



A STUDY OF TRANSPORT NETWORK SYSTEM IN AURANGABAD DISTRICT OF MAHARASHTRA STATE

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ABSTRACT:

Transport Network system plays a significant role in the social & economic development. In the study area are transport network system in the three ways, like roadway transport, Railway transport & Air transport etc. There are a good transport network service is available in the study area. Due to this transport network social & economic development of the area is being done, such as Agricultural, Marketing, Education, Health, Industrial, Villages, Tourism & Milk business etc, are being promoted. In this research paper the present study reveals of the Aurangabad district the distribution of the transport network system.

KEYWORDS – Transport network, distribution, impact, distance .

INTRODUCTION:

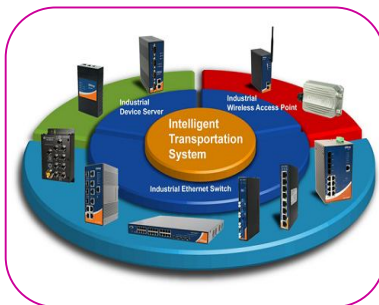
Geography of Transportation is concerned with study of transportation, its Development, location & operation within the territorial economic complexes of countries and regions & it's are relationship with the location of industry and agriculture, of population and cities and of natural phenomena and resources. Transportation network development is considered to be one of the keys to modernization and development.

An efficient road network is inevitable for meeting the needs of a transportation system in the country. (Eshita Boral & suklaBahaduri, 2015).

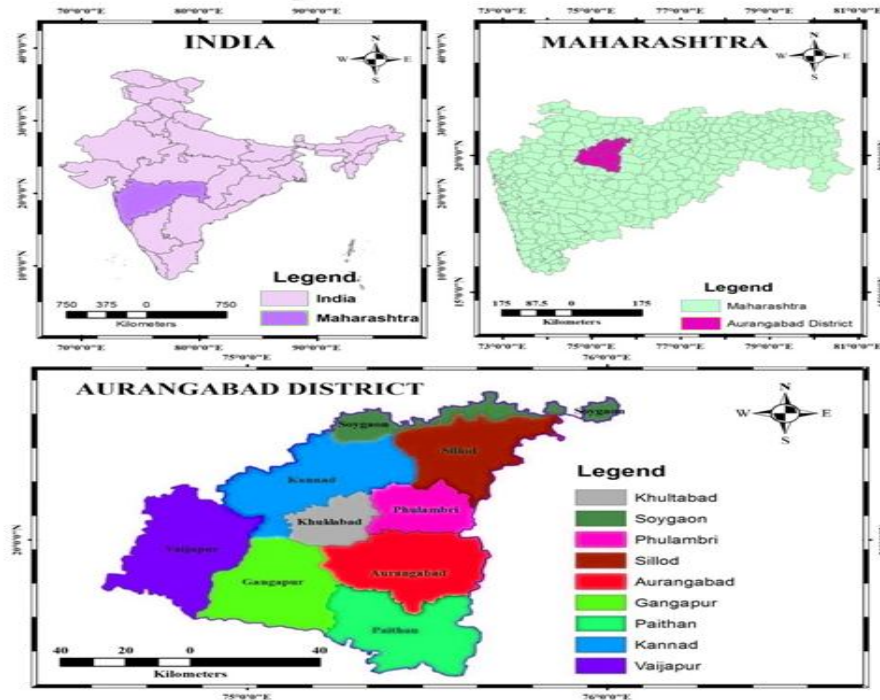
The growth & development of transportation provide a medium, contributing to the progress of Agriculture, Marketing, Industry, Commerce, Administration, Defense, Education, Health or any other community activity. (saxena, 2016) Transport is dependent on infrastructure and modes of Transportation.

