Multi-Modal Logistics Parks in India: A Test Case

K S Murthy
Professor of Practice, Ballari Institute of Technology and Management

This descriptive example case is prepared to demonstrate the characteristics of multi-modal logistics parks in India, their importance to the businesses across India and country's economy.

India's logistics sector is expanding rapidly with a "spectacular rise" of 16 places in World Bank's Logistics Performance Index (LPI) in 2023 in line with the growing economy. India's LPI ranking rose to 38th, up from 54th in 2014.

The LPI is an interactive benchmarking tool created to help countries identify the challenges and opportunities they face in their performance on trade logistics and what they can do to improve their performance. The LPI 2023 allows for comparisons across 139 countries. However, India had comparatively high logistics costs, 13% of total price of goods compared with 8 to10% in other major economies[1]. India's road freight cost per ton-kilometer, adjusted for purchasing power parity, is ₹1.90 ($0.03), which is almost double that of the United States.

In addition, the average speed of freight vehicles on Indian roads is about 25 - 30 km/hr (3), which is 50 – 60% lower as compared to USA, adding to the freight cost. While factors like topography do play a role in daily distance covered, the magnitude of difference is indicative of the inefficiencies present in logistics movement in India. In addition, variability and unpredictability of time required for freight movement adds to the logistics problem. Moving across the same route has time variability as high as 15-20%. Further, there is a ~50% variability in average speed across Indian states (with average speeds ranging from 37–40 km/hr in states like Gujarat and Rajasthan to 18-20 km/hr in states like Orissa and West Bengal), driven by differences in infrastructure and documentation complexity. This results in a need for higher inventory holding across the supply chain, in turn further increasing the logistics costs.

To make India globally competitive by reducing these costs and time, the Ministry of Road Transport and Highways (MoRTH) is developing multi-modal logistics parks at selected locations in the country under its Logistics Efficiency Enhancement Program (LEEP).

Multi-Modal Logistics Parks (MMLPs) is a key policy initiative of the Government of India, led by National Highways Logistics Management Limited (NHLML) under MoRTH and the National Highways Authority of India (NHAI).

MMLP[2] is officially defined as a freight-handling facility with a minimum area of 100 acres (40.5 hectares), with various modes of transport access, mechanized warehouses, specialized storage solutions such as cold storage, facilities for mechanized material handling and inter-modal transfer container terminals, and bulk and break-bulk cargo terminals. According to a Centre for Transportation and Logistics report, MMLPs can reduce logistics costs by up to 10%.

Logistics parks will provide value-added services such as customs clearance with bonded storage yards, quarantine zones, testing facilities, and warehousing management services. Provisions will also be made for late-stage manufacturing activities such as kitting and final assembly, grading, sorting, labelling and packaging activities, re-working, and returns management. MMLPs also help reduce carbon emissions and fuel consumption.

The key envisaged functions of MMLP are:

1. freight aggregation and distribution,
2. multi-modal freight transport,
3. integrated storage and warehousing,
4. information technology support, and

[1] Arora, Rajat (2017-07-21). "Government approves plan to build 34 mega multi-modal logistics parks at an investment of Rs 2 lakh cr". The Economic Times. ISSN 0013-0389. 2023-08-01.

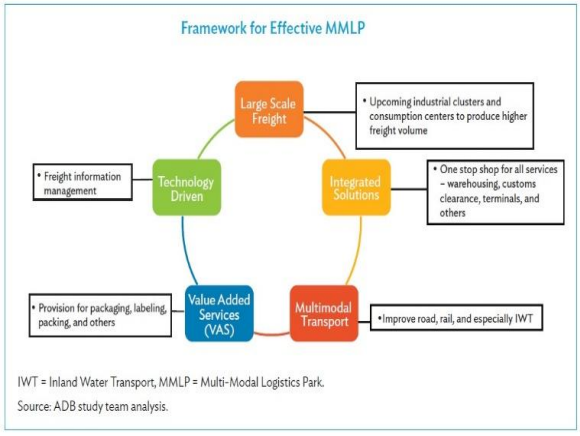
[2] Government of India, Ministry of Road Transport and Highways. 2017. Draft Policy Document: Development of Multimodal Logistics Parks. Delhi.

