limited to a single chain or a large number of chains	Maintain a limited set of multiple chains to ensure distribution
3.	Reliability	Focus on cost-efficiency	Focus on reliable and cost-efficient supply chains
4.	Realignment	Participants forced to choose between own and chain's interests	Interests of participants coincide (or are developed to be synergistic)

*Source: Tabulated by author adapted from Ketchen and Hult (2007)*

### Responsiveness

Today's external business environments are often characterized as volatile and unpredictable due to intricate dynamics of business relationships and rapid changes in consumer behavior. To better meet these demands, today's firms should take more proactive initiatives which will allow them to capture the hearts of their customers and subsequently enhance their

competitiveness in the global marketplace (Roh *et al.*, 2011). In this context, the main principle of a responsive supply chain is that firms must become more customer-centric, information-intensive, and flexible. Responsiveness describes the ability to react quickly to sudden changes in demand or supply. With responsiveness, firms handle external disruptions smoothly by responding to short-term changes in demand or supply swiftly. Creating a responsive supply chain has become a source of competitive advantage (Lau and Hurley, 2001). Thatte (2007) stated that supply chain responsiveness and competitive advantage of the firm are positively related.

Sharing of information strengthens collaboration among the supply chain partners as collaboration is also a key to the supply chain's ability to respond (Lee *et al.*, 2008; and Thomas, 2008). Responsiveness also implies that the organization is close to the customer, hearing the voice of the market and quick to interpret the demand signals it receives. Major crises encountered by Marks and Spencer, Sainsbury, and Motorola in the late 1990s and the early 2000s stemmed from their failure to promptly respond to the sudden shift in the customer needs and preferences rather than their inefficiencies in the production process (Finkelstein, 2003; and Walters, 2006). In the future, organizations must be much more demand-driven than forecast-driven and the keyword in this changed environment is agility (Christopher, 2011). Agility is defined as "the result of integrating an alertness to changes (opportunities/challenges)—both internal and environmental—with a capability to use resources in responding (proactively/reactively) to such changes, all in a timely, and flexible manner" (Li *et al.*, 2008).

Supply chain agility has been acknowledged as the capability that enables supply chain competencies to respond to the changing environment and ultimately lead to elevated performance and sustained competitive advantage (Swafford *et al.*, 2006; and Gligor and Holcomb, 2012). An agile supply chain strategy allows the supply chain to flexibly and rapidly respond to short-term changes in customer demand (Lee, 2004; and Dubey *et al.*, 2018). Hence, it is more responsive to unpredictable customer demand. However, responsiveness without cost-effectiveness is not a real competitive strategy (Gunasekaran and Yusuf, 2002). Such ability to rapidly react to changes in demand depends on the degree to which the supply chain partners integrate and coordinate information flow throughout the supply chain (Swafford *et al.*, 2008). Supply chain agility enables firms to better synchronize supply and demand, reducing the cost of inventory and transportation (Christopher, 2000). With an adequate level of agility, it is possible to proactively anticipate changes while seeking new emerging opportunities (Sharifi *et al.*, 2006).

## Resiliency

Globalization, outsourcing and reduction in supply base have exacerbated the uncertainty within and risk exposure of supply chains. Thus, it is no longer enough for firms to develop capabilities to cope with short-term, temporary changes in supply and demand through supply chain agility, and hence firms also need to develop resiliency (Lee, 2004). Resilience is the combination of responsiveness and flexibility and refers to the ability of a supply chain to cope with unexpected disturbances and respond to marketplace changes to gain or maintain

competitive advantage (Sheffi, 2005). Resilient supply chains are more capable of coping with the uncertain external environment, i.e., they are more adaptable. Adaptability sometimes requires developing more than one supply chain for the same product in order to ensure distribution. For example, the supply chain surrounding the Gap relies on China for manufacturing and sourcing of Old Navy stores, while Central American facilities supply Gap stores and Italian facilities supply Banana Republic stores. This approach is far more expensive than if all three brands were served by one network, but it helps differentiate the brands and provides insurance against problems that might arise in any of the three regions (Lee, 2004). Wal-Mart's responsive and resilient supply chain enabled the company to access the devastating areas of hurricane Katrina, earlier than the Federal Emergency Management Agency (FEMA) and the Red Cross (Waller, 2005).

