



AN ANALYSIS OF INDIAN RAILWAYS CONTRIBUTION TOWARDS EMPLOYMENT GENERATION

Prof. H.R.Uma*

Shruthi B.R.**

Abstract: *The service sector covers a wide array of activities ranging from services provided by the most sophisticated sector like telecommunications to simple services, highly capital intensive activities like civil aviation and shipping to employment-oriented activities like tourism and housing, infrastructure related activities like railways, roadways, and ports to social sector related activities like health and education.*

Indian Railways is one of the largest systems in the world under single management. It is also one of the very few railway systems in the world generating operating surpluses. With a modest beginning in India from 1853, the Indian Railways has emerged today as the main vehicle for socio-economic development of the country.

Indian railways is contributing significantly to the employment generation. One of the main objectives of railway vision 2020 is also to generate large scale productive employment. Indian railway is a labour intensive industry having a workforce of over 13.6 lakhs employees. Indian railway is one of the largest employers not only in India but also in the world.

The workforce of Indian railway is a varied mass of people from the gang man at one end to chairman of railway board at apex level. Railway employees are working in various categories in the zonal railway and production units. There are around 700 categories of staff divided into 4 groups as A B C and D assigned according to working responsibilities.

The present study makes an attempt to highlight the contribution of Indian railways towards employment generation. The study also concentrates on Railways share in India's G.D.P. This study gives a comparative analysis of employment generation by different sectors of the economy and highlights the importance of Indian railways among all other employers.

Keywords: *Employment, service sector, Indian Railways.*

*Professor of Economics, University of Mysore

**Research scholar, University of Mysore



INTRODUCTION:

The service sector covers a wide array of activities ranging from services provided by the most sophisticated sector like telecommunications to simple services, highly capital intensive activities like civil aviation and shipping to employment-oriented activities like tourism and housing, infrastructure related activities like railways, roadways, and ports to social sector related activities like health and education.¹

In India agriculture has been the main occupation for large number of population from so many years. But the pattern of sectoral share of employment has changed over the past two decades with the share of agriculture declined and the share of services and construction in employment increased. Service sector's employment share has strong upward trend.

Indian railways is one of the major infrastructures under service sector. It is one of the largest railway systems in the world under a single management. Indian railways is a labour intensive industry having a workforce of over 13.6 lakhs employees. Indian railway is one of the largest employment provider not only in India but also in the world.

Employment generation has been one of the important objectives of development planning in India. Indian railway is contributing significantly to the employment generation. One of the main objectives of railway vision 2020 is also to generate large scale productive employment.

The workforce of Indian railway is a varied mass of people from the gang man at one end to chairman of railway board at apex level. Railway employees are working in various categories in the zonal railway and production units. There are around 700 categories of staff divided into 4 groups as A B C and D assigned according to working responsibilities. Apart from these formal employment Indian railways is also generating a large scale of informal employment through forward and backward linkages.

