ROLE OF SUPPLY CHAIN MANAGEMENT INFMCG INDUSTRY OF INDIA

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(Established under Galgotias University Uttar Pradesh Act No. 14 of 2011)

EXECUTIVE SUMMARY

I as a management student was engaged in my research project report. I worked on a project which is called winter project in management language. it was a very educated and professional experience and thereby gaining a practical overview of the corporate work culture. The project- The role of supply chain in FMCG industry in India is an attempt to find out the factors affecting the supply chain of FMCG. To examine the relationship between the FMCG sector the impact on sales and the supply chain of the company and the experience of the different companies.

It was found that the organizations done a lot of practices to enhance their supply chain services because it is directly related to sales and profit of the organizations. According to the material handling industry forum, 25 percent of the material handling cost is attributable to intra logistics cost. Organizations also use the Robotics & Artificial Intelligence: Fueling Growth of Indian FMCG Industry. It is found that there is significant impact on sales with an impact on supply chain, so it can be considered as one of the key parameter for companies to be considered in their sales maximization strategies.

LITERATURE REVIEW

Meredith (1993) defined a literature review as a summary of the existing literature by finding research focus, trends, and issues. On the other hand, Harland et al. (2006) argued that a literature review can even help in filtering out the conceptual content of the domain apart from contributing to theory development. The huge literature body of SCM has led to numerous literature reviews in the past 15 years. Table 1 shows a sample of review papers within the domain of SCM. From these reviews, it can be found that a good number of review papers focusing on diverse topics are already available within the domain of SCM. But not many papers are available that reviewed the literature on SCM from the perspective of understanding the contributions of academic and practitioners towards the body of knowledge especially from the Indian perspective. This missing link motivatedus to carry out this study.

1. Shukla and Jharkharia 2013 Presented a literature review on the fresh produce supply chain management (FSCM) and classified it on the basis of structural attributes such as problem context, methodology, product under consideration, geographic region and year of publication. They concluded that although there is an increase in interest towards FSCM, still there is an absence of a journal with the prime attention towards FSCM.

2. Soni and Kodali 2013 Reviewed 57 frameworks in SCM with an objective of revealing the dominant constructs in SCM. 3. Soni and Kodali 2012 Presented a classification of scheme based on empirical research methodology used in SCM.

4. Soni and Kodali 2011 Presented a classification of scheme-based SCM content in empirical literature.

5. Akyuz and Erkan 2010 Reviewed the literature on SC performance measurement, with the objective of revealing the basic research methodologies/approaches followed; problem areas and requirements for the performance management of the new SC era. Supply Chain Management Research 3 IIM Kozhikode Society & Management Review, 2, 1 (2013): 1–19 S. No. Author(s) YearRemarks

6. Sarac et al. 2010 Analysed the state-of-the-art on Radio Frequency Identification (RFID) technology deployments in SCs to understand the impact on the SC performance, potential benefits gained, particularly against inventory inaccuracy problems, the bullwhip effect and replenishment policies. They reviewed various works addressing analytic modelling, simulations, case studies and experiments apart from ROI analyses.

7. Gosling and Naim 2009 Presented a comprehensive literature review on Engineer-to-Order (ETO) supply chains and contributed to the development of a more robust definition of the ETO supply chain. Furthermore, they also reviewed different strategies for ETO SCs apart from investigating the relationship of the ETO sector with lean and agile approaches.

8. Melo et al. 2009 Conducted a literature review of facility location models in the context of SCM.

9. Rao and Goldsby 2009 Performed a literature review to understand risks in SC and created a topology for SC risks.

10. Arshinder et al. 2008 Have thrown light on the importance of SC coordination.

11. Gunasekaran and Ngai 2005 Reviewed Build-to-Order Supply Chain management (BOSC) based on the following four major areas of decision-making: organizational competitiveness, the development and implementation of BOSC, the operations of BOSC and information technology inBOSC.

12. Meixell and Gargeya 2005 Carried out a review on the decision support models for the design of global SC to assess the fit between the research literature in this area and the practical design issues. Their review dimensions included (a) decisions addressed in the model, (b) performance metrics, (c) the degree to which the model supports integrated decision processes, and (d) globalization considerations.

CHAPTER-1

INTRODUCTION

INTRODUCTION

Fast-moving consumer goods (FMCG) sector is India's fourth largest sector with household and personal care accounting for 50% of FMCG sales in India. Growing awareness, easier access and changing lifestyles have been the key growth drivers for the sector. The urban segment (accounts for a revenue share of around 55%) is the largest contributor to the overall revenue generated by the FMCG sector in India. However, in the last few years, the FMCG market has grown at a faster pace in rural India compared to urban India. Semi-urban and rural segments are growing at a rapid pace and FMCG products account for 50% of the total rural spending.

Fast moving consumer goods (FMCG) is the fourth largest sector in the Indian economy. There are three main segments in the sector – food and beverages, which accounts for

19% of the sector; healthcare, which accounts for 31% of the share; and household and personal care, which accounts for the remaining 50% share.

FMCG market is expected to grow 5-6% in 2020. FMCG's urban segment grew by 8%, whereas, its rural segment grew 5% in the quarter ending September 2019, supported by moderate inflation, increase in private consumption and rural income.

Indian online grocery market is estimated to exceed sales of about Rs 22,500 crore (US$

3.19 billion) in 2020, a significant jump of 76% over the previous year.

FMCG companies are looking to invest in energy efficient plants to benefit the society and lower cost in the long term. Dabur had plans to invest Rs 250-300 crore (US$ 38.7946.55 million) in FY19 for capacity expansion and possible acquisitions in the domestic market. The sector witnessed healthy FDI inflow of US$ 16.28 billion during April 2000March 2020. Investment intentions related to FMCG sector arising from paper pulp, sugar, fermentation, food processing, vegetable oils and vanaspati, soaps, cosmetics, and toiletries industries worth Rs 19,846 crore (US$ 2.84 billion) was implemented until December 2019.

Growing awareness, easier access, and changing lifestyle are the key growth drivers for the consumer market. The focus on agriculture, MSMEs, education, healthcare, infrastructure and tax rebate under Union Budget 2019-20 was expected to directly impact the FMCG sector. Initiatives undertaken to increase the disposable income in the hands of common man, especially from rural areas, will be beneficial for the sector.

Fast Moving Consumer Goods (FMCG) is the article of daily use having a high consumption frequency Huber, Gossmann, and Stuckenschmidt, 2017). FMCG supply chain managerial decisions focus on finding out when to order and how much to order. Keeping up the optimum flow of goods is usually a priority of FMCG supply chain. The main objective of a consumer goods supply chain is to satisfy market by developing decisive competitive ability to add service orientation to the core product concept and thereby, managing the constraints for on time delivery performance (Mohan and Deshmukh, 2013).

On the basis of product flow, FMCG supply chain can be carved up into two parts: upstream supply chain and downstream supply chain. The upstream supply chain is the portion of a supply chain with product flow from raw material suppliers to producers and downstream supply chain as the portion involving product flow of finished goods from producers to retailers or customers (Yao and Minner, 2017). The divisions of supply chain in the upstream supply chain and downstream supply chain is important from strategic and tactical perspectives. FMCG downstream supply chain experiencing slight demand fluctuation causes huge variation in the level of inventory held in upstream supply chain and increase in stock outs negatively impacts customer service level (Ivanov, Tsipoulanidis and Schönberger, 2017). A fluctuation in the downstream supply chain has its effects throughout the supply chain. As the firm expands, in the pursuit of velocity and efficiency, the probability of fluctuation propagating throughout a chain grows (Scheibe and Blackhurst, 2017).

Upstream supply is forecast-driven and downstream supply chain is customer orderdriven (Sindi and Roe, 2017). Forecasts can rarely be entirely accurate and uncertainty of future demand is always difficult to be fully eliminated (Choi, 2016). Hence, the FMCG companies relying heavily on demand forecasts are unable to respond rapidly to changes in real demand.

An increase in demand fluctuations along the upstream supply chain causes situations of stock-outs and excess inventory along the downstream supply chain Huber, Gossmann, and Stuckenschmidt, 2017). Forecast-driven supply chains can be at high risks of losing sales as a result of multiple undesirable effects such as instances of stock outs, degradation of customer service, the high cost of production, and relatively longer leadtimes (Mital, Del Guidice and Papa, 2017). Stock-outs prevalent in a downstream supply chain can have cascading undesirable effects on service levels of downstream supply chain members, who tend to increase the ordering quantity (order size) to safeguard against stock out scenario (Sharma, 2017).

