

FMCG Sector Response to Covid-19: Impact on Supply Chain and Logistics

Anup Sharma¹, Anmol Sharma², Varun², Dhanya Andrews², Rosmin Roby²

¹Assistant Professor, Lovely Professional University;

²MBA Scholar, Lovely Professional University

Abstract:

Covid-19 pandemic affected multiple disciplines. Almost all industries suffered owing to economic stress and Government regulations. Handling and transportation of goods became more challenging. FMCG sector was significantly affected by the pandemic and organizations adopted multiple strategies to keep themselves afloat. Multiple trade-offs were considered by organizations including partial closure, limited operational hours, and restructuring of the supply chain. Multiple reports across different industries were studied and supplemented with in-depth interviews from the industry experts. The study revealed the use of innovative ways to reach customers. Organizations tried adopting lean practices in-order to support stressed-out logistics handlers.

Keywords: covid-19, supply chain, logistics, FMCG

Introduction

The sudden outbreak of COVID-19 in China and then later on turned into a pandemic. All the countries of the world got impacted and everything got disturbed starting from small sections to large sections including Global supply chains. COVID-19 has changed the entire scenario of the world within months or even in weeks. The supply chain is one of the essential elements to make the product available to customers. FMCG industry providing the essentials for humans and availing the day-to-day needs. COVID-19 has taken every industry with a bang and since the origin was from China the largest manufacturer and with advanced supply chains still countries are not interested in dealing. The disruption begins and the entire supply chain of the world got impacted and the FMCG sector suddenly freezes.

As the world grapples with the unraveling human and economic crisis before us, supply chains find themselves firmly inside the public eye and facing their unique challenges. Experts have been dwelling on 'supply shocks' for weeks at the start of the year, as COVID-19 took its toll on China. There were disturbances to the supply of goods sourced from China; both finished goods for sale and items used in established market factories. Companies struggled to decide what performance was possible, and what demand could be fulfilled. It made sense to think about supply chain resilience at that moment. The lessons learned on resilience for global value chains under pressure have been addressed previously and the five supply chain resilience levers should be placed in place by companies. Some businesses have already incorporated these lessons, while others have relentlessly streamlined manufacturing and increased procurement in the interests of cost and the sacrifice of agility and resilience.

The FMCG is a fast-moving consumer goods industry in India that has been dynamic and was the significant, changes in the year leading up to the pandemic. FMCG is having the largest fourth position in the National economy. The major segments of their sector are Food & beverages (19%), Households and personal care (50%), and Healthcare products (31%). FMCG has been growing in a good manner since 2018. The situation moreover changed now. Due to the pandemic, their growth rate went rapidly downwards. The major sector had been seeing a slow down since mid-2019 with the growth rate declining from the past 12 to 15 months from the mid-teens to around half of that by January/February. In the scenario, FMCG is fast-moving consumer goods and players compete by way of price cuts and greater offers to consumers or customers in the hope of gaining market share. This is especially true for urban areas. The FMCG sector in rural areas has grown up faster pill pace than its urban counterpart with FMCG product accounting for about half of total ruler spending. There is the semi-urban and rural segment contributes over

40% of the overall revenue of the FMCG sector in India and with about 12% of the world population livelihood in the villages of India also the India ruler FMCG market is said to be driven Force for the industry at large scale.

Now Global supply chains under the FMCG sector have faced so much in the past few months and due to this pandemic, every country has faced a lot and since the disruption of traditional supply chains has made humans suffer along with the sufferings to the businesses. So, the continuous impact on supply chains due to this pandemic enforces the organizations to bring sustainable measures which can last even when there is any misfortune or complex situation in the future.

As the pandemic crisis deepened and nations started to institute lockdowns, something entirely different has been encountered by supply chains: systemic demand shocks, where consumers stock up on consumer staples to comply with limits on movements, often purchasing supplies for months in a single day. There seemed to be a fear that food supply chains would not be able to respond to this huge, unprecedented demand spike. Consumer staple supply chains have replied to the call, with a few exceptions. Store shelves have been replenished and this has offered a measure of reassurance in a distressing time for individuals. But with a herculean outstanding effort, the supply chain experts behind the scenes have achieved this, as the classic planning models are not constructed to meet such extreme demand peaks. It can be notoriously manual and lacking in complexity for replenishment models that dictate orders from supermarket chain fulfillment centers to stores. They are ideally suited to continuous demands that are relatively smooth. There was a scramble to redirect inventories, determine goals and override IT supply proposals with pipelines being emptied. Effective replenishment, on the supply side, is the outcome of optimizing production with all surplus capacity in use. The complete pipeline has probably not yet been restored, because food supply chains are typically finely tuned for steady demands.

