



Fast Tracking Freight: A Roadmap for Growing Economy of India

Received : 7-1-2022
Revised : 11-4-2022
Accepted : 29-4-2022

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Plagiarism: 12%

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Keywords: Fast Tracking Freight, Freight Corridor, Logistics, GDP

Classification-JEL : R42, L31

How to Cite: Saxena, Yogesh (2022). Fast Tracking Freight: A Roadmap for Growing Economy of India. *Journal of Commerce and Trade* (H. Agarwal, Ed.) 17 (1), 65-69. doi:10.26703/JCT.v17i1-11

ABSTRACT

The movement of goods across the country and beyond its borders has created economic opportunities for millions of India's citizens. Today, the logistics sector represents five percent of India's Gross Domestic Product (GDP) and employs 2.2 crore people. India handles 4.6 billion tonnes of goods each year, amounting to a total annual cost of INR 9.5 lakh crore. The present study is a review on the current freight corridor vision and mission of our Prime Minister Narendra Modi. Various junk versions are being talked in the social sphere. So, the researcher thought to work upon it and to bring out a genuine significance of the government policy of dedicated freight corridor in India. The research paper is descriptive one based upon the facts and figures broadcast by the government agencies time to time. It is a secondary data analysis done on the collection made from various reports and online available data.

1. INTRODUCTION

India has acquired the position of fastest-growing economy of the World in the past five years. Most of the dependencies on imports for consumer goods and services have been erased upto an extent in the last half decade. Government plans and industrial environment have brought in again the noise of machine and cheers of the workers. The movement of goods across the country and beyond its borders has created economic opportunities for millions of India's citizens. Today, the logistics sector represents five percent of India's Gross Domestic Product (GDP) and employs 2.2 crore people. India handles 4.6 billion tonnes of goods each year, amounting to a total annual cost of Rs. 9.5 lakh crore. These goods represent a variety of domestic industries and products i.e., 22 percent are agricultural goods, 39 percent are mining products, and 39 percent are manufacturing-related commodities. Trucks and other vehicles handle most of the movement of these goods. Railways, coastal and inland waterways, pipelines, and airways account for the rest. Therefore, the Government of India

(GOI) is pursuing a range of actions to improve its logistics performance. These include the development of dedicated rail-based freight corridors, improvements to the capacity and connectivity of coastal and inland water-based shipping. It is also looking at the buildout of road infrastructure projects such as Bharatmala and the Golden Quadrilateral, and the creation of supportive policies. As national freight activity grows about five-fold by 2050, India's freight transport ecosystem has a critical role to play in supporting India's ambitious priorities. Some of these include international competitiveness, job growth, urban and rural livelihoods and clean air and environment.

2. SIGNIFICANCE OF THE STUDY

The present study is a review on the current freight corridor vision and mission of our Prime Minister Narendra Modi. Various junk versions are being talked in the social sphere. So, the researcher thought to work upon it and to bring out a genuine significance of the government policy of dedicated freight corridor in India.

3. METHODOLOGY

The research paper is descriptive one based upon the facts and figures broadcast by the government agencies time to time. It is a secondary data analysis done on the collection made from various reports and online available data.

4. SAVING OF ENERGY

India's cumulative energy consumption from freight transport between 2020 and 2050 under a business as usual (BAU) scenario will be around 5.8 billion tonnes of oil equivalent (TOE). However, India can reduce this energy consumption by 50 percent under an efficient scenario through three opportunity areas:

- Increasing the share of rail transport
- Optimising truck use
- Promoting use of fuel-efficient vehicles and alternative fuels.

These opportunities will also lead to the following benefits:

- Reduced logistics costs** – India has set a target of reducing the logistics costs as a share of GDP from 14 percent currently to 10 percent by 2022, which can save up to INR 10 lakh crore.
- Reduced carbon emissions and improved air quality** – India can save 10 giga tonnes of CO₂, 500 kilo tonnes of particulate matter (PM) and 15 million tonnes of nitrogen oxide (NO_x) caused by freight transport by 2050.
- Less truck traffic on roads** – Improved mode share and efficient logistics can reduce the vehicular-freight activity by 48 percent in 2050 over a BAU scenario.

