



ORIGINAL RESEARCH PAPER

Geography

SPATIAL ANALYSIS OF ROAD LENGTH IN HARYANA-2021

KEY WORDS: Road Length, National Highway, State Highway, Major District Road

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ABSTRACT

Road transport plays an important role in the reconstruction of any area. As it provides a strong stimulus to the development of a nation, it is realized that there is a need to analyze the spatial characteristics of road length in Haryana. The study is based on data collected from different secondary sources. It is observed that the total length of roads in the state is 27244 kms in 2021, out of which 100 per cent roads are metalled. It shows that state has experienced a tremendous growth in metalled roads. Total road length in Haryana has recorded a growth rate of 136 per cent in the time span of fifty years. Hisar and Sirsa (situated in the western part of the state) have the maximum road length i.e. 2437 kms and 1878 kms respectively followed by Kaithal which is having a road length of 1739 kms. Approximately, 79.6 per cent of the total road length is contributed by other district roads in Haryana. National highways, state highways and major district roads are contributing 9.5 per cent, 5.9 per cent and 5.0 per cent respectively in the total road length of Haryana. However, it is to be noted that National highways and state highways play a major role in the people movement and traffic flow in the state.

INTRODUCTION

A road is a symbol of motion. A road network is usually established in a region with a view to facilitate economic and social interaction in space- both at the intra and inter-regional levels. It plays an important role in shaping the space economy. The role of transportation in the distribution of economic development as well as political and social gains is an issue that has received renewed interest in recent years (Patra, 2014). A better road transport system provides social advantages, diffusion of innovations and regional development. In geography, the role of transport and its implications on the socio-economic development of a region at macro level were analyzed by scholars like Ullman (1954), Berry (1959), Garrison (1960), Kansky (1963), Taffee (1963) and others. Mahajan (1998) explained the key role of road transport in increasing the level of economic development in Himachal Pradesh. He confined his study to evaluate the growth of roads, motor vehicles registered during the period from 1985 to 1995 and growth of nationalized road transport. Vaidya (1998) dealt with various specific aspects of transport in India. He made a successful attempt to provide up-to-date statistics on the transport development, especially road transport development in India by presenting many articles and major contributions in the same field. Mangat and Gill (2015) seek a correlation between road transport development and various regional development indicators such as gross value from agriculture per hectare, number of workers employed in registered factories, Number of students per Lakh population in recognized schools, number of hospital beds per lakh population and share of urban population in Haryana. Therefore, in the present research work, an attempt has been made to analyze the spatial characteristics of road length in Haryana.

Research Methodology

Present study is based on secondary data. Ministry of Road Transport and Highways (MORTH), National Highway Authority of India (NHAI), District Statistical Abstracts, Dept. of P.W.D. & BR and various other government offices are consulted for the required data. The systematic approach has been followed. The suitable standard techniques, methods, ratio measures, comparative bar diagrams, line graphs and pie diagrams etc. have been used to present the trends of road length and distribution of roads in Haryana. Maps are prepared with the help of Arc- GIS software (version 9.3).

Road Transport System

Haryana, due to its ideal location, serves as a transport corridor the border states of Punjab, Himachal Pradesh, Jammu & Kashmir and rest of the country. Therefore, these neighboring states can find export possibilities only through Haryana, which has necessitated an efficient transport system. With the coming of the green revolution, it

became necessary to connect villages to market centers. Roads had to be well maintained to ensure a continuous flow of raw materials from villages to town and finished products from town to village.

The road network of Haryana in 2021 is shown in the map [Fig. 1.1]. It is very clear from the Table- 1.1 that the total length of roads in the state was 11516 kms in 1971 including 9107 kms metalled (79 per cent) and 2409 kms (21 per cent) unmetalled, which has increased to 27244 kms in 2021, out of which 100 per cent roads are metalled. It shows that state has experienced a tremendous growth in metalled roads from 1971- 2021. The change in total road length during the period 1971- 2021 is represented in Fig. 1.2.

Table- 1.1, Haryana: Length of Roads, 1971-2021.

Year	Road Length (Kms.)	Metalled Roads	Unmetalled Roads
1971	11516	9107	2409
1981	20516	18260	2256
1991	23017	21797	1220
2001	23706	22960	746
2011	27116	26889	227
2021	27244	27244	0

Source: Statistical Abstract of Haryana, 2020-21.



