

Indian Railways – The ‘Lifeline of the Nation’

An Analysis of the Indian Railways and the Suggestions by the Bibek Debroy Panel

The Indian Railways (IR), a 162-year-old national asset has the distinction of being **the second largest railway system in Asia and the fourth largest railway system in the world**, operating more than **19,000 trains and 7,112 stations**. IR plays a critical role in facilitating the economic and social development of the country by enabling geographic connectivity, citizen mobility and commercial activity, in addition to providing a world-class logistics and transportation infrastructure. The organizational structure of Indian Railways is such that it is divided into 17 zones, and these zones are further subdivided into 68 divisions, each headed by a divisional headquarter. Also, the IR is one of the biggest employers in the country with a workforce of 13 lakh people.

The IR is the backbone of the transport infrastructure in the country, along with the national highways, inland waterways, ports and airports and carried **21 million passengers every day in 2013-14**. Owing to the low per unit cost, the IR has been the preferred mode for transportation of bulk commodities such as coal, iron ores and cement **and it carried 1.05 billion tonnes of freight**, as a result of which it broke into the exclusive club of 4 railways (*USA, Russia and China being the other three*) that carry more than one billion tonnes of freight annually.

However, despite this vast coverage and volume of traffic carried by the IR, it has been vastly underperforming on account of under-investment in capacity addition and upgradation, losses on passenger services, continued operation on uneconomic branch lines and increasing competition from road transport in freight traffic. As a result, the share of the IR in the overall GDP of the country has declined to less than 1 percent and it has also ceased to be the largest transporter of freight traffic in the country. Thereby, **an investment of INR 8,56,020 crore has been proposed over the next 5 years (2015-19)** to enable expansion, restructuring and up-gradation of the railways.

It is in this context that this brief discusses the challenges and opportunities in the railways sector and presents the recommendations of the Bibek Debroy Panel, formed by the Government of India to suggest measures to improve the IR.

The Indian Railways – the numbers highlight the opportunities and the challenges



India Railways is the world’s 4th largest railway network spanning a network of **65,806-route kms** as well as a running track length of 89,919 kms. Also, 86% of the tracks are broad gauge. However, **only 39.92 percent of the network has been electrified**, as of 31st March 2015.



During 2014-15, the IR carried **8,350 million passengers** and the freight loading by IR stood at **1,101.25 million tonnes**; 54% of the passengers originated from suburban routes and average distance travelled is 138km per passenger. **Speed of average freight is only 24-25 km/hour**



IR’s locomotives consume 2.6 billion litres of diesel and 13.8 billion units of electricity annually; the fuel bill accounted for INR **30,199 crore** of its net working expenses in 2014-15, which implies that **fuel expenditure comprises 28 percent of the working expenditure of the IR**.



The gross traffic earnings stood at **1,59,248 crore** in 2014-15 with earnings from goods traffic accounting for 67% of the total earnings; **93.6 paisa is spent to earn 1 rupee** implying a very poor operating ratio. 55.5 percent of the budget is allocated for staff costs and fuel bills

Slow Pace of Expansion and Modernization in the Railways Sector

While the passenger traffic and number of routes operated by the IR has increased significantly since its inception, the corresponding growth in infrastructure is inadequate. In fact, the IR has added only 10,000 route-kms since Independence while China has added more than 50,000 route kms in the same period. Additionally, the share of double/multiple track as a percentage of total route kms has grown by only 52 percent over the past 3 decades and today only 30.32 percent of the route kms have double/multiple tracks. Owing to the slow pace of expansion, the current infrastructure has reached a saturation point and today, almost 40 percent of the 1219 sections operated by the IR are running at more than 100 percent line capacity utilization. The Sam Pitroda Committee highlighted that nearly 40 percent of the network carries about 80 percent of the traffic. This has resulted in large scale congestion and inability to accommodate more trains and increase in the speed of the trains.

Despite the fact that electric locomotives comprise 45% of the total locomotives¹ operated by the IR, electric locomotives carries 51.4 percent of the passenger traffic and 66.5 percent of the freight traffic, which indicates a better performance investment. However, even then the pace of electrification of tracks has not taken place at a rapid pace and currently only 40% of the network has been electrified.

