Research Paper *IJMSRR*
*Impact Factor :**3.029*** *E- ISSN - 2349-6746*
Peer Reviewed & Indexed Journal *ISSN* -2349-6738

A STUDY OF ROAD TRANSPORT SERVICES IN INDIA

Dr.K.Maddileti* Dr.G.Ganeshkumar Rai**
**Asst. Professor, Department Commerce, Sri Krishnadevaraya University, Ananthapuramu, Andhra Pradesh.*
***Post-Doctoral Fellow, Department Commerce, Sri Krishnadevaraya , University, Ananthapuramu, Andhra Pradesh.*

Introduction

Road network is vital in boosting economic growth and facilitating trade in an emerging economy like India. An efficient transport sector reduces the cost of transportation and thereby contributes directly to a country's international competitiveness. This sector acts as an economic catalyst by opening up new market opportunities, moving products and human resources with speed and efficiency. It promotes efficiency in the economy by minimizing total transportation cost in terms of economies of production, distribution and consumption. The role of road transport among the different modes of transport is dominant because of its last mile connectivity or feeder service.

Research Methodology

The present study based on Secondary data. The data were collected from various annual transport year book published by Road Transport and Highways Ministry, Government of India, Journals, edited books and newspapers etc.

Objectives

1. To study the Road Transport and its Importance.
2. To analyse the growth of Road Transport services across India over a period.
3. To Compare the Rural and urban area roads in India.

Road Transport in India

A good road network is a crucial infrastructure requirement for rapid growth. It provides connectivity to remote areas; provides accessibility to markets, schools and hospitals; and opens up backward regions to trade and investment. Roads also play an important role in inter-model transport development, establishing links with airports, railway stations, and ports.

India has one of the largest road networks in the world, of 33.14 lakh km, consisting of (i) national highways (NHs), (ii) State highways (SHs), (iii) major district roads (MDRs), and (iv) Rural Roads (RRs) that include other district roads and village roads. NHs with a length of 66,590 km comprises only 2.0 per cent of the road network but carry 40 per cent of the road-based traffic. SHs with a length of about 1,37,000 km and MDRs with a length of 3,00,000 km together constitute the secondary system of road transportation which contributes significantly to the development of the rural economy and industrial growth of the country. The secondary system also carries about 40 per cent of the total road traffic, although it constitutes about13 per cent of the total road length. RRs, if adequate developed and maintained, hold the potential to provide rural connectivity vital for generating higher agricultural incomes and productive employment opportunities besides promoting access to economic and social services.

The transport demand for freight and passenger movement within the country is met mainly through road transport and railways. Between these two modes, road transport has steadily expanded its scope of operation and is now not merely a mode for the last haul but is also handling freight over long distances. It also plays a complementary role to railways in moving freight from and to railheads vis-à-vis the Origin-Destination movements of cargo. Its intermodal share in carrying freight, which was around 14 per cent in 1950–51, increased to around 61 per cent in 2004–05. The share of road transport in passenger movement has also witnessed a quantum jump from 15 per cent in 1950–51 to an estimated 87 per cent of the total traffic by the end of the Tenth Plan.

Table 1, Status of National Highways as on 31st March, 2012.

No	Roads / Ways	Length (Km.)
1	Expressway	200
2	National Highways	66,590
3	State Highways	1,31,899
4	Major District roads	4,67,763

5	Rural and Other Roads	26,50,000
6	Single Lane/Intermediate Lane	32%
7	Double Lane	56%
8	Four or more Lanes	12%

Source: National Highways Authority of India.

The road network of the country consists of National Highways (NH), State Highways (SH), Other Public Works Departments (OPWD) Roads, Rural Roads, Urban Roads and Project Roads. Table 1 shows the progress of road length under different categories during the period 1951-2012.