Fig.1.1

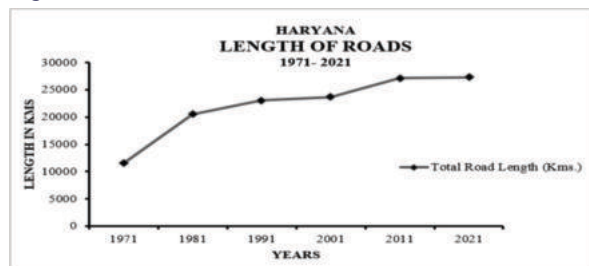


Fig.1.2

It is evident from the graph that total road length in Haryana has almost increased three times and recorded a growth rate of 168 per cent in the time span of fifty years. The maximum growth in road length is observed between 1971- 81 which has increased by 78 per cent. In the next twenty years i.e. from 1981- 2001, growth of road length has remained almost stagnant. From 2001 to 2021, the total road length has been increased with a rate of 15 percent.

The growth in metalled road has witnessed the same trends as of total road length and is presented in Fig. 1.3. It is very clear from the graph that length of metalled roads in Haryana has increased almost three times by recording a growth rate of 200 per cent from 1971 to 2021.

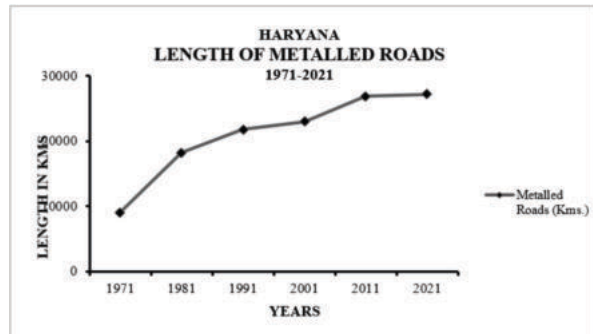


Fig. 1.3

Nagpur plan which was set up in 1943 for balanced and coordinated road development in India, divided the road transport system in four classes viz national highways, state highways, major district roads & other district roads and village roads. Accordingly, Road transport is put into four categories in Haryana:

1. National Highways
2. State Highways
3. Major District Roads
4. Other District roads

The total length and percentage share of different road types into the total road length of Haryana state in 2021 is shown in Table 1.2 and represented by Fig. 1.4.

Table-1.2, Haryana: Length and Percentage share of Different Roads, 2021.

Sr. No.	Type of Road	Length in Kms	Share in Total Road Length (%)
1	National Highway	2582	9.5
2	State Highway	1602	5.9
3	Major District Roads	1350	5.0
4	Other District Roads	21760	79.6
Total		27244	100.0

Source: Dept. of PWD & BR, Haryana

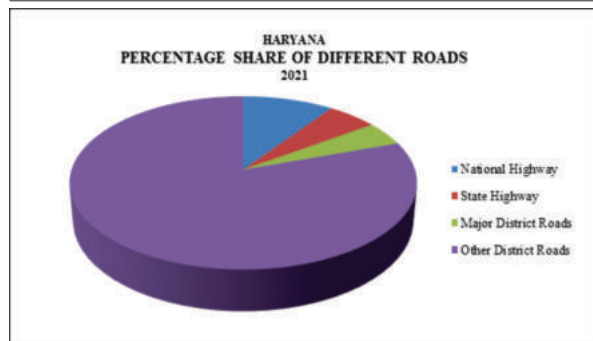


Fig. 1.4

It is very clear from the figure that 79.6 per cent of the total road length is contributed by other district roads in Haryana. National highways, state highways and major district roads

are contributing 9.5 per cent, 5.9 per cent and 5.0 per cent respectively in the total road length of Haryana. However, it is to be noted that National highways and state highways play a major role in the people movement and traffic flow in the state.

CONCLUSION

Road transport development is a positive indicator of growth potential of a geographical area. Close examination of the road network of Haryana affords a deeper insight into the factors which affected the spatial diffusion of roads. It is observed that the total length of roads in the state was 11516 kms in 1971 including 9107 kms metalled (79 per cent) and 2409 kms (21 per cent) unmetalled, which has increased to 27244 kms in 2021, out of which 100 percent are metalled. Approximately, 79.6 per cent of the total road length is contributed by other district roads in Haryana. National highways, state highways and major district roads are contributing 9.5 per cent, 5.9 per cent and 5.0 per cent respectively in the total road length of Haryana.

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