

# Freight Handling Approaches of Indian Logistics Industry – An Investigation

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**Abstract** - The logistics of physical items usually involves the integration of information flow, material handling, production, packaging, inventory, transportation, warehousing and often security. Logistics Sector in India is highly fragmented, due to increased industrial activities, the India logistics industry has gained immense growth over the years and a major contributor of Indian GDP. Since the logistics costs in India is high (13 per cent of GDP) as compared to developed countries (8-9 per cent of GDP).The logistics sector is primarily categorized into four segments comprising transportation, warehousing, freight forwarding and value added logistics services. Transportation alone holds 60 per cent share of the logistics industry and rest 40 per cent is contributed by warehousing, freight forwarding and value added logistics services. Therefore, the plenty of corporate and MNCs are planning to set up operation in India and large local retailers are also planning to expand their operations in worldwide. There are four modes of transportations are very effective in India viz. road way, railway, sea way and air way. In India, about 40% of the logistics cost is due to transportation alone. The major infrastructure required for moving of cargo from product's origin place to consumption place with the help of roads, railways, ports and shipping, and airports all of which are either managed or regulated by the Government. So the main objective of logistics management is customer satisfaction with less freight charges and less logistics costs will be achieved with the implementation of modern technique of logistics network as well as modern approaches for connecting the goods and services from production point to consumption point in different country quickly.

**Keywords:** GDP, MNC, GOI, Logistics sector, cargo handling.

## I. PREAMBLE AND DESIGN OF THE STUDY

In a general business sense, logistics is the management of the flow of things between the point of origin and the point of consumption in order to meet requirements of customers or corporations. The logistics of physical items usually involves the integration of information flow, material handling, production, packaging, inventory, transportation, warehousing and often security. Logistics Sector in India is highly fragmented, due to increased industrial activities, the India logistics industry has gained immense growth over the years and a major contributor of Indian GDP. The India logistics industry is projected to grow at CAGR of 15-20% during the financial year 2016 to the financial year 2020.The primary bottleneck in driving economic growth of this sector is due to multiple taxes charged by authorities at interstate check posts. But now this bottle neck is removed through GST. Since the logistics costs in India is high (13 per cent of GDP) as compared to developed countries (8-9 per cent of GDP).The logistics sector is primarily categorized into four segments comprising transportation, warehousing, freight forwarding and value added logistics

services. Transportation alone holds 60 per cent share of the logistics industry and rest 40 per cent is contributed by warehousing, freight forwarding and value added logistics services. Therefore, the plenty of corporate and MNCs are planning to set up operation in India and large local retailers are also planning to expand their operations in worldwide. But with the present poor infrastructure largely under-developed and incapable of catering to a growing economy, since logistics industry is too complex nature in India. India is emerging as one of the world's leading consumer market with the raise of middle income group. Day by day, the logistics industry is growing in terms of RFID, vehicle tracking technologies, warehouse management systems etc. Also logistics industry is still not looked at as the industry of choice for young graduates thereby making hiring of quality professional manpower is challenging one. A recent study has found that varieties of skills are required in the logistics sector, includes technology skills, driving skills including safety procedures, industry understanding and multi operations skills. Present logistics companies and their staff as well as truck drivers today find it difficult to accurate delivery records, understand delivery documents,

negotiate for return business, handle queries etc. Therefore, the GOI must create awareness related to transport sector. There are four modes of transportations are very effective in India viz. road way, railway, sea way and air way. In India, about 40% of the logistics cost is due to transportation alone. The major infrastructure required for moving of cargo from product's origin place to consumption place with the help of roads, railways, ports and shipping, and airports all of which are either managed or regulated by the Government.

### Problems and prospects of logistics industry in India

The logistics costs in India are high as compared to developed countries. This is due to various issues and challenges faced by this industry. The key challenges of logistics are truck regulations, poor infrastructure, trained manpower, and lack of training institutions and information and communication technology poor warehouse and storage facilities. There are long queues at interstate check posts, as the authorities examine the freight since implemented the GST which are applicable all over in India. Truck delays around 6 to 7 hours of wait time at interstate check posts which includes lot of manual work by the authorities. Since 65% of the freight in India moves by road, it is a fact which leads to see the logistics experts to look into the GST as a crucial area in India.

### Cargo handling modes of transportation in shipping industry:

**Road way:** The road freight industry in India is worth about INR 1.42 trillion and is growing at about 6-8 percent year on year manpower spends amount to only about 4 percent of sales as against the overall sector average of 8-10 percent.

