A Supply Chain Management Overview: Today and Tomorrow

Dr. Madhulika Shahoo Gupta, Dr. Swati Dilip Badhe
Dr. D.Y. Patil Centre for Management and Research, Maharashtra, India

Abstract
Supply Chain Management (SCM) is a system implemented by organizations to systematize the procedure of scheduling, executing and controlling the process of supply chain resourcefully and feasibly. Supply chain management covers all activities from stocking up of supplies, work-in-process inventory and finished produce from point-of-origin to point-of-consumption. Supply chains at present are dependent on sophisticated technology to handle multifarious practices. Supply Chain Management is a set of connections of unified trade involved eventually in the prerequisite of merchandise and service packages required by end customers. Different organizations adopt different methods of SCM depending upon the responsive to the market. Some may adopt just-in-time production when they produce on order basis and others that have a longer manufacturing process would pile up stocks in anticipation of demand or due to doubt of sudden increase in demand. Currently, SCM is functional in a variety of industries such as automotive, manufacturing and services. SCM provides diverse payback to an organization that employs the arrangement particularly in term of best possible use of time and space. Consecutively to minimize the number of substandard component, slash labor costs and to build up sophisticated organizations, SCM will play a very important role.

Keywords
Supply Chain Management, Scheduling, Work-In-Process Inventory, Outsourcing, Globalization.

I. Introduction
A supply chain is a structure of organization, group of people, technology, actions, information and resources involved in motion of a merchandise/products or services from supplier to end customer. Supply chain actions convert expected resources, raw materials and components into a finished product that is transported to the end customer. Supply Chain Management incorporates and runs organization processes & information flow across the supply chain. Supply chain management (SCM) is the management of a network of interconnected businesses involved in the ultimate provision of product and service packages required by end customers (Harland, 1996) [1].
In simple words Supply Chain Management (SCM) is an arrangement used by an organization to systematize the procedure of planning, implementing and controlling the operations of supply chain as resourcefully as possible. Supply chain management includes all actions like storage of supplies, work-in-process inventory and finished produce from starting point to the end i.e. to the point-of-consumption. Further to ponder, it's evidently proves that the supply effort managements have positive effects on business performance and the past related such studies reports finds similar conclusions [2].

II. Decision Variables in SCM
The decision variables in administration of supply chain are:
- Location- of amenities and resource points.
- Manufacture- what to manufacture in which amenities.
- Inventory- how much to order, when to order, safety stock.
- Transportation- mode of transportation, consignment size, routing and scheduling

A. Benefits of SCM
- Abridged inventory
- Enhanced quality
- Cost reduction and control
- Better utilization of space leading apt layout
- Reduced lead time
- Augmented output

III. Supply-Chain Values
Supply-Chain management has turn into faith for innovative and modern day businessman and therefore there should be few values which when applied constantly and meticulously tracked would bring out massive economical advantages. To name few:
- Splitting up clientele base on service requirements
- Tailor the Supply Chain Management arrangement
- Avoid accumulation of inventory to balance probable forecasting miscalculation
- Tactically handle the resource of key suppliers
- Build up a supply-chain with support of IT
- Implement supply-chain measurement systems for performance measures
The values are difficult to execute, but the companies that do it proficiently are able to put up an unbeaten supply chain and have demonstrated realistically that they can satisfy customers and get benefit from appreciation by such action.

IV. Supply Chain Management Today
If we check out in 1997, Supply Chain Management had a solid hand over all portion of physical distribution and materials management. More than 75% organizations incorporated the subsequent actions as part of their organizations’ Supply Chain Management responsibility:
- Inventory management
- Transportation service procurement
- Materials handling
- Inbound transportation
- Transportation operations management
- Warehousing management
Furthermore, the Supply Chain Management department is likely to add to its array of responsibilities and include the following:
- Client service routine examination
- Order processing/customer service
- Supply Chain Management upcoming financial plan
Besides these there are few functions which are intricate to convince the management so as bring them under the roof of SCM as they believe that these have nothing to do with SCM department. These are:
- Third party invoice payment/audit
- Sales forecasting
- Master production planning
Organizations today are dealing with transformation at a frenetic speed. Countenance with worldwide competition, persistent outsourcing, dwindling product life-cycles, and demand instability, the scale and difficulty of the supply chain management is indisputable. In today’s background, supply chain strategy become outdated as soon as they are inclusive because the dynamics of the marketplace and the user are varying speedily. A latest model has developed making awareness the key determinant of modern supply chain management triumph. There is an indispensable necessity to keep an eye on and deal with change, appreciate opportunity and threat, scrutinizing the impact and demeanor quick threat trade-off and reaction. Today scores of companies are in strain to extend novel products and fetch them to marketplace swiftly and at the same time should take care that there is no diminution in market share of existing products. To organize the requirements of clientele, organizations require extra competent product lifecycle management methods, for example, profound stress on supervision of new product introduction, product cessation, designs for manufacturing or DFM and control over total product line and infrastructure. One of the principal advantages of Supply Chain Management is that it is serving organizations to plan products that can share common functions, machinery or resources with other products, thereby plummeting threat of obsolescence write-offs, growing cost leverage on the procurement of materials and guarantee optimum utilization of infrastructure investments and finally, the organization which has the practices of good supplier selection procedures and standards have achieved greater business performance which also has the support of previous empirical evidences [3]. Today Supply Chain Management is expanding its domain and also includes services such as:

