



# Demand Forecast Accuracy in SCM for Consumer Durables Industry in India

Dr. Gaurav Lodha<sup>1st</sup>  
Dean, Faculty of Management,  
Jodhpur National University  
Jodhpur, Rajasthan (India)

Prof. Prakash Jagdale<sup>2nd</sup>  
Research Scholar,  
Jodhpur National University  
Jodhpur, Rajasthan (India)

**Abstract:** Consumer durables refer to those consumer goods that do not quickly wear out and yields utility over a long period of time. .With the continuous inflow of disposable income and the advancement of technology, the need for the varied consumer durable goods are increasing. The expected market size of consumer durables in India by 2015 is 75, 000 crore rupees and is growing. To stay profitably in the business companies should use SCM very effectively and demand forecasting has to be very accurate. This paper suggests a measurement Demand forecasting accuracy, which will help in improving efficiency.

## I. OVERVIEW OF CONSUMER DURABLES INDUSTRY IN INDIA

Consumer durables refer to those consumer goods that do not quickly wear out and yields utility over a long period of time. Some of the popular and common examples of these kinds of items are electronic goods, kitchen appliances, home furnishings and leisure equipments etc.

**White goods:** White goods mainly include air conditioners, refrigerators, washing machines, audio equipments and speakers.

**Brown Goods:** This kind of consumer durables mostly include kitchen appliances like chimneys, electric fans, grinders, iron, microwave ovens, mixers and varied other cooking ranges.

**Consumer Electronics:** Some of the mostly used consumer electronic goods are DVD players, MP3 players, mobile telephones, telephones, VCD players etc.

**Food products:** The leading segment, accounting for 43 per cent of the overall market. Personal care (22 per cent) and fabric care (12 per cent) come next in terms of market share.

The expected market size of consumer durables in India by 2015 is 75, 000 crore rupees. .With the continuous inflow of disposable income and the advancement of technology, the need for the varied consumer durable goods are increasing. This in turn is leading to a strong competition among the different consumer durable brands available in the nation as well as the price gap between the same consumer goods of different companies are narrowing down. Day by day these goods are becoming cheaper. The rural and urban market of consumer durables has been growing at a rate of around 15 % on an average.

## II. SOME OF THE TOP CONSUMER DURABLES BRANDS IN INDIA

LG	Blue Star	Toshiba India Private Limited	GCMF (AMUL)
Nokia	Carrier	Videcon	Dabur India
Philips	Godrej India	Voltas	Asian Paints (India)
Samsung	Hitachi India Limited	Hindustan Unilever Ltd.	. Cadbury India
Sony	Sharp India Limited	ITC (Indian Tobacco Company)	Britannia Industries
Whirlpool	Tata	Nestlé India	Procter & Gamble Hygiene and Health Care

## III. RURAL MARKET

**Rural** areas expected to be the major driver for FMCG, as growth continues to be high in these regions. Rural areas saw a 16 per cent, as against 12 per cent rise in urban areas. Most companies rushed to capitalize on this, as they quickly went about increasing direct distribution and providing better infrastructure. Companies are also working towards creating specific products specially targeted for the rural market. The Government of India has also been supporting the rural population with higher



minimum support prices (MSPs), loan waivers, and disbursements through the National Rural Employment Guarantee Act (NREGA) programme. These measures have helped in reducing poverty in rural India and given a boost to rural purchasing power. Hence rural demand is set to rise with rising incomes and greater awareness of brands.

#### IV. URBAN MARKET

With rise in disposable incomes, mid- and high-income consumers in urban areas have shifted their purchasing trend from essential to premium products. In response, firms have started enhancing their premium products portfolio. Indian and multinational FMCG players are leveraging India as a strategic sourcing hub for cost-competitive product development and manufacturing to cater to international markets.

##### SALIENT FEATURES:

- Rapid Innovation
- Dynamic market place
- Highly competitive industry
- Significant 'time to market' pressure
- Significant cost pressure
- Rapid rate of market penetration

##### MARKET ENABLERS:

1. Collaborating with foreign players
2. Collaboration with 3rd party logistics service providers
3. Increase the presence in Tier 2,3 cities and rural areas
4. Increase the investment in IT technology to manage large distribution networks
5. Expanding after sales service to both urban and rural areas
6. Increasing the availability of private label brands in rural market
7. Extending credit facilities
8. Develop relationships with innovative manufacturing companies
9. Increasing the integration with suppliers to develop customized products

#### V. SUPPLY CHAIN MANAGEMENT –SCM

Optimizing the supply chain activities has been the focus of supply chain managers in their quest for creating value, considering value chain for growth has potential to achieve organizational effectiveness- without compromising on operational efficiency – as value chain not only strives to withdraw activities that do not add value to its primary activities, but also introduces support activities such as infrastructure, human resources, finance and technology. Benefits of Efficient SCM are:

