ROLE OF TRANSPORT SYSTEMS ON ECONOMIC DEVELOPMENT IN SATARA DISTRICT OF MAHARASHTRA STATE

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Abstract: Transportation plays an important role in the political, economic and social development of any region and society. The economic utilization of different type of resource would incomplete without transportation. The density of transportation and its development is control of economic development of a country. The economic development of any under developing district can be attributed relatively poor condition of transport system. One of the main reasons for the economic backwardness of many of the developing district of every state is the non-availability of modern transportation system. Many economists said that, in many causes' rural poverty systems from the poor development of transport system. The most important matter at such economic development is to achieve the maximum benefit from each of the existing mode of transport system. The transport cost most important for reasons of economic development of any district. In this paper the present study reveals the tahsil wise mode of transport in Satara district, 2013-2014. According to 2011 census Satara district has 3003922 populations. It occupies area of 10580 sq. km, the secondary data have been collected and computed by recent research techniques and the results have been brought through tables and maps.
Keywords: Transportation system, Economic development, density.

I. INTRODUCTION

"Transport, an important phenomenon of cultural landscape, work as a potent factor for the regional and national development any type of development whether economic, social or cultural is based on a good transport network" (Singh,J.1977). "Certainly, the cheap, efficient and fast transportation is dominant factor of our modern industrial and scientific age" (Finch, 1949). "Unlike natural resources transport is manmade recourse which interacts with man and various commodities of different areas. Transport, therefore is a form of capital good, just as a piece of factory equipment, which can be used to produce a service. In the absence of means of transport the regional development cannot get momentum and it cannot enhance the socio economic condition of developing countries" (Tiwari R.C, 1990) "In other words without transformational and communicational lines must of economic activities are barred. Consequently, a broad gap in human civilization is created. It is a strong tool for the exchange of views, cultures, traditions, religious etc. in brief transport eases the movement of man, goods an ideas and just as manufacturing creates form utility so transportation creates place utility." (Finch,1949). The study of geography of transport, in spite of its immense significance remained neglected for long time in Satara district. Satara district is one of the populous districts in the Maharashtra. It covers only 3.40 percent area of the state but have 2.67 percent population to the total population of the state. At present it is most important to role that the transport system of Satara district is different types and different ways. The transport is most important role to play for economic development. Road transport is supposed to be more efficient than railway transport. Road way transport is maximum use in different development of economic condition in Satara district. The proposed study region experiences the disparity in the distribution of mode of transportation from tahsil to tahsil. Keeping above arguments in mind, it is proposed a humble effort towards great task of exploring Role of Transport Systems on Economic Development in Satara District of Maharashtra State

II. THE STUDY AREA

Satara district lies in the southern Maharashtra, particularly at the western limit of Deccan table land. From the view point of physiographic Sahyadri and Mahadeo these are the two important ranges within the Satara district. The district is situated in the river basin of two rivers that are the Bhima and the Krishna River. But most probably, from the view point of peninsular drainage the entire land of Satara district belongs to the larger drainage system of the Krishna River. The latitudinal and longitudinal extent of Satara district is 17°05' to 18°11' north latitudes and 73°33' to 74°54' east longitudes. The district is bordered by Pune district and Sangli district in the north and

the south respectively and by Solapur district and Ratnagiri district in the east and the west respectively. It also shares small boundary of about 24k.m. in the north-west with Raigarh district (Census 2001). The district administers 10580.00sq.k.m of area. The total population of district is 3003922 including 1512524 male population and 1491398 female population. The total population of district constitutes 2.67 percent of the total Maharashtra's population. The population density of district is 287 people per. Sq. km. whereas the sex ratio of district is 986. (Census2011).

Fig-1

Objectives:
The main objective of the present study is to analyse the tahsil wise Transport system and economic development in Satara district.

III.   DATA COLLECTION AND METHODOLOGY

Present paper is based on secondary data. The data have been analysed for total roads length per 100 square kilometres. The secondary data have been collected and computed by recent research techniques and the results have been brought through tables, Graph and maps.

Role of Transport Systems on Economic Development in Satara District

Transportation network plays a significant role in the economic development. The development of transport network is controlled by topography of the region. The development of transportation network is vital for the decentralization and mobilization of small and large scale industry in the region. Transport system in different ways, like road way transport, railway transport, and Air Transport etc.

