Literature Review

Abstract:

Indian Railways, one of the largest contributors for rail freight in India has faced a drastic decline in its share of rail freight. Freight Train transport in India runs more than 9,200 trains' daily generating revenue and 501 billion INR per year whereas the annual distance travelled by an average freight truck is between 95,000 to 130,000 kilometres. Logistics account for about 14% of India's GDP, and road transport alone comprises **70%** share. In this work, an effort to increase the share of Indian Railways across freight transportation is the major goal.

Introduction:

Freight transport can be defined as **the stages and means rolled out when transporting goods**. Stages include deployed logistics, conveyance or the resources used to reach the delivery destination. The major goal of freight transport is to increase the value of goods by moving them to locations where they worth more and encourages competition and production by extending the spatial boundaries of commodity and labor markets. Freight traffic in India is prominently dominated by roads. Over 71% of India's freight is transported by road. Rail freight being the most green and energy efficient mode of transportation among freight transport it accounts to only **17%** of freight transportation in India. If we are able to overcome the practical difficulties in rail freight, it can lead to economic boost both for the government and the people. Our goal is to analyse the previous rail freight stats and come up with a solution to regain the lost market in rail freight corridors, analyse the port traffic and come up with cost efficient solutions on concentration of rail freights a different ports, identify the major factors that affect the economy of rail freight and increase the number of rail corridors in the country in the most cost effective ways.

Keywords:

Freight transportation, Rail freight, Freight flow, Dry ports.

References:

[1] Urban rail system for freight distribution in a mega city: case study of Delhi, India, Monika Singh and Sanjay Gupta, Transportation Research Procedia, Volume 48, 2020, Pages 452-466.

It is observed that in the present state-of-the art of city planning and practice in India there is very little importance attached to understanding the characteristics, problems and potentials of goods movement to, from and within urban areas. Alternate scenarios of distribution of case commodities through rail system were developed in this paper with varying distribution legs in supply chain networks to assess the usefulness of using rail system over the existing road system-based distribution practice with the reduced emission, handling time and fuel consumption. It was observed that there is a potential reduction in carbon emissions by 97.8% by 2026 compared by BAU scenario. In addition, there shall be substantial reduction in handling time as well as fuel consumed.

[2] Comparison of Three Models for Introducing Competition in Rail Freight Transport, FumioKurosaki and ManojSingh, Transportation Research Procedia, Volume 14, 2016, Pages 2820-2829.

This study compares three models for introducing competition in rail freight transport in the three countries; the UK, India, and Japan. The three cases show that there are different types of intra-modal competition in the freight rail transport. As for the container transport in India, the Indian government allowed the private and public sector operators to enter the container operation segment. However, the distinct difference from the UK model is that it is regulated so that IR must haul all container trains, regardless of whether they are trains of Concor or of the new entrants. Thus, compared with the case in the UK, this model has an advantage that essential factors of railway operation such as slot allocation and timetabling can be integrated into a single organization, which make it possible to operate railway system smoothly. If the transport market does not require mutual access by different railways with on-track competition, the appropriate model for efficient railway operation looks to be different from that in Europe. For example, the railway sector in India and Japan do not have other freight operators that should promote mutual access.

[3] Marketing Strategies for Freight Traffic on Indian Railways: A Systems Perspective, G. Raghuram, Rachna Gangwar, W.P. No.2007-07-03 July 2007, INDIAN INSTITUTE OF MANAGEMENT, AHMEDABAD.

IR's overall share of freight has come down from 89 percent in 1950-51 to 40 percent in 2000-01. The road sector has captured the largest share of it. The loss of market share is in high rated commodities i.e. iron & steel, cement and POL. Iron & steel and cement shares have been taken by road. POL share has mainly gone to pipelines. IR's loading growth for coal and food grains has been higher than the production growth. In the case of high rated commodities, IR's loading growth has been lower than the production growth. IR should focus on the OD perspective proposed in this paper. They can also focus on interdivisional OD flows. This needs comprehensive information on terminating traffic. This orientation will allow each division to derive their own strategies based on market segmentation. IR needs to change their perspective of looking at the traffic. They must view traffic along with their clients as partners. There is a need for client based strategies. Integration and increase of IT related technologies are required. FOIS is a good initiative, and can be used to collect comprehensive data on OD, lead, customers at divisional level.

[4] Moving Towards Aggregation: Freight Forwarder Scheme of Railways, Ms Palak Passi, Research Associate, TERI, Published by, The Energy and Resources Institute (TERI).

Rail is the most viable option for carrying out bulk transport, freight movement though road sector has been able to penetrate here as well, particularly in medium and low-distance segments. This study proposes to examine the role of aggregators or freight forwarders in order to expand the commodity basket and move beyond the traditional bulk commodities. The study undertakes an in-depth analysis of challenges and barriers in expansion of role of freight forwarders or aggregators and suggest measures to overcome them. A freight forwarder should be viewed as a strategic partner who would assist railways in the following ways:

- Collect low and medium volume bulk traffic which is not amenable to forming of a train-load by the shipper. The freight forwarder would combine such shipments in to train-loads and offer it for carriage by railways.
- Collect non-bulk traffic of any shipment size, both high-value and low-value goods and offer to railways as train-loads for carriage.
- Arrange for delivery of goods at destination points.
- Take responsibility for compliance of packing conditions, following all the commercial formalities and also for settlement of claims in case of any damage or pilferage during transit.