1. Efficient Sourcing
2. Demand Planning
3. Inventory Optimization
4. Order Management
5. Tracking
6. High Inventory for High Demand Periods
7. Reverse Logistics
8. Reduced vendor payments due to better on-time delivery and improved availability
9. Increased revenues from improved availability of high fast moving inventory
10. Working capital reduction due to improved inventory management and reduced order cycle times
11. Fixed capital reduction due to effective asset utilization

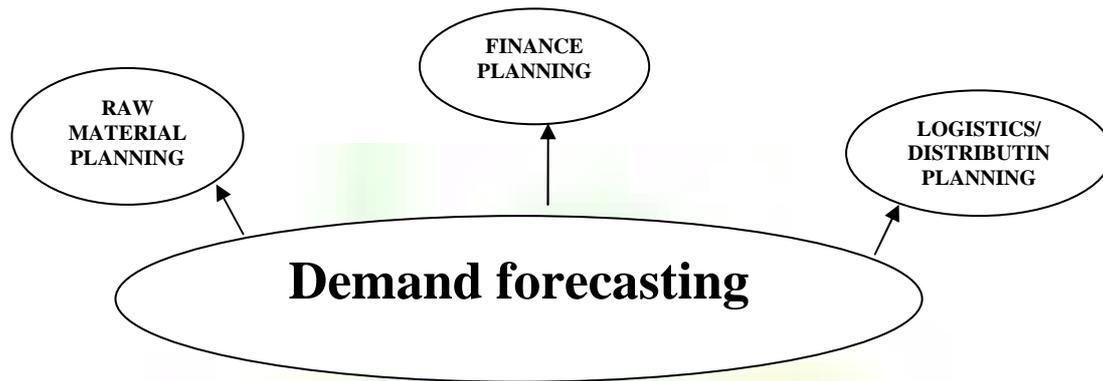
##### CONSUMER DURABLES DISTRIBUTION CHANNELS:

Traditional Retailing, Company Managed stores, Franchisee Showrooms, Reverse Logistics, E-Retailing, Individual Consumers, Institutional Consumers

##### PLANNING AND FORECASTING:

It is driven by past data and current market trends. Annual Forecasts based on previous year sales and current trends. These sales are disaggregated into monthly or seasonal or any period that suits to the organization's sale Plans. Interaction between production and marketing is musts for better quality of forecasts and demand utilization.

**Figure-1**  
**Demand forecast connects to all other processes of SCM in the organization.**



## VI. DEMAND FORECASTING ACCURACY MEASUREMENT

Forecasting demand, and coordinating activities to meet demand. Companies with global operations use sophisticated software and systems to forecast demand, but small businesses can forecast supply chain needs using simple techniques. The methods of moving averages and exponential smoothing seek to smooth out demand to allow for seasonality in the results. With moving averages, you drop the oldest sales numbers and add newer numbers, making the average move over time. For example, to calculate sales over a four-week moving average, add weeks two through five, drop the sales from week one and divide by four. Exponential smoothing is similar to moving averages except that older data receives progressively less weight and new data receives greater weight. When there is definitive trend, however, the moving averages and exponential smoothing forecasts might lag behind the trend.

It is necessary to add forecast accuracy as in ISCM you in need to plan all resources needed. Proper planning helps to reduce uncertainties. This will also help in sticking to forecast method used or changing the same, if required. Following simple measurement, which is easily available ERP data of the company, may be taken, retailer wise, wholesaler wise, distribution centre wise or any other outlet wise, in which case aggregate of all outlets will define measurement for company. Continuous monitoring of this will make it reach as high value as possible.

**Demand forecast accuracy (%age) =**

**SFA = ( Actual sales orders received during the period / Sales orders forecasted during the period ) \* 100**

**If Distribution is taken instead of Sales orders received then,**

**Demand forecast accuracy (%age) =**

**SFA = ( Actual Distribution made to end customers during the period / Demand forecasted during the period ) \* 100**

**For a specific predetermined period**

Ideal value of SFA should be 100%. If it is not, then forecasting methods need to be changed. It is also suggested that apart from few methods suggested earlier, hybrid methods can also be used, where different methods for different part of the year is used as all other processes work based on this and hence for efficient SCM.

## VII. CONCLUSION

As consumer durable industry is large in India, efficiency of organizations is to meet needs of customers. To produce what is required is best but cannot be done. There could be situations like push / pull, more market player entering in the similar business. One good thing about India is, more and more customers are buying consumer durables. It is recommended that, organizations should use accurate demand forecasting methods and preferably one suggested to monitor.

## REFERENCES

1. N. Viswanadham and Y. Narahari. Performance Modeling of Automated manufacturing Systems. Prentice Hall of India, 1998.
2. Sunil Chopra and Peter Meindel. Supply Chain Management: Strategy, Planning, and Operation, Prentice Hall of India, 2002.
3. <http://www.iimmbangalore.org/education/results/198-performance-of-measurement-supply-chain-management.html>
4. [www.ibef.org/download/consumer\\_durable](http://www.ibef.org/download/consumer_durable)