Table-1
The Satara District
Spatial Pattern of Road Length2013

Sr. No.	Name of the Tahsil	Road Length in km.					
		National Highway	State Highway	Major District Road	Other District Road	Village Road	Total Road Length
1	Mahabaleshwar	00	49.16	224.34	71.50	184.99	529.99
2	Wai	25	53.62	125.29	143.35	330.90	678.16
3	Khandala	20	52.12	97.10	105.00	233.70	507.92
4	Phaltan	00	91.20	360.18	166.00	639.20	1256.58
5	Man	00	155.40	246.10	155.60	582.10	1139.20
6	Khatav	00	154.48	241.11	176.45	674.26	1246.30
7	Koregaon	00	144.95	207.90	301.25	244.45	898.55

8	Satara	44.95	57.60	173.99	169.80	455.75	902.09
9	Jawali	00	30.40	72.68	126.50	253.30	482.88
10	Patan	00	55.30	229.67	164.10	551.10	1000.17
11	Karad	40	121.35	237.13	150.80	520.35	1069.63
12	Total	129.95	965.58	2215.49	1730.35	4670.10	9711.47

Source: i) Executive Engineer, P.W.D. Satara
ii) Executive Engineer, B. and C. Z.P. Satara.

Table-2
The Satara District
Spatial Pattern of Road Length (Density 100 sq.km) 2013-2014

Sr. No.	Name of the Tahsil	Total Geographical Area (in sq.km)	Density 100 sq.km					
			National Highway	State Highway	Major District Road	Other District Road	Village Road	Total Road Length
1	Maha.war	221.90	00	22.15	101.09	32.22	83.36	238.84
2	Wai	619.09	4.03	8.66	20.23	23.15	53.44	109.54
3	Khandala	536.08	3.72	9.70	18.11	19.58	43.59	94.74
4	Phaltan	1190.29	00	7.66	30.25	13.94	53.70	105.56
5	Man	1507.87	00	10.30	16.32	10.32	38.60	75.55
6	Khatav	1364.57	00	11.32	17.66	12.93	49.41	91.33
7	Koregaon	948.40	00	15.28	21.92	31.76	25.77	94.74
8	Satara	879.53	5.11	6.54	19.78	19.30	51.81	102.56
9	Jawali	868.95	00	3.49	8.36	14.55	29.15	55.57
10	Patan	1403.64	00	3.93	16.36	11.69	39.26	71.25
11	Karad	1042.11	3.83	11.64	22.75	14.47	49.93	102.64
12	Total	10582.43	1.22	9.12	20.93	16.35	44.13	91.76

Source: Compiled by Researcher

1. Road Network
The Satara district has well developed interconnected network of various roads (Fig.-2). The Satara district has total road length of 9711.47 km and road density per 100-sq.km is 91.76 km. Table 1 and 2 provides comprehensive regarding spatial pattern of length of roads and road density. It observed that the distribution of roads have played a major role in the economic development.

I) The National highway:
Pune-Bangalore (NH 4) passes through the study area, which has 129.95 km. length. The NH4 passes through Khandala, Wai, Satara and Karad tahsils of the study region.

II) STATE HIGHWAY:
The district as a whole has 12.81 km density of state highway per 100 square kilometres. However, spatial distribution varies from tahsil to tahsils. The High density of state highway is recorded in Karad, Koregaon, Man, Khatav and Mahabaleshwer tahsils i.e. above 10.30 km per 100 squares. The moderate density of state highway is found in Wai, Khandala, Phaltan and Satara tahsils i.e. 6.50 to 10.30 km per 100 squares. The low density of state highway is recorded in Jawali and Patan tahsils i.e. below 6.50 km per 100 squares.

III) MAJOR DISTRICT ROADS:
The district as a whole has 20.93 km density of major district roads per 100 square kilometres. However, spatial distribution varies from tahsil to tahsils. The High density of major district roads is recorded in Mahabaleshwer, Wai, Phaltan, Koregaon and Karad tahsils i.e. above 20 km per 100 squares. The moderate density of major district roads is found in Patan, Satara, Khatav, Man and Khandala tahsils i.e. 16 to 20 km per 100 squares. The low density of major district roads is recorded in Jawali tahsil i.e. below 16 km per 100 squares.

**IV) OTHER DISTRICT ROADS:**
Table-2 indicates that the density of other district roads is 16.35 km per 100 square kilometres, district as a whole. However, spatial distribution varies from tahsil to tahsils. The High density of other district roads is recorded in Mahabaleshwer, Wai and Koregaon tahsils i.e. above 23 km per 100 square kilometres. Moderate density of other district roads is found in Karad, Jawali, Satara and Khandala tahsils i.e. 14 to 23 km per 100 square kilometres. The low density of other district roads is found in Patan, Khatav, Man and Phaltan tahsils i.e. below 14 km per 100 square kilometres.

