A study on the literature relating to supply chain management

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Abstract:

The supply chain from vendor to customer is viewed as a single integrated system rather than many subsystems interfacing with each other. Traditionally efforts have been aimed at developing better interfaces between, say, marketing and production, or sourcing and conversion. This has facilitated smooth operational functioning issues like outsourcing.

Key words: Supply chain management, Just in Time system, Value chain, Value flow.

1.1.Introduction:

The phase from 1990s onward is recognized as the era of Supply Chain Management, which has been defined by the Global supply, Chain Forum of 1994 as: The integration of key business processes from the end user through original suppliers that provide products, services and information that add value for customers. American Production and Inventory Control Society (APICS) define SCM as: Organizations that successively transform raw materials into intermediate goods, then to final goods and deliver them to customers. The term supply chain management can be traced to 1980s, it was not until the 1990s that the term supply chain management captured the attention of senior level management in numerous organizations. The concept of supply chain management (SCM) can be traced back to just before the 1960s. Increased study of the field began in 1980s, with a dramatic increasein the publication rate since 1990. Supply chain management represents the third phase of an evolution that started in 1960s with the development of the physical distribution concept and focused up on the out bound side of the firm's logistics system. A number of studies during the 1950s and 1960s indicated the potential system of concept. Over the past 10 years many large firms or conglomerates have found that effectively managing all of the business units of a vertically integrated firm- a firm whose business boundaries extended to include onetime suppliers and/or customers is quiet difficult.

1.2.Objectives of study:

1. **To understand the different concepts related to supply chain management**
2. **To study the different literature related to supply chain management.**

1.3. Different concepts related to supply chain management:

Just In Time System:

Just in time is an essential strategy for the improvement of SCM process in industry. Broadly defined the concept of JIT as produce and deliver of finished goods just in time for sold; sub-assemblies just in time to be assembling finished goods, fabricated parts just in time to go into assemblies and purchased materials just in time to be transformed into fabricated parts

JIT systems need that people must perform with reliability, high degree of people involvement, training of people about JIT culture, team work, support of top management, restructuring of organization to redefine responsibilities and priorities for the various departments of the organization, and creation of logistics and supply chain management department. Implementation of JIT manufacturing generally requires relatively low investment and typically results in the following magnitude of performance improvement, 90% manufacturing lead time reduction, 90% work in process inventory reduction, 90% lift truck reduction, 75% machine down time reduction, 75% defect reduction, 50% plant floor space reduction and 30-50% personnel productivity performance improvement.

Supply Chain Relationships:

The supply chain concept emphasizes more of harmonious relationships among all the members such as vendors, channel participants, and all third-party logistics service providers. The contributions of supply chain members are significant for the performance of the organizations. The experts on SCM suggest limited number of vendors along with their high level of motivation to take appropriate actions for achieving the objectives of the buying organization.

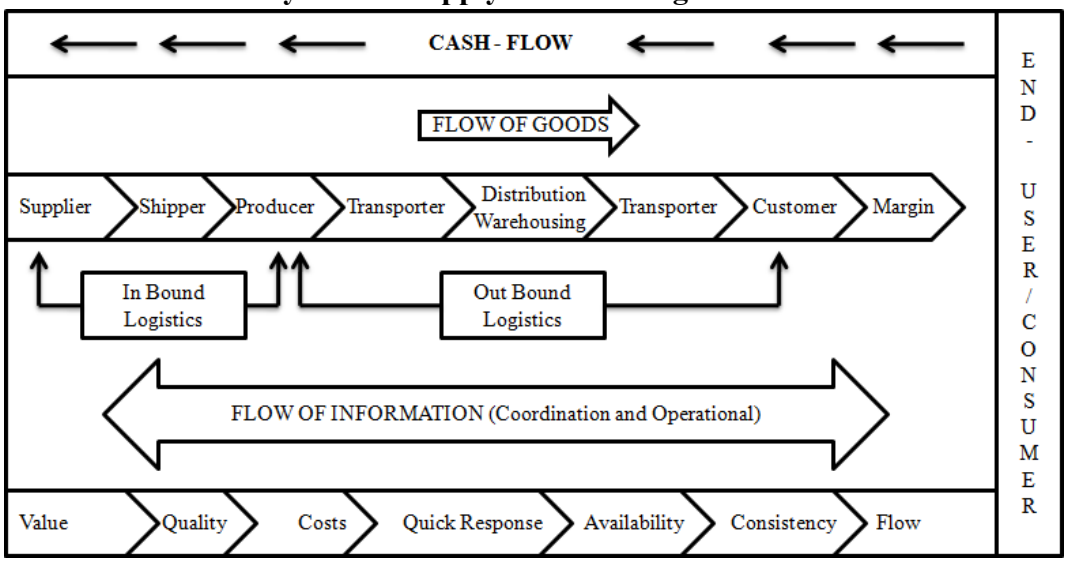
Value Chain:

Corporate enterprises are to a large extent developing supply chain systems in their organizations in order to gain a competitive edge in the market place due to its value addition capability in cost-efficient ways. SCM ensures superior customer value for core competency by a blend of better quality logistical services at minimum costs. The value chain of SCM focuses on speedier flow of goods, cash, value and related information within the complete supply chain process.