A key factor behind the slow pace of expansion and modernization is the chronic underinvestment in the sector as can be highlighted by the fact that Railway expenditure as percentage of transport sector expenditure declined to 30 per cent in the 11th Plan (2007-12) from 56 per cent in the 7th Plan (1985-90). Moreover, with an Operating Ratio, which has remained above 90 percent in the last six years, the amount of funds available with the IR for investment purpose is insufficient.

Declining share in Freight Traffic

The Indian Railways has since its inception been the prime mover of the nation by connecting different parts of the country and transporting people and goods across the country. Revenue receipts from freight traffic contributes up to 70 percent of the total revenue receipts of the IR. In absolute number, the revenue earning freight traffic (REFT) has grown by approximately 125% from 473.5 million tonnes in 2000-01 to 1,051.64 million tonnes in 2013-14. Coal accounted for almost 48 percent of the total freight carried by the IR in 2013-14.

Also, while the volume of freight transported and the earnings from freight traffic has increased considerably, the IR has been losing out on market share, particularly in retail commodities, which is a major cause for worry. The share of IR in freight traffic has fallen from 88 percent in 1950-51² to approximately 36 percent in 2013-14. Moreover, the modal share of Railways in freight transport is much lower in the country as compared to other countries with railway networks as big as India i.e. USA, Russia, China. Further analysis of the numbers also reveals that the average lead of revenue earning freight traffic³ has reduced from 754 kms in 1980-81 to 686 kms in 2012-13.

One of the key reasons for the same has been the fact that the Railways has been using hike in freight rates as a tool to cross subsidise the passenger fares, thereby, losing share to other modes of transport. Therefore, the increase in earnings has been driven by higher freights than considerable increase in volume.

Major Delay in Execution of Projects

The Twenty-Fifth Report of the Standing Committee on Railways on 'Ongoing and Pending Railway Projects, with special emphasis on Projects in the North-East Region revealed that approximately 41⁴ percent of the 368 projects being undertaken

¹ The IR had a total of 9,956 locomotives in 2012-13 of which diesel locomotives numbered 5,345 and electric locos numbered 4,568.

² RITES Report in 2009 revealed that the maximum decline occurred in the 90s when the share declined from 63 percent to 39 percent

³ Average lead of REFT represents the average distance each tonne of goods is transported and longer lead implies higher earning.

⁴ 217 projects were sanctioned in the last 5 years and in the current year; 64 between last 5 years and 10 years; 28 between last 10 years & 15 years and 59 projects were sanctioned more than 15 years ago (as of 2013-14).

by the Railways in 2013-14 had been sanctioned between the last 5 years and 15 years or more and in fact 59 of the projects have been ongoing since 1997-98 or before. Furthermore, the 342nd Flash Report of the Ministry of Statistics and Programme Implementation highlighted that there are almost 237 Railway projects with no commissioning schedules/dates and the cost of the 283 Railway projects being monitored by the MOSPI had increased to INR 2,67,604 crore from the original cost of INR 1,49,809 crore.

Summary of Key Government Initiatives and Policy Measures

The Government of India has taken various initiatives as well as introduced policies to mitigate the strain on the existing infrastructure of the Indian Railways as well as address the issue of under-investment and slow pace of modernization of railway sector. It has announced the redevelopment of existing railway stations, execution of railway projects in a time-bound manner, setting up Dedicated Freight Corridors (DFCs) and opening up the sector to 100 percent Foreign Direct Investment (FDI). It is envisaged that these key initiatives would also ensure railway connectivity in far-flung and hilly areas and provide an impetus to the growth of the railways in the country. This section takes a look at some of the key schemes and policy decisions.

