IDENTIFICATION OF SUPPLY CHAIN MANAGEMENT PROBLEMS: A REVIEW

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ABSTRACT:- At various levels of decomposition we can analysed the supply chain problem. At the first level problem of supply chain management which is consist of many sub problems as product design, customer services, logistic management and others. We can define all the problems as general and in specific way. These problems come at various vertical direction of problem decomposition and these are related with one particular issue for example inventory management. Other way general problems are horizontal; they deal with problems which require solving multiple specific problems for example, ensuring customer service problems from sales area as well as logistics.
Key words:- supply chain , manufacturer, supplier, buyers, retailers.

I. INTRODUCTION

If we see the trend of supply chain management, it has influenced many autonomous bodies along the supply chain to move away from adversarial to words cooperative management. In this system two key driving forces on the demand side that can be said globalization and mass customisation. The concept of globalization is very advantageous for multinational firms because it provides too much opportunities and help in their economies and research sector, product development and in manufacturing sector.

In modern days options are open for the customers, they have lot of choices and lot of options available. They can buy goods according to their liking in anywhere from any company. Company is known how they can complete the need of customer. This is why the complete by frequently introducing the new product.

Fashion goods, toys personal computers, electronic goods, domestic appliances etc are example of new and innovative products; they have shorter life because of competition and product varieties. "In the age of fashion there is no guarantee of product stability."

In the age of competition with mass product varieties has a high degree of demand, uncertainly. In this phase only those companies can be survive which has capacity of quick response supply because demands of uncertain. On the supply side there are three trends that drive chain members to cooperate each other.

1. With increment of information technology sector companies have lots of option to make link to their customers, suppliers and their partners in all around the world. In fact information technology has changed the picture of selling and buying of goods like OLX, Flipkat. Myntra , Zovi etc. This trend has provided opportunities to manage more complex to logistics process.

2. Retailing is a prevalent driver of supply chain management. Now- a-days retailers who are facing competitive market, suffering from narrowing margins need to carry fewer inventories and require quicker response from their suppliers. Logistics innovations for example vendor- managed inventory (VMI) , efficient consumer response (ECR) and collaborative planning, forecasting and replenishment (CPFR) are frequently accepted by suppliers and retailers to improve their performance.

3. New changes in manufacturing process such as just in time (JIT) oriented logistics make complete supply chain dependent on time sensitive delivery of product and services. It is a key driver to a chain member to improve over all supply chain performance.

As business increasingly relies on other companies in industrial and consumer goods the need of effectively managed relationship is of considerable importance. In the era of globalisation and information, the ability to achieve the effective management has become easy and competitive. Management with downstream and upstream member gives an opportunity to company to make sure growth and reduced cost. In a survey on e-business by the institute of supply management and forrester research told that more than half the responding companies (52%) reported collaborating with suppliers online. Example:- Amazon , Jabong, Yepmee etc.

Reasonly transparency has increased and the chain members has to reduce transition cost, eliminate rework and error, cut order cycle time. This is why academic need to provide an alternative source for supply chain knowledge that is presented and examined to ensure validity, generalizability and reliability of supply chain management. So it is the basic interest of academics to become actively involved in research of supply chain management model to reduce cost and increase production.

II. THE PROBLEMS OF SUPPLY CHAIN MANAGEMENT

The problem of supply chain management is full of many sub problems such as network design, logistic management, customer services and other. These problems can be both general and specific. Specific problems happens at the vertical direction of problem with particular issue for example inventory management, but general problems occurs horizontally.

III. IDENTIFICATION OF PROBLEMS AND ISSUES

Supply chain management consist of dealing with managerial and technical problems (Cooper et al. 1997; Mentzer et al. 2001) [1]. These problems are related with many common issues that must be addressed for supply chain to function effectively and efficiently. In the following we will discuss some of these issues.

A. Configuration of distribution network

This issue is related with a selection of warehouses, locations and capacities, finalising transportation between

warehouses and plants so as to maximise production and educed transportation expenditure and other costs.

This issue is related to information sharing as

1) Inter-relation between marketing, production planning, inventory planning, and receiving and warehousing functions, and

2) Intra-relation between manufacturer, suppliers, distributors / retailers, and transporters. It is a complex optimization problem dealing with network flows and capacity utilizations (Ballou 2001; Beamon and Fernandes 2004; Bozarth and McDermott 1998; Cakravastia et al. 2002; Cochran and Marquez 2005; Duray et al. 2000; Ernst and Kamrad 2004; Garavelli 2003; Salvador et al. 2004; and Schmidt and Wilhelm 2000) [2, 3, 4, and 5].

