Supply Chain Management for Sustainable Competitive Advantage (SCA)

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Abstract
Supply chain management basically depends on organization’s business strategy and relationship, plan and execution, logistic performance and information technology and its implementation in the organizational business system. All parties whether directly or indirectly involved in satisfying customer request and demand are involved in supply chain management. It is internalized and conceptualized as a link or chain of organizations from supplier to end user, with the intention of coordinating both supply and demand. These parties are not only suppliers and manufacturers, but also wholesalers, retailers, transporters and even the customer themselves. The success of organizations is highly depending on their ability to manage and design their supply chain management system in order to get the maximum benefit in the market where competitive forces are dynamic. Thus, supply chain is dynamic and all about conducting all necessary activities, facilities and functions, which can meet the demand of the customer.

Keywords: Supply Chain Management, Competitive advantage

Introduction
Increasing globalization has lead to an alarming concern regarding the improvement of the quality of the goods & services, customized services, inventory reduction, information timing and the most important element i.e. the satisfaction of the ultimate customer. With increasing complexities the process of Supply Chain Management as well as the logistics process has become more & more difficult as the level of demand is at its peak. In order to attain sustainable competitive advantage the firms should effectively integrate as well as incorporate the SCM systems in their work place (Figueiredo, 1994).

The supply chain means a type of chain that constitutes of every activity which is associated with a flow or transforming the goods from raw materials stage i.e. the extraction, throughout toward the end user, such as the associated flow of information.

Importance of Management of Supply Chain
Organizations nowadays increasingly estimate that they should rely on the effective chains of supply, or the networks, that competes in a global market or the networked economy. The paradigms of new management, the concept in case of relationships of business extends above the boundaries of traditional enterprise which seeks in organizing an entire process of business throughout the value chain in many companies.

From the past ten years, outsourcing, globalization, and the information technology which have enabled certain organizations, like Hewlett Packard, Dell in successfully operate the solid coordinated networks of supply where every specialized partner of business focused only on the few strategic activities (Scott, 1993).

This network of supply which works around inter-organization could be identified as the new form within the organization. Moreover, along with the interactions done complicatedly between the players, the structure of networks fits neither “hierarchy nor the market” categories (Powell, 1990). It’s not specified the kinds of major impacts of performance, along with different network structures of supply could impact the organizations, and very few is known regarding the coordinated conditions or the trade-offs which could exists among different players (Zhang & Dilts, 2004).

The world is the period of supply chain management, where organizations and business enterprises could not stand independently in isolation, but respond to ever changing global market through establishing a supply chain system to create a value delivery system. As per the definition of United Kingdom of Trade and Industry, supply chain management is defined as “the systematic planning and control of technologies, materials and services, from identification need by the ultimate customer”. Moreover, according to Fawcett, 2008, supply chain management can be defined as “the design and management of seamless, value-added process across organizational boundaries to meet the real needs of the end customer”. The main objective of supply chain management is to create value from the production to delivery process in a way which creates better competitive advantage to parties involved in the chain by minimizing cost. Value is not inherent in products or services, but rather is perceived or experienced by the customer (Handfield, Monczka, Giunipero and Petterson, 2009:11).
Supply chain management basically depends on organization’s business strategy and relationship the organization, plan and execution, logistic performance and information technology and its implementation in the organizational business system. According to Tan, 2001, supply chain management coordinated business activities and relationship internally within an organization, with immediate suppliers and customers along the supply chain, and within the entire supply chain system. The external supply chain includes the internal supply chain. See the following figure.

**Examples of S C A:**

**Automotive Industry:** The research provided an insight into a real problem that threatens in bringing the world’s automotive lines of production to the halt. The Automotive components limited, in Australia deals in manufacturing of engine parts. The company faced certain problems in management of supply chain and its effective delay in services. According, to the analysis done by the specialist of an automotive logistics organisation revealed that the lean, modern, automotive chain of supply was driving the increase towards the need of emergency services of delivery. Delays towards the manufacturing of its components, mainly caused by components and materials shortages up its chain, are considered to be the main reason that the suppliers and makers of cars resorts to the emergency service delivery (Ganeshan, 2004).

