

A REVIEW OF RESEARCHES ON MAIN CONTENTIONS & CONSTITUTES IN SUPPLY CHAIN MANAGEMENT IN LAST DECADE

Parvesh Antil¹

¹Assistant Professor, Mechanical & Automation Engineering Department,

N.I.E.C, New Delhi (India)

ABSTRACT

Supply chain Management has assumed a significant role in firm's performance and has attracted serious research attention over the last few years. This study identifies and consolidates various supply chain initiatives and factors which affect SCM in one or different way. This works aims at developing a broader view into SCM, considers various factors found important by different researchers. Various performance effecting, Strategic and technical factors have been included. It is done through an intense literature review of studies done by different researchers.

I INTRODUCTION

In the present post recession global scenario supply and demand volatility and uncertainty has increased forever. In these times with business enterprises having intercontinental business partners, it becomes rather tough for enterprises to respond rapidly to the customers' demand through traditional cooperation mechanism. With supply chain extending so much, supply chain practices occupy the centre stage. Most of the enterprises spend a lot of resources and effort in supply chain management.

¹ Supply Chain –The network created amongst different companies producing, handling and/or distributing a specific product, from being raw material to final product ready for consumer.

Supply chain management is a set of approaches utilized to efficiently combined suppliers, fabricators, repositories and inventories so that commodities are produced and dispersed at the accurate batch, to the accurate region, and at the proper time, in order to diminish system wide expenditure while pleasing service level requirements (Simchi-Levi et. al.)¹.

Supply chain management is the coordination of manufacturing, reserve, region, and shipping among the participants in a supply chain to achieve the best mix of responsiveness and efficiency for the market being served. It is a holistic approach and strategy to add value to the supply chain organisation. The SCM approach involves people, technology, activities, information directly or indirectly related to the product/services, involved in supplying the product/services from supplier to customer.

Aim of Supply chain management is to recognise the strategic nature of coordination between trading partners, create sourcing, making and delivery process of products/services and logistics functions seamlessly across the supply chain to gain a competitive edge in the market. The objective of supply chain management is to be efficient and cost-effective across the entire system wide expenditure from shipping and circulation to inventories of primal matter, task procedure, and furnished stuffs are to be minimized. Thus, the attention is not on simply reducing shipping expenditure or reducing stockpile but rather on taking a system access to supply chain management.

Traditionally, the focus of supply chains was on specific functionalities such as purchasing, manufacturing, and shipping to support logistics operations, but it has evolved into a lot broader concept. At the operational level, this brings together functions that are as old as commerce itself like searching goods, getting them, stash them and allotting them. At the strategic level, SCM is a relatively new and rapidly expanding discipline that is transforming the way that manufacturing and non-manufacturing operations meet the needs of their customers. The competitive environment of the 21th century requires high service heights, quick feedbacks, and fine quality of products and assistance. The effective management of technology and quality is the key to increased quality and enhanced competitive position in today's global environment.

Aspects like marketing strategies, product innovation, information sharing, customer relationship, outsourcing etc. Need to be taken into a broader view of Supply Chain Practices. New management practices TQM, JIT, Kaize etc. Which were earlier used in core enterprise issues are now being used in Supply Chain Management. In this work we have tried to form a broader view of Supply Chain Management. This work focuses on identifying the major factors affecting Supply Chain, and measures their effect in Supply Chain Performance.

II LITERATURE REVIEW

SCM practices have been globally accepted by enterprises as an important factor to survive in the present global scenario. Numerous researchers have explored SCM on various issues viz. Definition, dimensions, performance measurement, strategy evaluation etc. Therefore a vast literature giving an insight into this evolving concept is there.

“A supply chain is the alignment of firms that bring products or services to market.” (Lambert, Douglas M., James R. Stock, and Lisa M. Ellram, 1998, Fundamentals of Logistics Management, Boston, MA: Irwin/McGraw-Hill, Chapter 14)².

“Supply chain can be defined as integrated process wherein a number of various business entities work together in an effort to: (1) acquire raw materials (2) convert these raw materials into specified finished final products and (3) deliver these final products to retailers” (Benita M. Beamon, “Supply Chain Design and Analysis: Models and Methods”).