Information technology can play an important part in managing the downstream supply chain. Information Technology, specifically communication technology, can help in optimizing supply chain network for competitiveness, higher service level, lowering levels of inventory, and reducing supply chain costs (Varma and Khan, 2014). Human intervention in the determination of optimum reorder size and order quantity can be significantly reduced by Information Technology, which can aid in controlling stock-outs (Sankaran and Ahmed, 2017). Nonetheless, the reality is that end users of FMCG companies, as large scale as Unilever, face frequent stock-outs in the downstream supply chain. A study on demand forecasting system revealed that forecast accuracy varies with a skill level of individuals, and modifications by functional managers (AlvaradoValencia, Barrero, Önkal and Dennerlein, 2017). Forecast accuracy is also hooked on personal factors of product development teams, such as their wishful thinking, optimism bias, cognitive biases, and emotions (Belvedere, and Goodwin, 2017). Moreover, the role of inventory specialists in logistics keeps changing and there are variations in their competencies, job requirements, training needs, and personality traits (Dave, Lemay, Periatt, and Opengart, 2013). The study by (name) (Tatham, Wu, Kovács and Butcher, 2017) focused on accuracy of demand forecasting in relation to skills of managers and it was found that skills of supply chain managers (such as problem-solving skills and customer/ supplier relationship management) affect the accuracy of demand forecasting. As a remedy, certain FMCG companies have implemented the Theory of Constraints solution in the downstream supply chain and results has been encouraging as reported in increase in throughput, improvement in lead time, and reductionin system inventory.

Market Size

The retail market in India is estimated to reach US$ 1.1 trillion by 2020 from US$ 840 billion in 2017, with modern trade expected to grow at 20-25% per annum, which is likely to boost revenue of FMCG companies. Revenue of FMCG sector reached Rs 3.4 lakh crore (US$ 52.75 billion) in FY18 and is estimated to reach US$ 103.7 billion in 2020. FMCG market is expected to grow at 9–10% in 2020.

Rise in rural consumption will drive the FMCG market. It contributes around 36% to the overall FMCG spending. FMCG urban segment witnessed growth rate of 8%, whereas, rural segment grew at 5% in the quarter ended September 2019.

Investments/ Developments

The Government has allowed 100% Foreign Direct Investment (FDI) in food processing and single- brand retail and 51% in multi-brand retail. This would bolster employment, supply chain and high visibility for FMCG brands across organised retail markets thereby bolstering consumer spending and encouraging more product launches. The sector witnessed healthy FDI inflow of US$ 16.28 billion during April 2000–March 2020.

Some of the recent developments in the FMCG sector are as follows:

- In September 2020, Orkla, a Norway based consumer goods company acquired 68% stakein eastern Condiment
- In May 2020, Tata Consumer Products Limited (TCPL) acquired PepsiCo's stake inNourishCo Beverages Limited.

Government Initiatives

Some of the major initiatives taken by the Government to promote the FMCG sector in India are asfollows:

- The Government of India has approved 100% FDI in the cash and carry segment and insingle-brand retail along with 51% FDI in multi-brand retail.

- The Government has drafted a new Consumer Protection Bill with special emphasis on setting up an extensive mechanism to ensure simple, speedy, accessible, affordable and timely delivery of justice to consumers.
- The Goods and Services Tax (GST) is beneficial for the FMCG industry as many of the FMCG products such as soap, toothpaste and hair oil now come under the 18% tax bracket against the previous rate of 23–24%. Also, GST on food products and hygiene products have been reduced to 0–5% and 12–18% respectively.

GST is expected to transform logistics in the FMCG sector into a modern and efficient model as all major corporations are remodelling their operations into larger logistics and warehousing.

Road Ahead

Rural consumption has increased, led by a combination of increasing income and higher aspiration levels. There is an increased demand for branded products in rural India. The rural FMCG market in India is expected to grow to US$ 220 billion by 2025 from US$ 23.6 billionin FY18.

On the other hand, with the share of unorganised market in the FMCG sector falling, the organised sector growth is expected to rise with increased level of brand consciousness, augmented by the growth in modern retail.

Another major factor propelling the demand for food services in India is the growing youth population, primarily in urban regions. India has a large base of young consumers who form majority of the workforce, and due to time constraints, barely get time for cooking.

Online portals are expected to play a key role for companies trying to enter the hinterlands. Internet has contributed in a big way, facilitating a cheaper and more convenient mode to increase a company's reach. It is estimated that 40% of all FMCG consumption in India will be made online by 2020. The online FMCG market is forecast to reach US$ 45 billion in 2020 from US$ 20 billion in 2017.

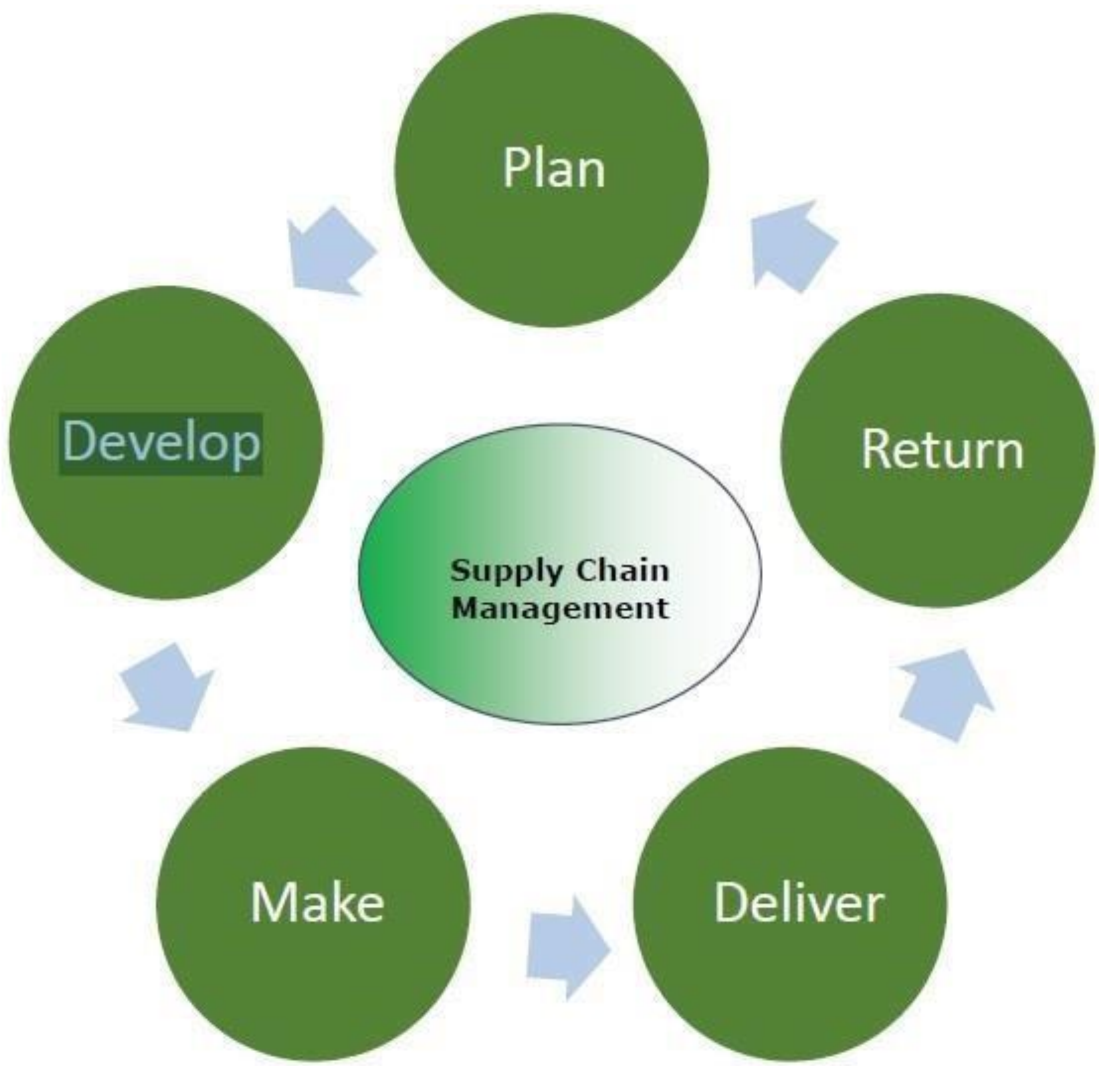
It is estimated that India will gain US$ 15 billion a year by implementing GST. GST and demonetisation are expected to drive demand, both in the rural and urban areas, and economic growth in a structured manner in the long term and improved performance of companies withinthe sector.