However, in production systems, the supply chain has not seen the end of manual interventions. To measure store-level specifications, many replenishment systems use simple moving averages. Supply chain planners would have to change supply amounts manually and scramble to change their planning processes for such an enormous demand surge polluting these moving averages.

This research paper designed by us is based upon the reviews from prominent writers and we have included their researches and put a detailed study to their literature and then by taking the valuable note from all the literature we have come up with a valuable paper showing the way the COVID-19 has impacted the global supply chains. Along with that, the information which we have gained from this literature regarding the future was very enlightening and we have proposed the future of the Global supply chains which will include Sustainable Supply chains, more involvement of E-commerce and IOT has come as a big thing regarding future.

Review Of Literature

FMCG supply chain and logistics pre-COVID19

One of the main industries worldwide is fast-moving consumer products (FMCG). Our world spins around consumer products, from our morning showers to our oats and fruit brunch, or workplace outings at a nearby pub or snacks at a street vendor. Ever-changing customer tastes and emerging innovations are continuously transforming the industry today. Customers prefer new products, which ensure that a broader variety of items is easily manufactured at higher volumes. Consumers also spend more in emerging countries, which increases the call for an extended supply chain.

Global markets are expanding and re-defining the way demand and supply are handled outside borders. Markets around continents propel multinational businesses. They are forced to keep looking to set up production centers where the cost of raw materials and labor is cheap to keep the cost of manufacturing down. The sourcing of raw materials and suppliers to provide the right quality, quantity and price require a diverse country-wide procurement strategy (**P Rajan Chinna, 2019**). Supply chain management information is scattered across various domains and a systematic literature review is needed to identify the gaps in Supply chain management literature. (**Burgess, Singh and Koroglu, 2006**). Empirical research on supply chain flexibility has concentrated largely on one (manufacturing) company, often adding a producer, distributor, or retailer's adjoining view. The present paper argues that it is not appropriate for a dyadic perspective and that an integrated perspective is needed. In-depth case study information was gathered and analyzed. In a fast-moving food supply chain for consumer products (FMCG), comprising vendors, major producers, suppliers of logistics services, and retailers. The study explored how these eight companies

perceive flexibility through the supply chain, drawing on network theory and stakeholder theory. The results indicate that versatility is enforced by each chain member to meet the next-tier chain member's direct needs. Other flexibilities are prioritized by companies at various supply chain roles. No support for overall versatility in the supply chain is available (**Jorieke H. M. Manders, 2016**).

An immediate and long-lasting shift in consumer spending for FMCG companies has caused the corona virus's effect on trade. This shift is due to increasing demand for particular fast-moving consumer products, shifts in patterns in usage and stock requirements. Businesses now rely on a supply chain that is flexible and creative. Consumer goods companies need versatility, visibility, and transparency in their worldwide logistics process to be effective if current trends are to be the new standard.

Perishable goods and their distribution:

During this pandemic, everything got disrupted and the nature of the pandemic was solely responsible for this. The perishable goods had a huge impact on their supply in many regions around the world. The supply chains which were linking the products such as vegetables and fruits from producers to the retailers were disrupted and the impact was felt in many countries. The categorization was done by **Richards and Bradley, (2020)** into short term impacts and long term impacts and they had discussed the disruption of supply chains in Canada especially for fruits and vegetables, and categorized it as short term impact whereas when the trade with Canada, USA and Mexico was taken into consideration then the impact was deep and termed as long term impact due to the impact of COVID-19 in the USA and due to which the entire trade between North American countries got disrupted because of the role USA was playing in the trade as USA was providing raw materials and even labor for smooth operations within three NAFTA countries. This disruption of supply chains was felt globally and even the developing nation with a huge population felt the deep impact of this pandemic i.e. India. Though the COVID-19 reached India late still the impact had disrupted the supply chains as mentioned by **Kanika Mahajan and Shekhar Tomar, (2020)**. They had provided statistical data claiming a fall of 10% in the availability of vegetables and fruits but the prices didn't fluctuate much. On the other hand, the quantity available of these perishable goods fell 20%. They had proposed a reason for this fall as disruption of supply chains. In their research, they had frequently assessed the distance between the point of cultivation to the retailers and the impact on availability and quantity and the final evidence they had obtained from this research was that the longer the distance between the producers and retailers i.e. longer supply chains had a deep impact due to this pandemic because of less welfare of urban consumers and farmers. This pandemic further impacted the logistics as well and the impact can be felt in the entire supply chain. The impact on Public Distribution System (PDS) was also felt and the research done by **Sube Singh, et.al., (2020)** showing the impact on logistic systems and supply chain. They had talked about difficulties that vast networks of PDS were facing in terms of supply and demand and the changing scenarios that were impacting this traditional system. They had talked about a resilient supply chain during a pandemic. They also proposed a resilient and responsive food supply chain to match the varying demand and along with that, they had proposed a rerouting of vehicles which may lead to a better and efficient logistics network post COVID too. This research carried out by these prominent experts was claimed to be very helpful in further projects which can provide more elasticity in terms of supply chains for the future. Since the impact was global so the activities needed to be more resilient and technology-oriented. These researches were focused to bring out a robust Global Supply Chain for the future.