### **Reliability**

There has been a shift of focus from creating simply cost-efficient supply chains to 'reliable and cost-efficient supply chains' (Snyder and Daskin, 2005). Reliability refers to the performance of the supply chain in delivering the correct product, to the correct place, at the correct time, in the correct condition and packaging, in the correct quantity, with the correct documentation, to the correct customer. The main reason for this shift to reliability is the negative impact of supply uncertainty on supply chain networks. Any supplier failure compromises supply chain reliability; hence when Land Rover was unprepared when a major supplier of a crucial component went bankrupt, its supply chain reliability suffered (Lester, 2002). There are many disruptive events such as earthquakes, severe weather, floods, fires, port explosions/disruptions, terrorist attacks, labor strikes, and financial distresses causing supply uncertainty in a supply chain (Pickett, 2003). Sheffi (2005) provided diverse examples of companies that encountered severe problems when their supply chains were disrupted. A breakdown in any link in the supply chain would increase the total supply chain cost and reduce the ability to create customer value (Lehrer, 2003).

### **Realignment**

Realignment of supply chain refers to aligning the interests of supply chain members time and again by ensuring that the goals of all participants in a supply chain are consistent. While aligning the interests of all firms in the supply network, companies optimize the chain's performance when they maximize their own interests. Realignment creates incentives for better performance. Incentive alignment is an important tool to facilitate collaboration between the common supply chain and each individual firm (Pakdeechoho and Sukhotu, 2018). According to Matthyssens and Vandembemt (2008), firms must be aligned both internally and externally with supply chain partners.

Supply chain realignment is the property of the supply chain such that the interests of all the organizations in the supply chain are aligned through free information exchange, as information plays an important role in designing a customer-centric supply chain (McCormack, 2003), clearly laying out the role of each constituent of the supply chain and through equitable sharing of risks, costs, and benefits (Dubey *et al.*, 2018). The supply chain as a network has led to a shift from the value-added supply chain to the value co-creation

supply network context as the entire supply network actors participate in the process of value creation and value delivery to the final customer (Martinelli *et al.*, 2017).

The alignment of systems throughout the supply chain enhances organizational performance (Green and Inman, 2005). Realigned supply chain facilitates the sharing of risk throughout the supply chain; as risk is reduced in terms of costs, and the resultant benefits in terms of performance increases are also shared (Arend and Wisner, 2005). This represents a fundamental shift from the traditional supply chain strategy in which supply chain partners often focused more on maximizing their own internal systems than on working together to meet the needs of consumers.