Supply Chain Management

Supply chain management (SCM) is the process of planning, employing and controlling the operations of the supply chain as effectively as possible. Supply Chain Management ranges all activity and storage of raw materials, work-in-process stock, and finished goods from point-of-origin to point-of-consumption.

Process of Supply Chain Management

A supply chain involves a series of steps involved to get a product or service to the customer. The steps include moving and transforming raw materials into finished products, transporting those products, and distributing them to the end-user.



Plan

The initial stage of the supply chain process is the planning stage. We need to develop a plan or strategy in order to address how the products and services will satisfy the demands and necessities of the customers. In this stage, the planning should mainly focus on designing a strategy that yields maximum profit.

For managing all the resources required for designing products and providing services, a strategy has to be designed by the companies. Supply chain management mainly focuses on planning and developing a set of metrics.

Develop (Source)

After planning, the next step involves developing or sourcing. In this stage, we mainly concentrateon building a strong relationship with suppliers of the raw materials required for production. This involves not only identifying dependable suppliers but also determining different planning methods for shipping, delivery, and payment of the product.

Companies need to select suppliers to deliver the items and services they require to develop their product. So in this stage, the supply chain managers need to construct a set of pricing, delivery andpayment processes with suppliers and also create the metrics for controlling and improving the relationships.

Finally, the supply chain managers can combine all these processes for handling their goods and services inventory. This handling comprises receiving and examining shipments, transferring themto the manufacturing facilities and authorizing supplier payments.

Make

The third step in the supply chain management process is the manufacturing or making of products that were demanded by the customer. In this stage, the products are designed, produced, tested, packaged, and synchronized for delivery.

Here, the task of the supply chain manager is to schedule all the activities required for manufacturing, testing, packaging and preparation for delivery. This stage is considered as the most metric-intensive unit of the supply chain, where firms can gauge the quality levels, production output and worker productivity.

Deliver

The fourth stage is the delivery stage. Here the products are delivered to the customer at the destined location by the supplier. This stage is basically the logistics phase, where customer orders are accepted and delivery of the goods is planned. The delivery stage is often referred as logistics, where firms collaborate for the receipt of orders from customers, establish a network of warehouses, pick carriers to deliver products to customers and set up an invoicingsystem to receive payments.

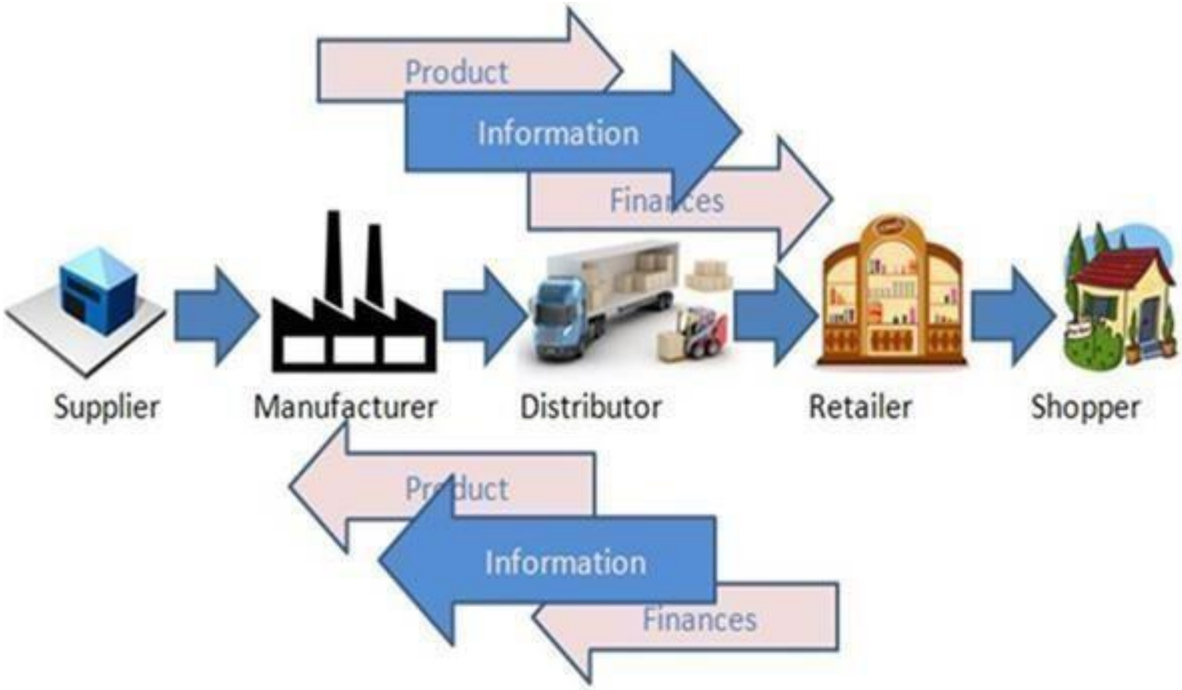
Return

The last and final stage of supply chain management is referred as the return. In the stage, defective or damaged goods are returned to the supplier by the customer. Here, the companies need to deal with customer queries and respond to their complaints etc.
This stage often tends to be a problematic section of the supply chain for many companies. The planners of supply chain need to discover a responsive and flexible network for accepting damaged, defective and extra products back from their customers and facilitating the return process for customers who have issues with delivered products.

In other words Supply chain management (SCM) is the art and science to improve the way a company manages its raw components and final output in terms of a product or a service and offers it to customers. Supply chain can be identified as the physical, financial and information networks for the logistic activity of materials, funds and related information. It starts from the acquisition of raw materials to distribution of finished products to the end users. Participants of supply chain include all vendors, service providers and customers. In essence, Supply Chain Management incorporates supply and demand administration within and across companies.

Supply Chain Management can be defined as the management of flow of products and services, which begins from the origin of products and ends at the product’s consumption. It also comprises movement and storage of raw materials that are involved in work in progress, inventory and fully furnished goods.

The main objective of supply chain management is to monitor and relate production, distribution, and shipment of products and services. This can be done by companies with a very good and tight hold over internal inventories, production, distribution, internal productions and sales.



In the above figure, we can see the flow of goods, services and information from the producer to the consumer. The picture depicts the movement of a product from the producer to the manufacturer, who forwards it to the distributor for shipment. The distributor in turn ships it to the wholesaler or retailer, who further distributes the products to various shops from where the customers can easily get the product.

Supply chain management basically merges the supply and demand management. It uses different strategies and approaches to view the entire chain and work efficiently at each and every step involved in the chain. Every unit that participates in the process must aim to minimize the costs and help the companies to improve their long term performance, while also creating value for its stakeholders and customers. This process can also minimize the rates by eradicating the unnecessary expenses, movements and handling.

Here we need to note that supply chain management and supply chain event management are two different topics to consider. The Supply Chain Event Management considers the factors that may interrupt the flow of an effective supply chain; possible scenarios are considered and accordingly, solutions are devised for them.

Some experts distinguish Supply Chain Management and logistics, while others consider the terms to be interchangeable. It is useful to remember that these are the terms that are used intertwine to define and distinguish between these related terms.

Although Supply chain management is no longer a business school concept, but a track proven technology appropriate to just about every company, regardless of the industrial sector. It is a sequence of complicated data that optimize enterprise plans within given set of constraints, backed up by a fully integrated suite of financial, distribution, and human resource management system. Supply Chain Management features planning and management of all activities involved in sourcing, procurement, conversion and logistics management activities. Often, it also includes co-ordination and collaboration with channel partners and customers. Supply Chain Management integrates supply and demand within and across companies. Supply Chain Management execution is handling and co-ordination of the activity of materials, information and resources across the supply chain.

Thus, Supply Chain encompasses all activities associated with the flow and transformation of materials and information from the raw material stage through to the end user.

Fast Moving Consumer Goods (FMCG) goods are commonly named as consumer packaged goods. Items in this category include all consumables (other than groceries/pulses) people buy at regular periods. The most common in the list are toilet soaps, detergents, shampoos, toothpaste, shaving products, shoe polish, packaged foodstuff, and household accessories and extends to certain electronic goods. These items are meant for daily of frequent consumption and have a high return.