Table: 2, Road network by categories (in kilometers) – 1951 to 2012

Road Category	**1951**	**1961**	**1971**	**1981**	**1991**	**2001**	**2011**	**2012**
National highways	19,811 (4.95)	23,798 (4.54)	23,838 (2.61)	31,671 (2.13)	33,650 (1.45)	57,737 (1.71)	70,934 (1.52)	76,818 (1.58)
State Highways	^	^	56,767 (6.20)	94,359 (6.35)	1,27,311 (5.47)	1,32,100 (3.92)	1,63,898 (3.50)	1,64,360 (3.38)
OPWD Roads	1,73,723 (43.44)	2,57,125 (49.02)	2,76,833 (30.26)	4,21,895 (28.40)	5,09,435 (21.89)	7,736,001 (21.82)	9,98,895 (21.36)	10,22,287 (21.01)
Rural Roads	2,06,408 (51.61)	1,97,194 (37.60)	3,54,530 (38.75)	6,28,865 (42.34)	12,60,430 (54.15)	19,72,016 (58.46)	27,49,804 (58.80)	28,38,220 (58.33)
Urban Roads	0	46,361 (8.84)	72,120 (7.88)	1,23,120 (8.29)	1,86,799 (8.03)	2,52,001 (7.47)	4,11,679 (8.80)	4,64,294 (9.54)
Project Roads	0	0	1,30,893 (14.31)	1,85,511 (12.49)	2,09,737 (9.01)	2,23,665 (6.63)	2,81,628 (6.02)	2,99,415 (6.15)
Total	3,99,942	5,24,478	9,14,979	14,85,421	23,27,362	46,90,342	46,76,838	48,65,394

Note: Figures within parentheses indicate per cent to total road length in each road category.

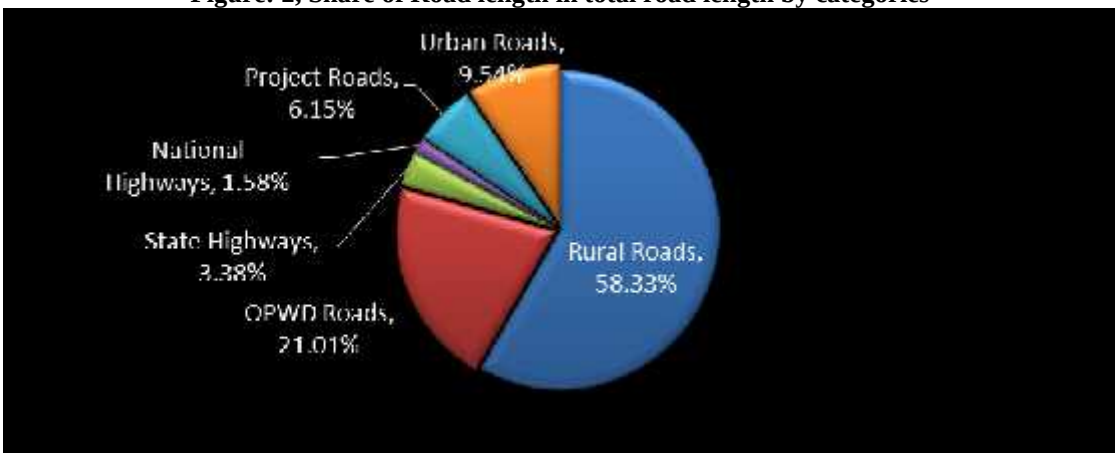
The total road length of the country increased significantly from 3.99 lakh kms as on 31st March, 1951 to 48.65 lakh kms as on 31st March 2012, growing at a Compound Annual Growth Rate (CAGR) of 4.2 per cent. While in 1951, the network of roads comprised NHs, SHs, OPWD roads and rural roads, in 2012, there were urban and project roads as well. During the period 1951 to 2012, rural roads recorded the highest CAGR of 4.4% amongst the various categories of roads (table 2). The urban roads recorded a CAGR of 4.6% during 1961 to 2012 and the project roads grew at a CAGR of 2.0% during 1971 to 2012.

