CONNECTING DOTS

Major transport infrastructure projects are underway which can transform the logistics value chain, reduce costs in the long run and also provide a requisite boost to GDP.

BY SHUBHAM JAIN

Logistics, by definition, is the management of the flow of goods between the points of origin and consumption to meet customers or corporations' requirements. Hence, it is important that all components of the value chain are available at the right time and place, in the desired condition and pertinently at the right cost to efficiently complete the goods flow chain. Since logistics is the backbone of an economy, its strength is one of the key determinants of a country's pace of future growth.

The sector has grown steadily in the past few decades and is at the cusp of a revolution as significant developments are underway in the Indian economy. The leap in the volume of freight traffic moved/handled was powered by years of high growth in the Indian economy. However, the share of India's logistics spend in GDP is estimated at 13 per cent, as against 7- 8 per cent in developed countries, implying chronic inefficiency in the domestic logistics sector. In this regard, the government initiatives towards improving transportation infrastructure such as roads, railways, airports, sea ports, coastal shipping and inland waterways is likely to transform the logistics value chain, primarily by reducing the logistics cost in the long run.

The Indian logistics flow is also unbalanced, as majority of the goods transported are only on a select few routes. The freight share is skewed towards western India routes, which connect the sea ports in Mumbai and Gujarat to the northern hinterland. However, infrastructural bottlenecks that have stifled the sector's growth are being unclogged gradually. For instance, construction of dedicated rail freight corridors (DFC) will help promote efficient haulage of containerised cargo by rail. The logistics sector includes three broad components: transportation infrastructure, warehousing infrastructure, and third party logistics (3PL). The transportation infrastructure comprises of road, rail, air, and port-related logistics (includes inland and coastal waterways).

Road Infrastructure

Importance of road transportation: The transportation sector accounts for around 6.5 per cent of India's GDP, of which road transport is the dominant mode (4.7 per cent of GDP). Road transport has deep linkages with the rest of the economy and a strong multiplier effect, underscoring the significance of the sector.

Road network in India: India has the second largest road network in the world, totaling around 5.47 million km. The road network in India is classified as National Highways (NH), State Highways (SH), Major and District Roads (MDR) and Rural Roads. National Highways, which comprise about 1.9 per cent of road network, carry around 40 per cent of the total road-based traffic.

Capacity of highways: With 76 per cent of the NHs having lesser than four lanes, transporters continue to grapple with heavy congestion and poor ride quality, resulting in higher costs for the commuters. SHs and MDRs constitute the secondary system of road transportation in the country. The SHs links NHs, state's district headquarters, important towns, tourist centres and minor ports. The total length of SHs at present is about 176,166 km. These roads also carry medium to heavy traffic. MDRs run within the districts, connecting areas of production with markets; rural areas to the district headquarters and to SHs and NHs.

Shubham Jain,
Vice President and Group Head,
Corporate Ratings, ICRA Ltd

Major highway development programme: The Cabinet approved the Bharatmala Pariyojana Phase-I along with other programmes in October, 2017 which involves around 83,000 km (including Bharatmala Pariyojana Phase-I of 24,800 km) of national highway development by FY2022. Bharatmala Pariyojana is a new umbrella programme for the highways sector that focuses on optimising efficiency of freight and passenger movement across the country by bridging critical infrastructure gaps through effective interventions like development of economic corridors, inter-corridors and feeder routes, National Corridor Efficiency Improvement, border and

international connectivity roads, coastal and port connectivity roads and greenfield expressways. Bharatmala Pariyojana aims to bridge critical infrastructure gaps through corridor-based development which is a more scientific approach, desirable in the long-term, as it takes a holistic view on the overall network. Therefore, Bharatmala programme has the potential to change the entire landscape, if implemented as per plan.

The government's policy measures over the last few years has revived the Indian road sector, which was earlier beset by execution delays, project cancellations, stalled projects, loss of lender confidence, and leveraged balance sheets of developers. Broadly these policy measures can be classified into ones which have direct bearing on execution, awarding activity and the changes which impact the developer's financial profile. Awarding projects after securing 80 per cent right of way, delegating the power to regional offices for granting forest clearances and utility shifting, online filing for clearances to construct ROB and RUBs are some of the measures which aided execution.

Railways

The Indian Railways are amidst a major infrastructure development plan of ₹8.56 trillion during the five-year period 2015-2019. These projects are aimed towards significant capacity enhancements and network decongestion. The major capex is towards ongoing Dedicated Freight Corridor (DFC) projects, modernising of Railway infrastructure, station redevelopment, etc. The key capex planned/undertaken by the Railways is as follows:

Dedicated Freight Corridor Project:

