ICC REPORT ON

INDIAN RAILWAYS

Increasing the Modal Share

INDIAN CHAMBER OF COMMERCE

CENTENARY (1925 TO 2025)

Background

An efficient supply chain management requires a coordinated and integrated logistics system. The increased adoption of railways as a mode for cargo movement is crucial for improving India's logistics services. Currently, the modal mix in terms of freight movement is considerably skewed towards road transport. The effect is an increased burden on roads, and therefore, significant congestion, increased pollution, and resultant logistics cost escalations. At this juncture, it is important to strengthen the railways for the cost-effective and clean movement of a broad commodity base.

In the context of increasing the share of rail in domestic freight movement and improving rail efficiency, the report gathers incisive insights on the current status of rail infrastructure and operations, reasons for below-par adoption of railways as a mode for freight transport, bottlenecks faced in cargo movement through rail due to sub-optimal infrastructure, operational inefficiency, issues faced in first and last-mile connectivity, the role of private players, issues faced in multimodal transport, etc…

Indian Railways (IR) has been taking several initiatives to address the challenges and boost the rail share, such as the special parcel trains for transportation of perishable goods and essentials commodities.

PPP in India

In several countries, Public-Private Partnership (PPP) model is widely adopted, wherein various segments of the railway operations and infrastructure are outsourced to the private players. For instance, the private business rents some specific physical assets, such as rolling stock, which saves the railway from financing those assets itself. In 2003, Russia began allowing the private sector to rent freight wagons to the railway, making it profitable through a change in tariff rules.

The new policy created a vibrant market where the private sector provided USD 50 billion toward replacing the railway's extensive stock of old wagons. As a result, 85 percent of Russia's freight wagons are owned by the private sector.

Besides, the private sector can sell services to the railway, such as track maintenance. In such cases, the investor deploys its equipment and facilities, finances the working capital involved, and provides the labour to the railways.
However, in the Indian context the need for effective collaboration and integration of efforts between Indian Railways and private players is much beyond owning of rolling stock as in countries like Russia, South Africa and many such countries the axel loads, permissible train lengths are much higher.

Efficiency in Rolling Stock

Suggestions In our case, we need to make the rolling stock more efficient in terms of effective throughput, for which track upgradation is a prerequisite. This requires huge investments and agility in transformation of the basic infrastructure of the Railways. The operational expenses also need to be considered along with capital expenditure while deciding projects of national importance, thus, bringing in the concept of life cycle cost in terms of monetary as well environmental impact. A renewed focus on the operational ergonomics of the Rolling stock will further attract more share of freight for Railways. While conceptualising design of rolling stock the compatibility for multimodal logistics also needs consideration. Better operational ergonomics will add to safety and savings, besides ease of operations. Bi-Modal or multimodal wagon design, concept of Ro-Ro Rail and Sagarmala integration need more focus.
Ease of doing business with IR by ways of unbundling of maintenance charges from freight, tariff rationalisation for voluminous cargo, liberalisation of wagon investment policies, private investment in locomotives etc. are some possibilities.

Regulatory reforms

Regulatory reforms like decoupling TXR from base depots, allowing private maintenance facilities with laid down standards, dedicated investment regulator and protection of Intellectual Property Rights for innovative solutions are some of the possibilities to attract more freight to railways. Another important aspect is monetisation through saving in carbon footprint as it will make technologically advanced solutions look more attractive and feasible on cost front.

Product Mix

Focus on Product Mix There is an urgent need to focus on the product mix of Indian Railways, which has been skewed towards the movement of bulk commodities such as coal, cement, iron ore, steel, petroleum, food grains, and fertilizers. In 2023-25, coal constituted 50 percent of the total freight movement of 1,590 million tonnes, followed by Iron Ore (11%), Cement (10%), Raw Material for Steel Plants (except Iron Ore) (5%), Container traffic (5%), Iron & Steel (5%), Fertilizers (4%), Food grains (3%), Mineral Oil (3%), and other commodities (7%). The challenges faced in movement of containers via rail, and low share in domestic container movement have been discussed.