- Operational Analysis and Design Materials Handling
- Distribution Strategy
- Operational Improvements, Distribution Management
- Computer Systems
- Warehouse Design Project Management
- Operational Commissioning
- Computer Simulation
- Technical seminars

The core of SCM is to deal with upward and downward associations with purveyors and clientele in order to deliver superior value in the final market at less cost to the supply chain as a whole. As companies contract out more of the activities they used to carry out internally, the further the reliance on outside purveyor and service providers grow. In the same way, more companies that move into multi-channel marketing and circulation, the greater is the need to work more closely with mediators. For eliminating existing challenges and those estimated for the impending decade focus should be given on physical supply chain improvement.

Following vital areas were recognized:

- In-Store Logistics: includes in-store visibility, shelf-ready products, shopper communication
- Collaborative Physical Logistics: communal transport, communal warehouse, communal infrastructure
- Demand vacillation Management: cooperative planning, implementation and monitoring, identification and labeling
- Efficient Assets: alternative forms of energy, competent/slick vehicles etc.
- Joint Scorecard and Business Plan

A. Concert Evaluation of SCM

Supplier’s concert is measured on the basis of quality, on time delivery, initiative, service, price, contract compliance, lead time, responsiveness, accuracy of quotes. Evolution in supplier’s relationship is the beginning of green channel supplier & vendor managed inventory. Process concert is measured on the basis of no down time, high first time right ratio, implementation of JIT principle, zero defect products, less cycle time for manufacturing, reduction in throughput time, optimum inventory of raw material. Logistics concert is measured on the basis of selection of appropriate hauler, route of shipments, minimum loading – unloading time, on time delivery, damage free shipping, rapid response to the client’s requirement, delivering the product at required place, installation & commissioning of product. Financial concert is measured on the basis of cost of raw material, revenue from good sold, activity based costs such as material management, stock holding costs, carrying costs, cost of expired perishable goods, penalties for erroneously filled or late orders delivered to client.

V. Supply Chain Management Tomorrow

The employment of impermanent workforce, tackling with recurring ups and downs in demand, preserving elasticity and receptiveness, supervising threat, and aligning a supply chain to dish up the client competently, is all dynamic elements of supply chain management. The trends responsible for Changing Supply Chain Management Tomorrow will be Demand Planning, Globalization, Increased Competition, Outsourcing, Collaboration & Role of Technology. These trends would be liable for transforming supply chain practices in the upcoming years. The demand planning move can aid a business in generating a more customer attentive outlook, without abstaining operational competence. Demand Planning can be a significant tool for better Sales and process development and can comprise a noteworthy constructive brunt on fresh product prologue, inventory scheduling and supervision, client service, effective supply planning. The precise Supply Chain plan is vital to systematize the revolution brought in by the brisk globalization. A well calculated Supply Chain system plan can enhance the efficiency of the system and the stream of materials throughout the system. Organizations will begin to view supply chain as a system to increase competence, as an approach for being competitive, for developing procedures with enhanced devise, for healthier partnerships, good network and new services. All this will help organizations to stay competitive and build up better associations with clientele.

Supply chain that is best possibly outsourced will rely profoundly on, advanced supply chain system design, insertion of outsource associate in the information string, institutionalizing controlled machinery to take action and make changes before they need to be made, rather than waiting until problems develop by examining diverse workings of the supply chain and Information systems to bond and harmonize the supply chain impeccably. A deep collaboration between customers and suppliers will transpire as supply chains persist to expand and mature. The echelon of collaboration will be ahead of connecting information systems to entirely incorporated business procedures and organization structures across businesses that encompass the complete value chain.
Finally, the objective of collaboration will be to augment visibility right through the value chain in an attempt to make superior administrative judgments and to eventually shrink value chain expenditure. By means of the precise paraphernalia, procedure and organizational structure in place, collaboration provides right people at right place all over the value chain with the exact information needed to formulate business-critical evaluation with the best available information.