Developing Dedicated Freight Corridors – reducing transit time and ensuring better management of freight traffic

In an attempt to reform the freight transport services offered by the Indian Railways and provide clear passage to freight trains, the Government of India had approved the construction of two dedicated freight corridors (DFCs) i.e. the **Eastern DFC and the Western DFC** in 2008. A Special Purpose Vehicle, the Dedicated Freight Corridor Corporation of India Limited (DFCCIL) has been established for the planning, construction, operation and maintenance of the two corridors. The two corridors would cover a length of 3300 kms, the trains would run at an average speed of 70 km/hr as compared to the average speed of 25 km/hr currently and the tracks would be electrified and have been designed to handle an axle load of 32.5 tonnes, up from the 22.5 tonnes currently. These two corridors would be built at a cost of **INR 81, 459 crores**, which includes a land acquisition cost component of INR 8,067 crores and are expected to carry more than 300 million tonnes of freight by 2021-22. Going forward **four more dedicated freight corridors with a total length of 6200 kms are planned across the country:** Kharagpur – Vijaywada, Kolkata – Mumbai, Delhi – Chennai and Goa – Chennai.

Name of Project	Length	States Covered	Construction Cost	Deadline
Eastern Corridor (Dankuni-Ludhiana)	1839 kms	Punjab, Haryana, UP, Bihar, WB, Jharkhand	INR 26,674 crore (World Bank loan funding for 66% of the project cost)	Commissioning in 2019
Western Corridor (JNPT – Dadri)	1499 kms	Haryana, Rajasthan, Gujarat, Maharashtra	INR 46,718 crore (77% of the project cost funded by Japan International Cooperative Agency (JICA))	Commissioning in 2018

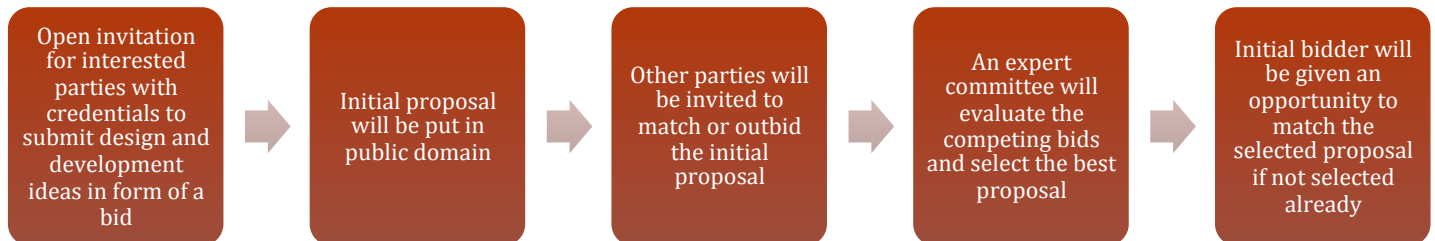
Source: DFCCIL, PIB

Redevelopment of 400 Stations through the Swiss Challenge Method

On 16th July 2015, the union cabinet cleared a proposal for redevelopment of 407 A1 and A type railway stations⁵ through the innovative “Swiss Challenge” Model. These stations will be offered for redevelopment on “**as is where is**” basis. The ownership of the land will remain with the Railways. The redevelopment proposals will be selected by the “**Swiss Challenge**” method,

⁵ A1 and A type Railway Stations are non-suburban stations with high passenger traffic. There are **75 A1 and 332 A type** stations in the country. A1 type stations are those that earn INR 60 crore or more while A type stations are those that earn between INR 8 and 60 crore.

which is described in the process chart below. The plan aims to leverage private investment to provide better passenger amenities on the stations while monetizing the assets in the process.



Role of MPs in Station Redevelopment and Providing Passenger Amenities

The MPLAD fund guidelines provide for the use of MPLAD funds for passenger amenities at the railway stations and halts. This may include provision of approach roads, foot over bridges, bio-digester toilets, drinking water facilities, escalators, fixed seating etc. at the railway stations. Following are examples of constituencies where MPLAD funds have been used for passenger amenities:

Constituency	Railway Station	Amenities	MPLAD Used
Mumbai North	Multiple Stations	Cleaning, RPF Barrack	INR 1.5 Crore
Bangalore Central	Whitefield	ITPL Halt Station	INR 1 Crore
Udhampur	Multiple Stations	Seating Benches and Platform Shelters	INR 34 lakh

The MP may also encourage local businesses and developers to take up redevelopment under the scheme. This would ensure local engagement and customization for local preferences while allowing for direct and indirect local job creation.