The movement of freight traffic by rail faces many challenges - infrastructural, operational, and end-to-end connectivity which urgently require actionable reforms based on stakeholders' discussions for these sectors.
For example, in the automobile sector, despite a rise in transportation of automobile by rail in the last few years, the share of railways in the automobile movement has been significantly low. In the passenger vehicle segment, almost 95 percent of the transportation occurs via roads. To increase the freight traffic for this sector, Indian Railways can tap into the Sports Utility Vehicles (SUVs) and two-wheeler segment traffic by modifying the wagon design to allow double stacking SUVs and allow side loading of two-wheelers.

Fortunately, Maruti Suzuki (India's largest auto maker) has recently initiated many steps to increase movement of auto traffic by rail., which includes the commissioning of an exclusive private rail siding at the Manesar unit of the company.

Product mix diversification can get boost if Railways define their business as a total logistic provider rather than just a transporter. In this context, door to door cargo services in collaboration with road transporters, especially for containerized traffic, should be institutionalized.

Challenges

Challenges faced by Indian Railways Indian Railways faces several infrastructural, operational, and connectivity challenges leading to a shift of freight traffic to roads.

Some of the challenges that came up during stakeholder discussions were:

1. It takes approximately 2-3 days longer for transportation via rail than the road along the major routes. The increased transit time by rail and pre- movement and post-movement procedural delays such as wagon placement, loading and unloading operations, multi-modal handing, etc., hamper freight movement by rail.

2. Lack of necessary terminal infrastructure, maintenance of good sheds and warehouses, and uncertain supply of wagons are some of the infrastructural challenges faced by the customers. This results in high network congestion, lower service levels, and increased transit time.

3. The absence of integrated first and last-mile connectivity in case of rail transportation increases the chances of damage due to multiple handling and also adds further to the inventory holding cost. Shippers expect greater service levels and proper handling of their goods(reinforces importance of door-to-door delivery).

4. Absence of time tabled services, inconsistent supply of rakes, and lack of integrated first and last-mile connectivity impacts the transit time and increases the cost of freight operations for the customers.

Based on the identified challenges, there is an urgent need for IR to draw up a credible and constructive roadmap of reforms to increase the domestic rail share and improve efficiency. The private sector can play an important role in enhancing operational efficiency and strengthening the rail infrastructure through Public-Private Partnerships (PPPs). Operational efficiency for loading/unloading, warehousing management, station services, automation, and digitization of various processes could be outsourced to the private sector.

Similarly, for first and last-mile connectivity, a separate entity can be created by the railways in partnership with the private sector as a single point of contact for customers to handle multiple legs of movement and ensure smooth transportation of goods.

The dedicated freight corridors (DFCs) are a great way to improve the capacity as well as reliability of timelines for operations of freight trains. A fast track dedicated network with straight line alignments and higher axle loads will pave way to increase SOB for railways.

Already, with operational lengths of the DFCs constituting 4 percent of rail network is transporting around 11-12 percent of total freight moved by IR. Connectivity with ports and operations of multimodal transit hubs will further add to the freight movement for IR. It has a huge potential in Eastern and North Eastern states for becoming a transit hub for countries in east and Far East.

There is an urgent need for development of a revenue model based on, as per stakeholders' discussions, PPP model has been suggested for a few dedicated container freight trains from point to point based on the Build-Own-Operate approach.

An Uber-like model for cargo vehicles in passenger trains, wherein the customers can book the vehicle using an online application, is also a need of the hour.

There is a significant potential in improving the rail efficiency and rail coefficient of freight in the domestic freight market. Railways can increase the validity of brake power certificate for the rakes by enhancing the efficiency in rolling stock maintenance process.
Such reforms will address some of the major challenges faced by the Indian Railways to ensure seamless rail freight operations, increase in the share of rail freight in the modal mix, and subsequently, increased revenues for railways.

The share of Indian Railways in domestic freight transport has been declining over time, from 85% in 1951 to less than 26% in 2024. However, Indian Railways has set loading targets of 3,000 million tonnes (MT) by 2027 and 3,600 MT by 2030–31, to achieve 45% of freight share by 2050-51.