The FMCG Industry is on a high growth curve with the overall demand expected to multiply over the next decade. This high growth is retail dimensions, growing rural spend tendency.

The resultant new challenges that need to be addressed for an efficient and effective supplychain are:

- Managing generation of different varieties.
- Aligning to the outstart of new channels.
- Managing the challenges of reach.

Companies are now realizing that current supply chain configurations need to evolve to enable them to participate in achieving growth. This requires fresh thinking on the ways in which an organization would structure itself in terms of its key supply chain processes anddrivers.

With the presence of 12.2% of the world population in the villages of India, the Indian rural FMCG market is something no one can overlook. Better infrastructure facilities will improve their supply chain.

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CHAPTER-2

Major Players

MAJOR PLAYERS IN THE FMCG MARKET IN INDIA

DOMESTIC PLAYERS

Britannia India Ltd (BIL)

BIL is a major player in the Indian biscuit/cookie industry, with famous brands such as Tiger glucose, Mariegold, Fifty-Fifty, Good Day, Pure Magic, Bourbon etc. The company holds a 40 per cent market share in the overall structured biscuit market and has a capacity of 300,000 tonne annually.

Indian Tobacco Corporation Ltd (ITC)

Indian Tobacco Corporation Ltd is an affiliate of British American Tobacco with a 37 per cent stake. While ITC is an excellent market leader in its traditional businesses of cigarettes, hotels, paperboards, packaging and agro products, it is rapidly getting business even in its nascent businesses of branded apparel, greeting cards and packaged foods and confectionary.

Dabur India Ltd.

Dabur India Ltd. is one of India’s leading FMCG Companies with **Revenues of over Rs 8,700 Crore & Market Capitalisation of over Rs 80,000 Crore**. Building on a legacy of quality and experience of over 135 years, **Dabur is today India’s most trusted name and the world’s largest Ayurvedic and Natural Health Care Company.**

Dabur India is also a world leader in Ayurveda with a portfolio of over 250 Herbal/Ayurvedic products. Dabur's FMCG portfolio today includes **five flagship brands** with distinct brand identities -- **Dabur** as the master brand for natural healthcare products, **Vatika** for premium personal care, **Hajmola** for digestives, **Réal** for fruit juices and beverages and **Fem** for fairness bleaches and skin care products.

Dabur today operates in key consumer product categories like **Hair Care, Oral Care, Health Care, Skin Care, Home Care and Foods**. The ayurvedic company has a wide distribution network, covering 6.7 million retail outlets with a high penetration in both urban and rural markets.

Dabur's products also have huge presence in the overseas markets and are today **available in over 100 countries across the globe**. Its brands are highly popular in the Middle East, SAARC countries, Africa, US, Europe and Russia. **Dabur's overseas revenue today accounts for over 27% of the total turnover.**

The 135-year-old ayurvedic company, promoted by the Burman family, started operating in 1884 as an Ayurvedic medicines company. From its humble beginnings in the bylanes of Calcutta, Dabur India Ltd has come a long way today to become one of the biggest Indian- owned consumer goods companies with the largest herbal and natural product portfolio in the world. Overall, **Dabur has successfully transformed itself from being a family-run**

business to become a professionally managed enterprise. What sets Dabur apart from the crowd is its ability to change ahead of others and to always set new standards in corporate governance & innovation.

Dabur also recommends various Ayurvedic Home Remedies formulated using ayurvedic plants & herbs which are natural & chemical free.

Patanjali Ayurved Limited

Patanjali Ayurved Limited produces quality Herbomineral preparations. To monitor quality, the Divya Yog Mandir Trust and Patanjali Yog Peeth grow many endangered herbs on its farmland. The principles of Good Manufacturing Practices (GMP) are rigorously followed in the plant and Company prides itself on being environment friendly.

A high stress on quality, several quality circles and special quality circles and special project teams working on Total Quality Management (TQM) projects make quality a way of life in Patanjali Ayurved Limited. This enables Patanjali Ayurved Limited to produce herbomineral preparations with uniform levels of batch-to-batch consistency. This ensures that the customer gets the same high quality product regardless of where it is purchased.

The special equipment required for manufacturing of sterile products (bhasma, ghanstva, eyedrop, capsule, etc.) includes component washing machines, steam sterilizers, membrane filter machines, manufacturing vessels, blenders, liquid filling machines, powder filling machines, sealing and labelling machines, vacuum testing chambers, inspection machines, lyophilisers, pressure vessels, etc. are provided depending on the type and volume of activity.

Unit sterilizers are double ended with suitable interlocking arrangements between the doors. The effectiveness of the sterilization process is established initially by biological inactivation studies using microbial spore indicators and then at least oncea year by carrying out thermal mapping of the chamber.

Filling machines are challenged initially and then at periodic intervals by stimulation trials including sterile media fill.

On procurement, engineers with the support of production and quality assurance personnel have done installation qualification of each of the equipment. Equipment for critical processes like aseptic filling and sterilizers are suitably validated according to a written programme before putting them to use.

Standard operating procedures are available for each equipment for its calibration and operation and cleaning.

MULTINATIONAL PLAYERS

Cadbury India Ltd (CIL)

Cadbury Indian Ltd is a 93.5 per cent subsidiary of Cadbury Schweppes Plc, UK, and a global major in the chocolate and sugar confectionery market. CIL is currently the largest player in the chocolate market in India with a 70 per cent market share. The organization is also a key player in the malted foods, cocoa powder, drinking chocolate, malt extract food and sugar

International Journal of Scientific Research in Engineering and Management (IJSREM)
Volume: 06 Issue: 05 | May - 2022 Impact Factor: 7.185 ISSN: 2582-3930

confectionery segment. CIL had also entered the carbonated drinks market with brands like ‘Canada Dry’ and ‘Crush’, which were subsequently sold to

Coca Cola in 1999. Established brands include Dairy Milk, Perk, Crackle, 5 Star, Éclairs, Gems, Fructus, Bournvita etc. The company plans to increase the number of retail stores for future growth and market expansion.

Colgate-Palmolive India

Colgate Palmolive India is the market leader in the Indian oral care industry, with a 51 per cent market share in the toothpaste segment, 48 per cent market share in the toothpowder market and a 30 per cent share in the toothbrush market. The company also has a presence in the premium toilet soap segment and in shaving items, which are sold under the Palmolive brand. The company plans to launch new products in dental and personal care segments and is prepared to continue spending on advertising and marketing to gain market share. Profit margins are being targeted through efficient supply chain management and bringing down costof operations.

Hindustan Unilever Ltd (HUL)

Hindustan Unilever Ltd is the nation's largest and most significant consumer goods company. The product portfolio of the company includes household and personal care products like soaps, detergents, shampoos, skin care products, colour cosmetics, deodorants and perfumes. It is also the market leader in tea, processed coffee, branded wheat flour, tomato products, ice cream, jams and squashes. HUL enjoys a solid distribution network masking over 3,400 distributors and 16 million outlets.

Nestle India Ltd (NIL)

Nestle India Ltd a subsidiary of Nestle SA, Switzerland, is a leading manufacturer of food products in India. Its products include soluble coffee, coffee blends and teas, condensed milk, noodles (81 per cent market share), infant milk powders (75 per cent market share) and cereals (80 per cent market share).

Nestle has also established its presence in chocolates, confectioneries and other processed foods. Soluble drinks and dairy products are the major contributors to Nestle's total sales. Some of Nestle's popular labels are Nescafe, Milkmaid, Maggi and Cerelac. The company has entered the cold milk products segment with the launch of Nestle Dahi. Nestle has also made a venture in non-carbonated cold beverages segment through placement of Nestea iced tea and Nescafe Frappe selling machines.