In this pandemic situation, the companies or the organizations are a shift towards a demand-driven model for managing their supply chain the covid-19 has created intense pressure on the companies to provide Core and non-core services and hence they are switching to new forms of supply chain the company outsource third-party and utilize their supply chain network and collaborate with multi-tier supplier to fulfill the demand of the supply (**Chi, et.al., 2020**). The perishable goods had a huge impact on their supply in many regions around the country or world. The several prominent studies on risk prediction and uncertainty in the supply chain Are discussed that have been conducted during an emergency or in covid 19 pandemics. So here the researchers have introduced to some significant model-based studies to tackle covid-19 problems. This conceptual model on the spread of covid-19 in the city of China was formulated by considering that three scenarios are based on the individual reactions of government actions such as travel restriction hospitalization and self-Quarantine (**Lin, et.al., 2020**). So, it a multi-period stochastic programming model (stochastic programming is a framework for modeling optimization problems that involve uncertainty. Whereas deterministic optimization problems are formulated with known parameters, real-world problems

almost invariably include some unknown parameters. for allocating the Inventory of ventilator in the covid-19 pandemic for The USA by generating 4 types of demand scenario **Mehrotra, et.al., (2020)**. Be expressed the Global supply chain problem by simulating the covid-19 scenario to protect the impact on supply chain performance because of destruction at Tier 1 suppliers original equipment manufacturer. They are constructed by **Ivanov and Dolgui, (2020)** review they demonstrated a game-theoretic model to address the intertwined supply network for meeting the demand of society associated with food communication and Logistic researchers have also simulated supply chain problem during the pandemic covid-19.

Effect on E-COMMERCE

The Covid-19 pandemic has created impacts in our lives. The conditions of global commerce and businesses were different in pre COVID - 19, and now it has changed a lot. For physical goods, the B2B and B2C online sales have recently got a surge of demand due to the COVID - 19 pandemic. The products like hand sanitizer, facemask as well as home materials such as non-perishable goods and toilet paper were stockpiled up. There has experienced an increased demand for a wide expansion of digital services. Consumers started to prefer online shopping more. Because of this, some local store business has shifted their resources to e-commerce. However, the stimulus by social distance and stay at home, the goods and services through e-commerce will continue to adapt to the environment.