Recommendations of the Bibek Debroy Committee

On 22nd September, 2014, the Ministry of Railways announced the constitution of a committee headed by Mr. Bibek Debroy for making recommendations for the mobilization of resources for major railway projects and restructuring of the Railway Ministry and Railway Board. The Committee submitted the final report in the month of June this year and this report seeks to lay down a roadmap to carry out a gradual restructuring of the existing decision-making systems in the Indian Railways and bring down its social cost obligations as well as generate external resources for expediting ongoing and pending projects while emphasising the point that the primary operation of the IR should be confined to running trains. It also recommends the phasing out of the Railways Budget and suggests that the Union Budget should provide gross budgetary support to the IR. While it doesn't recommend privatization of operations, it recommends private entry in running trains to provide a competitive environment as far as the railways are concerned. The salient recommendations of the Report are as follows:

Setting up an Independent Regulator, the Railways Regulatory Authority of India (RRAI)

The Report recommends the setting up of a **statutory independent regulator**, the RRAI, for enabling competition and protecting consumer interests, which is in line with the Cabinet decision in August 2013 to set up a Rail Tariff Authority (RTA) as well as the announcement by the Honorable Minister of Railways, Mr. Suresh Prabhu during the 2015-16 Railway Budget speech to set up a comprehensive independent regulation mechanism, not restricted to determining tariffs. The report goes on to suggest that the RRAI should only be responsible for determining passenger tariffs and not freight tariffs, while also

specifying that the regulator's recommendations should not be binding and the final decision with respect to passenger tariffs should rest with the Ministry of Railways.

Generating Resources through Optimum Utilization of Existing Assets, External Financing and Building Capacity

On account of the need to execute the pending projects, which need to be identified on the basis of a rigorous selection process and have been accorded highest organizational priority, the report specifies the **need to augment the efficiency of the railways services to generate more internal resources as well as secure financing from public and private entities**. It recommends the need to concentrate on freight segment (which is more remunerative in nature), license on-board catering to large food chains and leasing of parcel vans in trains to tap the growing e-commerce traffic in the country as some of the steps for generating more internal resources. At the same time, it talks about the need to enter into Joint Ventures and Public Private Partnerships for execution of projects.

Carrying out Accounting Reforms

The Railway Accounting structure has been found to be extremely complex and difficult to comprehend, as a result of which it doesn't reveal the exact financial status of the IR. The report highlights the need to undertake extensive accounting reforms in order to bring them in line with accounting standards and practices followed by a commercial enterprise as this would not just **help in tracking assets at the disposal of the IR and providing a full picture of the IR's financial position**. It would also enable quantitative assessment of the policy interventions on the cost of various services.

Need to Separate Ancillary functions such as running Hospitals, Schools and the Railway Protection Force

The report stresses on the need for delinking activities such as running of hospitals, schools, manufacturing of locomotives, coaches and wagons from the core business of running trains. It also recommends that the IR should not be funding half of the funds required for maintaining the Government Railway Police (GRP), which comes under the State Government, and that the State governments should be asked to entirely fund the GRP. It also goes on to suggest that General Managers and Divisional Railway Managers should be granted greater freedom in deciding the functionaries of non-core activities undertaken by the IR.

Conclusion

The Indian Railways has played a critical role in the social and economic development of the country and in ensuring access to cheap and affordable public transport for the masses. Moreover, it has grown significantly and is among the largest railway networks in the world. However, over the past two decades, it has not been able to maintain its position as the prime mover of the nation and concerns have been cast over its ability to provide competitive and cost-efficient transport services for passengers and freight in the country. As the Bibek Debroy Committee Report pointed out, *the supply-side improvements have not been commensurate with demand end requirements*, indicated by the slow speed of passenger and goods trains as well as the delay in modernization and expansion of the network. Therefore, it has become imperative for the IR to undertake a concerted effort at improving passenger amenities, decentralizing decision making, fast-tracking projects of national importance, adopting uniform accounting standards and ensuring better delivery of services in order to drive the growth of the economy and also improve its financial health as suggested by various committee reports submitted recently and in the past.