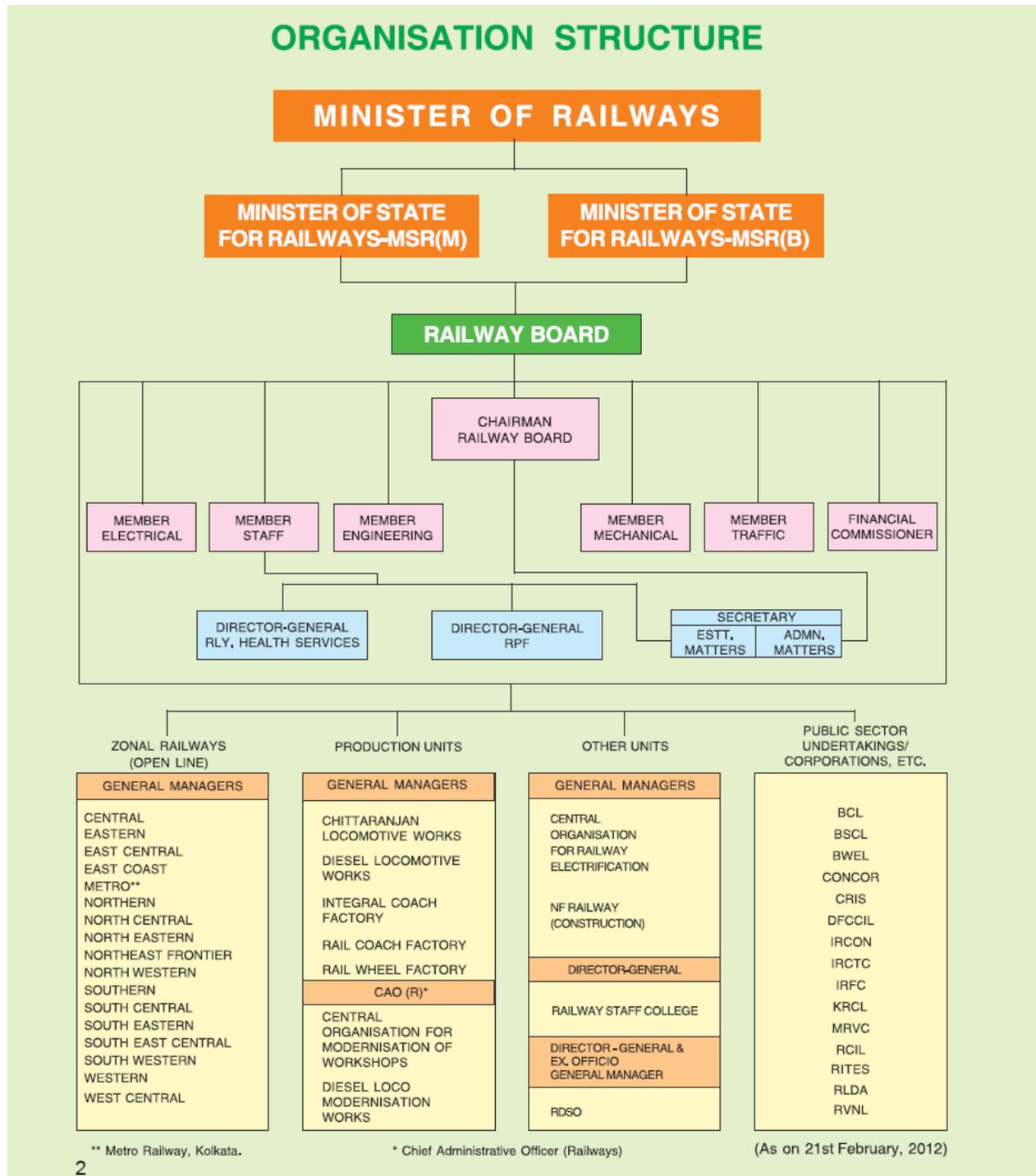
ORGANIZATION STRUCTURE OF INDIAN RAILWAYS IS AS FOLLOWS:

Indian Railways is an Indian state-owned railway company headquartered in New Delhi, India. It is owned and operated by the Government of India through the Ministry of Railways. Indian Railways has 114,500 kilometers (71,147 mi) of total track over a route of 65,000 kilometers (40,389 mi) and 7,500 stations. It has the world's fourth largest railway network after those of the United States, Russia and China. The railway ministry is headed

¹ Economic survey 2012-13



by the union minister for railways and assisted by two ministers of the state for railways. Indian railways is administered by the railway board, which has a financial commissioner five members and a chairman.



ORGANISATIONAL STRUCTURE

Railway employees are classified into gazetted (Group 'A' and 'B') and non-gazetted (Group 'C' and 'D') employees. Group A&B consists of accounts officers, traffic service officers,



engineers (civil, mechanical, electrical), stores officers, signal and telecom officers, personnel officers, financial advisors, medical officers. Station masters, inspectors of work, supervisors, technicians, pharmacists, guards, train ticket examiners, engine drivers, clerical staff all come under Group C. Group D consists of gang men, attendants, train sweepers, office peons, train attendants, hospital attendants etc.

The recruitment of Group 'A' gazetted employees is carried out by the Union Public Service Commission through exams conducted by it. The recruitment to Group 'C' and 'D' employees on the Indian Railways is done through Railway Recruitment Boards and Railway Recruitment Cells which are controlled by the Railway Recruitment Control Board (RRCB).

NEED FOR STUDY:

Service sector is playing vital role in the development of Indian economy. Railway being an important part of service sector also contributing to nation's economic development directly as well as indirectly. It is necessary to study how Indian railways is contributing to employment generation as unemployment and under employment have become a serious threat to economic development.