Supply Chain Management – according to Council of Logistics Management “Supply Chain Management is strategic Coordination of traditional business functions and tactics across these business functions within the particular organisations and across business within the supply chain for the purposes of improving long term performance of individual organisation and supply chain as a whole”.

According to Council of Supply Chain Management Professional – “Supply Chain Management encompasses the planning & management of all activities involved in sourcing & procurement, conversion, and all logistics management activities. It also includes coordination & collaboration with channel partners which can be suppliers, intermediaries, third party service providers and customers. In essence supply chain management integrates supply & demand management within and across the company.

SCM is a concept that has evolved since 50's and 60's, in 1950's, 1960's most manufacturers emphasised on mass production to minimize cost. Excessive inventory was maintained to take care of bottleneck operations. Information and technology sharing was seen as risk and not at all good for the organization. In place of Supply chain the term logistics was used which emphasized only on transportation function. In 1970's material requirement planning (MRP) was developed and managers realized new material management concepts to improve performance. In the 1980's due to global competition manufacturers were forced to offer low-cost, high performance and flexible products. JIT and more management programs were used to improve the efficiencies of production and improve performance. The term Supply Chain Management came into use in 1990's when managers further extended improvement strategies to include strategic suppliers and logistics functions. The concept of supply chain has evolved to a great extent. Manufacturers and retailers are embracing the concept of SCM to improve efficiencies and effectiveness to a great extent (Tan, 2002)³.

SCM creates a virtual organization composed of several independent entities with common goal of efficiently and effectively managing all its entities and operations including the integration of purchasing, manufacturing, and distributing and coordination management. The short term goal of SCM is to increase productivity and reduce inventory. The long term goal of SCM is to increase customer satisfaction, market share and profits of all members of the virtual chain

Tan (2002)³, in his work has studied the effect of various SCM practices. It has segregated 25 SCM practices in 4 core issues:-

- Supply and material management issues
- Operations issues
- Information technology and sharing
- Customer service

I.J. Chen et. al.⁴ Have discussed various constructs to form a measurement framework of supply chain management. Various constructs were:

- 1) Environments Uncertainty
- 2) Customer Focus
- 3) Top Management Support
- 4) Competitive Priorities
- 5) Information Technology
- 6) Strategic Purchasing
- 7) Supply Network Structure
- 8) Buyer Supplier Relationship
- 9) Logistics Integration

Suhong Li. et al.(2005)⁵ defines SCM as the set of activities undertaken by an organisation to promote effective management of its supply chain. In this research it has derived and validated six SCM issues and has used them

as a measurement instrument for SCM practices and their relationship with other organisational practices like competitive advantage, SCM performance and organisational performance.

The issues used are:-

- Strategic supplier partnership
- Customer relationship
- Information sharing
- Information quality
- Internal lean practices
- Postponement

Tan (2001), has considered the following six aspects of SCM:-

- Supply Chain Integration
- Information sharing
- Supply chain characteristics
- Consumer service Management
- Geographical proximity
- Just-in-Time capability

Togar M. Simatupang et. al.⁶ Considers various modes of coordination inside and outside of an organization and its effects. Coordination among independent firms such as raw-material suppliers, manufacturers, distributors, third-party logistics providers and retailers is the key to attaining the flexibility necessary to enable them to progressively improve logistics processes in response to rapidly changing market status. Also the improper management among the chain members can cause flawed operational performance. Four different modes of coordination have been identified:

- 1) Logistics synchronisation: recognising and concerting improvement initiatives that significantly contribute to value creation in the procurement, utilization and disposition of products and services rapidly. It also assists participating members to resolve role conflict, so each member can perform specific tasks and assume certain responsibility to ensure the attainment of chain profitability
- 2) Information sharing: The coordination of information sharing attempts to make applicable, correct and timed information available to the decision-makers
- 3) Incentive alignment: Incentives define how decision-makers are to be rewarded or penalised for the decisions they made. Existing incentives influence individual member behaviour and their interaction with other partners.
- 4) Collective learning: collective learning deals with how to tackle the coherency problem of initiation and diffusion of knowledge across organisational borders. Special emphasis is placed on practical learning from one another for understanding and creating tacit capability in implementing particular logistics improvement initiatives.