The time of evolution was developed around five years back mainly to provide a high speed in the delivery of services for the suppliers and makers of car. In recent years, the organisation conducted the survey between its customers, by identifying the reasons of using the services of critical delivery. Now the time of evolution critically published and analysed a whole concept of the data which was collected on the basis of global shipments.

The supply chain of automotive is considered to be the most complex industry structures in the operation today. Decades in the efforts of cost cutting have reduced the line side inventories levels to the days or even for hours, while a drive towards the benefit from an emerging manufacturing capability of cost of low labour, countries meant that the components should travel further from a source the point of their use (Antonio, 2008).

The company was considered to be one an efficient organisation in the timely delivery of supply chain. In spite of this the organisation failed to be a market winner as it suffered huge losses, by not paying attention to certain important factors like Human error, problem of transportation and the delay in the production. This leads the company towards a disturbed system of supply chain management. However, it was analyzed that different issues were grouped into the different structures in an automotive organisation, they are:

**Delays in the production:** Quality problems, equipment problems, and the delays in its supply of materials and the line of basic production which was debugging at the time of introduction of the new components could all results in different parts which arrived from the lines later on than it was expected.

**The Error of Human:** Cars are the complex machines which are built from around thousands of different parts. It is important to carefully examine which part to be requested, and the right part that is requested but a supply of wrong occurred, this problem occurred within the automotive company, which leads to a delay in the supply chain of their products. This all factors leads to delay in the production of the company, which was the most instant cause of an emergency requests of deliveries among the customers surveyed, that accounts for around 28 percent of the emergency shipments. Human errors were the second most important cause, which leads towards the quarter of the shipments. The problems of transportation also created huge delays in the organisations supply chain. The critical deliveries which were planned made up around the final and seven percent of its European shipments that was analysed (Koch, 2004).

The avoidance of the human error, which is the second important cause in the emergency shipments, seemed to offer the makers of car a big opportunity of improvement. It is considered to be always cheaper in moving data than the parts. In any case an error in the communication could be reduced which delivers the significant benefits in financial terms.

**Example is of Nike:** Nike is one of the world’s largest apparels and shoe manufacturing company. It had one of the finest supply chains. But all of a sudden Nike faced a huge loss, because of the failure of one of its software glitch which cost Nike around more than, $100 million in sales, its stock its price around 20 percent, which was triggered by a flurry in lawsuits of class action. The wave was big enough which compelled the company in revealing its losses at the quarterly conference calls with risk and analysts, the wrath of its Exchange and securities Commission, shareholders and both (Lee, 1992).

Nike claimed that the problem was with its software of i2 demand planning, were tactical or fixable. It was working too slowly, was not integrating well, had few bugs, and the planners of Nike were trained inadequate-
supply chain management strategy that suits their objectives. The organization should evaluate its current strategic position and competitiveness strategy. To form this strategy, First and foremost, organizations should establish a management system as a key to success in the current volatile market. Organizations business enterprises and corporations compete to each other on the basis of their comparative advantage of their supply chain to fulfill customer’s need. They have realized that producing goods and services efficiently is not enough, but their supply chain management system has to be more competitive. Thus, they began to realize that effective supply chain management system is a key to success in the current volatile and competitive market.

Stages of supply chain management

1. Strategic positioning evaluation:
First and foremost, organizations should establish a supply chain management strategy that suits their objectives and competitiveness strategy. To form this strategy, the organization should evaluate its current strategic positioning. Risk, market and competitive analysis are included in this first stage. Many organizations have been used the Porter’s five forces to react to competitors strategic challenges. These five forces listed as follows:
   a) Competition among existing competitors
   b) Challenges of new entrants
   c) Threat of substitute products and services
   d) Bargaining power of suppliers; and
   e) Bargaining power of buyers

One of the most challenging problems at this stage is that lack of basic knowledge of how to make work the supply chain strategy of the organization, especially at senior level. It is vital to obtain the right information and data at hand. Organizations should balance the shareholders in decision making process as most of the people who are enfranchise or disenfranchise through the supply chain management are decision makers.

Value Chain analysis:
In order to identify the value from customer’s point of view, value chain performance need to be analyzed. If the customers do not give a value for the products of an organization, there is no need in supplying the goods and services. Because the importance of value chain analysis is to visualize each part of the chain from the customer’s perspective. Organizations should be sure of that each product from production to marketing process is considering the interest of the customers.