STUDY AREA:

Aurangabad District is situated in the central part of Maharashtra state. It lies between 19° 18' and 20° 40' north latitudes and 74° 34' and 76° 04' East longitudes. It is surrounded by jalgaondistrict to the north, Jalna and Buldhanadistrict to the East, Ahmadnagar and Beed district to the south and Nashik district to the west. The district has been divided in a nine Talukas Viz Aurangabad, Kannad, Soygaon, Sillod, Phulambri, Khultabad, Vaijapur, Gangapur & Paithan etc. The District has on Geographical area of 10137.6 square kilometers, and has population of 3,701,282 According to 2011 census & consisting of 1356 villages in the district.



LOCATION MAP OF STUDY AREA



OBJECTIVE:

1. To study the transport network system in study area.
2. To Analysis the taluka wise distribution of transport network in the study area.
3. To examine the impact of Geographical factors on transport Network in study Region.

DATABASE & METHODOLOGY:

For the current research paper only secondary data has been used from the District census Handbook, Socio-economic abstract&Research paper Related published & unpublished Records, books, journals & websites. The data has been processed tabulation percentage, index value done with help of computer software. The processes data has been put in the table forms, certain statistical methods & cartographic techniques has been applied to represent the data in the form of graph, maps, & diagrams.

RESULT & DISCUSSIONS:

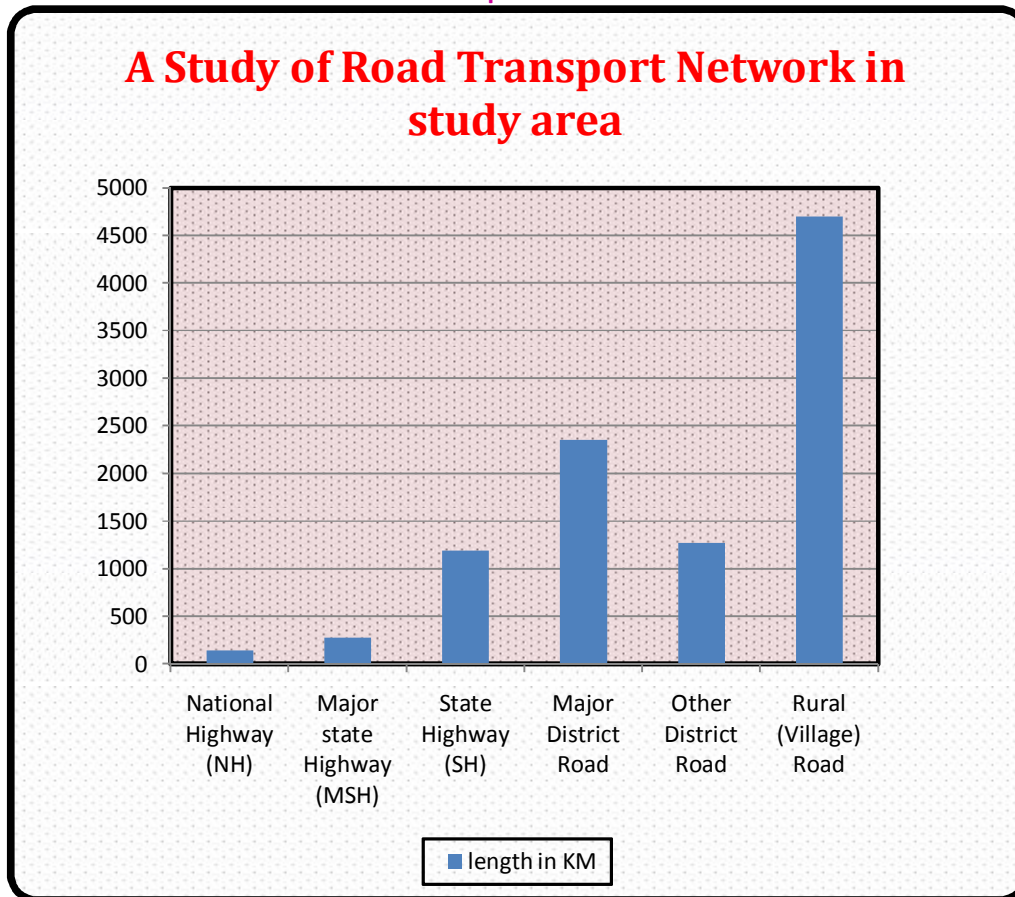
A) A Study of Road Transport Network in study area.