Goods and services in the E-commerce trade have been impacted by the same factors that have made disruption in supply and demand. The arrival of COVID- 19 in various parts of countries made the domestic markets face difficulties in slow consumption. Meanwhile, the number of sectors has lost their demand in a low manner. The sectors like FMCG & pharmaceutical have shown their increase in demand. But they have also faced disruption from the supply-side because of resources of raw material and logistic challenges. COVID -19 had a significant change in retail also. In the initial months of the pandemic, there was a mandatory lockdown happened in various countries. That time all retail shops were asked to shut down for more than 2 months, except essential goods. So that time E-commerce increased the sales of foods due to panic buying and helped the E-commerce penetration in retail. **(Shetty, et.al., 2020)**. The COVID -19 pandemic outbreak has become the reason to shut down the businesses forcefully and led to the disruption of commerce in some sectors. Brands and retails have faced many challenges which are related to supply chain logistics, marketing, demand, sales etc. Meanwhile, online communication, online shopping, online entertainment has come up with good growth. All countries were trying to spur their economies to keep as much as possible for their infrastructure intact. Still, some businesses are struggling and some are thriving and this case is true for digital businesses like food delivery, online shopping, online education etc. **(Naveen and Anders, 2020)**. According to research, about 52 percent of consumers are hesitant to go brick and mortar stores and crowded street shopping during the pandemic. Overall, coronavirus has a role in the growth of sales in e-commerce. Currently, about 205 countries are infected with COVID -19. It's a challenging time for global trends. This can change the behaviors of humans. Trading nature and business as well. Due to the pandemic, people avoided going out, keep social distance, work at home which made 74 percent growth in Walmart grocery through e-commerce. E-commerce on goods and services has increased the buyers in developed countries as well as in developing countries such as India, Singapore, Pakistan, Thailand etc. Retail sales of E-commerce are expecting to touch their sales at 6.5 trillion dollars by 2023. **(Bhatti and Akram, 2020)** According to World Trade Organization (WTO,2020) world trade has already experienced a downfall in 2019. Then after the coming of the COVID-19 pandemic in the financial crisis, they estimated that the major economies will lose around 2.4 to 3 percent of the gross domestic product in 2020. So that it became a challenge to most businesses across the world. COVID - 19 has become a threat to the innovative new startups and a high percentage of startups threw out of the market. **(Surabhi and Anders, 2020)**

According to the E-commerce Trends Report 2020 by unicommer, online retails are more focused on digital platforms. As of June 2020, E-Commerce has witnessed 17 percentage of growth. The consumer buying pattern was changed in the FMCG sector with the rising number of online shoppers. There is also a rapid growth in Brand websites.

Objective of the Study

Our study was conducted with the following objectives:

- To identify changes in logistics post-COVID -19.

- To analyze strategies adopted by company to meet supply chain challenges during the pandemic.
- To identify challenges faced by manufacturers during COVID -19.
- To study the impact of COVID-19 on the FMCG sector.

Research Methodology

To provide a better and reliable research outcome we decided to use both primary and secondary data to prove the impact on Global Supply Chains and FMCG sector due to Covid-19 and the change in supply chains post covid-19.

Primary data is more reliable and has a high confidence level too. We decided to approach this method because of its value during the analysis. Primary data will be beneficial and industrial experts as well as employees will provide the respective information which will help in meeting the research outcome.

Secondary data is also helpful in our research because our project is targeted towards global supply chains and the information from reputable journals, books, different articles, periodicals, proceedings, magazines, newsletters, newspapers, websites, and other sources will provide the necessary claims which will help us in achieving the outcome of the research.

Analysis

Managing logistics of essential commodities over the last 9 months:

As per the interview, many said that they had to face many challenges to manage the logistics. When companies started resuming work in different areas, amid ongoing disease prevention and control initiatives, they consider how to resume business operations and ensure that they can return to a normal, safe work routine as soon as possible. Restarting operations after the Lunar New Year has often raised some problems as staff return to the factories gradually. Quarantines and travel restrictions, however, mean that for many facilities, the time to ramp back up to full capacity will be much longer than usual. This would not only entail additional attention to labor preparation but also extra attention to the quality of the product as plants operate with less than a full complement of staff.

Containment zone impact on supply chain:

The companies had stopped working because most of the areas were zoned as containment zones. Since the containment zone areas are varied and range from individual residential complexes to entire districts, the supplies of daily essentials and grocery should be addressed at the local state and district levels. This is because state-level authorities are best equipped to understand the complexity of containment zones," secretary of consumer affairs ministry

Identifying and appreciating the company's main direct suppliers. The capacity to meet the requirements of supply and possible risks. Work to add attention to the inventory, production, and purchase order fulfillment status of Tier 1 suppliers. So, started working with main suppliers to appreciate the flexibility of moving manufacturing and order fulfillment to other locations. In the event of inventory and capability constraints, we also understood how we will be handling from an allocation viewpoint, since we are not likely to be their only customer. To minimize the supply chain effect on the business, active communication and formulating alternative strategies will be important

An innovative method to manage the supply chain during this period:

Referring to the interview we can say that they faced many challenges. Containment zones have arisen throughout the world, in areas with a high incidence of Covid-19, with restricted access to individuals within them. Shipments to be shipped here could be delayed at the last mile because they would require the consignee to come to the access points to receive their shipments at the edge of the containment zones. The ability to classify shipments planned for these zones in advance was essential to controlling our operations and to provide shippers and consignees with accurate information.