This new freight paradigm will also lead to higher economic growth, more employment opportunities, better public health, and

Figure 1: CO₂ Emission from Freight Transport in India

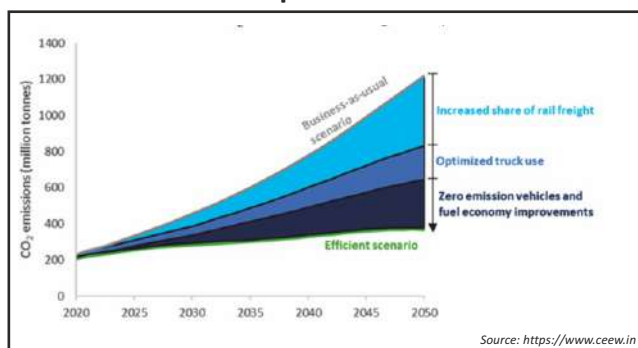
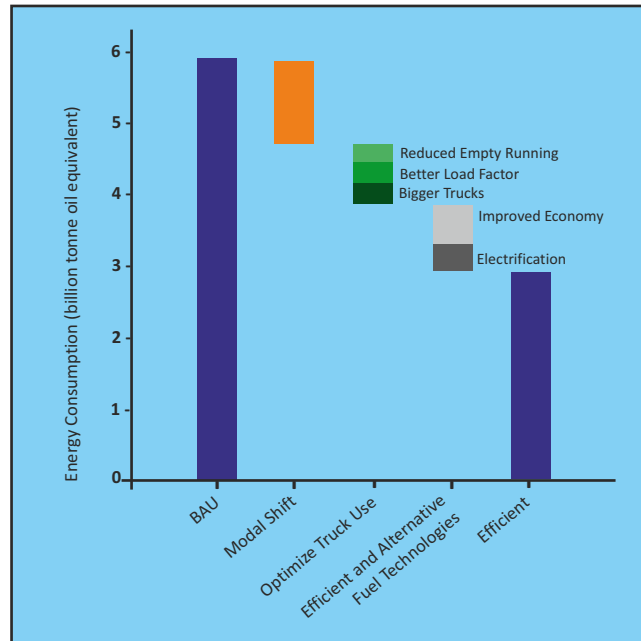


Figure 2: Cumulative energy consumption by freight sector between 2020-2050



Source: <https://www.ceew.in>

enhanced logistics productivity, which will meet many of India's development goals

5. LOGISTICS AND WAREHOUSING

Logistics costs in India are high, accounting for 14 percent of the GDP. Transportation and inventory costs account for more than 90 percent of these costs. These high costs are, in part, a result of low logistics efficiency due to a fragmented market, lack of standardised trucking assets, old vehicles and obsolete warehousing technologies. These factors have resulted in:

- Low truck utilisation
- High empty running of trucks
- Overloading of trucks

By optimising truck use, vehicular movement and travel time can be reduced, and logistics practices can be made less emission- and cost intensive. To optimise truck use, India can prioritise the following solutions:

- Improve load matching using digital platforms and get freight on the right type of truck, depending on the use case
- Maximise vehicle productivity through efficient packaging and loading
- Improve the siting of warehouses using the principles of optimized network design

- Improve the performance of warehouses by implementing advanced digitised tools
- Logistics Efficiency Enhancement Program (LEEP) is designed to improve logistics efficiency using infrastructure solutions like building 35 multimodal logistics parks as well as introducing technological and digital solutions like goods tracking.

6. STRONG FOUNDATION OF INDIA TO BUILD A WORLD CLASS FREIGHT SYSTEM

India has a vast population base of middle-class people who want to uplift the living standard through fulfilling the daily needs and to live a comfortable life. This urge creates a bounce to purchase more items of daily routine. Thus, to deliver these items, whether offline or online, a strong foundation of freight tracking is needed. We have already a strong network of roads, those need only updation and management.

a) Make in India: Make in India is an initiative to promote domestic manufacturing of

products and infrastructure by providing dedicated investments. The initiative aims to reduce India's reliance on other nations for manufacturing capabilities of goods and associated infrastructure.

b) Digital India: Digital India is a flagship programme with a vision to transform India into a digitally empowered society and knowledge economy. The vision of the programme will support the digitization of the supply chain that can improve logistics efficiency.

c) Logistics Efficiency Enhancement Program (LEEP): LEEP is designed to improve freight transportation efficiency by improving associated cost, transportation time, and logistical practices like goods transferring and tracking through infrastructure, technology, and process interventions.

d) National Logistics Policy (DRAFT): The goal of the National Logistics Policy is to enhance the economic growth of India by making the logistics sector more efficient, seamless, and integrated. It also aims to drive