2. Identification of opportunities and Risk
In terms of the organization’s flexibility and vulnerability to loss, there should be a right evaluation of the supply chain risk. Including the supply chain vulnerability, organization need to view the risk from sides, customer and supplier side. Evaluating the maturity level of the supply chain management is also vital.

Supply Chain Strategies and Competitive Advantage:
Supply chain strategy is a set of customers need or interest that suppliers try to satisfy through their products and services in competitive way. It may include decisions related to production system of supplier, distribution channel and place of facilities. The decision considered the overall objectives of the organization, mostly minimizing cost, which are need to be achieved. The basic changes in the environment of global market competition and trends such as outsourcing need organizations to establish supply chain strategies that are associated to “appropriate value propositions” and customer market division.

Organization’s relative market share and position in a given industry or sector is determined by its preference of competitive advantage and its competitive scope. The main competitive strategies are very important as they determine the position of the organization at simple and broadest level. In order to achieve competitive advantage, a firm needs to make decision on the type and scope of its competitive advantage. Thus, a firm can es-
establishes a strong competitive advantage position through cost leadership (taking advantage in producing goods and services compare to counterparts), differentiation (better and outstanding service delivery for the same price with competitors) and a focus approach which enable the firm to concentrate on narrow competitive advantage that wide.

**Competitive Advantage;**
Competitive advantage is the extent to which an organization is able to create a defensible position over its competitors (McGinnis MA, et al., 1999). It comprises capabilities that allow an organization to differentiate itself from its competitors and is an outcome of critical management decisions. The empirical literature has been quite consistent in identifying price/cost, quality, delivery, and flexibility as important competitive capabilities (Tracey M. et al., 1999). In addition, recent studies have included time-based competition as an important competitive priority. On the basis of prior literature on Koufteros et al. study describe that a research framework for competitive capabilities and define the following five dimensions: competitive pricing, premium pricing, value-to-customer quality, dependable delivery, and production innovation.

**Example of Companies with Sustained Competitive Advantage**
1. **Strong research and Innovation;** The technology industry is one of the leading industries with respect to strong research and innovation. And when it comes to setting the pace using innovation as leverage; Apple and Sony are the two companies that have held their leadership position using innovation as a competitive advantage.
2. **Brand Popularity;** Being recognized all over the world as a respected brand is a sustained competitive advantage that companies such as Virgin, Apple and Coca cola have used as leverage to hold the market sway for years. Virgin is a company that has used its brand name as leverage to break into new markets in completely new territories.
3. **Corporate reputation;** Corporate reputation is a form of sustained competitive advantage that companies such as Price Waterhouse and Berkshire Hathaway have leveraged to become world class entities.
4. **Strategic assets;** Holding strategic assets such as patents is a strong source of sustained competitive advantage and General Electric has stood the test of time because of the several patents held. Mind you that possession of these strategic assets has made General Electric one of the most powerful companies in the world.
5. **High volume production;** Dangote Group of companies became one of the leading conglomerates in Africa because of its ability to produce goods on high volume and ensure a uniform price throughout Nigeria.
6. **Access to working Capital;** Generally, public liability companies (quoted companies) have a sustained competitive advantage over private companies because of their infinite capacity to raise capital from the public. Take a look at how Oracle acquired 57 companies in a space of five years and Reliance Industries investing a billion dollars in a single swoop to open a chain of retail stores.
7. **Barriers to Entry;** Barriers to entry due to government restrictions and regulations have been the source of sustained competitive advantage for companies such as Telmex and Chevron.
8. **Superior Product or customer support;** IKEA has become a market leader in the furniture industry because of its ability to provide superior product at an affordable rate; backed by a strong customer support system.
9. **Exclusive re-selling or distribution rights;** The Coscharis Group has become one of the leading automobile retailers in Nigeria and West Africa at large because of its possession of exclusive distributorship of BMW brand throughout West Africa.
10. **Ownership of capital equipment;** Ownership of capital equipment can be a source of sustained competitive advantage and Julius Berger has proved it by becoming a leading company in the construction industry.
11. **Flexibility;** The ability to change swiftly is a strength and source of sustained competitive advantage that Microsoft leveraged upon to become the largest software company in the world.
12. **Speed and Time;** Speed and time was once an overlooked source of sustained competitive advantage until FedEx and Domino Pizza used it as leverage to become industrial pacemakers.
13. **Low pricing;** Wal-Mart as at the time of this writing is the most capitalized company in the world. Thanks to its low pricing strategy that became its strong source of competitive advantage.
14. **Superior database management and data processing capabilities;** GTBank, AT&T, Google, Facebook have become market leaders in their various niches because of the superior database management and data processing capabilities they possess.

