PERFORMANCE OF INDIAN RAILWAYS
A ZONAL ANALYSIS : 1966-67 to 1998-99

by

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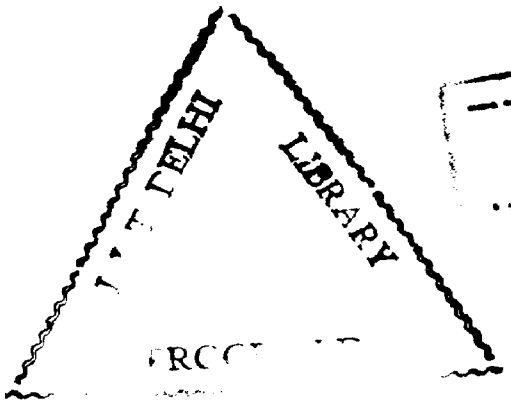

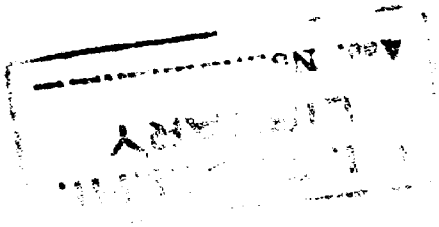

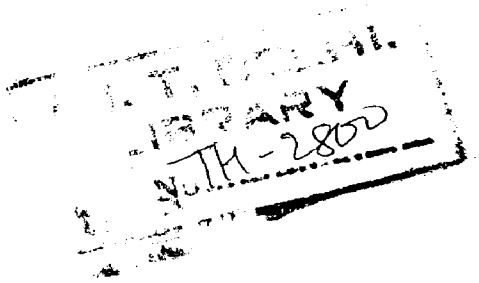

CERTIFICATE

Certified that Mr.K.P.Sunny, was permitted to work for his Ph.D. Degree in Economics at the I.I.T., Delhi on the problem entitled "PERFORMANCE OF INDIAN RAILWAYS : A ZONAL ANALYSIS –1966-67 TO 1998-99". He has faithfully carried out his study under my guidance and supervision and the accompanying thesis is his genuine and original work.

The results contained in this thesis have not been submitted, in part or full, to any other University or Institute for the award of any degree or diploma.

Mr.K.P.Sunny has completed necessary course work and put in the required attendance in this Department.

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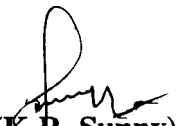

(K.P. Sunny)

ABSTRACT

Railway has a long history in India dating back to 1853 AD. Independent India inherited an extensive rail network of about 53400 route kms in 1947. India was a rail dominant economy in the 1950s, however, it became decidedly a road dominant one in the 1990s. Given India's size, geography and resource endowments it mandates a dominant role for the railways. Currently Indian Railway is the largest railway system under a single management in the world. During 1998-99, it had a route length of 62809 kms and operated 11000 trains daily including 7500 passenger trains. It carries 11 million passengers and 1.2 million tons of freight on a daily basis. Indian railway is a monolithic system with nine Zonal railways as its administrative units controlled and regulated by the Railway Board at the centre. Among the zonal railways, Northern railway is the largest and North East Frontier railway is the smallest in terms of route kms.

Major objectives of the present study could be identified as:

i) To explore the genesis and development of Railway operations in India and analyze the impact of recent economic reforms on the structure and pattern of Railway operations in India.

ii) To analyze the general growth and performance of Indian Railways at the all India level since 1950-51 through 1998-99 and also to compare observed performance levels with major railways in the world.

iii) To provide a detailed analysis of the growth and productivity performance of the Zonal Railways since 1966-67 through 1998-99 with special emphasis on changing commodity compositions in freight traffic.

iv) To measure and analyze the trends in labour, capital, fuel and total factor productivity of railways at all India as well as at Zones during 1966-67 to 1998-99.

v) To provide policy directions for making Railways more competitive *vis a vis* roads at the zonal level.

Being the largest public sector undertaking in the country, railway's productivity and efficiency has direct bearing on the overall economic performance of the country. Among the zonal railways, Central railway has been

found as the major carrier of passengers whereas South Eastern railway was the major carrier of goods. Coal and food grains have been the major components of goods carried by Indian railways. During the economic liberalization phase (1991-99) we notice negative growth in the case of staff at all zonal railways except Northern railways. Fuel consumption (excluding electricity) in railways exhibited a decline over the years. However, electricity consumption increased substantially.

Labour productivity performance across zonal railways increased at 2.88% per annum. Highest labour productivity has been reported during the economic liberalization phase. Capital productivity was found negative during the first and third phases. Fuel productivity was found growing at the rate of 3.07% per annum for the entire period. Total Factor Productivity (TFP) increased at an annual rate of 1.56% during 1966-99 period. TFP growth was found at the highest level during 1976-91period (2.45% per year). During the economic liberalization period (1991-99) TFP growth declined to 1.49% per annum. Sources of output growth during the entire period show that TFP emerged as the major contributor (50%).

A comparative analysis of zonal railway productivity performance shows that South Central railway was the best zonal railway during the first phase. During the second phase Central railway emerged as the best performing zonal railway in terms of composite index. During the third (economic liberalization) phase North Eastern railway exhibited the best performance among the zonal railways. Over all performance was found to be the best at Central railway during the entire period.

In view of the low productivity levels observed in Indian railways, a thorough restructuring of the existing system is warranted. While keeping the operation of track network in public sector as it exists today, the railway services could be provided by separate corporations, which may specialize in freight or passenger traffic. The role of the state should gradually decrease to meaningful intervention through a central regulatory body or maintenance of infrastructure at the public interest.

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