Value flow:

Value is delivered through the defined business activity of the firm in the form of goods and services. The flow of value is always in a forward direction in the supply chain process as each supply chain participant adds some value in the goods or source received by him from his proceeding member before making delivery to the next party. The value addition may be in the form of quality, costs, quick response, availability and consistency of the logistical system. Generally, if a product remains unsold due to late availability, its cost increases due to involvement of working capital and value decreases due to gradual decrease in the physical attributes. Or take the instance of delivery of a damaged product (due to mishandling during transit) by the company to a dealer. The same cannot be sold at tagged price due to the decrease in the value of the product unless it is recovered from the damage. Appropriate SCM prevents from these damages and enhances the value of the products.

Value chain system of Supply chain Management



1.4.**Review of literature:**

Thaler (1999) encapsulates methods and procedures for the comprehensive configuration planning and control of cross business and companywide supply chains.The core philosophy of SCM is the integration of all value added levels from the extraction of raw material in the sale of the finished product to the ultimate customer, while taking into account organizational, technological and human factors. Hence lackof transparency and in particular the complexity of supply chain processes can be reduced and flexibility enhanced.

Walther and Bund (2001) says the planning tasks can be divided into three different levels which encapsulate the following areas of responsibilities within integrated supply chains as (a) supply chain configuration (b) supply chain planning and (c) supply chain integration. **Gupta et. al. (1992)** applied simulation techniques to a supply chain design inorder to evaluate the performance of various lot sizing techniques.

Artnzen et al (1995) evaluated global SCM at a digital equipment corporation and determined the worldwide manufacturing and distribution strategy. The authors concluded that global SCM is a very general approach to model supply chains applicable to any firm involved in multi stage, multi-product manufacturing.

Viswanadhan and Mathur (1997) considered integrated routing and inventory decision making problem in one ware house multi retailer and multi productdistribution systems.

Beamon (1998) made a focused review of literature in multi stage supply chain model and defined a research agenda for future research in this area.

Christopher, M.C. (1998) logistics and supply chain management strategies are reducing cost and improving service. Martin Christopher describes the goal of supply chain management as to link market place, the distribution network, the manufacturing process and the procurement activity in such a way that customers are higher levels and yet at lower cost,

he discusses the role of logistics in achieving thesegoals. He outlines how service levels can be used to segment markets and explores appropriate measures to assess logistics productivity and service performance.

Lambert, D.M. and Cooper, M.C.(2000) presents a framework for supply chain management raises questions related to implementation and suggested avenues for future research. From case study findings they reports up on three elements of supply chain management: supply chain network structures, supply chain business processes and supply chain management components. The authors argue that successful SCM requires integrating business processes with key members of the supply chain. Four different types of business process links are identified: managed business links, monitored business process links, not managed business process links and non-member business process links.

Beamon et al. (2001) studied the performance effects of inventory. Stock- out risk, supplier lead time, demand distribution, transportation time and processing time.

Harland,C.M., Lamming,R.C., Zheng,J. and JohnSen,T.E. (2001) defined supply networks as inter connected entities whose primary purpose is the procuring, use, and transformation of resources to provide goods and services .This positions supply networks as a more complex concept and develops an empirically derived taxonomy.

Amiri (2006) discussed distribution network design problem in a supply chain system. The researcher developed mixed integer programming model and provided efficient heuristic solution procedure to determine the best strategy for distribution of products in the supply chain.

Dotoli et al. (2006) proposed a single and multi-objective optimization model to configure the network of integral E-supply chains (IESCs). The researchers adopted integer linear programming problem in the design process, which provides different network structures that allowed improved supply chain flexibility and agility environmental performance.

Gunasekaran et al.,(2006) proposed a multi criteria decision making procedure and applied the same to find out a set of optimal solution with respect to the performance of each supplier. The method provides decision making with an optimal solution.

1.5.Conclusion:

The changes in information technology and communication infrastructure have resulted into a continuous acceleration in the magnitude of competition. To sustain themselves in such an erratic environment, firms need to have core competency and productivity. That is why firms are perceived to have more systematized activities related to movement and storage of goods so as to make them available at a short notice with the lower inventory level. Systematic Supply Chain Management, in the new buzzword in the corporate world. Due to its overwhelming contribution, more and more Indian companies are jumping onto the supply chain management bandwagons for that competitive edge.

1.6.References:

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