## Design and Methodology

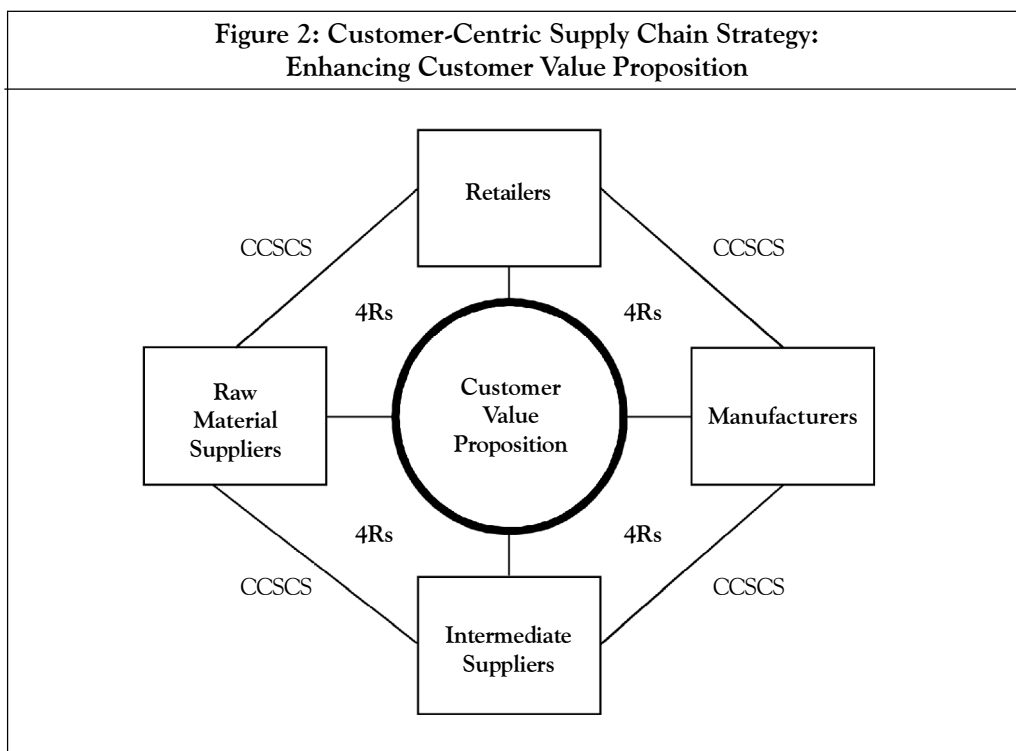
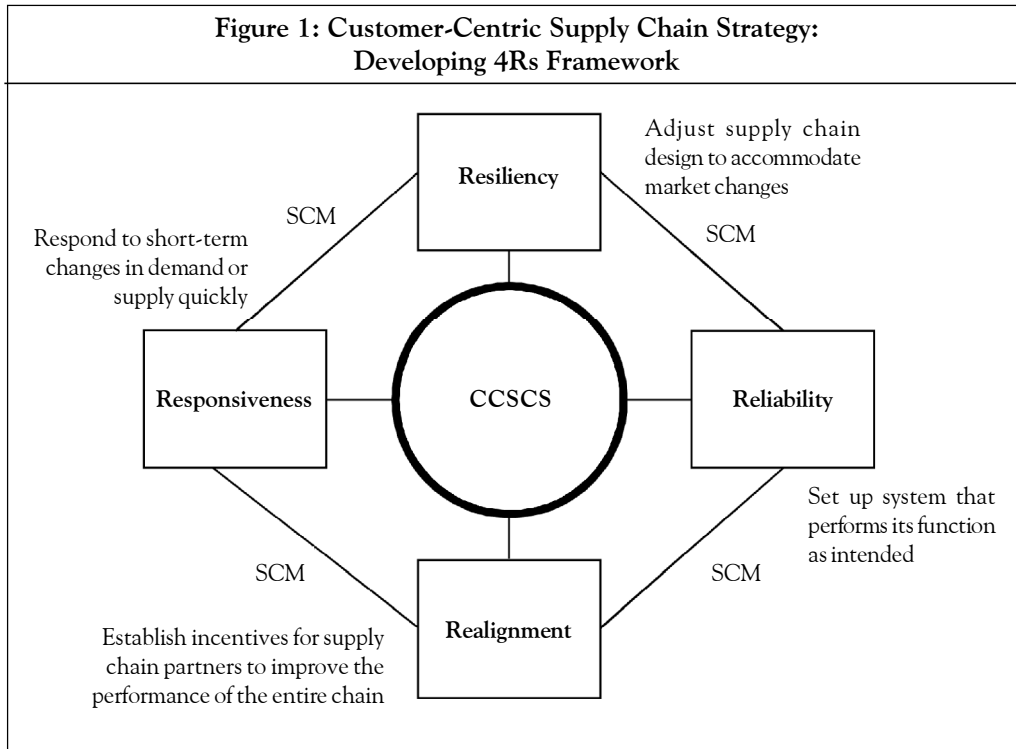
This study focuses on the development of a theoretical framework for identifying and analyzing the benefits of a CCSCS. A two-stage methodological approach is adopted in this study. In the first stage, the study focuses on development of a 4Rs (responsiveness, resiliency, reliability, and realignment) framework for identifying key processes and drivers of supply chain performance improvement in organizations. The second stage involves development of a framework for emphasizing the benefits of customer value proposition on deployment of 4Rs framework.

### Customer-Centric Supply Chain Strategy: Developing 4Rs Framework

Traditional supply chain focus has always been on how to reduce operating costs for firms through improved efficiency in outsourcing, production planning, and logistics processes. Although improved efficiency throughout the end-to-end supply chain can enhance a firm's competitiveness, it will not necessarily make the firm a winner. The rationale is that improving efficiency alone will not help the firm to differentiate its products and services from those of its competitors (Roh *et al.*, 2014). Figure 1 shows CCSCS with all these competitive priorities of responsiveness, resiliency, reliability and realignment.

### CCSCS: Enhancing Customer Value Proposition

Having a competitive advantage for organization generally suggests that they can have one or more of the following capabilities when compared to its competitors: lower prices, higher responsiveness and dependability, and shorter delivery time (Madhani, 2017b). Nevertheless, the CCSCS has to be designed according to the specific characteristics of the supply chain considered and the context in which this operates. Madhani (2017a) advocated that firms should select the right supply chain strategy based on product characteristics and market environment. In CCSCS, supply chains are much more customer-centric—they deliver great service at lower cost. Value-creation aspects of the customer-centric supply chain have become a new competitive ground to which most firms can aspire. As explained earlier, every supply chain needs four key elements in order to be as customer-centric as possible: Responsiveness, Resiliency, Reliability and Realignment (4Rs). As shown in Figure 2, the 4Rs are major contributors in enhancing customer value proposition.