5. value-added services.

The aim of government is to develop Multi-Modal Logistics Parks in hub-and-spoke model to improve the country's freight logistics sector by lowering overall freight costs and time, cutting warehousing costs, reducing vehicular pollution and congestion, improving the tracking and traceability of consignments through infrastructural, procedural, and information technology interventions.

The higher logistics costs in India are primarily due to 1. unfavourable inter-modal mix – 60% of freight movement skewed toward road transport despite the lower freight cost of rail transport, 2. inefficient fleet mix – characterized by smaller, inefficient trucks, 3. underdeveloped material handling infrastructure - a fragmented industry consisting largely of small, unorganized warehouses with limited mechanization, 4. underdeveloped road infrastructure – limited presence of 4 and 6 lane national highways, and 5. institutional and regulatory bottlenecks - such as complicated documentation and procedures related to toll collections.[3]

To overcome these challenges to the development of the logistics sector, the government took several initiatives. In addition to the nationwide imposition of a goods and services tax (GST), Make in India, and infrastructure improvement projects, the Government of India is undertaking reforms and technology adoption to transform India's integrated logistics sector. In addition, a new Logistics Division is established within the Ministry of Commerce and Industry to coordinate integrated development of the sector via policy changes, improvement in existing procedures, identification of bottlenecks and gaps, and introduction of technology-based interventions.[4] Also, an integrated logistics portal was set up to connect buyers, logistics service providers and relevant government agencies, Apart from this, the logistics sector is reclassified as a subsector of the Infrastructure sector, to improve access long-term credit to the logistics sector access. And processes of approval for the construction of MMLP is simplified encouraging investments by debt and pension funds into recognized logistics projects.



In 2017, the Government of India launched a program to develop 35 multi-modal logistics parks across the country over the succeeding years and invited Asian Development Bank (ADB) to become a lead partner and provide the necessary support (Jeong, 2017). ADB then conducted a pre-feasibility study to assess the suitability of MMLP locations and identify the requisite infrastructure, connectivity, and regulatory reforms.[5]

Since then, under Bharatmala Pariyojana[i] 35 MMLPs are being developed with a capital budget of Rs 50,000 crore for the country by various public and private entities across the country under Public-Private Partnership (PPP) in Design, Build, Finance, Operate and Transfer (DBFOT) mode. Based on the detailed project report (DPR), feasibility study and approved bidding document, the tender are invited from companies. The bidding documents (The Model Concession Agreement and Request for Proposal) are finalised for these 35 MMLPs depending on their feasibility.

[iii] Bharatmala Pariyojana is a new umbrella program for the highways sector envisaged by the Ministry of Road Transport and Highways that focuses on optimizing the efficiency of freight and passenger movement across the country. Under Phase-I of Bharatmala Pariyojana, the implementation of 34,800 km of national highways

[3] Government of India, Ministry of Road Transport and Highways. 2016. Logistics Efficiency Enhancement Program (LEEP). Delhi.

[4] R. Goyal and S. Singh. 2018. Indian Logistics Sector: On the Path of Transformation. Government of India, NITI Aayog (National Institution for Transforming India). http://niti.gov.in/content/indian-logistics-sector-path-transformation

[5] "Multimodal logistics park: Re-defining infrastructure in India". Qrius. 2018

in 5 years (from 2017 to 2022) has been approved at an estimated outlay of Rs. 5,35,000 crores. Bharatmala Project components are:

1. Economic Corridor – including the Golden-Quadrilateral and North, South –East West corridors by decongesting the choke points through the construction of elevated corridors, bypasses, ring roads, lane expansion, and logistics parks at identified points. These are integrated networks of infrastructure within a geographical area designed to stimulate economic development. As per the guidelines of the road construction project, the construction of 9,000 kms of Economic Corridors will be undertaken by the central government. One of the key focus of Bharatmala Pariyojana.
2. Feeder Route or Inter Corridor – 6,000 kms of Feeder Routes or Inter Corridor category
3. National Corridor Efficiency Improvement – 5,000 kms of roads, constructed under the scheme will fall in the category of National Corridor for the better connection between roads.
4. Border Road and International Connectivity – Connecting the cities and remote areas, which are situated in the border regions, the project has kept provision for constructing 2,000 kms roads that fall in the Border Road or International Connectivity category. Port Connectivity and Coastal Road – To connect the areas that are dotted along the shorelines and important ports, the central government has ordered the construction of 2,000 km of roads.
5. Green Field Expressway – Typically, it entails development on a completely vacant site and architects start completely from scratch. The main stress will be given to the construction and development of the Green Field Expressway for better management of traffic and freight.
6. Brownfield Projects–They carry constraints related to the current state of the site and might be contaminated or have existing structures that architects have to tear down or modify in some way before the project can move forward.
7. Balance NHDP Works – Under the last segment, the project will see the construction and maintenance of about 10,000 kms new roads.
8. To generate a large number of direct and indirect employment opportunities in the construction and infrastructure sector and also as part of the enhanced economic activity resulting from better road connectivity across the country.
9. To connect 550 districts in the country through national highway linkages.

Source: https://www.clearias.com/bharatmala-pariyojana/ - an Article written by Aseem Muhammed

Out of the approved locations, Five (05) MMLPs at Jogighopa, Chennai, Bengaluru, Nagpur and Indore are under development and expected to be operational in FY 2025-26 and FY 2026-27. [i]

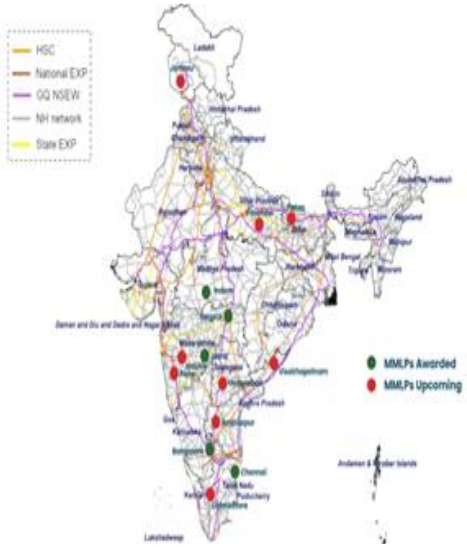
5 MMLPs	Estimated Cargo volume (Million Metric Tonnes Per Annum)	Estimated Cost of Project (₹ Crores)
Chennai	7.17	1,423.50
Bengaluru	29.46	1,769.70
Nagpur	11.26	673.12
Indore	12.79	1,110.69
Jogighopa (Assam)	13.32	693.97

Other locations are in various stages of development, including bidding, feasibility studies (DPR), and planning.

In addition, there are many private logistics parks in India, developed by private entities alongside Multi-Modal Logistics Parks (MMLPs). These parks, including those offered by IndoSpace, Agility Logistics Parks, Horizon Industrial Parks ESR Group, and Adani Logistics Ltd., provide warehousing, logistics facilities, and value-added services for industries like e-Commerce. Key locations for these private parks include the Mumbai Metropolitan Region, Delhi-NCR, Bangalore, and Chennai, leveraging strategic access to ports, highways, and airports to reduce logistics costs and improve efficiency.

Map of 35* MMLP Locations

Brief Current Status of MMLP Projects
(Source: National Highways Logistics Management Limited: https://nhlml.org/multi-modal-logistics-park)



Key Questions & Points of Discussion:

- ✓ What Challenges and Reforms India's Logistic Sector?
- ✓ What are the objectives of MMLPs?
- ✓ What are the expected outcomes and benefits MMLP?
- ✓ Will MMLPs help in reducing the logistics costs, and how?
- ✓ What are key benefits of MMLPs for Businesses?
- ✓ How do the dedicated freight corridors (a network of electric broad gauge freight railway lines that solely serve freight trains) in India complement MMLPs?
- ✓ How does the Golden Quadrilateral Freight Corridor (a network of national highways connecting major cities of India) help India's economic growth?
- ✓ What are the impacts of Sagarmala, UDAAN (Ude Desh ka Aam Naagrik), and Bharatmala on India's Logistics sector and economic growth?
- ✓ How is the execution of setting up MMLPs being carried out and the challenges involved?
- ✓ Role of private sector and government in enhancing logistics performance