

# Logistics Management Practices and Developments in India Post COVID-19

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## **Abstract**

*India's supply chains will go through huge transformations in the next few years as the impact of COVID 19 continues to challenge our demand and supply frameworks. With widespread disruptions, supply chains are either broken or severely affected. As ongoing supply side issues start getting addressed, we will see demand contraction in several industry segments creating further disorder. Organizations would need to adapt to this new reality and consider some of the following thoughts to build supply chain resilience. Every entity engaged in running supply chains would need to go through severe compliances as worker, product, transport and facility sanitization protocols would have to be in place. This would not only increase efficiency but also cost containment.*

**Keywords:** Logistics, Warehouse, Transport Infrastructure.

## **1. Introduction**

Logistics is generally the detailed organization and implementation of a complex operation. In a general business sense, logistics is the management of the flow of things between the point of origin and the point of consumption to meet the requirements of customers or corporations. The resources managed in logistics may include tangible goods such as materials, equipment, and supplies, as well as food and other consumable items. The logistics of physical items usually involves the integration of information flow, materials, production, packaging, inventory, transportation, warehousing, and often security.

In military science, logistics is concerned with maintaining army supply lines while disrupting those of the enemy, since an armed force without resources and transportation is defenseless. Military logistics was already practiced in the ancient world and as the

modern military has a significant need for logistics solutions, advanced implementations have been developed. In military logistics, logistics officers manage how and when to move resources to the places they are needed.

Logistics management is the part of supply chain management and supply chain engineering that plans, implements, and controls the efficient, effective forward, and reverse flow and storage of goods, services, and related information between the point of origin and point of consumption to meet customer's requirements. The complexity of logistics can be modeled, analyzed, visualized, and optimized by dedicated simulation software. The minimization of the use of resources is a common motivation in all logistics fields. A professional working in the field of logistics management is called a logistician.

Today, logistics and distribution is a rather complicated and advanced process but it began years ago in a less advanced form. We thought these quick facts and historical background would provide for an interesting read.

Logistics refers the movement of products or services to a designated location at an agreed upon time, cost and condition. Ancient Roman and Greek wars are the basics for today's logistics systems. Rome developed a highly efficient logistic system to supply its legions. Military officers called "logistics" were responsible for ensuring the supply and allocation of resources, so that soldiers could move forward efficiently.

After World War II, logistics moved from warfare to business. Physical distribution of products began with a focus on outbound activity. Filling orders, distribution of products, storage and warehousing. Production planning and customer service are presently important aspects of the logistics process.

An entire industry was born from what started as a way to get products from point A to point B. Many companies now rely on outsourcing for some or all of their supply chain management activities, resulting in the development of third party logistics companies for efficient transport and tracking of goods.

## 2. Recent Trends logistics management practice and developments in India post Covid-19

India is facing several challenges amid country-wide lockdown. Many industries have been severely affected. One of them is logistics and supply chain management. Shortage of labor, cargo capacity challenges, and the slowdown in manufacturing, order delays, stuck shipments as well as demand and supply shocks have affected the logistics segment to the core.

The manufacturing halt has reduced demand for logistics services, which has brought down the pressure on prices across warehousing, freight and logistics. Due to lockdown in surrounding countries, minimal export-import movements during this time have amplified the crisis in the logistics space. Restrictions on air travel and international flights globally have contributed to the slowdown in the movement of goods and brought first and last-mile transportation and intermodal movement of goods to a standstill. Reduction in the capacity of vessels and shortages in the equipment to deliver the goods, related to disruptions has had a major impact on the intra-Asia trade lanes. A rapid and sudden drop in freight volumes has prompted major carriers to report service cancellations and delays and ultimately empty sailings to and from India, the Middle East and the Mediterranean took place.

But in a post-COVID-19 world, the scenario of logistics and supply chain segment will be totally different and supply chain stress tests will become a new norm. India's supply chains will go through huge transformations to challenge the demand and supply frameworks in the coming few years. Also, people are responding in a variety of ways and having different attitudes, behaviors and purchasing habits.

According to a recent industry report of India's leading logistics intelligence platform Logistics Now, a timeline of at least 1-2 months will be required for the logistics industry to recover post lifting of the lockdown. The key recommendations are to unlock inventories for retail consumers; increase transport and distribution capacity for the vaccine; build Citizen Information

Systems (CIS) powered by Artificial Intelligence (AI); build digital supply chains and logistics, mandate and further drive digital payments, etc. alongside supporting the economy through the usage of advanced technology.

The most important change will be the rise of domestic sourcing to make supply chains more local. Post lockdown, the role of government policies to promote domestic manufacturing companies should increase and this will push the establishment of global value chains in India to not only serve domestic markets but also export markets. Companies should start building more safety stock in their distribution pipelines to gain risk management and mitigation in supply chains. This will increase in more warehousing space across networks. The practice of developing, implementing multiple and robust contingency plans will be taken more seriously.

As there will be more variables in volumes, supply chains will start becoming more adaptive, especially large suppliers and logistics operators in the supply chain industry must prepare for major catastrophic events such as weather-related calamities, upcoming lethal pandemic outbreaks, strikes, social unrest and associated disruptions. Digital transformation of the industry will be hastened. Every element of the logistics process whether it is planning or execution would be reconsidered, repurposed and digitized. In most of the industries, comprehensive dashboards have been produced that states the full status of production and shipment, down to the last detail. Such technology will inevitably emerge as a norm in the coming days.

To prevent the spread of the virus, the number of touch-points any product goes through during the entire supply chain from production to handling till the doorstep of businesses and homes will be reduced drastically. Rapid automation in handling systems and management including palletization of cargo, conveyor systems, robotics, drones and drop boxes amongst others would go through an accelerated trend. A rapid shift towards omni-channel procurement would be a new trend once the lockdown is completely lifted.