REVIEW OF LITERATURE:

G. Alivelu (2010) has studied salient aspects of growth story of Indian railways. His study analyses the trends of output and employment of Indian railways for the period of 1981-82 through 2007-08. Labour is divided into 3 categories they are; skilled management personnel (group A and B), semi-skilled employees (group C), and unskilled employees (group D). This study reveals that the percentage share of the semi-skilled labour has increased, the percentage share of the unskilled labour registered a decline and it shows that skilled management personnel contributed more to output than semi-skilled labour.

Rakkeethimothy (2010) has made an attempt to understand the changing structure of service sector employment in India over past three decades. She is of the opinion that the increasing share of service sector in GDP and stagnant employment generated from the sector has become a serious threat as unemployment is still a major problem in India. She says that the reason for this asymmetrical relationship in income and employment generation is due to the pattern of service sector growth experienced in the country. Through her detailed study she has reached at the conclusion that at the macro level not



much changes has occurred but at the sub sector level employment there are so many changes. The employment generation in the service sector remains low.

Falguni Pattanaik and Narayana Chandra Nayak (2011) investigated the employment intensity of service sector growth in India. The results of their study indicates that over the years there is an increase in output growth rate in service sector but employment growth rate has declined significantly it leads to fall in employment elasticity. According to authors to achieve higher employment elasticity in service sector there is a need for investment friendly environment, effective labour policies and proper structural transformation.

T.S. Papola and Partha Pratim Sahu (2012) made an attempt to study the growth and structure of employment in India with special focus on the post liberalization period. This study assesses the employment challenges and examines the prospects of generating productive employment of adequate quality and quantity. Authors suggested some strategies to achieve faster growth of productive employment as there is a challenge of creating new jobs as well as improving quality of existing jobs.

Research gap: There are number of research papers related to service sector employment but there is no particular study related to employment generated by Indian railways which is an important component of service sector in India. And no study has focused on the group wise employment over years. This study is an attempt to show that Indian railway is one of the largest employment providers of service sector in India and the study tries to explore the relationship between GDP and employment.

OBJECTIVES:

Main objectives of this paper are

- To examine the contribution of Indian railways towards employment generation.
- To examine the relationship between Indian railways share in GDP and employment.

METHODOLOGY

Data source: the study is based on secondary data collected from ministry of railway's railway year books, annual reports and data collected from planning commission, ministry of statistics and programme implementation and NSSO quinquennial rounds on employment and unemployment (50th, 55th, 61st and 66th)



Techniques of data analysis: simple table analysis is done for the comparison between different sectors and a bar graph is drawn to show trends in railway employment. Correlation test is conducted by using SPSS (statistical package for social sciences).

Inter sectoral comparison of employment gives a correct picture of changes in the service sector's contribution to GDP and Employment.

Table 1: GDP AT 2004-05 PRICES

YEAR	Total GDP (in crore)	Service sector share in GDP
1950-51	279,618	29.54%
1960-61	410,279	30.19%
1970-71	589,787	33.26%
1980-81	789,506	37.65%
1990-91	1,347,889	42.55%
2000-01	2,348,481	50.49%
2010-11	4,937,006	57.32%

Source: planningcommission.nic.in/data

Table 1 shows the GDP of India and service sector share in GDP at 2004-05 constant prices from 1950-51 to 2010-11. Share of service sector has increased continuously. Share of agriculture sector in GDP has declined at the same time service sector share has raised significantly. Service sector's share in GDP was 29.54% in 1950-51 increased to 57.32% in 2010-11.

Table 2: Employment in different sectors as a percentage of total employment in India on usual principal subsidiary status basis (UPSS)

Year	Total employment in million	Primary sector % share	Secondary sector % share	Service sector % share
1993-1994	372.1	63.9	14.9	21.2
1999-2000	396.76	59.9	16.4	23.9
2004-2005	457.46	56.6	18.7	24.8
2009-2010	460.22	53.2	21.5	25.3

Source: various NSS rounds: 50th, 55th, 61st and 66th rounds

Table 2 shows employment across three sectors according to 50th, 55th, 61st and 66th rounds of employment and unemployment survey of NSSO.