**Rail way:** Indian Railways (IR) established in 1853, which is a Government owned monopolistic sector, it is world's second largest rail network spread over in 81,500 km as well as covering around 7000 stations. Rail freight traffic revenues stood at around 1038 Million tonnes in the year 2013 having grown at around 8 percent in 2017, the growth in the last couple of years being around 10 percent. India has high stakes in rail infrastructure and freight.

**Sea ports:** India, with a vast coastline of 7,517 kms handles 95% of India's foreign trade through its seaports. It has 13 major ports and 184 other (minor and intermediate) ports. The major ports are governed by the Major Port Trust under the control of Central Government, while the minor ports are under the jurisdiction of their respective state Governments. **Airway:** Airports in India are managed by Airport Authority of India (AAI), under the central Government. The country has six international airports-Delhi, Bombay, Calcutta, Madras, Trivandrum and the newly upgraded Bangalore airport.

### Statement of the problem

This present study gives an overview of freight handling approaches of logistics industry in Indian perspectives. The poor condition of infrastructure directly translates to higher turnover, pushing up the operating costs and reducing efficiency. Logistics is become a high-cost, low-margin business now. The problem of organized players is compounded by unfair competition with unorganized players. There is a lack of trust and awareness among Indian shippers with regard to outsourcing logistics. The future of the logistics sector depends not only on the continued development of infrastructure but also on the capability of the service providers in adapting themselves and making optimal utilization of technology. Therefore, freight handling approaches are playing vital role in shipping industry for connecting the world from one end to another end quickly for meet out the global customer requirements.

**Objectives of the study:** To examine the freight handling approaches of logistics industry in Indian perspectives in road way, rail way, sea way and air ways. To offer suitable findings and recommendation to shipping industry.

**Period of the study:** The present study covers a period of five years that is from 2011-2021.

**Scope of the study:** The Indian logistics industry is played vital role in domestic and international market. The present study is attempts to analyze and understand the freight handling approaches in different modes of transporting sector in India (Road, Railway, Seaports, Airports). The study shows that the present position and growth of logistics sectors for the period 2012-2021.

## II. RESEARCH METHODOLOGY

The researcher has chosen the desk research for find out the freight handling approaches of Indian logistics industry with the help of published data like traffic manual, magazines, journals and articles related to logistics industry. The researchers have applied the following statistical tools i.e. Trend analysis and Trend percentage.

**Limitations of the study:** The present study has been conducted with the help of using secondary data only. The major limitations of the study are scarcity of data. The study can't be said as totally covered because it's a wide concept. Thus the study is limited to a glance of Indian logistics industry perspectives only.

### III. DATA ANALYSIS

**Table: 01 Road ways freight traffic volume and its prediction**

Year	Freight traffic (Million tonnes)	Trend percentage
2012	2086	100
2013	2236	107.2
2014	2478	110.8
2015	3027	122.2
2016	3223	106.5
2017	3529.5	109.5
2018 (Projected)	3836	108.7
2019	4142.5	108.0
2020	4449	107.4
2021	4755.5	106.9

Source: secondary and computed data

The above table shows that, compared with the base year there is increase in every year by 7%, 10%, 22%, 6%, 9% respectively up to 2017. From 2018 onwards there is a slight fluctuation up to 2021.

**Table 02: Railway freight traffic volume and its prediction**

Year	Freight traffic (Million tonnes)	Trend percentage
2012	837	100
2013	892	106.6
2014	926	103.8
2015	975	105.3
2016	1038	106.5
2017	1079	104.0
2018 (Projected)	1128	104.5
2019	1176	104.3
2020	1225	104.1
2021	1273	104.0

Source: secondary and computed data

The above table shows the increase in the movement of goods by railway. But the movement of goods by railway is almost domestic. It is increased by 6%, 3%, 5%, 6% and again 4% in 2017.

**Table 03: Major seaports freight traffic volume and its prediction**

Year	Freight traffic (Million tonnes)	Trend percentage
2012	530.35	100
2013	561	105.8
2014	570	101.6
2015	560	98.2
2016	573	102.3
2017	584	101.9
2018 (Projected)	593	101.5
2019	601	101.3
2020	610	101.5
2021	618	101.3

Source: Secondary & computed data

The above table shows the movement of goods by sea .When compared with the base year 2012, the movement of goods shows increase by 5.8%, and decrease in 4. 2% in 2015 again increase of 2.3% in 2016 again decrease in .4% in the year 2017.

**Table: 04 Minor ports freight traffic volume and its prediction**

Year	Freight traffic (Million tonnes)	Trend percentage
2012	213	100
2013	289	135.7
2014	315	109.0
2015	389	123.5
2016	414	106.4
2017	475	114.7
2018 (Projected)	525	110.5
2019	576	109.7
2020	623	108.2
2021	675	108.3

Source: Secondary & computed data.