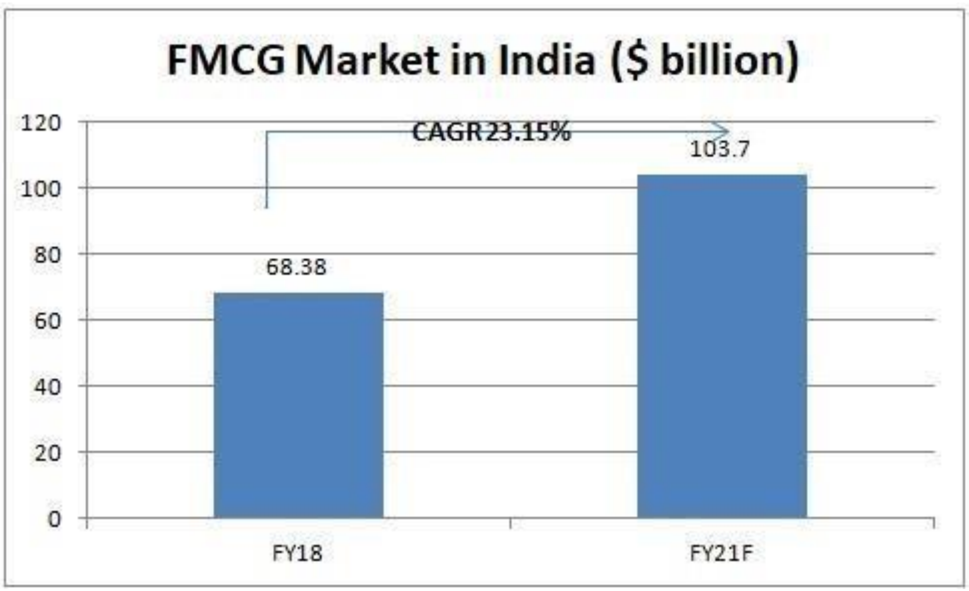
PepsiCo

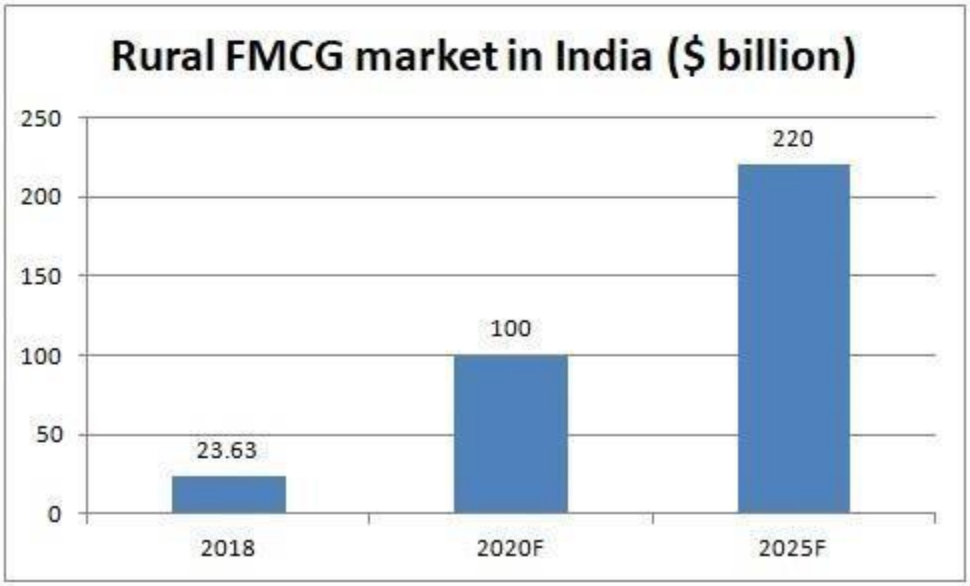
PepsiCo is a world leader in convenient foods and beverages. PepsiCo brands are available in nearly 200 markets worldwide. PepsiCo entered India in 1989 and is working on three focus areas – soft drink concentrate, snack foods and vegetable and food processing. PepsiCo's success is the result of excellent products, high standards of performance and unique competitive strategies.

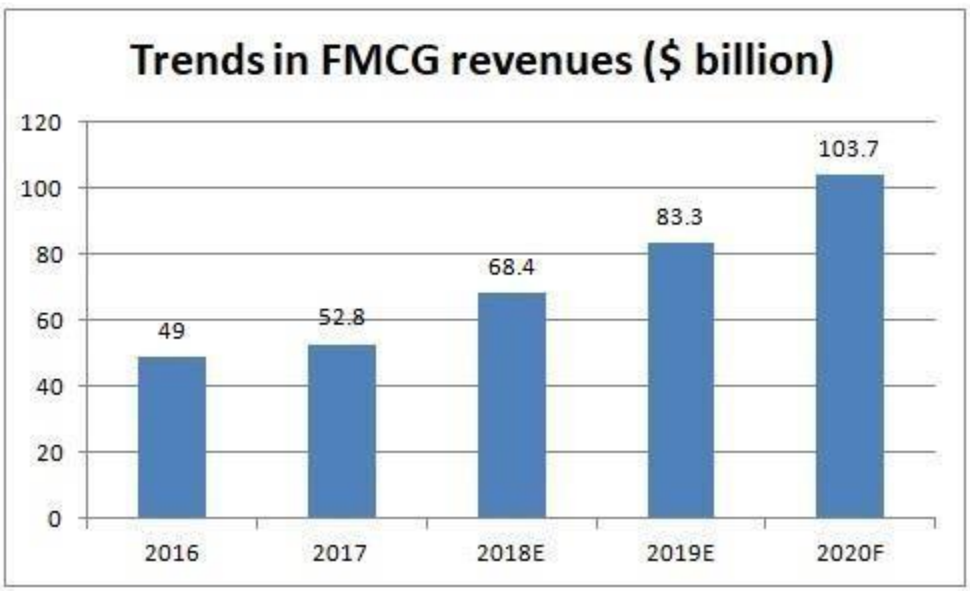
MARKET SHARE OF MAJOR PLAYER OF FMCG INDUSTRYIN INDIA

Fast Moving Consumer Goods have a low shelf life and/or are perishable in nature. They have a lower margin but they consumed on a regular basis hence result in higher sales. It is the fourth largest sector in the Indian economy.

FMCG market has grown from $68.38 billion in 2018 to 83.3 billion in 2019. In FY21, it is expected to grow at a CAGR of 23.15%. Neilsen estimates the FMCG industry to grow at 9- 10% in 2020 as against 13.8% in 2018 and India's contribution to global consumption is expected to more than double to 5.8% by







Competitive Advantage for India

- Rural demand in India contributes 45% to overall FMCG revenue share; expected to growto $220 billion by 2025 from $23.63 billion in FY19
- It is estimated that India will gain US$ 15 billion a year by implementing GST.
- Indian consumers are highly adaptable to new and innovative products

Government Policies:

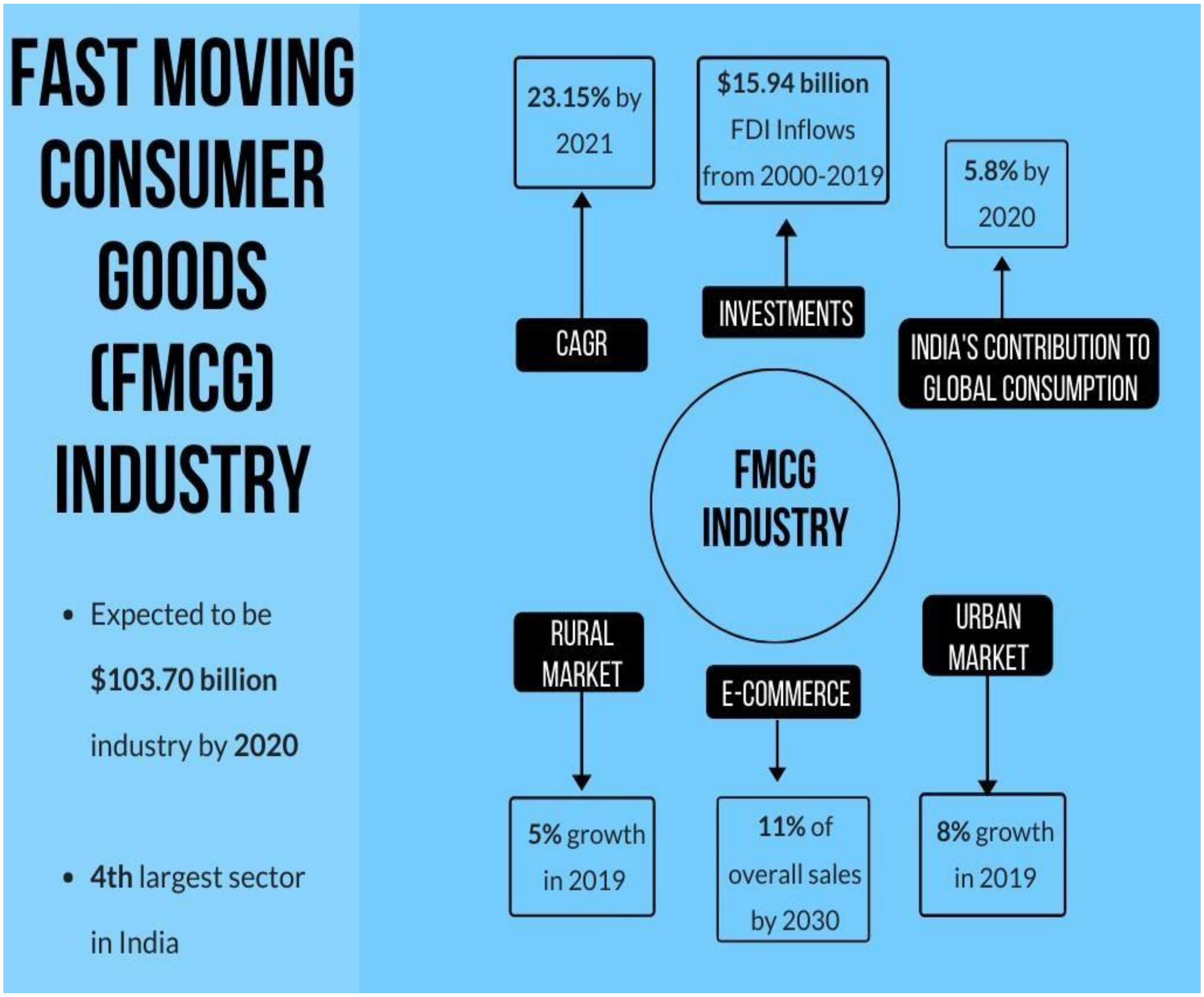
- Government initiatives like Food Security Bill and direct cash transfer subsidies have penetrated 40% of households in India.
- 100% FDI in single retail and 51% FDI in multi-brand retail approved by the government Warehousing cost for FMCG companies is estimated to fall by 25-30% backed by the implementation of the GST.
- Goods and Services Tax (GST) will move a lot of FMCG products like soap, toothpaste,and hair oil from 23-24% to 18% tax bracket.
- Government has invested $163.73 million to initiate the Self Employment andTalent Utilisation (SETU) scheme to boost young entrepreneurs.

