Indian Railway's: Finance and Revenue Management Approach

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Abstract: *Indian Railways has the fourth largest rail network in the world after the United States, China and Russia. In the last few decades, traffic has been moving to other transport modes such as roads and air, which has led to declining rail traffic, and consequently declining revenue generation for the Railways. Deteriorating finances of the Railways have translated into lower investment in infrastructure, poor infrastructure maintenance, and poor services. Poor infrastructure has also had serious implications in the form of train accidents. The Comptroller and Auditor General of India conducted a compliance audit for the year 2016-17, which has been tabled in Parliament. In this context, the note looks at the Railways finances and challenges to financing, the Railways infrastructure, and the current organizational structure of the Railways and the reforms suggested to restructure it. In 2021-22, the total revenue expenditure by Railways was estimated at Rs. 2, 10,899 crore which was an annual increase of 10% over 2019-20. While the total proposed capital expenditure for 2021-22 was Rs 2, 15,058 crore. This was an annual increase of 21% over 2019-20.*

Keywords: Indian Railways, Revenue, Finance, Revenue management, Finance management, Public entity

I. INTRODUCTION

Indian Railways is the largest railway network in the world. It has a revenue base of US$13 billion and employs about 1 million people. The Indian Railway's annual passenger traffic is over 4 billion passengers per year, making it one of the largest transportation companies in Asia Pacific region by passenger volume. It is also one of the busiest freight railways with over 2 million tonnes of cargo transported daily across its network; while its freight earnings contribute nearly 50% towards its overall revenues (51%). Indian Railways has been ranked the best performing state-owned enterprise in the country by Center for Public Enterprises at IIM Bangalore.

II. LITERATURE REVIEW

Ankita Singla and Balbir Singh (2020) the researchers concludes that growth of Indian railways is satisfactory for total investment, total capital, number of passengers originating, number of stations etc. but net revenue receipts and number of employees employed are showing negative growth.

Asma Khan et. al (2015) the researchers concludes that the total earnings have increased at a faster rate than the total working expenses during the study period. As far as net profitratio is concerned, it has showed a rising trend till 2007-08 and started declining after thatshowing a poor performance. Similarly, it has been observed that the operating ratio continuously declining till 2007-08 reflecting a very good performance but after that again started rising showing a pathetic performance. Hence, it is recommended that the gross earnings need to be increased as well as the working expenses need to be reducedfor improving the Indian Railway operating and net profit ratios.

Richard Mowery (1993) One of the first books on revenue management was written by in 1993 titled "Intelligent Revenue Managers" which focused on how companies can use their resources more efficiently and effectively to increase profits. This book was later adapted into an audio series called Intelligent Revenue Management.

William Sahlman (1994), another book titled "The Economics of Transportation: Pricing and Allocation: A Microeconomic Model for Transportation Systems Management". This book focused on how transportation systems should be priced so as not to create excess demand for them or excess supply for other things such as fuel or pollution

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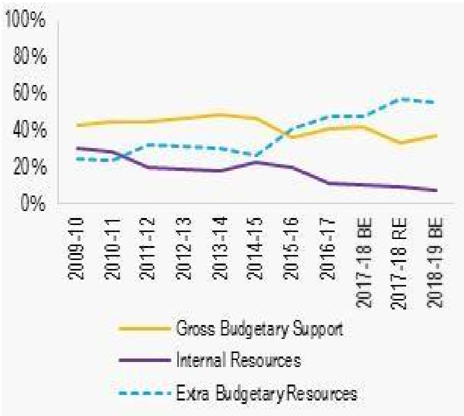
emissions due to congestion problems caused by excessive use of roadways during peak travel times.

III. METHODOLOGY OF THE STUDY

The main objective of this study is to analyse the financial performance and revenue management of the Indian Railway by Trend Analysis. Secondary data were used for analysis and were taken from Indian Railway Website, books and journals.

IV. RAILWAY FINANCES AND THE FINANCIAL PERFORMANCE OF IR



Indian Railways is financed through:

(a) Its own internal resources (freight and passenger revenue, and leasing of railway land),

(b) Budgetary support from the central government, and

(c) Extra budgetary resources (primarily borrowings but also includes institutional financing, public private partnerships, and foreign direct investment).

Railways' working expenses (salaries, staff amenities, pension, asset maintenance) are met through its internal resources. Capital expenditure (procurement of wagons, station redevelopment) is financed through extra budgetary resources (58%), the budgetary support from central government (33%), and Railways' own internal resources (9%) for the year 2017-2018. In the last few years, the growth of Railways' transportation businesshas been declining, and consequently, its ability to generate its own revenue has been on adecline. On the other hand, Railways' expenditure on salaries has been gradually increasing with a significant jump every few years due to Pay Commission revisions. There is an increasing expenditure on pension too. The pension bill may increase further in the next few years, as about 40% of the Railways staff was above the age of 50 years in 2016-17. However, employees who joined since January 2004 are part of the contributing benefit scheme under the National Pension Scheme. The pension bill will start tapering off once these persons start retiring around 2040. A decline in the growth of internal revenue generation has meant that Railways has been funding its capital expenditure through budgetary support from the central government and borrowings. While the support from central government has mostly remained consistent, Railways' borrowings have been increasing. An increased reliance on borrowings could further exacerbate the financial situation of Railways.