Table No. 1

Sr. No.	Categories	length in KM
1	National Highway (NH)	143.20kms
2	Major state Highway (MSH)	278.10kms
3	State Highway (SH)	1193.93kms
4	Major District Road	2354.75kms
5	Other District Road	1269.47kms
6	Rural (Village) Road	4706.016kms
Total length		9945.46kms

Source: District socio-economic review, Aurangabad district- 2014.

Graph No: 1



In the study area the end of March 2014 there is a good Transport Network of black topped surfaced roads. The Total length of the road is 9945.46Kms including corporation areas out of which 143.20kms National Highway and 1193.93kms state Highway & 278.10kms. Major state Highway & 2354.75kms major district roads, 1269.47kms other District roads, besides these 4706.01kms are village road.of which 6293.06kms are tar road & 3063.72kms (khadi) road. It means for every 100 sq.kms98 kmsroad available in the district.

Taluka wise Distribution of Road Transport Network in Study Area

Table 2

Sr. No.	Name of Taluka	Road Length in K.M.						Total Length
		National Highway	Major State Highway	State Highway	Major District Road	Other District Road	Rural Village Road	
1	Kannad	38.76	-	192.03	385.50	145.10	658.70	1420.09
2	Soygaon	-	24.00	96.00	102.15	46.70	195.10	463.95
3	Sillod	-	47.00	100.60	225.75	197.70	413.55	984.60
4	Phulambri	-	27.00	72.50	153.35	73.45	402.60	728.90
5	Aurangabad	60.24	53.56	198.80	265.25	56.80	1375.38	2010.03
6	Khutabad	19.00	-	88.20	101.55	50.20	182.06	441.01
7	Vaijapur	-	56.54	150.20	382.55	293.22	543.30	1425.81
8	Gangapur	-	70.00	128.60	426.60	178.50	480.50	1284.20

9	Paithan	25.20	-	167.00	312.05	227.80	454.82	1186.87
Total		143.20	278.10	1193.93	2354.75	1269.47	4706.01	9945.46

Source :District Social-economic Review Aurangabad District - 2014

Graph No: 2

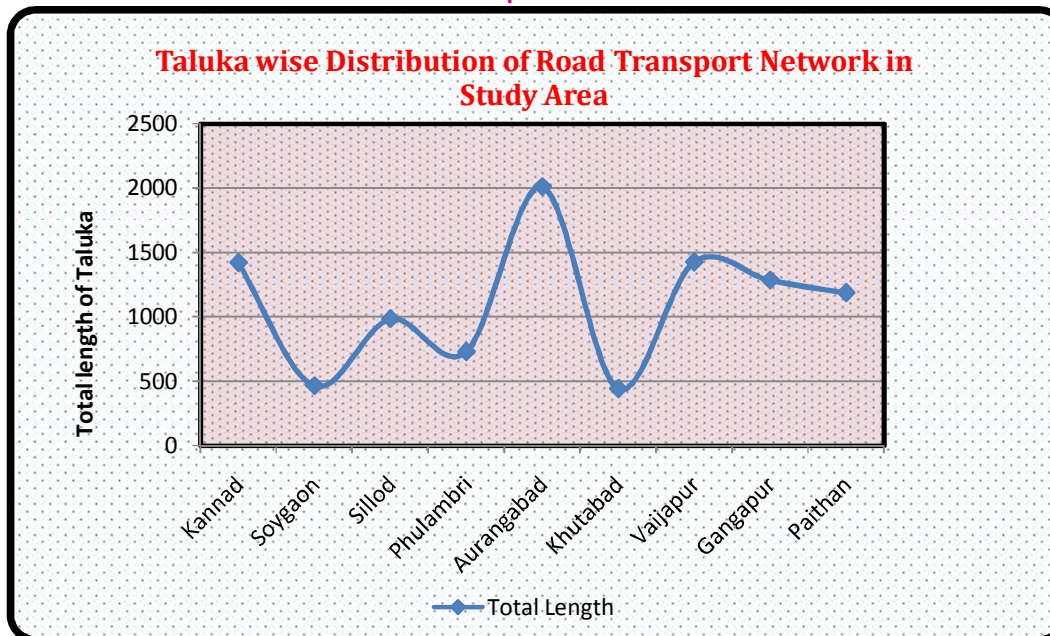


Table reveals that there are total length of the roads in the study area is 9945.46km. Out of this length, Maximum road length of 2010.03 km is in Aurangabad taluka & the lowest road length of 441.01 km is in the Khultabad taluka.