**Supply Chain Management as a Source of Competitive Advantage**
The reason why so many researchers and authors want to talk and discuss about supply chain management is that it is a major source of competitive advantage in the volatile global market. Technology, globalization, business creativity, information and availability of huge capital led the aggressive competition in today’s global market.
In the global competitive market, having high market share is not enough to earn maximum profit, thus, organizations should focus on their competitive capability to ensure profitability. Because of this, organization’s ultimate goal becomes satisfaction of customers or end-users. As customers dominate the market, inter-organizational linkage becomes a critical to satisfy the customers. Customers want high quality of service with lower price with available mass customization. This can be achieved if there is only committed chain of suppliers, wholesalers, retailers and distributors in the marketing system. Thanks to technology information system and globalization, organizations are competing at global level not just a region or country level. This system will not tolerate supplier’s blind interest of profit making. In this perspective, Kotler, 1997, States that “As firms globalize, they realize that no matter how large they are, they lack the total resources and requisites for success. Viewing the complete supply chain for producing value, they recognize the necessity of partnering with other organizations.”

Information and communication technology are the most intense and influential changes that directly affect companies. With the beginning of modern computers and communications, giant companies, which had become highly bureaucratic, started eroding. Fast communication and modern information system links all the parties from production to distribution channel in global market ease the cooperation and integration of firms to set effective supply chain system. This led them to enjoy their competitive advantage as per their role in the market to satisfy the customers. The minimized cost and ready availability of information resources allow easy linkages and reduce time delays in the network.

Today’s market situation puts pressure on the relationship among customers and the suppliers. According to Kotler, “Customers are scarce; without them, the company ceases to exist. Plans must be laid to acquire and keep customers.” The level of competition to attract customers in both domestic and international markets requires that business enterprises be responsive, quick, and flexible to compete effectively. This requirement cannot be acquired without cooperation of the organizations in the supply chain system.

A case of fast growing companies:

The impact of technology on supply chain management cannot be undermined. This also result a business linkage between small enterprises and big companies and specialization of the work.

Supply chain management (SCM) has become a potentially valuable way of ensuring competitive advantage and enhancing organizational performance. For example, a recent report stated that in Ethiopia the Economic trends in 2009 produced a sharp increase in telecommunications revenues through allowing small and medium enterprises to be involved the supply chain of the services provided by the company, through it is monopolized by the government. The government has found ways to apply systems knowledge to manage relationships with suppliers such as SMEs. This situation allows suppliers and customers to exchange information, purchase goods and services, and execute payments with ease. Besides, recently encouraging the Supplier Diversity Value ensures that diverse suppliers remain an integral part of the telecommunications industry supply chain and Improves access to capital for diversity suppliers.

Moreover, according to Li et al., (2004) and Koh et a.l., (2007) preliminary empirical studies identified that the supply chain management practice into various dimensions such as, strategic supplier partnership, customer relationship, level of information sharing, and quality of information sharing. The study found that firms that implement SCM practices can have a bottom line influence on the organizational performance and SCM practice also direct impact on competitive advantage. Moreover, firms that have higher levels of competitive advantage may lead to improved organizational performance. Supply Chain Management is now seen as a set of manageable interrelated processes with the aim of increasing effectiveness and efficiency. Many practitioners are leveraging such SCM practices as joint planning and technology sharing. Companies like Dell and Lucent have achieved significant improvements in their supply chain planning and scheduling through collaboration and mutual trust (Chopra, 2201). According to Edward and Robert, 2004, the set of relationships in an extended enterprise must be aligned with the overall strategy of the firm. The three Cs (connectivity, community and collaboration) have been presented to substantiate the philosophy of the extended enterprise. Connectivity refers to the extent to which various partners are connected with each other for achieving a common goal. Community refers to the members living in harmony and following a defined and agreed set of norms and procedures. Collaboration is the heart of the extended enterprise. If the supply chains management is viewed from a resource based view, the key question is whether the characteristics are valuable, rare and difficult to replicate. According to Ketch, 2004, if these strategic resources are available for only one company at the markets, this company has competitive advantage over its competitors and by coordinating the activities a company can gain competitive advantages.