The above table shows that, the movement of the goods by sea is fluctuating trend during 2012-17.

**Table:05 Domestic air freight traffic volume and its prediction**

Year	Freight traffic (Million tonnes)	Trend percentage
2012	643.31	100
2013	708.39	110.1
2014	780.6	110.2
2015	860.78	110.3
2016	931.1	108.2
2017	1003.23	107.7
2018 (Projected)	1076.02	107.3
2019	1148.82	106.8
2020	1221.62	106.3
2021	1294.42	106.0

Source: secondary & computed data

The above table shows that, there is a constant position going on through domestic air freight from 2012 to 2021.

**Table:6 International air freight traffic volume and its prediction**

Year	Freight Traffic (Million Tonnes)	Trend Percentage
2012	1289.3	100
2013	1445.5	112.1
2014	1622.3	112.2
2015	1822.7	112.4
2016	1995.5	109.5
2017	2171.9	108.8
2018 (Projected)	2350.9	108.2
2019	2529.8	107.6
2020	2708.8	107.1
2021	2887.8	106.6

Source: secondary & computed data

The above table shows that movement of goods by air, it is stable with 112% between 106.6% from 2013 to 2021.

#### IV. OBSERVATIONS OF THE STUDY

- It is found that the road freight traffic does not show much difference in the future years(2012-2021)
- It is found that the percentage of railway freight traffic is increased by 6%,3%,5% & again 6% when compared with the base year 2012.
- It is found that the percentage of major sea freight shows increase by 5%, 1%, 2% and a decrease of 2% in 2015 when compared with the base year.
- It is found that the major ports freight traffic does not show much difference in the future years.(2012-2021)
- It is found that the percentage of minor sea freight are fluctuating trend during 2012-2021, when compared with the base year. It is found that the minor ports freight traffic does not show much difference in the future years but while comparing to previous years the future freight traffic of minor ports is decreasing.
- It is found that, there is a constant position going on through domestic air freight from 2012 to 2021.
- It is found that, there is a stable and light fluctuation in international air freight from 2012 to 2021. Road transportation is used mainly for the Indian Logistics industry as compared to other modes of transportation and airways is used as minimum of 1% for all countries.

#### V. RECOMMENDATIONS OF THE STUDY

- Scheduling of service time point of arrival and departure of rails, ships and plane has great scope for improvement. They never run on time and require national discipline.
- The official must trained for managing the cargo handling in different mode of transport in any time.
- There should be time to bound programme of simplify procedure and format of cargo handling approaches in constant manner.
- With the increasing trend of all modes of transportations more facilities should be implemented for maximising the services to customers.
- Logistics development is absolutely necessary in India.
- The GOI must seek more FDI in logistics sectors through relaxing of norms relating to entry, taxation, import of material handling and movement of equipment etc in all over the sea ports and minor ports.

#### VI. CONCLUSION OF THE STUDY

India spends around 14.4% of its GDP on logistics and transportation as compared to less than 8% spent by the

other developing countries. Indian freight transport market is expected to grow at a CAGR of 13.35% by 2020 driven by the growth in the manufacturing, retail, FMCG and e-commerce sectors. In India road freight constitutes around 63% of the total freight movement consisting of 2.2 million heavy duty trucks and 0.6 million light duty trucks covering more than 18,00,000 kms of road length carrying more than 3000MMT (million metric ton) of load annually. Indian Logistics industry is continuously improving its performance in the global logistics industry by improvement of customs, trade-related infrastructure, inland transit, logistics services, information systems, and port efficiency help to provide trade goods and services on time and at low cost. However, as India's logistics outsourcing and investments to improve logistics efficiencies are still at a nascent stage, these future trends will take place, but it will take longer time to materialize. The resources needed for wholesale development will also take enormous amounts of time and resources. However, India should recognize the extraordinary role logistics plays in economic development and in enhancing the competitiveness of all sectors of the economy. As such, India should move forward for an integrated strategy towards developing a world-class logistics industry. The present study clearly stated that the implementation of modern logistics technology, subsidy and Goods Service Tax will have a significant impact on logistics sector in India. Then it will have a double positive impact on the logistics industry that is logistics costs will come down and logistics efficiency will increase both within India and exports. So the main objective of logistics management is customer satisfaction with less freight charges and less logistics costs will be achieved with the implementation of modern technique of logistics network as well as modern approaches for connecting the goods and services from production point to consumption point in different country quickly. So the main objective of logistics management is customer satisfaction with less freight charges and less logistics costs will be achieved with the implementation of modern technique of logistics network as well as modern approaches for connecting the goods and services from production point to consumption point in different country quickly.

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