The following case study of Longs Drug Stores illustrates how CCSCS enhances customer satisfaction as well as business performance:

### **Case Study: Longs Drug Stores**

Longs Drug Stores is a major drug chain in North America, with 521 retail outlets totaling \$5 bn annual sales. The company has always emphasized high customer service since its founding in 1938. Longs Drug Stores used information-oriented services to differentiate from their competitors. These services include the pharmacy application. In Longs Drug's client/server environment, the pharmacy system resides on a server in each of its stores as it has a lot of local data. This system allows pharmacists to access local patient information from the in-store server and compare that information with reference data housed on a central server at corporate office. The pharmacist can even go outside the network, to access some clinical information on the disease. Customers highly appreciate this kind of attention given in a matter of seconds by pharmacist. To the customer, the pharmacist becomes a trusted counselor and that attention is keeping customers loyal. For better customer services, it is necessary to identify and predict customers' need and consumption pattern. Weather plays a big role in demand for flu drugs, holidays trigger higher demand for indigestion drugs, changes in packaging sizes by manufacturers and natural disasters may also result in shifting demand patterns. Therefore, in 1997, Longs Drug invested in a Nonstop Solutions technology to use more science in demand chain management processes. This technology uses state-of-the-art data-driven methodologies to eliminate as much guesswork as possible and optimize the activities in the demand chain—forecasting, inventory control, transportation, material handling and warehousing.

Instead of tracking products as they move across the supply chain, Nonstop analyzes the subtle clues buyers send across the demand chain in the other direction. Nonstop's analysis accurately produces a 90-day replenishment plan based on 150 variables per product and improves performance by freeing up some of the capital tied up in inventory and some of the labor tied up in restocking it. Such scientific analysis enabled Longs Drug to cope with the higher transportation costs caused by frequent ordering and improve performance through inventory savings. With such up-to-the-day sales predictions, Longs Drug reduced inventory, replenishment costs and freed up \$105 mn in working capital (Doan, 1999).

Longs Drug incorporated seasonal profiles of products and used statistical analyses of day-of-week, seasonality, and trend effects in customer demands of products to increase availability levels at its stores to 99% and thus enhanced 'responsiveness'. At Longs Drug, better replenishment system, integrated databases, close links with suppliers, and deep knowledge from buyers resulted in 'resilient' supply chain. Integration of forecasting, inventory management and transportation resulted in 'reliable' supply chain. Information sharing allows Longs Drug to have visibility of point of sales, demand forecasts, inventory, and shipment plans. When supply chain partners are willing to collaborate and are sharing information with one another, there is better synergy of product introduction, development, and replenishment. For better coordination, roles and responsibilities for replenishment,

forecasting, order fulfillment and customer service need to be realigned. Longs Drug's explicit treatment of supplier performance (supplier fill rate and delivery performance), 'realigned' its interests and those of its member partners.

Thus, Longs Drug has created customer-centric supply chain based on attributes of responsiveness, resiliency, reliability and realignment. Longs Drug's performance was the envy of its competitors in the marketplace due to its excellent business performance leveraged by customer-centric approach. Inventory at Longs Drug's distribution centers has dropped by 79%, while the corresponding store inventory has dropped by 32%. Longs Drug has average inventory turns of 9.4 (i.e., 160% better) compared to the industry average of 5.8 (Lee, 2002). In August 2008, Longs Drug was acquired by CVS Health for \$2.8 bn by paying a 32% premium over Longs Drug's closing stock price.

## Conclusion

CCSCS has a positive effect on top and bottom-line growth of the firm as it enhances the capabilities of the firm to adapt to the rapidly changing environment, with even more focus on the customer. In addition to matching organizational resources with customer value, it can improve forecasting, product planning and optimization. Greater insight into demand and delivery schedule will improve operational efficiencies and help organizations in creating the business value they seek. CCSCS helps organizations to sense consumer demand, respond to it in real-time and provide a superior consumer experience at every opportunity, while also decreasing the time to market, trimming overall costs and optimizing productivity. This research has developed various frameworks and emphasized that responsiveness, resiliency, reliability and realignment (4Rs framework) are important drivers of CCSCS, and hence contribute immensely to enhancing customer value proposition.

**Implications, Limitations and Future Scope:** The current study focuses on identifying various attributes and competitive priorities (i.e., responsiveness, reliability, resiliency and realignment) of the supply chain that creates value for customers. By developing a CCSCS, value creation process is analyzed within the whole supply chain by examining all supply chain members responsible for value creation and for the final product offered to the consumer. The study has highlighted that customer-centric approach will generate better values for customers and companies. Being a theoretical study, the 4Rs framework presented in this study did not develop or validate any scales for the supply chain variables. Hence, empirical tests are needed to measure the variables of customer-centric supply chain and credibly test the theory about any causal links between capabilities, practices and performance related to such supply chain. Future research may focus on empirical studies to validate each of these causal links to measure overall performance improvement on deployment of CCSCS.✪

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