Railways' surplus is calculated as the difference between its total internal revenue and its revenue expenditure (this includes working expenses and appropriation to pension and depreciation funds). Operating Ratio is the ratio of the working expenditure (expenses arising from day-to-day operations of Railways) to the revenue earned fromtraffic. Therefore, a higher ratio indicates a poorer ability to generate surplus that can be used for capital investments such as laying new lines, or deploying more coaches. The CAG (2019) noted that in 2017-18, the decline in revenue surplus led toa decline in appropriation to the various funds managed by Railways from its internal resources.

In the last decade, Railways has been struggling to generate higher surplus. Consequently, the Operating Ratio has consistently been higher than 90% formore than a decade. In 2020-21, Railways expects to generate a surplus of Rs 6,500 crore. This is a 71% higher than the revised estimates of 2019-20 (Rs 3,811 crore). In 2018-19, the ratio worsened to 97.3% as compared to the estimated ratio of 92.8%. In the year 2021-22, Railways expected to generate a

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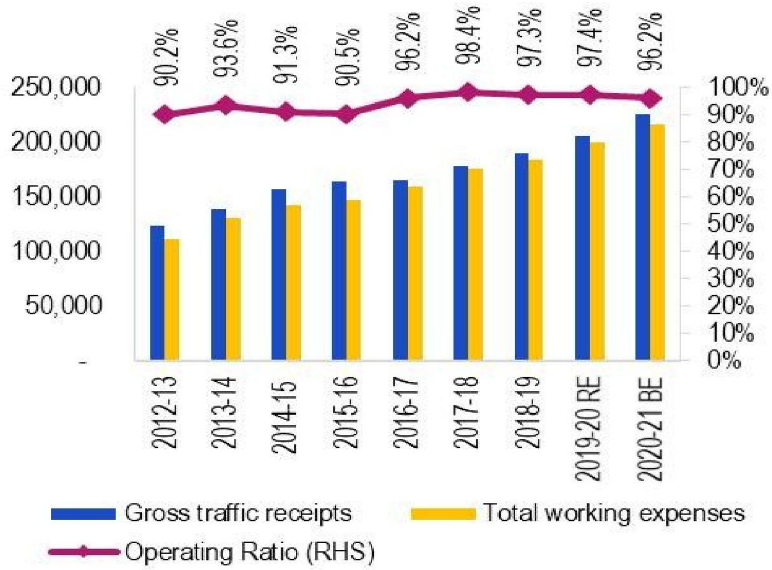
surplus of Rs 6,561 crore. This is an annual increase of 103% over 2019-20 (Rs 1,389 crore). In 2019-20, the operating ratio worsened to 98.4% as compared to the estimated ratio of 95%. The CAG (2020) had noted that if certain advances for 2019-20 were not included in receipts for 2018-19, the operating ratio for 2018-19 would have been 101.77%. 10 If appropriation to the pension fund were to be as per the requirement, the operating ratio for 2019-20 and 2020-21 will be 114.2% and 131.5%, respectively.



The Operating Ratio of the Indian Railways for 2012-13, 2013-14 and 2014-15 was 90.2%, 93.6% and 91.3% respectively and so on. Improvement in Operating Ratio necessitates a progressively higher growth rate in Traffic Earnings vis-a-vis the Working Expenses. It is a continuous endeavour of the Railways to increase revenues and control expenditure. Steps taken to maximize the traffic earnings, inter-alia, include periodic rationalization of fare and freight tariff, effective marketing strategies to capture more and more traffic, creation of additional capacity and optimum utilization of the existing rail infrastructure, improved throughput by steps to increase productivity and efficiency, improvement of passenger interface etc. To contain expenditure, Railways have made efforts through diverse means including strict economy and austerity measures, improved man-power planning, better asset utilization and inventory management, optimizing fuel consumption etc.

A. Financial Performance of IR During the Period 2009-2010

In the year 2009-2010, IR's total turnover was US$13 billion. This was higher than the previous year and it marked an almost 5% growth over 2008-2009. The passenger business earned US$8 billion while the goods delivery services earned US$5 billion.In 2009-2010, the revenue base of US$13 billion (about Rs 700000 crore) is more than double that of any other organization in India and around three times more than what was generated by Air India during that period.

B. Financial Performance of IR During the Period 2019-2020 and ahead

IR's total turnover was US$13 billion and its total revenue was 20.9 billion INR in FY2019-20, which resulted in a net profit of 2.1 billion INR (US$29 million). IR had an operating income of US$2.1 billion, which was 8% more than the previous year. Its gross profit margin was also higher at over 57%, compared to 54% in 2008-2009 Indian Railways operates one of the largest railway networks in the world, spanning over 115,000 kilometers. It carries over 23 million passengers and 3 million tonnes of freight each day. Indian Railways is also India's largest employer with around 1.6 million people on its payroll as of March 2018. The gross revenue of Indian Railways was Rs. 174,660.52 crore (US$ 24.78 billion) in FY20.Freight earnings in FY20 stood at Rs. 113,487.89 crore (US$ 16.24 billion). In FY20, Indian Railways earned Rs 50,669.09 crore (US$ 7.25 billion) from passengers. Between April 2020 and February 2021, total passenger revenue was Rs. 12,409.49 crore (US$ 1.70 billion), compared to Rs. 48,809.40 crore

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(US$ 6.7 billion) for the same time the previous year.