B. Management of inventory

This is related with the stocking of goods in the supply chain. This is a decision problem solution in which involves using of forecasting, optimization algorithms, inventory management and supplier and manufacturer deals with issue in a supply chain by sharing information

C. Contracts of supply

It is related with sitting up relationship of suppliers and buyers in a reference of prize, discount, rebate, quality standards and return policies. It is a contract of terms and conditions. This approach is completely new; it is different from traditional approach because its main focus is minimizing the impact of decision made at not just on in supply chain but on its entire place. In this game retailer set up contracts with a distributer or directly with te manufacturer. This is a decision problem solution that could range from a simple linear programming problem to a complex game theory algorithm algorithm (Cachon 2002; Cachon and Lariviere 2000; Fisher et al. 1997) [4].

D. Strategies of distribution

This is related with decision making to the movement of goods in supply chain. Objectives of its to minimize cost of storage and transportation. In this system manufacturer can make decision about storage or direct shipment to the point of uses of plenty of products. Information are shared to manufacturer, suppliers, distributors and retailers. The solution to this problem involves utilisation of algorithm, linear and non linear programming techniques.

E. Integration of supply Chain and strategic partnering

One of the key issues in managing supply chains is integration (Bramham and McCarthy 2004)[6]. Information sharing and joint (or collaborative) operational planning are basic ingredients for solving this issue. Implementation of Collaborative Planning, Forecasting and Replenishment (CPFR) (Aviv 2001; Ng and Vechapikul 2002; Caridi et al. 2005; Fliedner 2003)[7], as carried out by Wal-Mart retail stores in their supply chain aided by information sharing through common software platforms such as Enterprise Resource Planning (ERP) are viable strategies (Akkermans et al. 2003)[8]. The main objective of this technique is to ignore excessive inventory through exact forecasting and utilization of commonly agreed and demand data. News

which is shared among many supply partners (Anonymous 2000)[9].

F. Strategies for outsourcing and procurement

It is an important issue because buying or selling or manufacturing should be considered thoroughly. It must be considered what to manufacture and what to buy from internal and external sources but the main problem with it that is making decision in identifying risks with these decisions and sorting them. Another issue to consider is the impact of internal or procurement strategies and what channels to utilise that can be public and private both. When dealing with the trading partners, in taking decisions, manufacturers try to minimize risk or they make balance between risk and payoff. Once this decision is taken use of information technology component as internet portals, many software's, play important role in this decision.(Chen et al. 2004)[10]

G. Decision support system and technology of information

It is one of the major issue in the supply chain management that we have lack of information for decision making, information technology plays important role in decision making throughout in supply chain. Internet, web based service portals, integrated infraction knowledge with ERP software and decision support system, all these helps in decision making problem for industry (Fiala 2005)[11]. Significant progress has been achieved in appling physical supply chain integration. Lau and Lee (2000)[12,13] use the distributed objects approach to elaborate on an infrastructure of integrated component-based supply chain information systems. Kobayashi et al. (2003) [14] conceptually discuss workflow-based integration of planning and transaction processing applications, which allows for effective integrated deployment of heterogeneous systems. Vonderembse (2004)[16] develops the architecture of component-based supply chain information systems. The author identifies key components and their role throughout the supply network. Themistocleous et al. (2004)[17] describe the application of enterprise application integration technologies to achieve physical integration of supply chain information systems. However, approaches and technologies for logical integration at the decision-modelling level, where common understanding of managerial problems is required, are developed insufficiently (Delen and Benjamin 2003) [15].

H. Customer value

Supply chain plays important role in the study of customer value. It can be measured by its ability to deliver value to the customer or the consumer. They can be in the form of quality, price, service level and perceived values. Solutions based on statistics and operations research can be applied to measure the quality of a product, and the reduction of lead-time to improve service rates. Input for this purpose is acquired via information sharing among different supply chain members (Baiman et al. 2001; Beamon and Chen 2001; Bullinger et al. 2002) [3].

IV. FUTURE ASPECTS

The increasing role of the Internet in supply chains has the potential of creating unique capabilities for improving

supply chain management. Therefore, it is beneficial to recognize that it will have a important role in defining the agenda for future research in supply chain management. As described in previously, sharing of information and integration of information are two of the main problems in supply chain management. As the size of the supply chain network grows, there is an exponential increase in the amount of data and therefore, information and eventually knowledge that needs to be collected , stored, managed, processed, and serviced for various decision-making needs while managing the supply chain. This problem needs active solution both from an operational respect, (forecasting and inventory management) as well as development of efficient information processing methodologies and techniques. Cyber infrastructure offers that destination for supply chain configuration research.

V. CONCLUSION

After going through the all domains of problems as discussed above one can easily identified the problem which is affecting the performance of the system as well as the modification in the existing working model can be done and appropriate results can be obtained by which the productivity and performance of the system can be improved up to the desired level.

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