Investments:

- From 2000 to 2019, FDI inflow was $ 15.94 billion
- Foreign FMCG companies to invest a minimum capital of $100 million

Market overview

- Household & Personal hygiene account for 50%, Healthcare for 31% and food & beveragesaccount for 19% of the overall FMCG market
- The FMCG market is reach $103.70 billion by 2020
- The retail market in India is reach $1.1 trillion by 2020 with modern trade expected togrow at 20-25% per annum


FAST MOVING CONSUMER GOODS (FMCG) INDUSTRY
Expected to be $103.70 billion industry by 2020
4th largest sector in India
23.15% by 2021
CAGR
$15.94 billion FDI Inflows from 2000-2019
INVESTMENTS
5.8% by 2020
INDIA'S CONTRIBUTION TO GLOBAL CONSUMPTION
FMCG INDUSTRY
RURAL MARKET
5% growth in 2019
E-COMMERCE
11% of overall sales by 2030
URBAN MARKET
8% growth in 2019

CHAPTER – 3

SWOT ANALYSIS

Gap Analysis

Indian organizations are still keeping up with among the Material Resource Planning (MRP-II), Enterprises Resource Planning (ERP), Logistics and Supply Chain Management (SCM). However, it is quite apparent that Indian corporate sector is fast realizing the need of SCM, which can integrate all other practices and procedures. SCM in India offers one of the fastest growth areas in revenues as well as employment.

India started a little overdue for restructuring and reformulating the strategies relevant with supply chain. However, there is no doubt that Indian industries are fast catching and preparing for meeting the new business environment. A study of available literature related with Indian business practices after 1991's liberalization guidelines show that organizations are concerned about their value chain and identifying that competition is shifting towards the efficiency and performance of entire supply chain activities.

The traces of SCM adoption by Indian organizations are given as:

Until 1990, logistics was treated as the management of transportation, inventories and warehousing and organizations had to perform these activities individually in an efficient manner.

Before opening of Indian market, Indian business giants were enjoying the single play with stable development of capacities. Later on when they heard the music of competition, they found themselves with excess capacities with huge cost burdens. This required organizations to control the cost factor for the survival at marketplace.

At the same time of 1990's, Indian companies got fascinated by Business Process Reengineering (BPR). Organizations treated BPR as remedy of their illness across the organizations' processes and functions by eliminating the non-value adding activities and streamlining the operations with a guarantee of higher returns.

Fast growth and development of telecommunication networks and wide spread of information technology tools and techniques after mid 1990s presented the biggest challenge in managing well-informed clients. Nevertheless, these changes also provided the most significant boost to Indian industries because organizations discovered themselves able to reach out vendors or suppliers on one end, and clients to the other. Due to this revolution only, ERP-II integrated the internal departments into a seamless organization, whereas, SCM attempts to integrate the exterior factors and processes into the internal procedures.

It was interesting to note that a company called Future Supply Chain Solutions Ltd. which is situated in Mumbai, India believes that, there is a need for cutting-edge and contemporary supply chain management practices in India through implementation of global best practices, indigenized and best adapted for Indian conditions. Some of these practices are now a visible proof of supply chain modernization in India. This company identifies a network of Big Box logistics parks with Infrastructure, Technology & Automation, People, Systems & Processes and Knowhow; running in a seamless manner which has helped reduce Time-To-Market and Cost-To-Market and thereby help increase revenues and profitability of our customers. The researchers has taken the above company as an example and how they are helping the customers in improving supply chains and usage of IT.

We can define that the Supply Chain Management is a set of activities undertaken to promote effective and efficient management of supply chains. Out of those activities could be supplier partnership, physical movement of goods, meeting customer demands and information sharing throughout the supply chain. However, the performance with respect to Supply Chains are related to estimation of customer needs, efficient and effective delivery, integration and collaboration throughout the supply chain, sharing of information and vision using IT as well as use of specialists for performing specific jobs across the supply chain. Therefore, we can understood that these practices of IT has a role on supply chain performance. It is important to note that **BRICS** is the acronym for an association of five major emerging national economies: **Brazil, Russia, India, China, and South Africa** ("New era as South Africa joins BRICS",2012). We need to know that BRICS members are all developing or newly industrialized countries, but they are distinguished by their large, fast-growing economies and significant influence on regional and global affairs; all five are G-20 members.(BBVA Research. 2012). According to the latest study of 2014, the five BRICS countries represent almost 3 billion people which is 40% of the world population, with a combined nominal GDP of US$16.039 trillion (20% world GDP) and an estimated US$4 trillion in combined foreign reserves ("World Economic Outlook". IMF. April 2013). As India belongs to

BRICS, the Growth Competitiveness Index survey conducted by the Geneva-based World Economic Forum (WEF) for 2014-15 puts India at 71st position among 144 economies in its Global Competitiveness Report. (http:// /www.weforum.org/).

The below figure tells us the status of India among BRICS in terms of its Global Competitiveness.

How the BRICS stack up

The Global Competitiveness Index 2014-2015	Global rank*
China	28
Russian Federation	53
South Africa	56
Brazil	57
India	71

Source: The Global Competitiveness Report 2014-2015
Note: * 2014-2015 rank out of 144 economies

FMCG Trends for 2021

As India prepares to enter 2021, there are some good tidings. Going by the latest reports, the economy is in the revival mode. With vaccines to combat COVID-19 a reality – although mass availability is some way off – hope abounds that the pandemic may be brought under control, sooner rather than later.

All of which augurs well for the FMCG segment, which is India's fourthlargest sector, employing three million-plus people. In the Rs 4.0 lakh crore industry, household and personal care items comprise around 50 percent of FMCG sales. While the urban segment contributes around 55 percent of the total FMCG revenues, the market in rural regions is expected to record faster growth. As semi-urban and rural India grows at a robust pace, FMCG products already account for half ofthe total spending in rural areas.

Significant Facts and Figures

Despite the pandemic's impact on consumer spending behaviour in 2020, the situation is expected to turn around in 2021. Currently, most households remain wary about what they purchase and the frequency of purchases. In 2020, lockdowns and other pandemic-related restrictions meant people preferred purchasing essentials online, including FMCG goods, rather than visiting brick-and- mortar stores.

The possibility of vaccines being available in India at some point, however, will lead to increased sales from conventional outlets such as local markets, hypermarkets and kiranas, among others. But digital will continue being a parallel purchase mode because both urban and rural people have developed a degree of comfort regarding online orders.