Figure: 1
Trend of Growth in Road Length by Categories: 1950-51 to 2011-12

In the past decade, 2002-12, the highest CAGR was that of urban roads (6.4%), followed by SH and OPWD roads (3.6%),

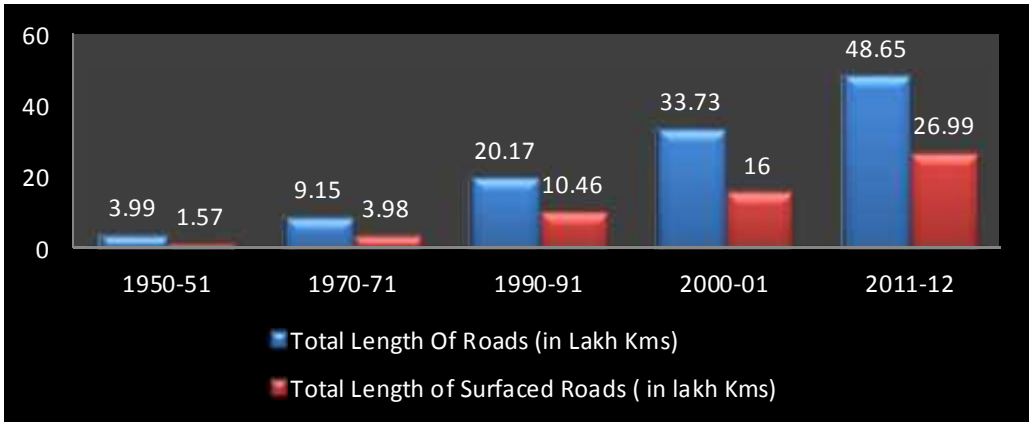
rural roads (3.3%), project roads (2.9%) and NH (2.8%). During the same period, the registered motor vehicles grew at a CAGR of 10.5 per cent. The growth in total registered vehicles was greater than that of the road network throughout the period 1951 to 2012.

Figure: 2, Share of Road length in total road length by categories



Along with the increase in the total road length, the surfaced road length too increased. The latter grew from 1.57 lakh kms as on 21st March 1951 to 26.99 lakh kms as on 31st March 2012. Surfaced roads formed 39.4% of the total road length as on 31st March, 1951. Their share increased to 55.5% as on 31st March, 2012.

Figure: 3,Total and Road Surfaced Length (in Kms) in India: 1950-51 to 2011-12



Uttar Pradesh recorded the highest road length of 403,102 kms as on 31st March, 2012 which was 10.2 % of the total road length, excluding Jawahar Rozgar Yojana roads. The five states with the largest road networks, viz. Uttar Pradesh, Maharashtra, West Bengal, Karnataka and Assam, accounted for about 42.9 % of the total road length of the country.

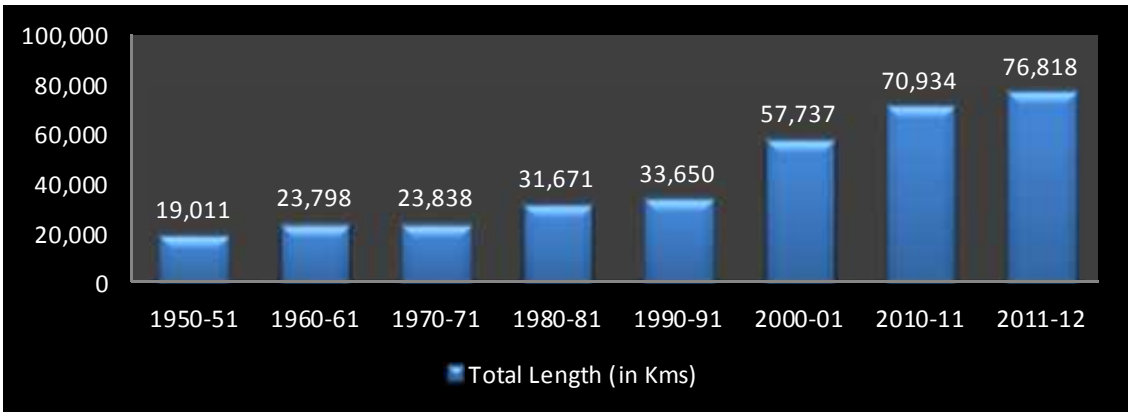
The average road density of India was 148 kms per 100 square kms of area as on 31st March 2012. The average road length per lakh population was 402.03 kms as on 31st March 2012. As on 31st March, 2012, the length of NHs per 100 square kms of area was 2.34 kms, while the length of NHs per lakh of population was 6.35 kms.

