

Supply Chain – Competing through Excellence

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Abstract

Supply chain secures competitive advantage of an organization. However, in its traditional form, it has lost its relevance with globalization in place. Companies of global repute are reaching customer's doorstep with variety of products and services intensifying customer's demand for quality and service. To retain business continuity, organizations are forced to concentrate on enhancement of performance of supply chain than ever before. This paper attempts to direct focus on key features that need to be nurtured for boosting performance of supply chain towards sustainable growth and profitability.

Keywords: Flexible, Proactive, Segmental Marketing, Global outreach, Technology reliant, Green, Digital, Collaboration, Next Gen, Excellence, Collaboration, People, Process

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1. Introduction

Business today is more of customer driven than internal focused. Customers dictate how the product is to be priced and supported. Pull effect of sales model prevails over Push model. Global competition, fluidized economy, technology upgradation, labour issues have kept supply chain professionals always on their toes. Supply chain hovers around a complex environment with multiple entries and exits than just dispatching a product to few predefined destinations. Each of the partners in the chain, be it supplier or manufacturer or logistics provider or distributor or retailer or customer, wants best output from the chain at least cost. Conventional supply chain models are ill equipped to satisfy this demand. That is where the need to upgrade and transform its platform towards complete visibility and flexibility in lower cycle time with improved quality at reduced cost i.e. a complete transformation to reach next gen supply chain.

2. Achieving Excellence

Excellence in supply chain can be achieved only through continual innovation and optimization towards enhanced customer service with resultant edge in profitability. A detailed analysis of information in this aspect available in public domain and published literatures reflect nurturing of following traits that makes the chain continue to function efficiently, sustain and grow in a highly competitive market.

i. **Innovative:** Innovation is the buzzword of Next Gen supply chain. Step change in supply chain often comes handy for companies that look for continuous innovation. Dell dramatically reformed sales strategy from 'make, stock and sell through retail' to make-to-order and direct sell to customer. Zara created a vertically integrated model by outsourcing to low cost factories nearer to marketing zone. FedEx introduced overnight delivery for all its customers. These companies maneuvered their supply chain that leap frogged growth. They encourage and nurture innovation as a company policy. Innovation should be inculcated in the culture of the firm that is ready to accept failure too after thorough test, trial and experiment. Extraordinary results can come out from persistent efforts.

ii. **Fast:** Acting quickly to demand often determines business continuity and hence movement of product from manufacturer's stock to end-customer should be as fast as possible. The kind of speed desired can be seen from the effort by some companies to use drone for faster delivery. Speed, thereby, has become essence of next generation supply chain.

iii. **Aligned:** Supply chain process must be in sync with business process of a firm. Service level agreements between interconnecting links brings clarity in deliverables by each chain link.

iv. **Robust Strategy:** Short as well as long term strategy factoring all possible setbacks must be framed with continual updation basis changed scenarios from time to time. The power of the strategy and how the strategy fits into supply chain model determines the competitiveness of the supply chain. Long term view should be strategic and near term view should be real time basis.

v. **Agility:** Agility is ability of responding to change. This trait is required for adaptation with changing pattern in demand, supply, operations etc. Real time planning, demand sensing and response management should be in vogue. Capability for consistently faster response to opportunities as well as threats makes a supply chain agile. Flexible supply chains are backed by robust decision support system.

vi. **Collaboration:** Deep relationship amongst chain partners bring cohesiveness and trust. Collaboration and integration with trading partners makes the chain stronger and agile.

vii. **Technology reliant:** Alignment with latest technology keeps a company a step ahead of its peers. Companies should therefore view upgradation of existing system and practice as continual part of business process than taking up as a once-for-all activity. Not only that how much investment done on technology upgradation, but also how efficiently new technologies implemented and how fast realizations from investment made determines the company's edge over its peers. Lifecycle of commodity products and services is fast shrinking with frequent upgradation from technological innovations. Complacency and stagnancy without looking beyond may cause a firm progressively losing business and finally cease to exist.

viii. **Data driven:** A strong repository of historical, real time and forecast data opens up minute insights of all links of supply chain and thereby sharpens its ability to take right decision at right time. Informed information and analysis helps in optimizing the chain more effectively. Data types can be wide ranged like speed of movement of product, location of product, customer preference, returns etc.

ix. **Proactive Risk management:** Proactive approach is required for countering predictable as well as unpredictable disruption in supply chain. Advance knowledge of potential issues through data modeling and predictive analytics is a prerequisite for adopting proactive approach. Financially justifying proactive initiatives may not be an easy task as often it depends on anticipation though never happened in past. It is necessary to anticipate risk factors that may crop up while advancing a business process so that necessary precautions may be taken. The risk is a chance of happening and thus not necessarily all anticipated risks are to be mitigated in advanced. An assessment of risk appetite, i.e. quantum of risks that can be absorbed by business, can help in determining which risks to be viewed critically.

x. **Green:** The world is transforming green and thus supply chain must reconfigure itself to project environment friendly image to outside world for long term sustenance.

xi. **Controlled inventory:** High holding of inventory leads to blockage of funds while low holding poses risk of losing customer for not meeting demand. Demand linked Inventory control is therefore necessary for effective control. However, this is not an easy task where demand is variable and volatile. Firms need to continually optimize inventory based on historical and real time data w.r.t buying patterns, seasonal demand, purchasing capability, competitor's products etc. Speedy delivery needs to be ensured for fast cash flow from end-customer to manufacturer through chain partners reducing cash-to-cash cycle.

xii. **Segmental marketing:** A product with same basic specification is moulded to different shapes and colours to cater to different markets. Majority of purchasing people have different poor purchasing

capacity but with huge volume as they come from different micro segments - low, lower middle and middle income categories. So, companies rush to satisfy the needs of this high demand segment. They constantly strive to figure out factors that influence purchasing decision of these segments. They keep very low margin while selling a product/service to this segment while keeping a high margin when the same base product is sold in attractive form to affluent segments. Companies therefore need to understand their micro segments and reconfigure their supply chain to satisfy specific need of these segments.

xiii. **Splintering:** Splintering is breaking long linked supply chain into various components and assigning the same to different stakeholders and then bringing synergy into it. Each of the stakeholders shall act for overall gain of entire supply chain rather focusing on individual profitability. This approach improves sustainability of the whole chain.

xiv. **Internalization vs Outsourcing:** Total jobs involved in supply chain requires to be divided into various segments with judicious decision on which part to be handled internally and which part to be outsourced. Neither Internalization nor Outsourcing should be adopted beyond proportion.

xv. **Global outreach:** Companies today are setting up/outsource facilities near to demand point far away from mother plant to minimize logistics cost. An US product sold in India may undergo a combination of license and technology from parent company at US, manufacturing in Malaysia, packaging and labeling in China. GDP in BRICS countries (Brazil, Russia, India, China and South Africa) is rising fast while they hold nearly half of world's population. The expanding markets in these countries have outpaced demand of developed economies Europe, USA etc. where markets are already saturated. Also, these countries do have strong workforce available at cheaper wage.

xvi. **Digital:** Productivity today has seen new waves through digitalization of key business and financial processes. Digitalization enables people, materials, products, supplies and data to move together across extended supply chain. Through digitalization, customers can be related faster and more closely so that offerings can be maneuvered to meet the wish of customers.

xvii. **People and Process:** While automation helps in boosting performance, process and people that governs automation are more important. Bill Gates remarked that automation magnifies efficiency of efficient operation and inefficiency of inefficient operation as well. So, focus on fundamentals should never be vitiated. A company must manage and develop its internal talents effectively on continuous basis.

xviii. **Social media savvy:** Social media has a deep influence over a large section of consumers across globe. Organizations are leveraging this platform to reach close to its customer base. They maneuver their supply chain designing and planning continually basis feedbacks from this source.

xix. **Customer Responsiveness:** Customer satisfaction is the focal point for positive growth of any business. Therefore, supply chain deliverables should be such aligned that it exactly fits the customers' requirements at desired time in right quality and quantity. Customers' demand may be unique and varies from one set of customers to other. Design of supply chain should include sufficient maneuverability to address this issue.

xx. **Optimized network:** Networks of a supply chain contributes nearly 80% of total supply chain cost. Hence, all the links connecting networks should be critically analyzed and optimized towards improving efficiency and reduction in cost.

3. Literature Review

A number of literatures in the context of the paper has been reviewed and following observations emerged:

Manufacturing companies need a paradigm shift from functioning of supply chain to gain full advantage of business. Stakeholders of supply chain can have complete visibility of demand and supply

data by use of digital technology. This would help in anticipating demand fluctuations in advance and respond proactively. Currently, companies are exploiting potential in piecemeal basis though substantial scopes exists in dynamic applications throughout supply chain which can be realized through effective synchronization and integration. A radical overhaul of systems and practices in planning and control is need of the hour. (D.F. Kehoe and N.J. Boughton. 2001) ^[1]

Customer service and satisfaction are the foremost priority for excellence in supply chain management. This can be achieved by addressing people issues e.g. trust, resistance to change, collaboration, culture. (Stanley E. F, Gregory M. M and Matthew W. M. 2008) ^[7]

Firms should recognize challenges w.r.t integration opportunities in supply chain. (Hussain A.H Awad, Mohammad Othman Nassar. 2010) ^[3]

Supply chain complexity, if not managed effectively, shall bring damaging consequences. Therefore, it is necessary to recognize, arrange and manage drivers of complexity in a supply chain. (Kavilal E.G, Prasanna S. Venkatesan, HarshKumar K. Dadhaniya. 2014) ^[14]

Supply chain management has been recognized as a proven process for continuity in growth and profitability. (Habib, M. 2014) ^[2]

Effective strategies, people with desired competency, state-of-art measurement system and collaboration and professional management are the key requirements for improving performance of supply chain. (Diana-Maria Diaconu (Nidelea) and Cristina A;popi. 2014) ^[11]

Supply chain should be purposive and planned. Design decisions (behavioural, social and structural/physical design elements), influencers (Considerations by external factors including Government legislations customer preferences etc) and building blocks (technology, transportation, inventory and capacity decisions) are three key factors that determine supply chain effectiveness. (Steven A. Melnyk, Ram Narasimhan & Hugo A. DeCampos. 2014) ^[9]

Globally benchmarked technological compatibility improves competitiveness and performance of supply chain logistics. Component providers, big or small, needs to be aligned and integrated with manufacturer. (Rajiv Bhandari 2014) ^[8]

Managers rarely take advance proactive measures to contain disruption knowing fully well about its cost impact. Absence of immediate return should not act as deterrence for investment in supply chain resilience. More concentration on global supply chain is desired than localized business. Developing a backup supply source at an expensive location may come as a rescue during disruptive scenario. (Sunil Chopra and Manmohan S. Sodhi. 2014) ^[10]

Supply chain is associated with many risks from financial, supply, demand, manufacturing, transportation, infrastructure and more importantly information. Mitigation requires intensive planning with risk assessment, identification, mitigation and monitoring. (William Ho, Tian Zheng, Hakan Yildiz and Srinivas Talluri 2015) ^[17]

Supply chain has become complex and longer with more competition as dynamic capabilities of market has increased. As all resources for satisfying needs of market are not under control of organization, collaboration and synchronization of business operations are required to make the organization dynamic and flexible so that market turbulence can be absorbed. (Ignas Masteika, Jonas Cepinskis. 2015) ^[12]

Technical, managerial and relationship perspectives are the major challenges in supply chain management. People, process and technology should be put I place towards competitive advantage for short term as well as long term. (Monika Patil. 2015) ^[6]

Green Supply Chain is taking prominence day by day in supply chain management. It should be adopted with robust strategy, efficient partner or supplier and reverse logistics. It can bring solutions to many aspects of supply chain covering regulation, risk mitigation, recycling, up-cycling, consumer awareness, differentiation, innovation, sustainability and profitability. (Kishore Bhattacharjee. 2015) ^[4]

Agility of supply chain determines long term survival of an organization. With increasing usage of Business Intelligence (BI), many of business uncertainties are being effectively handled through informed decisions. (Mohammad Moniruzzaman, Sherah Kurnia, Alison Parkes, Sean B. 2015)^[16]

Supply chain today should align with innovative technologies like big data, artificial intelligence and robotics which can reform the whole chain covering material handling, production and distribution with resultant enhanced customer service. (Massimo Merlino, Ilze Sproģe. 2017)^[5]

Impacts of social and environmental effects on commercial process are increasingly becoming important in Supply Chain Management. Whether in short term or long term, sustainability has become an integral part of SCM. (Imairi Eitiveni, Sherah Kurnia, Rajkumar Buyya. 2017)^[13]

Past two decades have witnessed high employment with enhanced wage in supply chain industry. Nevertheless, distinctive challenges faced by the chain requires efficient handling. Necessary supports from policymakers must be in place in various forms like access to capital, prospective buyers, skilled labours. Special focus should be given on innovation, data management, mapping, network and relationship. (Mercedes Delgado, Karen G. Mills. 2018)^[15]

4. Conclusion

Globalization has put immense pressure on supply chain due to multiple choice of products and services reaching at customer's doorstep. Organizations do not have any choice than offering best quality in fastest time at lowest price. This has prompted existing supply chain mechanism to go for a facelift with radical transformation. The transformation too doesn't last long and so continual innovation and alignment with latest technology have become routine affairs for business of excellence. Companies are bringing flexibility in the system to operate the chain under changing pattern of demand, supply and price. Customers are given complete visibility of products much before the ownership of products shifted to customer using digital intervention. Digital technology has smoothed integration and collaboration amongst supply chain partners. Supply chain, therefore, must be restructured in towards excellence a continual manner to cope up with changing market dynamics.

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