For essential goods Police had started services on two dedicated WhatsApp numbers down south in Kerala's Kasargod, a district with seven containment zones. To have critical goods shipped, residents should call or post these numbers.

500 mobile stores across the state have been set up by the government of Tamil Nadu to sell vegetables and fruit.

Permanent changes expected in the supply chain, post COVID-19 period:

Organizations have mentioned starting new depots which will help them to store goods in many places as per availability that will make their work easier and transporting good in a more safe and secured way. The

globalized supply chain network of today has been optimized to determine minimum lead times at the lowest price possible.

Supply chain stress tests will become a new standard in a post-COVID-19 environment. The distributed global business model is over, designed for the lowest cost. In optimization, tomorrow's paradigm needs new goals. Supply chains need to become more resilient as volumes become more complex, especially if, as predictions indicate, large suppliers and logistics operators in the supply chain industry need to plan for major catastrophic events such as weather events (fires, floods, tsunamis), lethal outbreaks of pandemics, strikes, civil instability, and related disruptions.

As a result, the transition to more versatility and multi-level procurement that has already started will accelerate tremendously. We expect a large redesign of the supply chain system over the next few years and a new order focused on three main dimensions.

Conclusion

The pandemic has created an economic backdrop across the globe, especially in the FMCG industry. Social distancing has brought a negative impact in the sector such as logistic issues, supply chain, lack of labor, operations etc. The COVID-19 outbreak was more affected by manufacturers. As per the survey, we found that many organizations had to face challenges in their supply chain and logistics. The countries which are having a huge consumer base are affected more. Firms could not reach their supplies in proper areas due to containment zones. They needed to keep the stocks for long period. Customers were started to think practically. They became scared to go out shopping and they started to do online purchasing. Because of that, many organizations changed to make online deliveries. Firms were continuously examined the situation of COVID and they were always ready to adopt the strategies according to the unstable condition.

Many of the organizations had to face transportation difficulties. Because of strict restrictions amended by government and local authorities, they couldn't able to do their services. But they maximum tried to handle their works safely. They preferred more on roadways transportation for the supply chain. Companies came up with strategies to overcome the crisis. They have created limited working hours and special entry pass to the employees in factories and distribution centers. After the outbreak of COVID, organizations decided to do the services more securely. They started to focus on manufacturing hygienic products to customers and handle the goods in a safe and standard manner for the supply chain.

References

1. Adobor, H. 2019. "Supply Chain Resilience: A Multi-Level Framework." *International Journal of Logistics Research and Applications* 22 (6): 533–556.
2. Altay, Nezh Angappa Gunasekaran, Rameshwar Dubey, and Stephen J. Childe. 2018. "Agility and Resilience as Antecedents of Supply Chain Performance Under Moderating Effects of Organizational Culture Within the Humanitarian Setting: a Dynamic Capability View." *Production Planning & Control* 29 (14): 1158–1174.
3. A. Bhatti, H. Akram, H. M. Basit, Ahmed Khan. "E-commerce trends during COVID-19 pandemic".
4. Mahajan, K. and Tomar, S., 2020. COVID-19 and Supply Chain Disruption: Evidence from Food Markets in India. *American Journal of Agricultural Economics*.
5. Manders, J.H., Caniels, M.C. and Paul, W.T., 2016. Exploring supply chain flexibility in a FMCG food supply chain. *Journal of Purchasing and Supply Management*.
6. Mohammad Daneshvar Kakhki & Vidyaranya B. Gargeya (2019) Information systems for supply chain management: a systematic literature analysis, *International Journal of Production Research*.
7. Naveen Donthi, Anders Gustafsson. "Effects of COVID-19 on business and research".
8. P. Rajan Chinna 2019. "Global Markets expansion".
9. Richards, T.J. and Rickard, B., 2020. COVID-19 impact on fruit and vegetable markets. *Canadian Journal of Agricultural Economics/Revue canadienne d'agroeconomie*.
10. Singh, S., Kumar, R., Panchal, R. and Tiwari, M.K., 2020. Impact of COVID-19 on logistics systems and disruptions in food supply chain. *International Journal of Production Research*, pp.1-16.
11. Surabhi Varma, Anders Gystafsson. "Investigating the emerging COVID-19 research trends in the field of businesses and management. A bibliometric analysis approach".
12. <https://www.imd.org/research-knowledge/articles/A-post-COVID-19-outlook-The-future-of-the-supply-chain/>