Brewer & Spech(2000)⁷ in their work have considered a balanced score card approach to supply chain management performance measurement. To do so they have considered 16 performance measures divided in 4 basic perspectives.

- 1) Customer Perspective
 - i) Customer's view of product and service

- ii) Customer's view of timeliness/responsiveness
- iii) Customer's view of flexibility
- iv) Customer value
- 2) Innovative and learning perspective
 - i) Product/Process innovation
 - ii) Partnership management
 - iii) Information flow
 - iv) Threats and substitutions
- 3) Financial Perspectives
 - i) Profit margin
 - ii) Cash flow
 - iii) Revenue growth
 - iv) Return on cycle
- 4) Internal business perspective
 - i) Waste management
 - ii) Time compression
 - iii) Flexible response
 - iv) Unit cost reduction

“Developing Supply Chain Strategy: balancing shareholder & customer value, A management Guide”, Cranfield University⁸, provides a useful insight into supply chain practices. It divides SCM practices into two categories:-

Customer alignment

Shareholder alignment

It also provides a very good methodology to measure Supply Chain Performance based on the above. Customer alignment focuses practices adding to customer value. All the practices that add to product/service quality are included in it. It serves to the organization in the long run and a long term planning is required too.

Customer Value - It is the perceived benefits gained from a product/service compared to the cost of purchase.

Shareholder alignment focuses on practices for delivering financial value to your shareholder. It aims at increasing profit margins, market growth, cost to company reduction, reducing wastage, lean manufacturing etc.

It serves to the company in the short term answer is important for the financial survival of the organisation.

The management guide also provides a road map for Supply chain analysis based on

- i) Scoping study
- ii) Situation analysis
- iii) Feedback to senior management

Scoping Analysis- Understanding business supply Chain context, identify a focus for the situation analysis and select key projects for it.

Situation analysis is to review the current state of strategies and processes within the supply chain, Alignment analysis and finding alignment gaps.

Feedback to senior management- to act on the findings of the findings of the analysis, improve on the loopholes found.

IV KEY TRENDS IN SCM

With newer management principles, new technologies, communication, and integration of businesses following new trends are developing :-

Demand Planning- The demand-driven approach can help a company to create a more customer-focused mindset without sacrificing operational efficiency. Ultimately a demand-focused approach to planning can significantly improve demand planning and management efforts and help in reducing overall costs (Dawei⁹)

Globalization- With the improvements in communication, globalization is dramatically impacting the way in which business is managed and transacted even on the most local levels. Manufacturing, distribution, sourcing of materials, invoicing and returns have all been significantly impacted by the increased integration of a global customer and supplier base. Especially in a country like India opening up of Indian economy to global business in the last two decades, where companies were not used to such harsh global competition, now and a totally global outlook especially for supply chain management is required.

Increased competition and price pressures- With supply chain re-design and technology companies are now looking at ways to reduce cost and are creating a more efficient value chain to remain cost competitive.

Outsourcing (Chan Cheng et. al.)¹⁰ supply chains partially or fully has allowed companies to concentrate on their core competencies. Significant cost improvements, capital saving and hassle free business have promoted this trend. The need for developing sustainable competitive advantage of the growing emphasis on providing good customer service effectively and efficiently and the strategic value of focusing on core businesses and re-engineering resulted in the evolution of contract logistics which is very different from traditional logistics.

Closer integration and collaboration with suppliers- Supply chain has now become a tool for better connection with suppliers. . The level of association goes beyond linking information systems to fully integrating business processes and organization structures across companies that comprise the full value chain.

The fundamental aim of association is to increase visibility throughout the value chain in an effort to make better management decisions and to ultimately decrease value chain costs.

V CONCLUSION

The aim of this study was to develop major internal and external factors that impact a supply chain. Salient features that are critical in effectiveness of a supply chain from the view of various literatures are discussed. Various issues that need to be focussed on for a successful supply chain management have been discussed from a customer's, supplier's, manufacturer's view. Various performance measurement issues have been discussed. All those issues have been discussed along with their performance parameters. New trends developing in Supply chain management have been discussed. The work aims at developing a broader view of supply chain management.

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