As per above table, In Aurangabad district, the maximum length in the road is 2354.75 km of the major district road and the lowest roadway of 143.20 km is of National highway. This is roadway connected by other District & others state.

National highway No-211 (Dhule-Aurangabad-Solapur) Passes through the kannad, khultabad, & Aurangabad Talukas in the study area.

The major District road these are important road within a District, serving areas of Agriculture, marketing, education, health and connecting these with each other or with the main highway. This District is a connected by Roads to Pune, Jalgaon, Mumbai, Nagpur, Solapur, Nashik & Dhule through state highway transport Network.

B) Railway Transport Network in study area

Study area is a connected by Railway to Delhi, Amritsar, mumbai, Nagpur & Hyderabad city by the broad line route. The length of broad Rail line in the District is only 102 kms. On this Railway line there are only Nine Railway stations in the district, they are namely Rotegaon, Parsoda, Lasur St, Potul, Daultabad, Aurangabad, Mukundwadi, Chikalhana & Karmadetc.

**C) Air Transport Network in Study Region
Chikkalthana, Airport, Aurangabad:**

Aurangabad Airport is a public airport situated in Maharashtra state. Located about 5.5 km east of the Aurangabad city center, this airport is owned and operated by the Airports Authority of India. The airport offers passenger services airlines such as Air India, jet Airways, & Trujet. Also, Blue Dart Aviation runs regular

cargo services from Aurangabad Airport. The airport is located at a height of 582 Meter above sea level, with a runway extension of 2,351 meters.

This airport is Delhi, Mumbai, pune, Hyderabad, Nagpur,Jaipur & Udaipur are the major Indian cities which have direct are connectivity with Aurangabad.



Impact of Geographical Factors on Transportation Network in Study Area:

Study area, some state highways& major district roads have to pass through "Ghats" or hill roads. These Ghats one on Aurangabad Jalgaon road near Daultabad village and one on Aurangabad Mumbai road nearDaultabad village are having considerable elevations & have many sharp turns which then dangerous for smooth traffic, Moreover the road width is narrow and there are many sharp turns with steep gradients. Many accidents have taken place in these Ghats in the past.

A number of Rivers flow through the district, requiring construction of bridges over the roads. There are all 491 bridges in the study area.

CONCLUSION:

1. A good transport Network system is available in study area, which includes roads, Railway line, or Air transport network system.
2. The study area is Delhi, Mumbai, Nagpur, and Hyderabad Cities are connected to road, railway and the air route.
3. In Study area the total Length of the road is 9945.46kms.
4. In Study area is Maximum road length of 2010.03 kms in Aurangabad taluka& lowest of 441.01 kms roadway length in KhulatabadTaluka.
5. In Study area, the maximum length in the road is 2354.75 kms of the major district roads and the lowest road of 143.20 kms is of National highway.
6. The National highway NH211 byroad passes through Kannad, Khulatabad& Aurangabad cities in the study area.
7. The important the Major District road in the study area,Which provides services in agricultural market, Education, commerce, Industrial and health sector. This roadway is connected to the main state highway via the road route of the District.
8. The study area is connected to the state highway transport network to the Pune, Mumbai, Nagpur, Nasik and Dhuleetc cities.
9. The Length of broad rail Line in the study area is only 102 kms.
10. The Aurangabad airport offers passenger services airlines such as air India, Jet Airways, trujet.

11. Due to impact of geographical Factors in the study area, some highways and major district roads pass through the bridge constructed over "Ghat" or hill and rivers.

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