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## A Decade's Observation – Logistics in India

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### **Abstract:**

*We are observing a rapid growth of Indian logistics industry and it is a business game among several new service providers, technology and infrastructure that will determine whether the logistics industry is capable to assist its customers to reduce their logistics and transportation costs and provide efficient services or not? Regularly changing government policies especially on taxation and governance of service providers are going to play a lynchpin role in this methodology of cost reduction. In India, coordination across various government agencies requires a chain of approvals from multiple officials and ministries which is a big pain causing hurdle for multi-model logistics system. At the SME level, the Indian logistics aim is moving towards reducing the cycle times in order to inculcate value to their customers. Therefore, better practices and strategies are being adopted by companies in order to enhance their decision making process. This paper provides an outlook on these predicaments and issues with the help of primary research done on it; I have also outlined some of the major challenges with the help of secondary information referred from a number of journals, articles and testimonials, and I have suggested some interesting initiatives that some organizations are taking to compete through perfection in managing their logistics system. The methodology adopted in this paper includes an extensive research and review accompanied with the personal interaction and observations with the various logistics relevant organizations.*

**Key words:** Indian logistics system, Predicaments in Indian logistics, Indian logistics challenges, Future of logistics in India

### **1. Introduction**

The economy of India is the tenth-largest in the world by nominal GDP and the third-largest by purchasing power parity and it has been growing with rate of more than 6 % over the last ten years (2003 to 2013) putting huge demands on its dynamic infrastructure. A stunning fact is that Indian infrastructure in terms of roads, air, energy, and power etc. and the Information Technology infrastructure of internet, telecommunication etc. And the service infrastructure of logistics is being stretched to perform beyond their capabilities. This development is leading us to an evolution of ingenious practices to allow businesses to perform at a higher growth rate in the current environment. The Indian logistics sector constitutes of the complete inflowing and outflowing divisions of the manufacturing and service supply chain systems. Formerly, the logistics infrastructure has earned lots of attention both from a business, and industries. However, the role of managing this infrastructure to efficiently compete has been slightly under-emphasized and deficit contribution of government has been observed. Deficient logistics infrastructure has an impact of creating obstacles to the growth of Indian economy and the logistics management, systematic plan has the competence of overcoming the disadvantages of the infrastructure in the short run while providing huge competitiveness in the long run. There are certain models that seem to be emerging, based on the critical needs of the Indian economy that can stand as viable models for other global economies as well. The Indian logistics system should focus towards two key areas that require attention in managing the logistics chains across the Indian business sectors: cost and value added services. Logistics costs are defined in terms of inventory carrying cost, to and fro transportation, warehousing, packaging and forwarding, and administration costs. Services of the logistics industry in India have been referred to as slow and consumes high time of the customers. The Indian logistics story is one with full of excellence but there is a huge need of general improvements on almost all parameters and segments.

### **2. Characteristics and Operating Culture of Indian Logistics System**

Indian logistic system typically depends on roads and railways, whereas sea logistics is not highly preferred due to high lead times and inaccessible from north India and air logistics which is always perceived as an expensive mode by customers. The Indian logistics sector has usually been driven by the aim of reducing transportation costs that were generally extremely high due to regional consolidation of manufacturing and geographically divided distribution activities based upon unions and political influence. Moreover

there are several predicaments like inefficiencies in infrastructure and incompetent technology if chosen as a cheaper option. Freight movement has casually shifting from rail to road with problems on related to quality of transfer, deadlines for delivery and operating costs, however problem of cost is exceptional for goods with heavy load and if being shipped over long distances, generally, move through the extensive rail network.

The Indian transportation industry is disintegrated and highly unorganized, a large number of independent players with regional or national permits that carry freight without organized price list, often with small fleet size of one or two single-axle trucks are available in business. This segment carries a large percent of the national load and almost the entire regional load of consumers. This fragmented segment consists of independent owners and employees with inadequate skills, less knowledge of traffic rules have abilities to organize and manage their operations efficiently. The focus of low cost has been traditionally achieved by employing low level of technology and employing lower educated labor which works even on low wages, poor maintenance of equipment, almost negligible focus on customer care, overloading of the truck beyond capacity thereby violating laws, and price competition amongst a large number of service providers within the industry. Generally, we find transportation brokers under the political influence who regulate supply of trucks and transport costs. However, it is observed that the long run average cost of transport operations across the entire Indian supply chain may not turn out to be low.

### **3. Emerging logistics Infrastructure in India**

With increasing business consumer and end consumer demands and the emerging growth in global trade, the aspect of infrastructure support and contribution in terms of roads, rails, ports & cargo hold the key to the success of the economy. In India, goods are transported usually by road and rail, whereas road transport is controlled by private players and rail transport is handled by the central government. Holding the position of the second largest network in the world, road contributes to 62 percent of the freight transport (RAM, 2013). Road is preferred because of its cost effectiveness and flexibility as compared to other modes. On the other hand, rail is preferred because of containerization facility and ease in transporting ship containers and wooden crates as well as big industrial equipments which are difficult by roads and cargos. Sea is another complementary mode of transport but rarely used within India. Around 95 percent of India's foreign trade happens through sea (NBA India, 2012). India has 12 major ports and six each on the East and West coasts and 187 minor ports distributed all over in India. There is also evidence of an across the board increase in freight traffic for all modes indicating an increased logistics activity.