The biggest benefit of online shopping is that it can be done from the safe confines of homes without worrying about social distancing norms. As per a Nielsen Global Connect report, online shopping has seen an increase of more than 20 percent.
Meanwhile, an intriguing fact – rural markets performed relatively better than urban ones after the corona virus outbreak. Data analytics firm Nielsen noted that in June 2020, there was a strong bounce-back in sales of FMCG goods across rural and semi-urban markets even as bigger cities saw a decline. In 2021 too, the sales revival in Bharat may continue outpacing that of India.

Partly, this is attributed to the severity of the pandemic in urban zones whereas Bharat faced relatively less stringent lockdowns. Also, the reverse migration of workers to their native places would have increased rural demand. Though most workers are said to have later returned to the cities, some preferred to stay back. These trends could continue to play out in 2021.

Deploying Digital

Given the pandemic-linked disruptions to supply chains, FMCG players deployed digital technologies in a big way to drive BCPs (business continuity plans). Having learnt the benefits ofe-commerce, FMCG entities are expected to maintain their digital presence even after normalcy is restored and COVID-19 comes under control. The shock of the pandemic has made it clear that an omni-channel approach of physical plus digital sales is the best way to drive BCPs in case of any future disruptions.

In 2021, FMCG companies will need to invest in tech tools that enable eordering, e-invoicing as well as e-collections via digital payment platforms. Innovations in digital would be the way forward in overcoming sudden disruptions in supply chains. Keeping this in mind, a global food company is aiming to create a mobile application that could serve as a digital sales model. Rather than sending its reps into the market, it is seeking to find solutions allowing retailers to place orders directly via WhatsApp, mobile or an app.

A Deloitte Consumer Tracker survey indicates there is a rising shift towards BOPIS (buy online pickup in-store), besides the growth in pureplay online purchases and deliveries. The main motivators: safety and the option of browsing through entire product portfolios more efficiently from the comfort and convenience of one's home.

Moreover, even as most economies continue facing headwinds and muted consumer demand, the FMCG sector will see sustained growth in select segments. For instance, consumers are raising spends on health, hygieneand nutritional products,including packaged goods. As people prefer staying indoors to avoid the risk of infection, e-commerce is their first choice in purchasing products.

The changing consumer patterns are due to mounting awareness about immunity-boosting products and those deemed safe, against the backdrop of corona virus concerns. Accordingly, companies would need to tweak their product portfolios and distribution strategies.

As we welcome 2021, the focus on consumer data, behaviour trends and digitalisation must continue. In the months ahead, demand-driven supply will count more than supply-side drivers. Inthe post-COVID era, consumers would undoubtedly continue calling the shots in driving FMCG sales.

SWOT ANALYSIS OF FMCG SECTOR

Strengths

- Low operational costs
- Presence of established distribution networks in both urban and rural areas
- Presence of well-known brands in FMCG sector

Weaknesses

- Lower scope of investing in technology and achieving economies of scale, especially insmall sectors
- Low exports levels
- Counterfeit Products. These products narrow the scope of FMCG products in ruraland semi-urban market.

Opportunities

- Untapped rural market
- Rising income levels, i.e. increase in purchasing power of consumers
- Large domestic market- a population of over one billion.
- Export potential
- High consumer goods spending

Threats

- Removal of import restrictions resulting in replacing of domestic brands
- Slowdown in rural demand
- Tax and regulatory structure

Major issues taken up by the FMCG SECTOR

1. GST
2. A C Nielsen
3. Environment Protection Act notification on use of plastics.
4. Sugar Representation
5. Cross Border Taxation
6. Competition Act

Robotics & Artificial Intelligence: Fueling Growth of Indian FMCG Industry

Key players in the sector are learning fast, innovating and transforming their ways of operating to meet changing customer demands.

Fast Moving Consumer Goods (FMCG) companies are using technology to beat longstanding challenges and build on emerging opportunities in the face of current challenges brought upon by Covid-19. Key players in the sector are learning fast, innovating and transforming their ways of operating to meet changing customer demands.

This disruption is set to change business models for the better, ushering in a new era of efficient, flexible and sustainable consumer goods companies. Robotics and Artificial Intelligence is set to bring about large changes by enabling greater efficiency across the FMCG sector in the immediatefuture.

Rapidly Growing Industry

The Fast Moving Consumer Goods (FMCG) sector is the fourth largest sector in India, growing at a compound annual growth rate (CAGR) of almost 28 percent, according to a November 2019 report by the India Brand Equity Foundation (IBEF). Demand in the FMCG industry is spurred by growing affluence and appetite of the Indian consumer, growing youth population and increasing brand consciousness. On the other hand, easier import of materials and technology, reduced barriers to entry of foreign players, and new product development with improvement in supply chain efficiency are major supply drivers for the sector.

Current Challenges in the FMCG Industry

Manual labour issues in material handling are a major challenge in the industry. According to the material handling industry forum, 25 percent of the material handling cost is attributable to intralogistics cost. Manufacturing processes are highly human labour dependent – from raw material feed to material processing to finished goods movement. The labour-intensive activities such as packaging and palletising not only cause physical but also mental stress to the employees leading to loss of productivity. Additionally, industry leaders have been showing caution in using traditional heavy machinery like forklifts for material transfer as there are major safety concerns of using a forklift, battery-operated pallet trucks, etc.; relating to not only goods safety but the safety of the human workforce. Further, the lack of real-time data – especially for material in transit
– is a big hindrance in
achieving efficiency in operations.

The Growing Need for Automation

To tide over these issues, there is a growing need for automation to kickstart growth and increase productivity. Increasing dynamism in consumer demands – more SKUs, more product variations, market fluctuation- resulting in increasing complexity in manufacturing processes- amplify the need for adaptability.
Operational efficiency, productivity and real-time traceability are crucial for FMCG companies to gain or maintain competitiveness.

According to McKinsey & Company, up to 90 percent of all 'predictable physical' processes in manufacturing can be replaced by automation to the benefit of producers and consumers. Though hit hard by the Covid-19 pandemic and the nationwide lockdown, the companies had to step out of their comfort zones and explore new ways of doing business. The Covid-19 pandemic stressedthe need for human-touch free processes as physical distancing is now becoming a norm.

Emphasis on Cold Supply Chain:

As per 'Indian Cold Chain Industry Outlook 2022', the Indian cold supply chain sector is set to grow at a CAGR of 17-18%, till 2022, due to demand for cold storage, primarily driven by the pharma sector, especially the vaccine supply chain in early 2021, followed by requirements fromseafood, meat and similar industries. While growth will be driven by introduction of a government led COVID immunization program, the growing e-commerce market for FMCG, dairy, meat and fish, will also help prope the sector significantly, given the ongoing virus threat.At present, healthcare products hold a 3.6% share in the overall Indian cold chain market that is expected to grow around 6% by end of 2021 as per IMARC services.

Growth in 3PL and 4PL providers as Manufacturing grows:

Agility, speed and mobility are set to be the key goals for a robust supply chain network and preference of 3 and 4PL service providers is going to set the tone for development, in 2021. While manufacturing has been one of the early adopters of 3PL and 4PL service providers, soon other sectors are also likely to benefit from outsourcing their supply chain management to experts, so they could focus on re-building and strengthening the core business, especially in the aftermath ofthe pandemic. Further, the evolution of these service providers into key partners, offering expert, end to end solutions ranging from documentation, tracking, warehousing, legal compliance and even kitting in some cases at competitive rates, has made them a lucrative choice for most businesses that are currently working on bouncing back from the financial crisis. The Indian 3PL market is expected to register a growth rate of over 11.5% during the forecast period of 2020-2025, with strong focus on value driven services that enhance customer satisfaction and delight.

Affordable Road transport:

Go plans to build massive road network in future, emphasis will be given to develop infrastructure like dedicated freight corridors, container freight stations etc. India needs to come up with intermodal and multimodal transport system to reduce the transportation and storage cost which in today's time is relatively high. Unfortunately, current poor road infrastructure decreases the maximum distance that can be covered by the heavy transport vehicles on highways. To combat such challenges, Government of India has decided to cut down on the current logistics cost of India's GDP in next two years with help of Ministries of Railways, Transport, Shipping and Aviation in order to achieve this goal.