National Highways in India

NHs are the arterial roads of the country for the movement of passengers and goods. They traverse the length and width of the country, connecting State capitals, major ports and rail junctions and link up with border roads and foreign highways. Ministry of Road Transport & Highways, Government of India, is responsible for the development and maintenance of NHs in India. For the development of NHs in the country, the National Highways Development Project (NHDP), the largest highways project ever undertaken in the country, was implemented by the National Highways Authority of India (NHAI) of

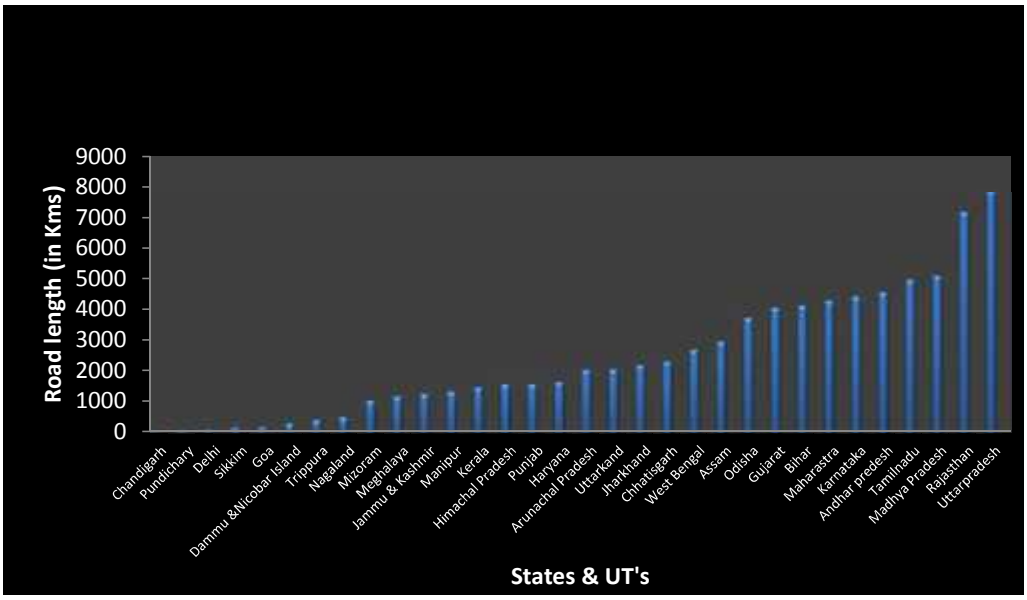
the Ministry of Road Transport & Highways. The growth of NHs since 1951 is depicted in Figure: 1.11.

Figure: 5,Total Length of National Highways (in Kms) in India 1951 to 2012



All NHs are surfaced. As on 31st March 2012, two-lane NHs constituted the largest share of NHs, i.e. 53.01% of the total length of NHs, followed by four lanes and above (24.86%) and the single/intermediate lane NHs (22.13%). Compared to 2010-11, there was an increase both in terms of length and proportion in two categories of NHs, viz. two-lane and four lanes and above NHs (table:1.4).