In terms of size of total employment in 1993-1994, 61.7% of the population was engaged in agriculture sector and around 21% in services. Over the years, the percentage of people employed in agriculture has declined and employment in services has increased, though the broad pattern of employment has remained the same with agriculture having the highest



share. Service sector employment has registered an increasing trend. Overall, services sector employment in India is low compared to its share in GDP, but it is gradually improving its share in employment. Services sector has the largest share of employment within the total organised sector employment. Indian railways is one of the major parts of organized service sector.

Within service sector there are number of changes in employment pattern. Over the years the employment potentials of some sectors have improved. To understand the exact trend and to know where railway stands it is necessary to examine the size of employment in different services.

Table 3: Employment in different service sub sectors

Size of employment in different components of services sector as per various NSS rounds (in million)				Absolute change in employment (in million)	
Service category	1999-2000	2004-2005	2009-2010	1999-2000 to 2004-2005	2004-2005 to 2009-2010
Trade	36.63	43.36	43.53	6.74	0.17
Hotels and restaurants	4.62	6.1	6.13	1.48	0.03
Transport, storage and communication	14.61	18.47	19.97	3.86	1.5
Banking and insurance	2.25	3.1	3.82	0.84	0.72
Real estate, renting and business activities	2.67	4.65	5.75	1.98	1.12
Public administration and defence	10.48	8.85	9.46	-1.64	0.62
Education	8.47	11.43	11.85	2.96	0.42
Health	2.62	3.34	3.59	0.73	0.25
Other services	11.85	13.51	12.24	1.66	-1.27
Total	94.2	112.81	116.34	18.77	3.53

Source: various NSS rounds: 55th, 61st and 66th rounds.

Table 3 shows employment scenario across different services. Despite Transport, storage and communication being a core sector their employment potential remains limited². As railway comes within that category we have to see the employment conditions of Indian railways.

²Aivelu G



Indian railways is regarded as the largest employer in the public sector in India. Railways being the giant of organized sector, it has generated a large scale of formal employment as well as informal employment. Following table shows railway employment over years.

Table 4: Railway employment size (in thousands)

Year	A and B group	C group	D group	Total
2000-01	14.8	900.3	630.2	1545.3
2001-02	14.3	890	606.5	1510.8
2002-03	13.6	870	588.3	1471.9
2003-04	14.3	860.1	567.1	1441.5
2004-05	15	873.7	535.7	1424.4
2005-06	15.4	883.9	513.1	1412.4
2006-07	15.8	898.5	483.3	1397.6
2007-08	16.1	907.4	470.9	1394.4
2008-09	16.4	914.2	455.5	1386.1
2009-10	16.7	926.5	418.9	1362.1
2010-11	16.9	1079.2	235.9	1332
2011-12	17.3	1161.8	126.6	1305.7

Source: Indian railway year book various issues.

It is evident from Table 4 that A and B group (skilled management personnel) employment shows a gradual increasing trend which is more or less a negligible increase. D group (unskilled employees) employment registered a declining trend. As a corporate policy, Indian Railways has set itself a goal of 1% reduction on the sanctioned strength per annum, assuming a 3% annual natural attrition, to reach an equilibrium level of right-sized staff strength.³ There is a significant increase only in case of C (semi-skilled employees) group employment. Total employment is showing gradual declining trend due to a strong decline in D group employment. The ratio of group C to D changed from 25:75 in 1950-51 to 82:18 in 2010-11, indicating a shift towards induction of skilled manpower.⁴

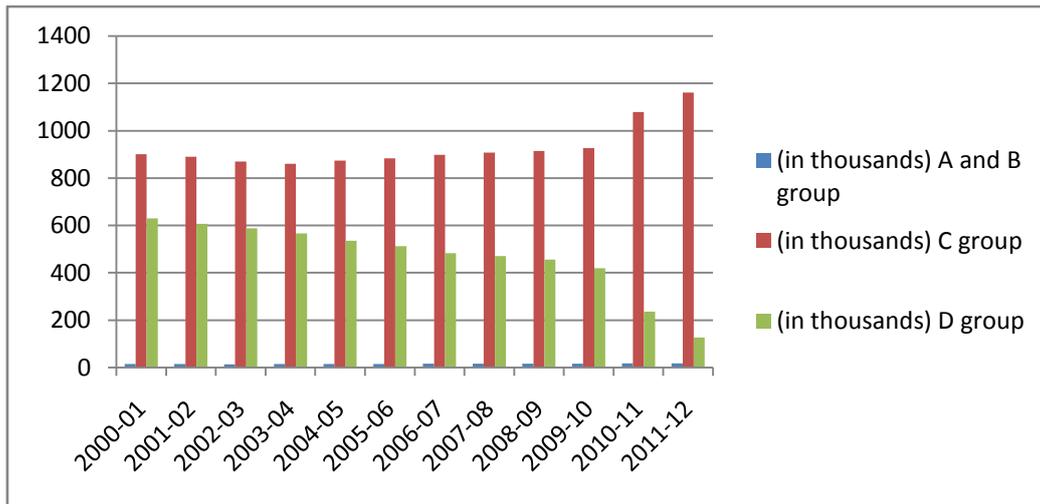
The following bar graph represents the above table.