Considering the increasing demand for road transportation and logistics, the National Highway Authority of Indian has been enhancing the national highways in multiple phases to provide superior road network nationally. There are many National Highways Development Project are going on which include the work on the development of golden quadrilateral which will connect Delhi, Mumbai, Chennai and Kolkata. India government is also investing in the development of an Intelligent Transportation System (ITS) which will enrich transport services on the highways like advance signaling, traffic congestion monitoring and accident management etc. more efficient and effective. Because of the burgeoning opportunity and capability for high revenue the Ministry of Railways has been taking actions to expand the rail connectivity and evoke the market share of freight business. With the proposed dedicated western freight corridor the goods carrying trains are expected to run at the speed of 120 kilometer per hour. The corridor of 1459 km will be constructed with an investment of around \$ 2.60 billion and will be enriched with the latest centralized traffic control systems and internet (IRCTC, 2011). Indian Railways has also decided to join hand with bulk users of freight transport to build the rail network based on a Public Private Partnership system.

In 2010-11, the ports handled 756.20 million tons of cargo traffic volume (AAI 2011). This is further expected to increase to 900 million tons by 2013-14. With the focus on pace and the growing demand, the government of India plans to increase port capacities to around 1.5 billion tons per annum in the next five years. Under several National Development Programs, Indian government is encouraging public and private partnerships to build and maintain the ports. With increasing congestion levels at major ports like Mumbai, Chennai and Kolkata and with high average turnaround time the government has decided to develop minor ports in seven states to ease the traffic of major ports (Mumbai Express, 2012). The estimated cost of this development project is expected to be approximately \$ 380 million. Moreover, private sector is likely to invest \$ 7.69 billion over the next five years. Presently, 15 private sector projects are operational at various major ports and 4 more projects are under implementation (AAI, 2012). One of them focuses to build the deepest port in the world with an investment of \$ 1.2 billion (TOI, 2010). This project will be handled by a three Chinese firms and with a Mumbai based partner, L&T. It can be seen that there is a flurry of activities in enhancing the infrastructure capacities in the country.

### **4. Restructuring the Auto Industry's Supply Chain System**

With dynamic government policies, regulations and consumer choices, the distribution supply chain system of Indian organizations has been affected to a great extent. This brings new challenges for various channel partners and system integrators. The auto and its dependent auto-component industries produced goods and parts worth \$ 7.8 billion (2008-09) with 63% of the demand coming from the replacement market (ACME, 2010). In India, low entry barriers in this sector have led to a large number of players in the replacement market. Data shows that there are about 450 firms in the organized sector and more than 5500 in the unorganized sector which are not original equipment manufacturers. Another feature of this sub-sector is the long duration of ownership of vehicles in India which leads to high requirement of parts which are consistently in demand. It is also observed that, the willingness to pay for parts decreases with the length of ownership and this has led to an intense segmentation of the parts market by price force.

In 1990's, this industry was still in a burgeoning stage. It was distinguished by few manufacturers and low demand market. As a consequence, the distribution network was deficient. However, availability of spare parts was a key issue with long delivery lead times and manufacturers need large orders to invest in this segment. This also led to the growth of unbranded parts or in the replacement market and this market was flooded with many suppliers. The product was sold chiefly on personal relationship with the buyer whereas the quality and price were not the selling propositions for such spare parts. Maruti Limited had created a network of suppliers of quality parts for its vehicles and made them available everywhere in India. Another player, Hero Honda had done the same for its motorcycles and captured a good market share for its genuine spare parts.

In 2000's, the liberalization of the automobile industry led to an entry of many foreign auto players with joint ventures. Due to the upcoming automobile industry boom and high margins for distributors and resellers, the demand for automobile spare parts was expected to increase. The distribution channel was modified with the entry of two more channel members, i.e., wholesalers and semi-wholesalers.

The period 2000-2008 was the period of a major transformation of the distribution structure in India. Original Equipment Manufacturers started to operate in the replacement market through a parallel supply chain selling parts through their authorized service stations as supplementary products. Moreover, the entry of large number of channel members caused semi-wholesalers to move out of the supply chain and they either moved up the chain to become wholesalers or moved down to become retailers for the existing as well as new products. To strengthen the coordination of this extended supply chain and to buffer against the differential tax structure across states many companies started to operate with Carry and Forwarding Agents but transportation related activities were carried out by all the members of the supply chain. But thereafter, the transportation activities were solely managed by channel members themselves.