Figure: 6,State/UTs-wise Length on National Highways (in kms), as on 31st March 2012



National Highways Development Programme (NHDP):

The NHDP is being implemented by NHAI, Ministry of Road Transport & Highways. For the construction and up gradation of NHs in India, NHAI has completed seven phases till now. Phases I and II comprise 4/6-laning standard routes of Golden Quadrilateral, NS-EW corridor, road connectivity to major ports and others. Phase III covers 4/6-laning of high density NHs and others. Phase IV consists of up gradation of NHs of 2-lanes with paved shoulders. The six-laning of four-lane NHs is covered under Phase V. Phase VI consists of fully access controlled expressways. The construction of ring roads, by-passes, underpasses, flyovers, etc. was undertaken in Phase VII.

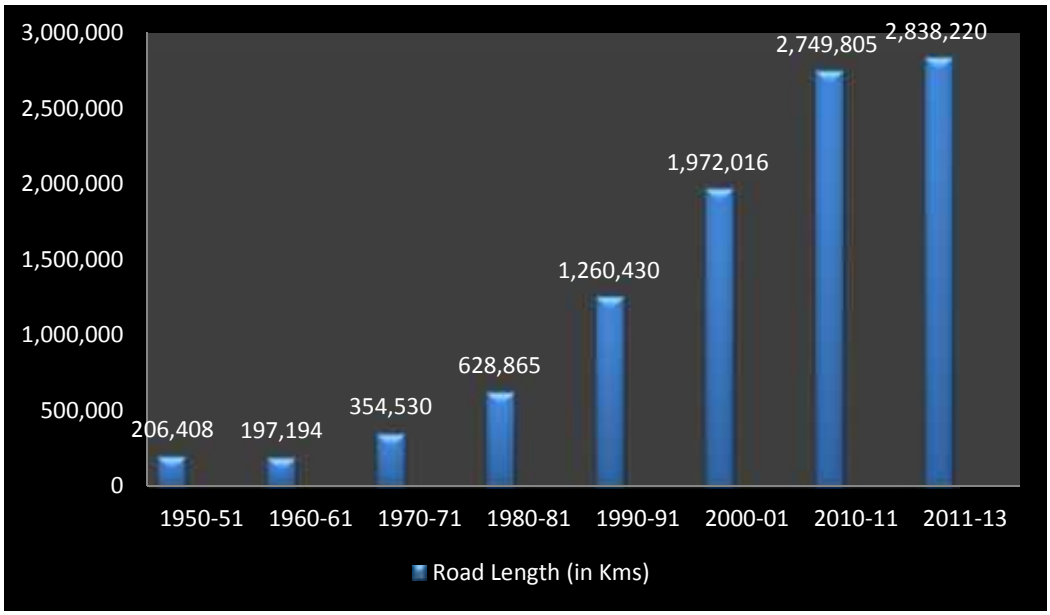
Rural Roads in India

Rural Roads consist of Panchayati Raj roads (Zilla Parishad roads, Village Panchayat roads and Community Development/

Panchayat Samiti roads) and roads constructed under Jawahar Rozgar Yojana (JRY) and Pradhan Mantri Gram Sadak Yojana (PMGSY).

Raj Roads were reported by various departments of Panchayati Raj (Zilla Parishad Roads, Village Panchayat Roads and Community Development/Panchayat Samiti Roads), 3, 50,433 kms of PMGSY Roads by National Rural Road Development Agency (NRRDA), Ministry of Rural Development and the remaining nine lakh kms of roads were as constructed under JRY.