Sustainable practices will be implemented:

Green logistics is going to be the key aspect of the supply chain evolution in the year 2021. Sustainable practices have already become a norm amongst international logistics and supply chain players as well as businesses. They view the green supply chains as responsible and sometimes even a mandatory criteria when selecting a logistics partner. With the influx of international manufacturing and e-commerce players, the Indian green Logistics and supply chain is set to get a boost, thanks to encouraging business opportunities for those adopting sustainable practices. Apart from protecting the environment and helping the society overall, sustainable practices are also becoming cost-effective, thanks to the fast paced technology evolution in the sector and are becoming instrumental in gaining consumer loyalty and endorsement for the socially and environmentally responsible millennial population. From adopting eco-friendly business models that follow environmentally conscious choices to e-commerce giants opting for zero plastic packaging or reducing packaging waste through recycling, to a more sophisticated use of solar panels for cold storage and temperature regulation A gradual shift of electronic trucks for transportation, recycling waste and systematic disposal of the chemical and other harmful waste, etc., are soon becoming popular green practices among Indian logistics and supply chain players.

Adoption of Technology:

This is another major trend that is set to make considerable impact on the sector. With businesses adopting the emerging technologies like AI, ML, Big Data etc., supply chain industry is no exception to adapting automation in processes and operations. Embracing artificial intelligence has only eased the making of processes more efficient, advantageous and dependable. Technology such as internet of things (IoT) helps maintain a transparent supply chain network, in turn helping to bring visibility, build customer loyalty and trust. From modern WMS and Automated Guided Vehicles (AGV) to AI driven robotics and use of data analytics, technology adoption is going to be at the center of the growth and development of the Indian logistics and Supply Chain sector, in2021. Given the goals and growth opportunities envisioned by the government: from making India a global manufacturing hub to focus on strengthening the local businesses with **'Atmanirbhar Bharat'**, **'Vocal for Local'** and the 'Start Up India' powered by a wide spread technology adoption, there is an urgent need to identify and address the existing vulnerabilities at the core of Logistics and Supply chain networks that are the backbone of a strong economy.

CHAPTER-4

RESEARCH METHODOLOGY AND RESEARCH DESIGN

STUDY TOPIC

Role Of Supply Chain Management in FMCG Industry Of India.

OBJECTIVE OF STUDY

- To study the opportunities in Role of Supply Chain Management in FMCG industry of India.
- To study the challenges in Indian FMCG Industry.
- To analyze the market share of FMCG industry.
- To estimate the effectiveness of Role of Supply Chain Management in FMCG industry in themarket.

RESEARCH METHODOLOGY

Exploratory research:

Exploratory research is defined as a research used to investigate a problem which is not clearly defined. It is conducted to have a better understanding of the existing problem, but will not provide conclusive results. For such a research, a researcher starts with a general idea and uses this research as a medium to identify issues, that can be the focus for future research. An important aspect here is that the researcher should be willing to change his/her direction subject to the revelation of new data or insight. Such a research is usually carried out when the problem is at a preliminary stage. It is often referred to as grounded theory approach or interpretive research as it used to answer questions like what, why and how.

For example: Consider a scenario where a juice bar owner feels that increasing the variety of juices will enable increase in customers, however he is not sure and needs more information. The owner intends to carry out an exploratory research to find out and hence decides to do an exploratory research to find out if expanding their juices selection will enable him to get more customers of ifthere is a better idea .

CHAPTER-5

FINDINGS

FINDINGS

The retail market in India is estimated to reach US$ 1.1 trillion by 2025 from US$ 840 billion in 2017, with modern trade expected to grow at 20-25% per annum, which is likely to boost revenue of FMCG companies. Revenue of FMCG sector reached Rs 3.4 lakh crore (US$ 52.75 billion) in FY18 and is estimated to reach US$ 103.7 billion in 2020. FMCG market is expected to grow at 9–10% in 2025. Rise in rural consumption will drive the FMCG market. It contributes around 36% to the overall FMCG spending. FMCG urban segment witnessed growth rate of 8%, whereas, rural segment grew at 5% in the quarter ended September 2020. The Government of India has approved 100% FDI in the cash and carry segment and in single-brand retail along with 51% FDI in multi-brand retail.

The Goods and Services Tax (GST) is beneficial for the FMCG industry as many of the FMCG products such as soap, toothpaste and hair oil now come under the 18% tax bracket against the previous rate of 23–24%. Also, GST on food products and hygiene products have been reduced to 0–5% and 12–18% respectively.

It is estimated that India will gain US$ 15 billion a year by implementing GST. GST and demonetisation are expected to drive demand, both in the rural and urban areas, and economic growth in a structured manner in the long term and improved performance of companies within the sector.

The FMCG Industry is on a high growth curve with the overall demand expected to multiply over the next decade. This high growth is most likely to be accompanied by significant structural shifts such as changing customer, preferences, emergence of modern retail dimensions, growing rural spend tendency.

With the presence of 12.2% of the world population in the villages of India, the Indian rural FMCG market is something no one can overlook. Better infrastructure facilities will improve their supply chain.

SCM in India offers one of the fastest growth areas in revenues as well as employment. The performance with respect to Supply Chains are related to estimation of customerneeds, efficient and effective delivery, integration and collaboration throughout the supply chain, sharing of information and vision using IT as well as use of specialists for performing specific jobs across the supply chain.

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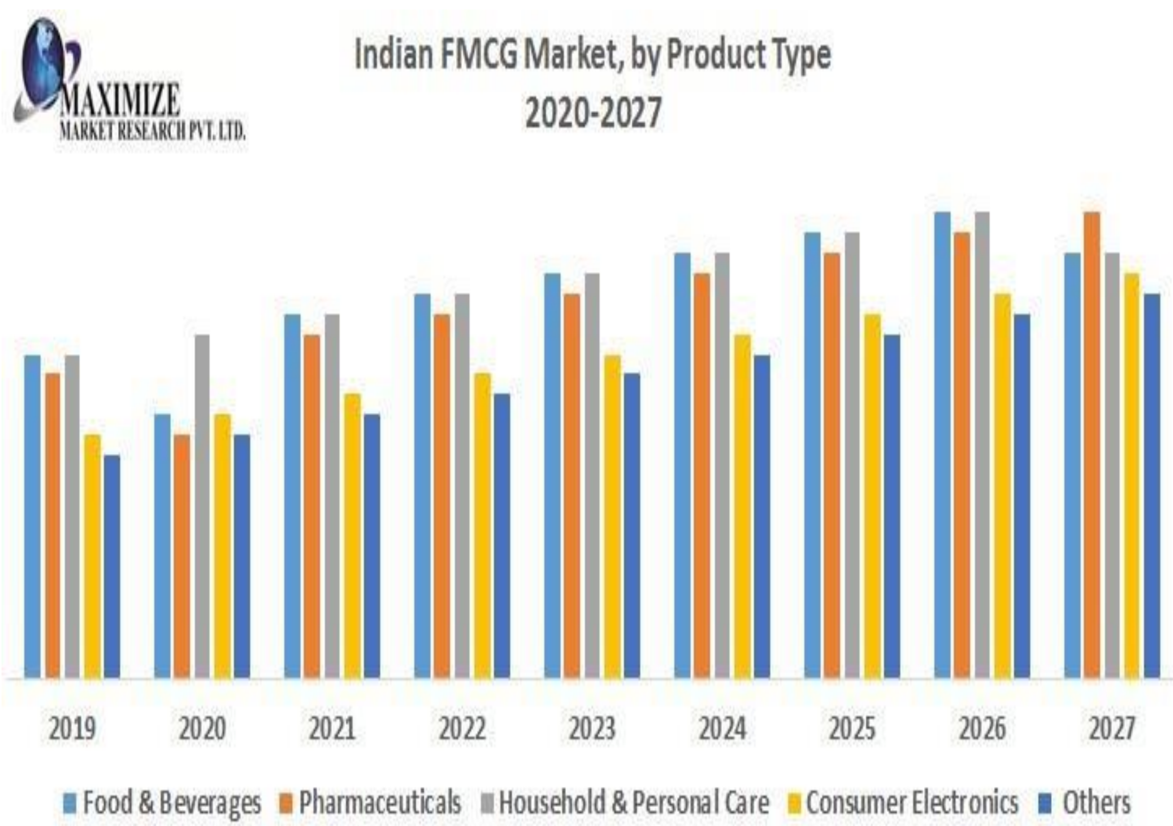
FMCG businesses can achieve the optimal model for manufacturing success. According to the Accenture report, Artificial intelligence in FMCG will increase productivity by 40 percent and profitability by 38 percent by



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 partment in professionally managed company however in small and medium sector itis 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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