The observation and analysis of the available IT infrastructure and its usage pattern for all the channel members in a survey indicates that there is a high deviation in the usage of IT in the replacement market supply chain. About 88 percent of the sampled firms use an ERP package – most of which was customized and developed locally from development firms. The major obstruction in the use of branded packages was the high cost of purchase, implementation and manage. These packages were used to generate daily sales report, regular order from suppliers and account for the financial transactions and track the level of inventory at plant. However, manufacturers, generally, order the stock from suppliers through emails to maintain the electronic record.

Post 2008, there is a visible change in the manner firms operate and this is the result of the implementation of a uniform tax structure across all states in India. The Carry and Forwarding Agents are becoming redundant as most manufacturers will prefer to deal directly with distributors only. The theory of an exclusive distributor is expected to vanish in coming future. It is now noticeable that with the increase in variety of components, distributors are upgrading to wholesalers and stocking multiple brands for the same commodity. Two parallel distribution channels are expected to be in operation one is the OEM chain and another is the non-OEM chain. OEM channel will primarily handle the passenger car replacement parts and the non-OEM distribution channel will sell parts for Light and Heavy Commercial Vehicles and 2 wheelers & 3 wheelers, as the car customers are becoming more brand conscious even while replacing parts which comes along with superior service with additional benefits. Furthermore, people perceive that the more advanced automobiles, open trade agreement with other Asian countries and Value Added Tax are going to change the way the replacement market operates. In future, there will be a rationalization of this market in terms of number of firms competing and will lead to an improvement in quality, delivery time and availability of parts.

## 5. Challenges in Future

Certain challenges remain before the Indian logistics sector and its future success will depend on the ability of the industry to overcome these barriers. Some of these obstructions are at the firm level while others are at the policy level. There is a need to observe these impediments to overcome Indian logistics predicaments.

At the policy level several issues of infrastructure and integration of Indian logistics network remain the two most critical areas that require attention from government. Since 1990, the growth of infrastructure has been quite extensive and is covering a wide geographical area as well as linking the key industrial transshipment centres. Movement beyond the golden quadrilateral is required to bring goods from upcountry production sources to main shipment centers. Moreover, the growth rate of the expressway has to increase and improved constantly. Poor road conditions increase the vehicle turnover thereby pushing the operating cost and reducing efficiency. Indian government is upgrading the national highways but they account for a little 2 per cent of the total road network. Due to non-contiguous development of expressways, heavy vehicle traffic has to frequently move from the expressway on to old national highways and vice-versa. However, this approach is inconvenient and is restricting the utilization of the excellent road network that is being developed. Moreover, the pricing of the toll on these expressways especially for cargo traffic has also been a deterrent to be usage and one needs to understand the price elasticity of this demand and develop appropriate price packages for heavy and frequent users.

New entrants are expected to face serious predicaments by privatizing the operations of container traffic through rails. Because of limited manufacturing capacity for manufacturing carriage wagons, these companies will have to import wagons at high cost from foreign countries. Huge investments in storage capacities near railway stations will also add to their cost and collectively these factors will increase the entry barriers for the private operators. Furthermore, the tariff structure and revenue sharing is still a hindrance for public-private partnership projects to succeed in infrastructure development of the country.

While the use of IT for logistics management is rising, it is broadly limited to large size firms only. This symbolizes an opportunity to further improve the decision making abilities across the supply chain and reduce costs further. With the growth of the IT sector in

India, these are clearly areas that can gain from the IT sector's engagement. Likewise, there is a role for emergence of a segment (i.e. a service provider) in the logistics chain that manages dispatch information and performs delivery tracking across manufacturers for their customers. But only a few thousand vehicles out of a total of several millions have tracking system and out of those thousands only 60 percent are operating without failure. Truck manufacturers could integrate the tracking technology in their products and IT servicing firms could provide information service on highways tracking movement of vehicles. This will help distribution firms to track both the consignment as well as the truck efficiently. As the concentration in the industry boosted, the requirement to control and manage larger number of trucks and their routes, consumers and warehouses will require decision support systems that perform scheduling and dynamic planning of their systems.

Another area that will see tremendous growth is outsourcing of logistics service. While concept has been in existence for several decades but it was limited to transportation and warehousing. Currently, India is outsourcing value added services like import/export, fleet management, customs clearance, order fulfillment, freight forwarding, several consulting services like distribution network planning etc. This outsourcing is a hurdle in the country's growth. Service tax on outsourced cost and the requirement to establish multiple warehousing facilities in order to avoid double taxation were also found to undermine the logistics business.

In future, their roles as coordinators will require that they offer a wider menu of value add services and should have the potential of integrating SME channels through a variety of logistics services and technology across a network of small manufacturers. The logistics focus at the firm level will have to move towards reducing cycle times in order to add value to their customers. Above are few of the issues one need to take account before the logistics industry can boom significantly in India.

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