Figure: 7,The Road length of Rural Roads (in Kms) in India:1950-51 to 2011-12

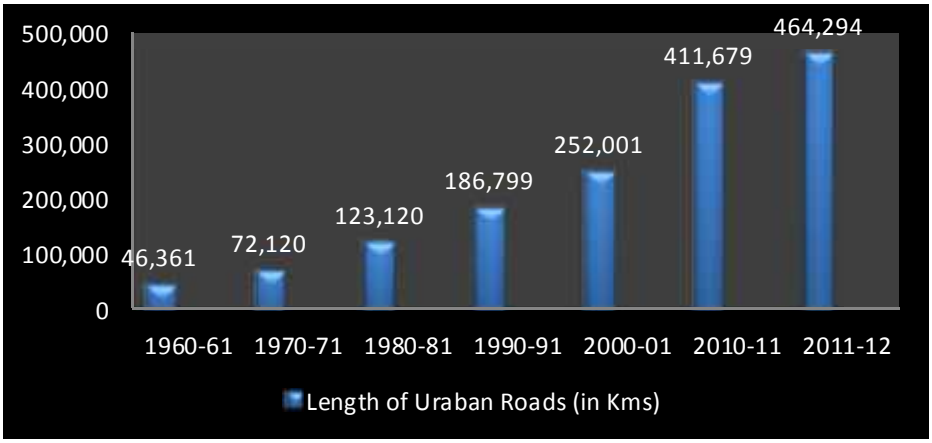


As on 31st March 2012, amongst the States/UTs, Assam had the highest length of Rural Roads, followed by Odisha, West Bengal, Andhra Pradesh and Karnataka.

Urban Roads in India

Urban Roads consist of Municipal Roads, roads constructed under Military Engineering Services (MES), Railways, Roads, Major Port Roads and Minor Port Roads.

Figure: 8,Total Length of Urban Roads (in Kms) in India:1960-61 to 2011-12



Within the category of Urban Roads, municipal roads accounted for the highest share of 90.61%, followed by railways roads (5.30%), MES roads (3.84%), major ports roads (0.19%), minor ports roads (0.06%).

In terms of absolute length, West Bengal had the highest length of Urban Roads, followed by Uttar Pradesh, Karnataka, Delhi and Tamil Nadu. The demand for transport is likely to go up with population increase and economic growth, coupled with rapid urbanization. Transport development helps to open up remote regions and resources for production.

The need for an assessment of the regulatory framework and its working is becoming necessary due to the rise in vehicle population and the increased demand for mobility as reflected in rising utilization rates of personal vehicles. The problem has been accentuated by the gradual reduction in the share of public transport of total road transport. The decline in the penetration of public transport has led to a greater dependence on personal modes of transport, which are more energy intensive, occupy more road space per person, and have higher levels of emissions per passenger kilometer travelled. One important concern is the reliability, punctuality, and overall quality of public transportation.

CONCLUSION

Although, over the years, mobility and accessibility have increased in India, there are severe problems like delays, congestion, accidents, vehicular pollution, energy wastage etc. These problems have heavy economic, social and environmental costs. The main reason for this is the prevailing imbalance in the modal split of transportation besides inadequate transport infrastructure and its sub-optimal use. The public transport system has not been able to keep pace with the rapid and substantial increase in demand. Bus services, in particular, have deteriorated. Public transport is vital for the vast majority without access to private transport.

An efficient public transport system needs at least two modes of services: a fixed route service and a demand response service. Measures need to be taken in the short run to enhance the quality of public transport service and to impose constraints on the use of private vehicles. In the long run, there needs to be effective land use planning and the introduction of new transit systems at least in metropolitan cities.

The need of the hour is therefore to create a policy environment that encourages competitive pricing and co-ordination between alternative modes of transport in order to provide an integrated transport system that assures them ability of goods and people transit at maximum efficiency and minimum cost.

Given the opportunity, people reveal widely divergent transport preferences. But in many places the transport authorities favour a basic standard of bus service provided by closely controlled, large undertakings. Actually it comes from the perception of great economies of scale in the size of the firms providing bus services, which is a misconception. Theoretical issues relate to competition in the transport sector, current policy scenario and state-level policies affecting competition.

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