CHAPTER I

RAILWAY TRANSPORT AND THE NEED FOR A LOCOMOTIVE
CHAPTER-1

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Transport is concerned with the movement of man and material for some specific purpose. The economic, social and political activities of a Nation depend on this powerful factor. It provides place and time utilities to both man and material and is therefore, indispensable to the development of trade and industry. It facilitates large scale production and distribution, and widens the area and scope of the market for goods and services.

The inland transportation comprises roadways, railways, waterways, and airways. The Railways consist of land routes laid with iron rails on which coaches and wagons move. The rail transport includes, in the main, the passenger transport that covers suburban and non-suburban sections and the freight transport.

The railway freight transport makes a quick delivery of all kinds of heavy and bulky articles over long distances between important towns, cities and states.

1.1. Passenger and freight transport:

Passenger transport or passenger traffic refers to the movement of people from one place to other. Before
Independence, the Britishers were utilising the Railways mainly for the transport of war troops and war materials. Later, there was a clamorous demand for railway services for civilians and civilian purposes. The twentieth century opened with a boom for the railways, both in expansion and in profits.

Passenger traffic in the suburban and non-suburban sections of the Indian Railways has increased considerably since 1950-51. The total originating passenger traffic increased from 1,280 million in 1950-51 to 3,300 million in 1976-77, registering a growth of 6.0 per cent per annum (See Appendix-I). In terms of passenger kilometres, it increased from 64,517 million to 1,63,836 million during the same period, showing a growth of 5.6 per cent per annum. For instance, during 1961-71 Bombay's population increased by 43 per cent while the number of suburban passenger trains rose by 79 per cent. Thus, by 3,001 with an estimated growth of 15 million people suburban trains are found to carry a vastly increased traffic load.

Goods transport or freight traffic refers to the movement of goods and commodities from one place to the other place in the country. Before independence, the
Britishers utilised the railways as a convenient means to transport raw materials from India to Britain and for the transport and sale of their 'finished products' in Indian markets.

In independent India railways have drawn up and executed their Five Year Plans of development in keeping with the National Five Year Plans. The freight traffic increased considerably since the inception of Five Year Plans from 1950-51. Roughly, transport of bulk commodities like coal, steel and fertiliser accounted for 77 per cent of the freight transport.

The important commodities which have shown a significant growth in the carriage by the railways between 1950-51 and 1976-77 are: Chemical manure (1,220 per cent); Manganese ore (826 per cent); Cement (454 per cent); Iron and Steel (361 per cent); and Mineral Oils (360 per cent). The freight traffic on the railways increased from 93 million tonnes in 1950-51 to 239 million tonnes in 1976-77, at a rate of 6.0 per cent per annum.

Appendix-I shows the growth of goods traffic and their earnings during 1950-65. It is revealed that over a period of about a quarter century between 1950-51 and 1976-77, freight traffic rose by two and a half times, its
earnings by over nine times and the average rate per tonne kilometre by more than two times.

1.2. Rail transport - The State ownership

Railways, as a public utility service caters to the needs of the people in the country. The industrial and commercial development of the Nation depends upon adequate and efficient transport facilities provided by the railway system. Hence, the maintenance of railways was considered a State's responsibility.

State regulation of railways in India began in 1853 and now they are managed and operated by the Government. The following are some of the factors that necessitated the nationalisation of Indian railways.

1. Large capital investments required for the development and expansion of railways.
2. Social considerations involved in the development of backward regions and the balanced development of all regions in the country.
3. The purpose of national defence - to serve the Nation in times of emergency through efficient transport of troops, goods, arms and ammunition etc...
4. To drive the advantages of a large industry such as reduced operational and maintenance costs.
5. As a result, perhaps, to offer railway services at a reasonable 'price'.
6. Provision of improved services and better amenities to passengers quickly and efficiently.
7. To ensure the welfare of labourers and workers of the railway system.
8. To assist the Government to control internal disturbances by transporting quickly the police, military and other security personnel to the disturbed areas.

Thus, State regulation of railways has become necessary to ensure safety to passengers, workers and others, to provide regular service at reasonable rates and to control the financial aspects of railways.

1.3. Need for a Railway Locomotive

The railway workshops and locomotives are found necessary for repairing and maintaining the locomotives. The rolling stock programme in Railways refers to the production and replacement of locomotives, coaching vehicles and wagons (generally in terms of 4 wheelers). Among the three items of rolling stock, locomotives are very essential for the smooth running of the railway system.