Value chain leaders will glance at focused division to incorporate successfully the supply chains of their associates with themselves. An apt association can serve up as a way to promptly and resourcefully guarantee that significant product information is exchanged as products run throughout the value chain and eventually to the customer.

Technologies have facilitated the supply chain “information employee” to begin using new ideas & method, make cost diminution, provide advanced services and congregate customer anticipation in an improved manner. A correct equilibrium is indispensable among investments, technology and procedures to have sustainable advancement in supply chain performance. Primarily there is a need for intellectual education on the persistent dilemma of harmonizing demand echelon to seasonal and other crest and trench in a globe where demand is getting evidently thorny. The organizations need to be flexible. Undoubtedly SCM has a great scope tomorrow and its future seems extremely bright. Recently the key trends that are advantageous for Supply Chain Management are Customer service focus & Information technology.

The supply process uses the information on customer segment-based delivery needs in order to plan the specific supply chain responses. This will comprise a range of common supply chain activities such as materials requirement planning, capacity management or production planning and scheduling. As we will outline below, here, the integration of demand and supply activities involves consistency between customer and production or logistics based segmentation [4].

Organizations should have an objective to build a better network with suppliers and customers, to achieve maximum supply chain profitability, to reduce the supply chain costs at the minimum possible echelon & to uphold a improved service rank i.e. client contentment, quality, on time deliverance etc.

Distinctiveness of the future Supply Chain
1. The prospect illustration will be based on multi-partner information sharing among crucial stakeholders: clients, purveyors, producers, movement management service providers and retailers.
2. After manufacturing, the goods will be shipped to communal warehouses in which multiple manufacturers store their goods.
3. Communal transport from the communal warehouse will distribute to city hubs and to local consolidation centers.
4. Warehouse locations on the rim of cities will be reshaped to function as hubs where cross-docking will take place for final distribution.
5. Rural areas will have local consolidation centers in which products will be cross-docked for final distribution.
6. Final allotment of supplies, lift-up points and house in town and rural areas will take place via consolidated deliveries using competent assets.

Globalization is becoming a powerful force within corporations and the world community. Thus, it is critical that researchers work to examine global SCM research questions, regardless of data access issues. American companies and their foreign counterpart are increasingly doing business overseas [5]. Booming organizations ought to be exceptional and have all these, so as to extend the importance of Supply Chain Management tomorrow. The future for Supply Chain Management looks very bright. Successful organizations must be excellent in both Customer service focus & Information technology as these are the two major trends benefiting Supply Chain Management operations. If these areas explored efficiently than the importance of Supply Chain Management and the tools available to do the job right will continue to expand.

VI. Conclusion
The management should be alert and ensure adequately and take care to provide the right tools and resources since the production and delivery of products is time bound. The greatest strengths of the organization would be Quality improvement, prompt service and good customer care etc. It is also observed that there is broad scope for improvement in maintaining services, expanding market in local and other cities. The management should strive to reduce labor turn over and also rejection rate of material. Organizations can use JIT supply technique for managing supply chain better as it assist to make better relationships with customers and suppliers. Organizations should also communicate clearly the goals and expectations with their employees so that they understand their part clearly. Information sharing discussions can also be arranged between particular department heads regarding products quality and modifications. For improvement in SCM system, company maintaining feedback forms from suppliers, customers as well as employees.

The relationship between strategic purchasing and concurrent engineering has not been explored either conceptually or empirically. With the increasing popularity of concurrent engineering and the integration of different functional units in firms this dimension of SCM needs further investigation. Due to the importance of the formation of cross functional teams in concurrent engineering, managers will be presented with problems of selection of different functional units in the supply chain. The selection of suppliers who specifically meet the quality requirements will further improve the performance of cross-functional teams and overall concurrent engineering practices. Knowledge sharing and transfer will occur if the members of the team share common goals. This will further result in improved organizational learning and SCM performance [6].

References
Madhulika Shahoo Gupta received her B.COM degree from Nagpur University, in 1997, the M.COM degree from Nagpur University, in 1999, and the Ph.D. degree in Commerce from Dr. Babasaheb Ambedkar Marathwada University in 2013. She is Head of Department of MBA Course and Assistant professor at S.M. Dr. D.Y. Patil Centre for Management and Research, since 2008.

Swati Badhe completed her Engineering in Information Technology, in 2008 and M.B.A. degree in Production & Materials Management in 2011 from University of Pune. Currently she is Assistant professor at S.M. Dr. D.Y. Patil Centre for Management and Research.