³ Indian railways Vision 2020

⁴ Indian railways year book 2010-11



Figure 1: Railway employment size (in thousands)



It is evident from the data that service sector share in GDP is increasing over years and employment share of service sector is increasing at a low rate than GDP. Following table contains the data on railway employment and GDP to analyse the relationship between those two variables in Indian railways.

Table 5: Railway GDP at 2004-05 prices and Railway employment

Railway GDP (in crore)		Railway employment (in thousands)		
year	Railway GDP	Group A&B	Group C	Group D
1950-51	3230	2.3	223.5	687.8
1960-61	5092	4.4	463.1	689.5
1970-71	7680	8.1	583.2	782.9
1980-81	10607	11.2	721.1	839.9
1990-91	16340	14.3	891.4	746.1
2000-01	22700	14.8	900.3	630.2
2010-11	47404	16.9	1079.2	235.9

Source: ministry of railways government of India and mospi.nic.in

Table 5 shows railway GDP and employment from 1950-51 to 2010-11. Railway employment is shown in three groups. To understand the degree of relationship between railway GDP and employment correlation coefficient of railway GDP and different groups of employment has been calculated. First set of results shows the correlation coefficient of railway GDP and group A and B employment.



1: Correlations

		railway GDP	group A and B
railway GDP	Pearson Correlation	1	.844 **
	Sig. (2-tailed)		.008
	N	8	8
group A and B	Pearson Correlation	.844 **	1
	Sig. (2-tailed)	.008	
	N	8	8

**Correlation is significant at the 0.01 level (2-tailed).

Result shows that there is a very strong positive correlation between railway GDP and group A and B employment. As railway GDP increases employment of A and B group also increases. Next set of result also shows that there is a very strong positive correlation between railway GDP and group C employment. The third set of results reveals that there is a very strong negative correlation between railway GDP and D group employment. The reasons behind the declining trend of D group employment may be due to the decisions of railway ministry to reduce and gradually eliminate induction of unskilled staff⁵ and steps taken by the ministry to match the skills of the employees with the emerging challenges thrown up by advances in technology and changes in market conditions.

2: Correlations

		railway GDP	group C
railway GDP	Pearson Correlation	1	.886 **
	Sig. (2-tailed)		.003
	N	8	8
group C	Pearson Correlation	.886 **	1
	Sig. (2-tailed)	.003	
	N	8	8

** . Correlation is significant at the 0.01 level (2-tailed).

⁵Report of the expert group for modernization of Indian railways.



3:Correlations

		railway GDP	group D
railway GDP	Pearson Correlation	1	-.935**
	Sig. (2-tailed)		.001
	N	8	8
group D	Pearson Correlation	-.935**	1
	Sig. (2-tailed)	.001	
	N	8	8

**Correlation is significant at the 0.01 level (2-tailed).

CONCLUSION

This study analyzed the contribution of Indian railways towards employment generation. Indian railways is not only generating formal employment but also a large scale of informal employment through its forward and backward linkages. Study reveals that service sector is gradually improving its share in employment. Within service sector though transport, storage and communication sector is potential of large scale employment generation, it has not performed so well. In Indian railways among 4 groups A and B group employment has increased slightly, C group employment has increased significantly. But D group employment registered a strong declining trend. The ratio of group C to D changed from 25:75 in 1950-51 to 82:18 in 2010-11, indicating a shift towards induction of skilled manpower. Total employment of railways is gradually declining. Railway's contribution to GDP has increased over years, railway employment of A,B, and C groups have a very strong positive correlation with railway GDP. Only D group employment has a negative relationship with railway GDP. The study reveals that Indian railways is capable of generating large scale of employment with its expansion.

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