A major challenge faced by Indian Railways is the issue of capacity constraint. The pace of expansion of the network (and additional capacity) to address expansion in overall freight demand for the economy has been a major factor in the declining share of Indian Railways in overall freight movement in the country.

Freight rate is an important determinant of demand.
Although the bulk commodities moving by rail are price inelastic, yet the share of Indian Railways in shipping these has been declining over the years. Hence,

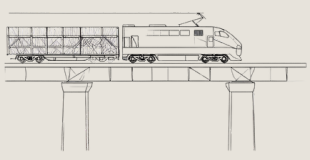
several other factors may also limit Indian Railways' expansion in market share. Some of these factors can be associated with:

1. **Timely availability of rakes;**
2. **Ability to move commodities in piecemeal (as against in rake loads only currently);**
3. **Reliability and timely delivery (assured service);**
4. **Increase in average operating speed from 25 kmph to 50 kmph for freight.**
5. **Safe and damage free transit for cargo;**
6. **Early settlement of claims;**
7. **Increase in coverage of railway network to more cities and towns (there are only about 8000 stations at present and more than a million cities, towns and district headquarters in India); and**
8. **Good connectivity between the source and destination (first and last mile connectivity).**
9. **More railway sidings- both public and private, should be encouraged to improve accessibility of Railways to larger customer base.**
10. **Information systems should facilitate real time online status of cargo for the customers.**
11. **Total logistics solution should be the guiding factor which can include augmenting containerized traffic and even Trucks on Train (TOT)**

Indian Railways also need to conduct detailed market research on selected customers of different commodities and collect information on their preferences over each of the mentioned factors along with the rate offered by railways to construct a composite "satisfaction index" (for each of the bulk commodities) to measure the performance of the railways in freight transportation. This will aid Indian Railways in assessing the main reasons behind its declining freight share despite the inelastic demand for bulk commodities and regaining its lost share. It is becoming quite evident that the current business strategies may not be able to help Indian Railways in achieving an annual freight-loading target of 3,600 MT by 2030–31.

The highest-ever average annual growth achieved by Indian Railways was 7%, mostly on account of the growth of coal, cement, iron and steel demand. Without diversification of revenue sources and freight loading, the ambitious 11% annual growth would be left to the vagaries of the market condition of these three bulk commodities.

Indian Railways needs to transform its business strategies, including a host of things like proactive marketing strategies, aggressive penetration in the non-traditional transport market of non-bulk commodities, by suitably designing new service methods, looking into its rating policy afresh to make it market-driven, and prioritising its investments in low-cost operational improvements like



terminals that give immediate benefits, and so on. Thus, Indian Railways requires an overhaul of the existing system to meet the future demand projections in view of stiff competition from other modes of transport. This also necessitates sustained efforts for rationalisation and liberalisation of the freight market of the Indian Railways in tandem with modernisation of the framework governing it.

Indian Railways is eyeing to capture 45% of freight share by 2050-51 from presently contributing to less than 30% of all freight movements in the country. However, there are several issues plaguing the freight operation of Indian Railways such as:

1. Decoupling of the growth rates of GDP and rail transport demand;
2. Declining lead in freight movement;
3. Increasing overhead costs and operating ratio;
4. Unstable revenue growth;
5. Lack of diversification of freight revenue sources;
6. Delay in scraping of the old and unusable rolling stocks and replacement with new ones; and
7. Slow commissioning of GCT (Gati Shakti Cargo Terminal) (since only about 91 terminals commissioned against identified 354 terminal-locations)

Finally

The diversification of revenue sources is a sine qua non for the commercial viability of freight operations. Particularly, Indian Railways needs to focus on designing its services towards catering to the high value automobile movement and container segment. There should be scheme for entering into long term contracts, with suitable incentives, to improve the customer base.

BOG and container services contribute to 12% of Indian Railways' freight loading and have remained stagnant over the years. This can go up substantially with a suitable 'door to door' delivery model. Also, Indian Railways should consider collecting customer feedback on different parameters associated with the delivery of a commodity/consignment, to construct a composite "satisfaction index" to assess the factors impeding the growth of the modal share of Indian Railways in freight operation. The business model of freight subsidizing passenger fares also needs to be reviewed for long term growth.