V) VILLAGE ROADS:
The district as a whole has 44.13 km density of village roads per 100 square kilometres. However, spatial distribution varies from tahsil to tahsils. The high density of village road is recorded in Karad, Satara, Khatav, Phaltan, Khandala, Wai and Mahabaleshwer tahsils i.e. above 40 km per 100 square kilometres. Moderate density

of village road is found in Patan and Man tahsils ranging from 30 to 40 km per 100 square kilometres. The low density of village road is observed in Koregaon and Jawali tahsils i.e. below 30 km per 100 square kilometres.

Figure-2
The Satara District: Density of road (2014)
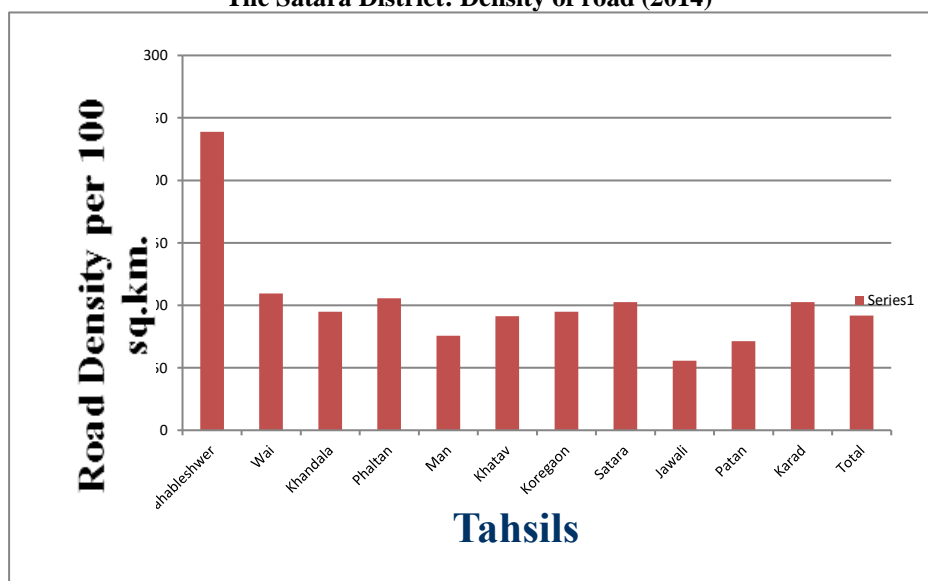
VI) TOTAL ROAD LENGTH:

The density of total roads length per 100 square kilometres in the entire district is 91.76 km. However, spatial distribution varies from tahsil to tahsils (Fig.-2). The High density of total road length is recorded in Mahableshwer, Wai, Satara and Karad tahsils i.e. above 100 km per 100 square kilometres due to high economic development tahsil as compare other tahsil. Moderate density of total road length is found in Khandala, Khatav and Koregaon tahsils ranging from 76 to 100 km per 100 square kilometres due to moderate economic development. The low density of total road length is recorded in Patan, Jawali and Man tahsils i.e. below 75 km per 100 square kilometres due to lack of small and large scale industries resulted low economic development tahsil as compare other tahsils.

2. Railway Network:

Although, the district has limited length (124.84km) of railway it is the most important means of transport. There is only one railway route in the district, which is single line broad gauge type. It connects Miraj with Pune and this line controls daily migration to Satara city from eastern region (Fig.2.).

IV.   Concluding remarks

The forgoing analysis reveals that the transport system of Satara district is lower than the Maharashtra state average due to topography of the region. But spatial distribution varies from tahsil to tahsil. Roadway transportation network plays a significant role in the economic development of Satara district. The High density of total road length is recorded in Mahabaleshwer, Wai, Satara and Karad tahsils due to this tahsils effect of high economic development. The low density of total road length is recorded in Man and Jawali tahsils due to this tahsils effect of low economic development. Satara district, there is ample scope for effective and innovative development of combined Road, Rail and air services. Unplanned development of transport network in many under development tahsils is so complicated in nature that it is quite impossible to set up co-ordination among the various modes for transport. Need at the moment is to extend the necessary co-ordination among the existing means of transport and look forward for a mare integrated and planed development of the future modes of transport in Satara district.

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