Previous literatures argued that differentiating or low cost of production is the base for gaining competitive advantage. However, competitive advantage is gained
by reducing costs and increasing the capacity the company to satisfy customers’ needs.

As a final note, there are the sources of sustained competitive advantage and the corresponding companies that leveraged such advantage. The message to pass across through this article is that you don’t have to win at every level; you just have to win at one level. If you can’t win with constant innovation or low price, you can win with speed and flexibility.

1. **People:** The knowledge and abilities of your people is the source of most competitive advantage. If you hire a modern day Thomas Edison who pumps out ground shaking innovation after ground shaking innovation (as long as you hold unto the employee) that's a sustainable competitive advantage. This scales to organizations big and small. Your people are typically your greatest competitive asset. Products come and go — a team that can repeatedly design products that wow your customers is sustainable.

2. **Culture:** Sustainable competitive advantage is all about your ability to innovate and change. You may have a highly talented team. However, if they don't work together towards a common mission that's unlikely to translate to a sustainable competitive advantage. Negative office politics and resistance to change will cause your competitive advantage to rapidly decay. Your culture is the way your team works together to focus their energies towards common goals. Firms that enjoy a culture of aggressive change, positive teamwork and innovative spirit tend to maintain and build upon competitive advantages.

3. **Processes:** If you can manufacture shiny-blue-widgets faster and cheaper than anyone else — this may represent a sustainable competitive advantage. Superior processes can be difficult for your competitors to emulate. In some cases, this is because processes happen behind closed doors. However, even public facing processes such as customer service are difficult for firms to copy. Some firms have good relationships with customers that continue decade after decade. Other firms have combative relationships with customer that continue until the firm goes bankrupt.

4. **Knowledge:** The secret of business is to know something that nobody else knows. ~ Aristotle Onassis

General knowledge is widely available on the internet. However, much of the world's industry specific knowledge is locked up in the knowledge management systems of firms. You can't read on the internet how to design, produce and sell aircraft. It requires a great deal of knowledge that's difficult to obtain. In many industries, know-how is a big barrier to entry. There's no public manual for how to start an investment bank or robotics company. The great thing about knowledge is that it helps you change. It's sustainable as long as you continuously improve it.

5. **Technology:** Firms weave together technologies to support innovation, production, processes and customer relationships. In large firms, these technologies stacks become extremely complex. Firms that effectively architect and govern technology may enjoy a significant competitive advantage over firms that struggle to develop technology capabilities and efficiencies.

6. **Capital:** Capital investments can represent a sustainable competitive if you own unique capital that no one else can buy. If you own a railway that cuts across hundreds of kilometers of urbanized land — it's almost impossible for anyone to build a competing route. This represents a competitive advantage that's so strong that it may be considered a monopoly in certain cases. On a less grand scale, retail or hotel locations can represent sustainable competitive advantages. If you buy land next to the most popular beach on an island — you may be able to consistently outperform hotels located near less attractive beaches.

7. **Sustainability & Sustainable Competitive Advantage:** Business change isn't always predictable. However, once in a while a giant trend comes along that makes or breaks everyone. Sustainability is one such trend. Sustainability is the capacity for humans to endure given the growth rate of population and economic activity. Governments and markets have begun a complex process of aligning sustainability goals with economic goals. If you create shiny-blue-widgets and sell them for $1 that may be sustainable. However, if your production process does $40 damage to the environment per widget, that's not sustainable.

**Conclusion:**

The supply chain occurs to be a network which provides facilities or the distribution options which performs a function of procuring the materials, transforming this material into the intermediate or the finished product, along with the distribution of the finished product to the customers.

It is not important that effective supply chain would help the organizations in becoming the market players. It is seen in case of an automotive company and in the case of the organization which deals with apparels and shoes. The management of supply chain for both the companies leads to losses, while the companies were performing better in their early stages. Therefore, it is important for the companies to effectively plan their supply chain in
order to overcome occurrence of prospective problems that could disturb the whole flow of their supply chain management.

References: