



# **Enhancing Profitability Through Efficient Supply Chain Management in Fast Moving Consumer Goods Industry in India**

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## **Abstract**

Supply chain Management (SCM) is a new concept involving the integration of all the value-creating elements in supply, manufacturing and distribution processes. Supply chain management is a function which encompasses clear accountability and responsibility for deliverables starting from customer's customer to supplier's supplier. It translates customer's customer requirement and links through till vendor's vendor. The concept of SCM is getting rooted in industry. However, during the past ten years, there has been an increased focus on SCM as competitive weapon due to the significant effects that supply chain activities have on all elements of an organizations financial performance, including operating costs, revenue growth and asset management. It has great implication on profitability of an organisation. The profitability can be improved through efficient supply chain management in organisation. The purpose of this paper is to explore the learning on enhancing profitability through efficient supply chain management in Fast Moving Consumer Goods Industry in Indian context. A survey is conducted to understand impact of supply chain performance parameters on organisational profitability in FMCG sector in Maharashtra region in India. As Supply chain is emerged out as custodian of wealth in the organisation which is clearly sounded during the study. Understanding of Key deliverables with focused approach, fixing right talents in supply chain and motivating them for results compliments in achieving KPIs which adds on profitability.

**Keywords:** *FMCG industry; organizational profitability; supply chain management*

## **1. Introduction**

As Supply chain Management (SCM) is getting rooted in Indian industry, to make organization cost competitive, supply chain is emerged as important function in early 21<sup>st</sup> century. It evolved from traditional store keeping to purchasing, distribution, warehousing to materials management; logistics to integration of important functions with encompassing to emerge in the form of Supply Chain Management. In other words, it is a linked set of resources and processes that begins with the sourcing of raw materials and extends through the delivery of the end items to final customer. SCM is defined by several authors in different ways. About 173 unique definitions of SCM are available in literature. An encompassing definition of SCM was provided through review of these 173 definitions in a systematic manner. SCM is Management of upstream and downstream relationships with suppliers and customers to deliver superior customer value at lessor cost to chain as a whole.

Many case studies have been published, evidencing the benefits of SCM. If we recall the industrial evolution process and emergence of SCM, it is learnt that organization's survival and subsequent growth came from functional approach to organization. If we considered various function which encompasses into SCM viz. stores, purchase, logistics, assets management etc. deals with wealth of organization in some or other form. It has great leverages on the cost and expenses of an organization which has bearing at the bottom

line. Looking at the perianal nature of the function, SCM is been considered as one of important function in an organization which drives and contributes to its profitability. The sole purpose of business is to generate reasonable profit. Recent trend in industry shows that SCM can add on profit if managed professionally. Meaning, clarity on complexity of function, deployment of talent to its requirement, training and motivation are key issues and challenges for the SCM function. Taking this hypothesis forward for testing in industry. It is opted to test in FMCG (Fast Moving Consumer Goods) sector.

The question arises as how many SCM professional understand, recognizes and drives for it so that overall profitability can be optimized. It is experienced that manpower fitment in organization is also perceived as challenge. Lack of understanding of functional accountability and importance of deliverable leads to vulnerable situations and great extent financial implications. With this been a hypothesis for study, various activities of SCM is thoroughly defined. Understanding of such enablers with its impact on function and opportunity for improvements are also evaluated during the study. SCM professionals should be updated with recent trends in the markets, imparted with trainings and properly motivated for results. The research described in this article is carried out to ascertain SCM enablers for its efficiency leading to enhancement of profitability in organization in FMCG sector.

A brief literature review is presented in the next section. This followed by preliminary findings and result of the study. In the final section concluding remarks are presented.

## 2. Literature Review

SCM was a term invented by Keith Oliver, a consultant belonging to the firm Booz Allen Hamilton, in the year 1982, to describe the overall process of planning, implementing and controlling what goes on at the supply chain in order to satisfy customers' needs in a quick, efficient manner. Supply management is evolved through various phases in industry starting from traditional store keeping, Purchasing, logistic, materials management, integrated materials management to supply chain management (Sharma & Kulkarni, 2004). Its performance is measured through attributes and parameters like Reliability, responsiveness, flexibility, cost and asset managements are defined for better clarity, understanding and removing ambiguities from the function. Each attributes has its own sub functions which are parts and parcel of supply chain activities. The function is supported with its resources like Manpower, Technologies like hardware and software, assets etc. (Levi, Kaminsky, & Levi. 2000).

SCM professionals are one of the important resources to drive the system. As a result; today's supply chain manager owes his success or failure purely to the possession or lack of certain key skills. There are several article which describes what these skills are, how one can acquire them, and how they can make one more effective supply chain manager (Materials Management Review, 2013).

Information technology solutions that are popular among supply chain and logistics managers are supply chain management (SCM) software and enterprise resource planning (ERP) software. Both of these software solutions are used in supply chain management, and while there are similarities between the two, there are also some important differences. A supply chain management software solution is one that is designed to automate the planning aspects of managing the supply chain, the logistics aspects, or both (Shapiro, 2001).

SCM solution like RFID, Radio Frequency Identification technology helps retailers provide the right product at the right place and at the right time, which is an effective way of maximizing profits. Radio Frequency Identification technology uniquely identifies every container, item, case, and pallet that is manufactured, sold and shipped. This provides increased visibility on every level of the supply chain and benefits everyone involved. While Radio Frequency Identification already has been an enormous benefit to a variety of different industries, one of the biggest drivers behind the technology in the United States of America has been Wal-Mart. It has been estimated that by fully adopting Radio Frequency Identification, Wal-Mart could save up to \$8.35 billion each year. Roughly broken up, that total consists of about \$600 million via avoiding stock outs (Levi, Kaminsky, & Levi. 2000).

While delivering the activities it forms strategies to get desired result. For example Just In Time Inven-

tory system. In the realm of supply chain management, “Just in time” refers to an inventory strategy that it used to improve a business’s return on investment through a reduction of in process inventory and all related costs. Just in time is driven by a series of signals, referred to as Kanban, which tell production processes when it is necessary to make the next part. Kanban can be visual signals, but are generally “tickets.” When implemented in a correct fashion, “Just in time” can help a producer improve in such areas as quality, efficiency, as well as the return on investment (Levi, Kaminsky, & Levi. 2000).

**3. Research Methodology**

The current SCM practices in FMCG sector are examined by way of structured questionnaire survey. It helped in identifying strength & weakness of current supply chain model. The findings from survey are analyzed focusing mainly on impact of SCM on business profitability. In addition to the survey, visionary views captured through personal interviews with SCM experts and high profile business leaders in India for development of competitive Supply chain Model.

To understand existing model of supply chain in FMCG industries, questionnaire is designed on Supply chain performance parameters like Supply chain Reliability, Supply chain responsiveness, supply chain flexibility, supply chain cost, supply chain asset management, Extent of use of IT tools and application, lastly impact of SCM performance parameters on profitability and SCM challenges.

Sampling strategy was adopted in such a way that samples are from cross section of FMCG industries and represents various aspect of supply chain management. Target industry from FMCG sector comprises of Food, Pharmaceuticals, Beverages, Health care, Seeds, Engineering (durable/non-durable) etc. The survey conducted on electronic media with Industries having annual Turnover in the range of INR 200 Million to INR 5500 Million, having total manpower strength from Min. 15 No’s to 350 No’s mainly from state of Maharashtra, India. We have approached 214 no of SCM professional through written and electronic media, we received response from 48 professionals in time span of 4 months.

70 % of respondent industries were located in state of Maharashtra whereas 30 % were located outside state of Maharashtra. The supply chain features of the organization represented by the respondents were inventory holding predominantly in the range of 40 – 50% of turnover, employee stability of about 7 years, organization having employee turn overs less than 10 % which is very good and indicates good stability.

Table 1: Response to survey: Industry sector wise

No.	Industry Sector	Response %
1	Pharmaceutical	30
2	Beverages – Alcoholic	35
3	Beverages - Non Alcoholic	10
4	Engg Durable	15
5	Foods	5
6	Seeds	5

**4. Results and Findings**

To have proper evaluations, SCM are measured on performance parameters and enablers which covers Reliability, Responsiveness, flexibility, Cost, Asset Management etc. Understanding of SCM by establishing its performance parameters, Usage of IT tools and extent, scope of IT application for leveraging better efficiency and effectiveness.

The Supply Chain reliability performance parameters largely encompasses Sales forecast accuracy, Volume and brand pack reliability, despatch commitment level - OTIF (On Time In Full) and stoppage of line on account of material shortage etc as shown in figure 1. From the survey finding the existing level of Sales forecast accuracy is around 80 % with improvement opportunity of 5-10 %, Volume reliability is at a level of 87 % with improvement opportunity of 5 %. Brand pack reliability is at 90 % with improvement opportunity by 5 % whereas OTIF is at 95 % with improvement opportunity by 5 -10%.

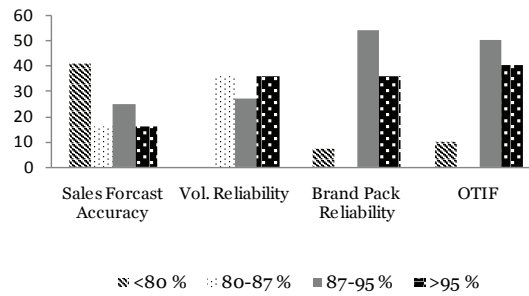


Figure 1: Supply Chain Reliability (%)

To measure responsiveness of supply chain Performance Indicators like Procurement lead time (days) Finished Goods (FG) Stock, Raw Material inventory, Freshness Index and Customer service level are considered for survey. The responses are as shown in the figure 2. Average procurement lead time is in the range of 7-15 days, FG stock are for 7 -15 days, Raw material and packaging material inventory holding is in the range of 15-30 days, freshness index of 7 day for the entire attribute improvement opportunity is by 5 %.

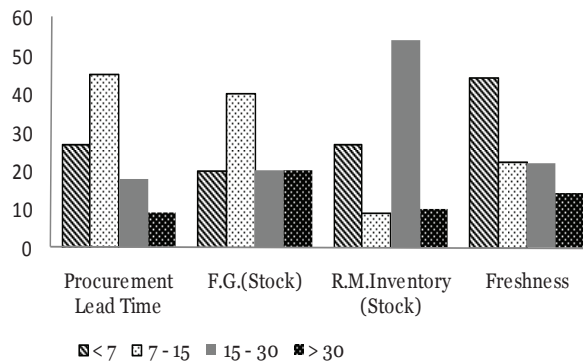


Figure 2: Supply Chain Responsiveness (days)

Flexibility of a system is important aspect for improvement and development for future. Hence Plan change absorption rate ( 80 -120 % ), Supplier’s response to urgent development or requirements, Time for new developments and cooperation from strategic vendor are performance indicators of supply chain flexibility and taken for testing. The survey results as drawn in figure 3, can be concluded as plan change absorption and supplier response to urgent development is in the range of 5-10 days with improvement opportunity <5%. Where as development time needed for new item is more than 20 days.

Performance parameters like Non Moving & slow moving items as % of Inventory, Obsolete items stock as % of Inventory, Hidden Cost like procurement cost, detention, dummarages,pilferage,theft,shrinkage etc.,Total Logistic Cost (% of CoP), Warehousing Cost, Raw and packaging material cost, Scrap reconciliation etc are indicators which represents supply chain cost at gross level and can be controlled through proper measurements and monitoring. Figure 4 represents leverages and extent of in Supply Chain Cost. Non Moving and slow moving items, Absolute items and hidden cost are at level of < 5 % , Total logistic cost is at level of 5-10 % and for the entire attributes there is an opportunity of improvement by 5 %.

Performance Indicators like Usage and extend of assets like Material Handling equipment, IT tools, Third Party services, Returnable material Management are considered for evaluation under study. From the figure 5, it can be inferred that Material handling equipment and IT tools are moderately used. Usage of third party service or outsourced service and returnable material management is at a level of low indicating improvement opportunity in the range of 5-10 %.

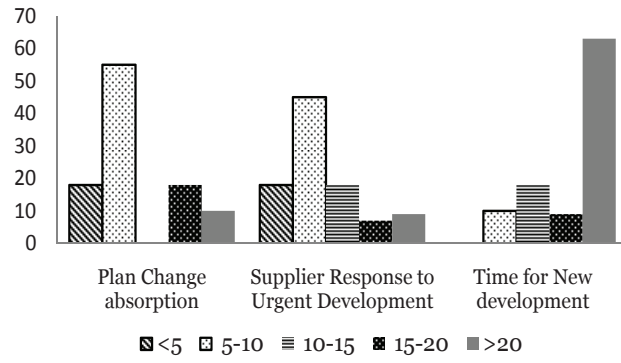


Figure 3: Supply Chain Flexibility

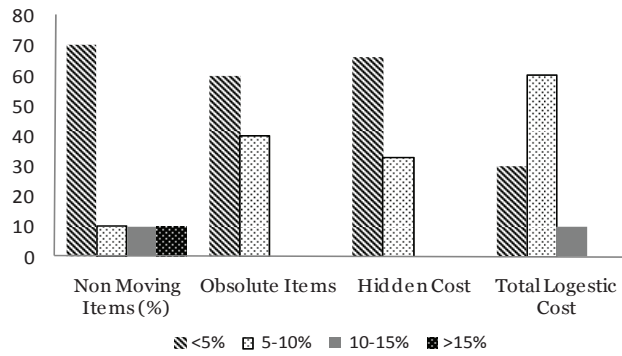


Figure 4 : Supply Chain Cost

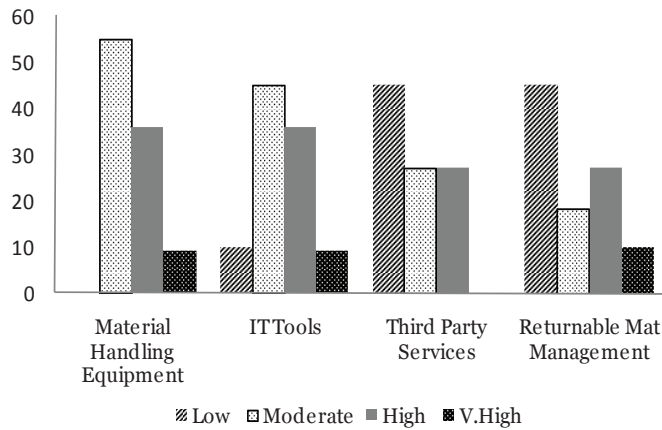


Figure 5: Supply Chain Asset Management

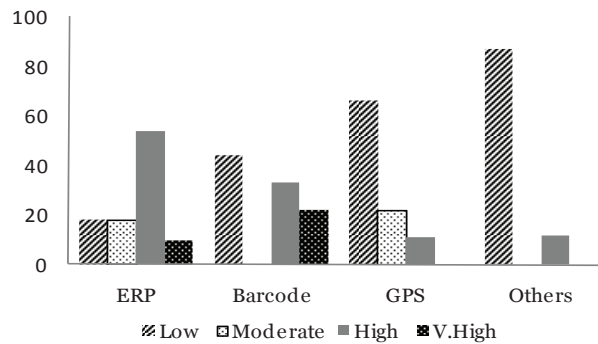


Figure 6: Usage of IT tools in SCM

**Usage IT Tools in Supply Chain Management**

Information being is a great enabler for any system. Usage of IT tools like ERP, Barcode systems , GPS and others like RFID, EDI, RTLS etc are widely used in SCM. Mapping of such act is done during the survey which indicate High use of ERP and Barcodes whereas low usage of GPS and others like RFID etc.

**Supply Chain efficiency and Profitability**

The first step towards improvement is starting of measurement of performance parameters directly or indirectly making impacts on function of supply chain and subsequently on profitability of an organization. From the survey in FMCG sector, as shown in figure 7, it can be concluded that existing efficiency in of supply chain is largely in the range of 85 % which indicates that there is further scope for improvement at least by 10 -15 %.

An unit increment in efficiency leverages profitability by 5 -10 %. This shows importance of the supply department from profitability perspective. The supply chain professional in FMCG sector also feel that Impact of Supply Chain activities are very much influential factor on the profitability of an organization. If we analyze the voice of professionals carefully it is attributed that the SCM function impacts at least by 20 % on profitability.

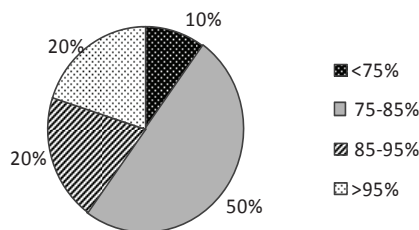


Figure 7: SCM Efficiency

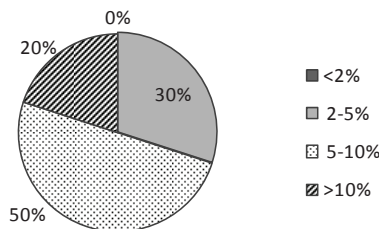


Figure 8: Impact on Profitability by unit incremental SCM Efficiency

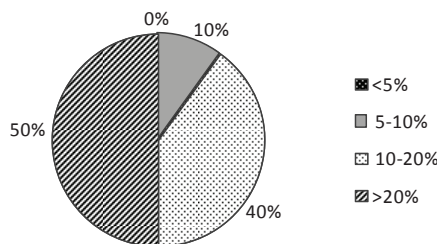


Figure 9: Impact of SCM on profitability

**Supply Chain Strategies for efficiency and Profitability**

After ascertaining the importance of function, establishing clear measurable key performance parameters which attributes towards the profitability, from the survey the extent and impact of such parameters are designed in an industry sector/type. In order to make it practical, it is to be implemented with dedicated accountability and responsibility through designated platforms. Such Program should encompass Strategies.

From the survey, the strategies like 1. Inventory Reduction, 2. Collaborative Planning with key suppliers (Strategic relationship with Vendor) 3. Decreasing manufacturing cost through waste reduction, 4. People Motivation in supply chain in particular and 5. Localization from tax optimization perspectives are some prime strategies come out of responses of survey which highly impacts on profitability. Hence our action focus should be dwelled around above strategies.

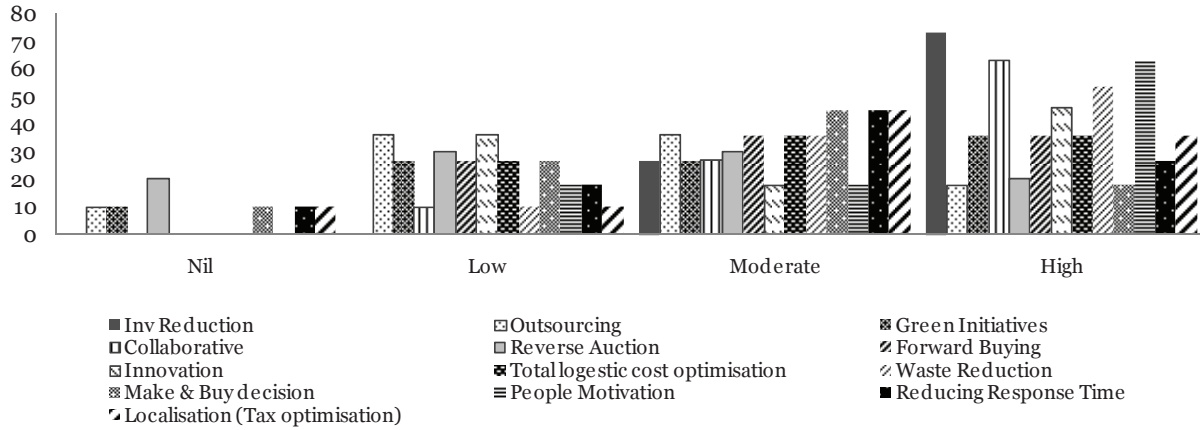


Figure 10: SCM Strategies

### Supply Chain Challenges

As the situation in the business remain dynamic and govern by various internal as well as external factors influencing business and policy at market place. It is essential to evaluate challenges time to time. When we are working for enhancement of profitability through efficient supply chain management, we need to evaluate associated challenges to supply chain function in an organization so that it can be thought fully considered and worked upon.

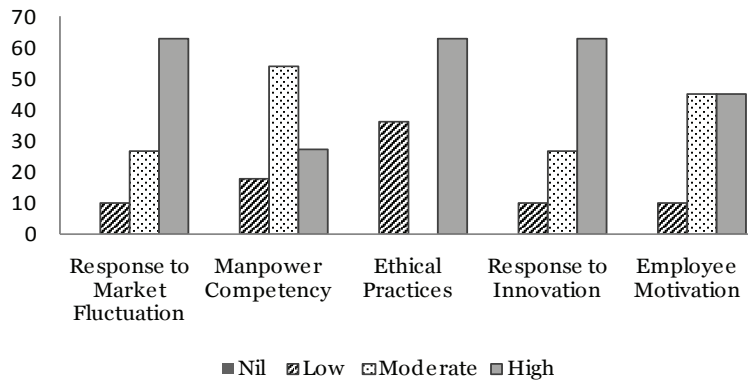


Figure 11: SCM Challenges

The professional in supply chain management expressed through survey that Response to market fluctuation, Employee Motivation and Response to Innovation (Process Automation) are Supply Chain challenges in FMCG industry as depicted in figure 11.

### 5. Conclusion

The Supply chain function is very important and critical function in organization which holds more than 50 per cent of wealth in the form of materials in FMCG industry in India. Hence it is major custodian of wealth in organization. Professional and MNC organization deploys relevant manpower with blends of qualification and experience that takes care of this wealth in kind. Stability of professionals is quite satisfactory in SCM de-

partment in professionally managed company however in small and medium sector it is perceived as concern.

On Supply chain Parameters, FMCG organization reflects, SCM reliability is 90-95 per cent which is quite in line with industry standard and scope for improvement by 5 to 7 per cent, Supply chain responsiveness in the range of 7-15 days ( meaning a confidence level of 85–90 per cent ) with scope for improvement by 5 per cent. Supply Chain flexibility ranges 90 – 110 per cent which is good as per as FMCG sector is concerned (Average 5 to 10 days variability). On the other hand Supply Chain Cost which impacts on profitability is in the range of 5–8% of cost of Production, also indicates good scope of improvement by around 7 per cent as this is skilled exercise unveiling hidden factors of cost which can be incorporated in Supply Chain strategies.

Information Technology (IT) has been proven as great help for SCM for cost reduction, improvement in accuracy and timeliness for decision making whereby improving overall service levels. Interestingly, still high scope of improvement in adopting larger application due to limitation of knowledge, resilience to adopt changes, lack of motivation and fear of failure.

Professional SCM targets for efficiencies. Survey reflects that Professionals consider their SCM model is efficient to level of 85 per cent, meaning, there is further scope for improvement more than 10 per cent for all practical purposes. An incremental efficiency in Supply chain management adds on profitability of organization by 7-8 % which shows how important are the functioning of SCM. As per Supply chain professionals, SCM influences profitability by 20 %. which can be improved by 8-12 per cent. This is clear indication of opportunity for enhancement of profitability of organization in FMCG areas. SCM strategies are Key drivers for success of profitability. Whereas challenges are perceived as moderate to response to market fluctuations, Response to Innovation and manpower competency, high in case of employee motivation.

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