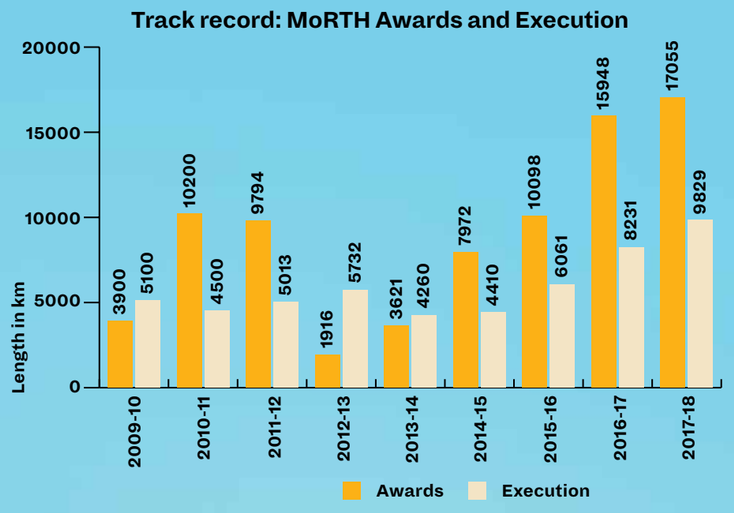
- Completing ongoing freight corridor capex – Eastern and Western freight corridors
- Proposal of developing additional freight corridors such as Delhi to Chennai (North-South), Kharagpur to Mumbai (East-West), and Kharagpur to Vijayawada (East Coast)

Redevelop 400 stations through PPP mode, entailing higher participation from state governments

- Bullet train/High Speed Rail Corridor project

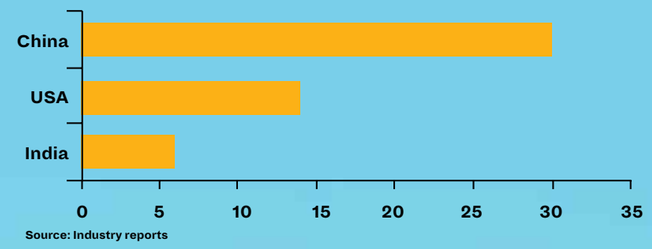
Execution progress and completion timelines of EDFC and WDFC

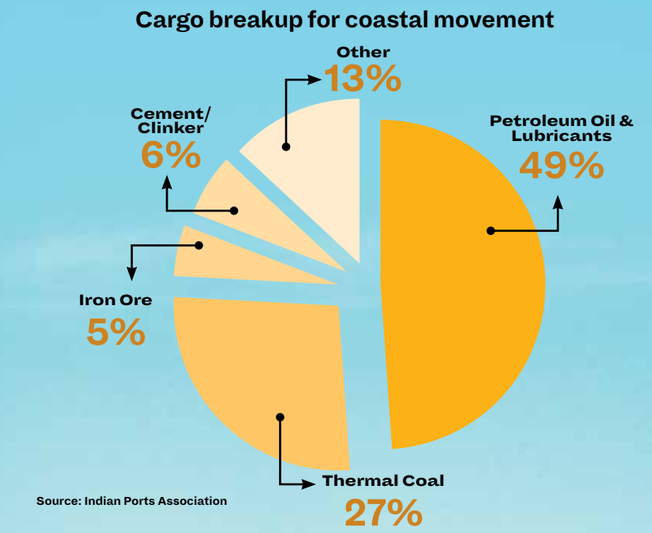
Till January, 2018, ₹349 billion were spent on the two DFC projects, out of the total estimated cost of ₹815 billion. The overall physical progress also stood at 40 per cent. Recently, about 190-km stretch between Ateli and Phulera, which is a part of the WDFC, became operational. DFCCIL expects phase-wise commissioning of the project by December-2020.



Inland Waterways

Globally, waterways transportation has demonstrated significant benefits compared to other means of transport, including low capital and operating costs, low maintenance costs, higher fuel efficiency and lower impact on environment given the low carbon emissions. India has a total of 14,500 km of navigable rivers; however, the freight transportation through this medium of transport is only 6 per cent of the total freight movement. Development of inland waterway infrastructure can help reduce the pressure on the road and rail infrastructure, while lowering the cost of transportation for the users. Despite the advantages envisaged, one of the key challenges in the past has been the high initial investment required for dredging an adequate fairway and creating multi-modal terminals and other allied infrastructure.





India currently has five national waterways and plans to develop 106 more such routes under the Sagarmala initiative. Of the ongoing projects, 'Jal Marg Vikas' is a major project on the river Ganga (National Waterway-1), being developed over a 1,620 km stretch between Allahabad and Haldia. The project envisages the development of a fairway with a depth of three metre, which would enable commercial navigation of at least a 1,500 tonne vessel on the river. The project envisages a fairway of three m depth, which would enable commercial navigation of vessels with 1,500-2,000 tonne capacity. Overall, the project shall include the construction of six multi-modal or inter-modal terminals, roll-off roll-on jetties and ferry terminals among others. The project is being implemented with technical and investment support from the World Bank and is planned to be completed over a period of six years at an estimated cost of ₹53.69 billion.

Higher integration between Coastal and Inland Waterway Transportation (IWT) to be a key going forward

India has a long coastline, spanning 7,516 km, forming one of the biggest peninsulas in the world. It is serviced by 13 major ports (12 governments, one private) and 187 notified minor and intermediate ports. These ports account for nearly 90 per cent (by volume) of India's international trade. However, for India, the share of coastal shipping in overall cargo is only about 6 per cent compared to 30 per cent in China and 40 per cent in Japan.

The potential of coastal shipping and inland waterways is untapped, but it is receiving much-need attention from the government. There are many inherent advantages of this mode of transportation. Coastal shipping or use of water as a mode of transportation is much safer, more economical, and less polluting (see table below). The coastal leg, apart from being more fuel efficient, can also carry larger parcel sizes and provide a great opportunity for consolidation of loads and over-dimensional cargo. All the major transportation infrastructure projects if completed as per plan and minimal cost and time over-runs has the potential to change the face of Indian economy and provide a requisite boost to the economy.