The railway workshops are mainly concerned with the production, repairs and maintenance of passenger coaches and goods wagons, whereas the running sheds are concerned
with the repairs and maintenance of locomotives of rolling
stock. Depending on different work schedules, a railway
workshop attends to timely check-up and ensure trouble-free
service to the passenger coaches and goods wagons. Different
works attending on a passenger coach are: Smooth function­
ing of the wheels, diameter of wheel maintenance, break
system, proper functioning of aircondition system, passenger
amenities like lighting, fans, seating arrangement, berths,
chain system, lavatory system etc.

The different works attended by a railway work­
shop to a goods wagon are: Smooth functioning of the wheels,
maintaining wheel diameter, surface walls of the wagons,
brake system, checking of leakages if it is an oil tanker or
gas tanker etc. A running shed should be responsible for
the repairs and maintenance of locomotives and to ensure the
expeditious supplies of materials. The locosheds ensure
trouble-free service to the engines. The list of workshops
and locosheds in different parts of the country are shown
in Appendix-IX.

Some of the Indian Railway workshops are manufac­
turing the spare parts which are used in the locomotives.
However, there are separate locosheds for repairs depending
on gauge and traction. There are 4 categories of locosheds,
Vis: 1) Broad gauge Diesel Locomotive, 2) Metre Gauge Diesel Locomotive, 3) Steam Locomotive and 4) Electric Locomotive. But there are some locomotives of multi-bays, which serve both Broad Guage and Metre Guage locomotives.

Establishment of a running locomotive is found necessary because:

1. A locomotive serves for the repairs and of the locomotives allotted to it.
2. Locomotives also serve the purpose of overhauling the Railway Engines.
3. It supplies trouble-free engines in order to meet passenger traffic as well as goods traffic in that Railway Zone.
4. At the time of engine failures, or accidents, it supplies good-conditioned engines as substitutes.
5. The locomotive also acts as a fuel filling point for the railway engines.
6. It also provides employment opportunities to workers.

Relevance and the scope of the study:

In view of the increasing passenger traffic and goods traffic, switch over from steam traction to diesel traction and electric traction, the establishment of Railway Workshops has become increasingly necessary. In this study,
it is attempted to analyse the performance of locoshed that repairs and maintains the diesel locomotives.

The increasing outlays and allocations made in the Five Year Plans of our country on the establishment and maintenance of Railway Workshops underscores the need for an economic analysis of the Railway Workshops. The Railway Workshops Development Programme and the Railway plan, with set objectives and financial allocations, calls for an evaluation of the functioning of Railway Workshops.

In this context, the present study is an attempt to examine the economic and physical performance of the locosheds. However, the present study is confined to analyse the economics of Broad Guage Diesel Locoshed at Gooty town in Anantapur district.

It is proposed in this study:

1. To describe the establishment, expansion, and extention of the Diesel Locoshed at Gooty.
3. To examine the effective functioning of the Diesel Locoshed and,
4. To evaluate the socio-economic impact of Diesel Locoshed on Gooty town.
1.4. Methodology:

For the purpose of describing and understanding the economic history of the Diesel Locoshed at Gooty information from Railway Records and Reports is collected. The data and information on physical and financial aspects are collected from the Office files and the reports of Senior Divisional Mechanical Engineer, Diesel Locoshed, Gooty.

To review the establishment and expansion of Railway Workshops in the country, the Five Year Plan Documents are referred. The Annual Reports of the General Manager, South Central Railway, Secunderabad are used to estimate the physical performance of the Diesel Locoshed during 1980-87. The Twentieth Anniversary Report of the Diesel Locoshed at Gooty is also used to collect other details.

The statistical techniques such as averages, standard deviation, time-series analysis etc., are used to describe the trend in the components of expenditure incurred on the Diesel Locoshed at Gooty.

For the purpose of evaluating the socio-economic impact of Diesel Locoshed on Gooty town, the information from the records of Chetnepally Panchayat (Gooty R.S.), is
secured. The author conducted primary investigation to estimate the increase in the level of business activity around the Diesel Locomotive, the additional employment provided to the daily wage workers by the locomotive, and the effects of prevailing Natka-Gane on the incomes of railway workers.

The period of study relates to the time period 1980-81 to 1984-87. This study may broadly be divided into three divisions: Chapter-II deals with a review of Railway Workshops Development in India, Chapter-IV analyses the expenditure and performance of Gooty Diesel Locomotive relating to the repairs and maintenance. In Chapter-V it is attempted to present the impact of the Diesel Locomotive on Gooty township, daily-wage employment potential, commercial and trade improvements, based on the sample survey. The findings and conclusions of the study are presented in the last Chapter.