Table 1: An Efficient Freight Paradigm Opportunities

Particulars	Increase the Mode Share of Rail Transport	Optimize Truck Use	Promote Efficient and Alternative Fuel Technology
What does this mean?	Shift the movement of goods from trucks to rail.	Improve utilisation and reduce empty running of trucks.	Improve vehicle efficiency and switching to alternative fuels.
What should India do it?	Rail costs less compared to trucks; Rail emits less CO ² than trucks on a per tn-km basis and improves air quality by emitting lesser PM, SOX, NOX emissions; With fewer trucks on the road, public health of citizens will improve.	This can improve logistics efficiency and truck productivity and in turn, reduce costs and emissions.	Cost effective technologies exist to make ICE vehicles more fuel efficient; EVs consume less energy, emit less CO ² than ICEs, have no tailpipe emissions and have lower operational costs.
How can India do it?	India will need to invest heavily in rail capacity additions and infrastructure upgrades, and tap into the intermodal market.	Truck use can be optimised by improving transportation and warehousing practices.	ICE vehicles can be made more fuel-efficient by investing in efficiency technologies and tightening fuel standards. Policy interventions and innovative business solutions can accelerate the deployment of EVs.

down logistics costs as a share of GDP.

e) Faster Adoption and Manufacturing of Electric Vehicles (FAME II): FAME II is a subsidy scheme by the GOI to accelerate the manufacturing and uptake of electric vehicles. Policies like FAME II will promote the deployment of EVs and associated charging infrastructure for freight EVs.

f) Bharat Stage (BS) Emission Norms: Bharat Stage Emission Norms are emissions standards set by the GOI to reduce criteria pollutant emissions from motor vehicles and improve vehicle efficiency. BS VI has been effective since April 2020.

7. INDIA'S NEW LOGISTICS PARADIGM IS WITHIN REACH

Covid-19 has highlighted the critical role of freight transport to India's economy. It connects citizens to the goods and services that they need every day. As India's leadership outlines policies and programmes to support short-term economic recovery and long-term resilience, a new logistics model must be among the nation's priorities. India benefits from general alignment on this vision and recognises the significant benefits of a whole-system transformation. Yet there is a need to accelerate and build on existing efforts to turn shared vision into shared opportunity at scale. Commitment and coordinated planning, action, and investment from the public and private sectors are required to:

- Elevate the role of freight transport in national and regional dialogues,
- Pilot and scale innovative business models to demonstrate the competitive advantage of optimised logistics and clean Evs,
- Use collaborative platforms to document insights, share lessons learned, resolve system barriers, and build stakeholder capacity, and
- To reap the benefits of the new freight paradigm through a phased approach, integration across the ecosystem is critical.

By unlocking a cost-effective, clean, and optimised freight transport system through a higher share of rail and a combination of multimodal logistics and EV operations, India

can be a leader in advanced freight transport globally. This approach will bolster domestic manufacturing, enhance international competitiveness, improve air quality and road safety, meet India's ambitious climate targets, and support the livelihoods of millions of citizens.

8. FINDINGS AND CONCLUSION

Following points may be put forth in final conclusion of the study:

8.1 Need for Fast Tracking Freight in India

As national freight activity grows about five-fold by 2050, India's freight transport ecosystem has a critical role to play in supporting India's ambitious priorities. Some of these include international competitiveness, job growth, urban and rural livelihoods, and clean air and environment. Today, the logistics sector represents five percent of India's Gross Domestic Product (GDP) and employs 2.2 crore people.

8.2 Energy Consumption

India's cumulative energy consumption from freight transport between 2020 and 2050 under a business as usual (BAU) scenario will be around 5.8 billion tonnes of oil equivalent (TOE). However, India can reduce this energy consumption by 50 percent under an efficient scenario through three opportunity areas:

- *Increasing the share of rail transport:* To increase the mode share of rail transport, India can prioritise increase the rail network capacity and the share of intermodal transportation.
- *Optimising truck use:* To optimise truck use, India can prioritise to improve transportation practices and warehousing practices.
- *Promoting use of fuel-efficient vehicles and alternative fuels:* To promote clean, fuel-efficient vehicle technologies such as EVs, India can prioritise to improve fuel economy and reduce ICE vehicles' emissions and use EVs and cleaner fuels.

8.3 Benefits of the Measures

- *Reduced logistics costs:* India has set a target of reducing the logistics costs as a share of GDP from 14 percent currently to 10 percent by 2022, which can save up to INR 10 lakh crore.

- **Reduced carbon emissions and improved air quality:** India can save 10 giga tonnes of CO₂, 500 kilo tonnes of particulate matter (PM) and 15 million tonnes of nitrogen oxide (NO_x) caused by freight transport by 2050.
- **Less truck traffic on roads:** Improved mode share and efficient logistics can reduce the vehicular-freight activity by 48 percent in 2050 over a BAU scenario. ●

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