Every segment, somehow attached in running supply chains, would need to go through severe compliances as a worker; product, transport and facility sanitization protocols would be the new priorities. This will not only increase the management cost but also the insurance cost. Labor will be managed as a key asset of adaptation that plays a fundamental part of a crisis response program. To deal with one of the largest global exogenous shocks to economies, almost all aspects of managing supply chains will go through substantial changes.

In the Indian logistics sector, several long horizon transformations will get accelerated and perhaps skip a generation of gradual improvements. In the post-COVID-19 situation, the main goals in the medium term should be making them more regional, modifying the supply chain as a key business driver and putting back the human asset and manpower as the most important factor for an agile business to succeed in the post-Covid-19 scenario.

### **3. Recent trends to scale up the logistics in India. They are as follows:**

**Growing Regional Integration:** Until recently, infrastructural woes had a crippling effect on the supply chain network in India. The delay in the movement of goods between state borders by the suppliers, manufacturers, and retailers which is due to complicated taxes and transport lines running over capacity, increasing overall costs. With the implementation of GST, the supply chain industry has a cascading impact on almost all aspects of trade and retail. As India opens its transparency in trade and economy further, financing the improvement of the logistics sector is vital growth in business. A modernized and efficient supply chain improves ease of doing business, scales down the costs of manufacturing, and accelerates rural and urban consumption growth due to better market access. With these new GST reforms coming into play, a gradual resolution of these problems seems imminent. And recently, E- way bill implementation by the Government of India which helps in regional connectivity by abolition of check posts, movement

of goods between the states is effectively and yields India's logistics ecosystem resulting in lesser traffic on major transportation routes.

**Better Transport Connectivity:** This sector is thus a key focus of government spending and infrastructure investments:

**a) National highways:** The National Highway Authority of India has a bidding process underway for companies to invest in highways across India. Dubai based investment firms have already started investment close to US\$9 billion (Rs 585 billion) for nine highways. This will help in increase in accountability for the update infrastructure of these roads - currently extremely under-maintained - and in future it will reduce road travel times. Recently, National Highways construction sets a record of constructing road at 28 KM per day.

**b) Freight corridors:** The country's freight corridors, covering 15 states all over India, are set to be complete by December 2019. Currently, a train carrying cargo travels at the rate of 25 km/ph; on these railway lines, trains will be able to reach speeds between 70 and 100 km/ph, and will carry double the quantity of cargo.

**Warehouse Development:** India allows 100 percent FDI in the development and maintenance of warehousing and storage facilities. Under Free Trade Warehousing Zone (FTWZ) Scheme, there are several designated zones in India reserved for warehouse development. Some of the designated FTWZs are constructed in Panvel near Mumbai, Khurja near New Delhi, and Siri City in Chennai. The connectivity of these zones along with major rail routes, roadways, airways, and ports is well established. Some of the major incentives such as duty free import, excise duty, etc., for building materials and equipment for these zones are attracting more investors to this logistics sector. During 2017-2018, the 100 acre FTWZ in Nanguneri in the southern state of Tamil Nadu began operations successfully. According to JLL India report, India needs to setup the investments close to Rs. 50,000crore for in creation of warehousing facilities in all states across the country between 2018 and 2020. Hence, there must we expected to create around 20,000 jobs in this operations across the country.

**Start Up:** The time is right for first movers to benefit from the changing landscape of India's supply chain ecosystem. With Make in India and Start Up India, greater participation from the private sector and increased government spending for ease of doing business and opportunities of foreign direct investors in the country's supply chain are come up with great effort. And also for the steady transformation of moving all sector to digital by Digital India initiative along with infrastructure as well, with federal campaigns Digital India working to promote the growth of technology startups and enterprises. For SMEs, possibilities in third party logistics abound are whether in the transportation of goods between the states and countries, new technology-based improvements like IoT, Block chain technology, etc., to make operations lean, or in warehouse management by create more number of cold storage facilities across the country. Multinational firms like L&T, Transitory, etc., are some of the major firms in construction and related industries are also take advantage of investment opportunities to start up operations in India's major ports, roads, and warehouse development.

#### 4. Conclusion

Forty-five years have seen physical distribution/business logistics/supply chain management go from individually managed activities that are product-flow related to an integrated set of processes managed across multiple echelons of a product supply chain. SCM has never been more important to business than it is currently, or will be in the near future. It has the potential of production/engineering in the industrial revolution and marketing of the 1920s and 1930s when each of these gained prominence in business. SCM often is the basis for a firm's competitive strategy, which is driven by increased outsourcing, expanding global operations, and heightened need for logistics customer service. Not only has managing supply chain costs become more important, as these costs are used in tradeoff with production costs, but supply chain strategy is increasingly viewed as a source for contributing to the revenues of the firm.

Key challenges for the future will be to better estimate the revenue contributions from the customer service levels generated by the supply chain and effectively managing the scope of the supply channel as envisioned in supply chain management. Because of the difficulty of estimation, too little attention has been given to the revenue contribution that the supply chain can make to the overall sales of the firm. It is an area of much needed research.

Proponents of SCM are making bold statements about the benefits of boundary-spanning management but offer little as to how these benefits can actually be realized. Businesses have yet to progress very far with boundary-spanning management, probably because the tools and skills are not well developed. If the promises of SCM are to be realized, an inter organizational accounting system, appropriate metrics for defining and tracking shared benefits, and acceptable methods for benefits sharing will need to be developed. Also, supply chain managers will need training in collaborative techniques, relationship and trust building, and skills for compromise. These will require major efforts by the academic, research, and business communities, but the rewards can be substantial.

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