In Financial Year 2022, gross revenue was Rs 85,588.96 crore (US$ 11.44 billion) (until September 2021). Passenger earnings in Financial Year 22 (through September 2021) were Rs. 15,434.18 crore (US$ 2.05 billion), while freight earnings were Rs. 78,921.86 crore (US$ 10.5 billion). In Financial Year 21, freight earnings totaled US$ 16.04 billion. Freight revenues were Rs. 12,312.76 crore (US$ 1.63 billion) in October 2021, and freight loading was 117.35 million tonnes. The freight segment continues to be the most profitable for Indian Railways, accounting for 79.1% of total income in FY22 (through August 2021), followed by the passenger segment. The freight segment generates the most money for railways, accounting for 65 percent of total revenue in FY20, followed by the passenger segment.

C. Revenue base of Indian Railways

The Indian Railways has by far the largest revenue base as compared to any other organization in India. It has a total employee strength of nearly 1 million, out ofwhich only 2,50,000 are directly employed by railways. Besides this there are also employees who work under contractors or on deputation basis and they form a significant chunk of overall expenditure on salaries and wages. Indian Railways also has around 10 million passengers per day using its services which means that on an average every single passenger uses Indian Railways more than once during his/her lifetime journey from one place to another point along his/her route between these two places (for example Delhi-Mumbai). Thus we can say that every passenger uses Indian Railways at least once during his/her lifetime journey from one place toanother point along his/her route between these two places (for example Delhi- Mumbai). Following are the major categories of revenues in Indian Railways:

1. **Passenger Fares:** If you have a train that travels from A-to-B and makes one stop along the way, then you'd have one passenger fare for each passenger on board.
2. **Freight Charges:** If you have two trains traveling from A-to-B and make twostops along their route, then you'd have two freight charges for each trip—one for each train's cargo.

V. REVENUE MANAGEMENT PRACTICES IN INDIAN RAILWAYS

Revenue Management is a business unit of Indian Railways, Government of India. It deals with the collection and disposal of revenue from various sources. Revenue management is defined as "the process of managing revenue effectively through the effective planning, implementation, monitoring and evaluation of policies and programme". The objective of revenue management is to maximize the value of revenues, while minimizing costs in order to achieve sustainable financial viability.The revenue management system of Indian railways is based on two main components: ticketing and freight. Ticketing is conducted by the Indian Railway Catering and Tourism Corporation (IRCTC), while freight is managed by Indian Railways' own freight management system (FMS).

In India, the Railways operate on a business model that is unique in its own way. While most companies have a chief financial officer (CFO) and other senior staff who report directly to him or her, the Indian Railways has no such person. Instead, it has a Department managing and working on its Finance and revenue, which handles all aspects of revenue generation for the entire organization—from ticket pricing, to marketing strategies and customer service—and also advises government bodies on how best to use resources as well as propose changes in policy or legislation related tothese matters. The RMD also oversees several other departments within IR.

VI. CONCLUSION

The Indian Railways has by far the largest revenue base as compared to any other organization in India. It generated a total turnover of Rs. 13 billion during FY 2018- 19, which was 7% higher than that earned during FY 2017-18 (Rs.12 billion). The passenger business earned US$8 billion while goods delivery services earned US$5 billion. It should be noted that there are many reasons for this significant increase in revenues and it is not just because there was less traffic on railways but also because IR increased its fares by more than 10% in comparison with previous years. This paper explains that the total liabilities of Indian Railway have raised from 21129.15 Crores in the year 2005 to 378051.73 Crores in the year 2021. After the study of the trend analysis it is clear that a growth rate of 1689 percent with an average growth rate of 397 percent is admissible. The degree of relationship of share capital and Reserve & Surplus over the year is calculated as a high positive Correlation of 0.96 and the same non-current liabilities and current liabilities have the positive correlation of 0.72. The National Transport Development Policy Committee (NTDPC), in 2014, had noted that freight services are run with a focus on efficiency instead of customer satisfaction. The rail network's capacity is severely constrained due to which trains tend to slow down, affecting the quality of services. Further, Indian Railways does not have an institutional arrangement to attract and aggregate traffic of smaller parcel size. Therefore, it has been losing out on high potential markets such as FMCGs, hazardous materials, or automobiles and containerized cargo. Most of this traffic is transported by roads.

This paper has attempted to explore the revenue management practices of Indian Railways. The paper has presented a comprehensive overview of the organization's operations and its revenue base, which is largely derived from ticketing and freight services. Furthermore, it has also identified some emerging issues in this area that need attention by both policy makers and managers alike.

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