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Spatial distribution of infrastructure facility in Mandya district

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Abstract

Infrastructure is a fundamental facility and systems serving the city or any other area. The services and facilities are necessary for economic development and socio-economic studies how economic activity affects social processes. In general, it analyzes how societies progress, stagnate, or regress because of their local or regional economy. Socioeconomics is sometimes used as an umbrella term with different usages. The present study is concentrate on infrastructure facilities on Mandya district and its help for study the socio economic condition of the study region. Data is based on secondary source, collected form district statistical office, Mandya. This study area is situated on southern part of Karnataka, and the area having seven taluks i.e., Nagamangala, Krishnarajapet, Malavalli, Mandya, Maddur, Pandavapura and Srirangapatana.

Keywords: Infrastructure; Mandya district; study area; Nagamangala; Malsvalli; Mddur; Pandavapura; Srirangapatna taluks

Introduction

Infrastructure is basic physical and organizational structures needed for the operation of a society or enterprise, or the services and facilities necessary for an economy to function. It can be generally defined as the set of interconnected structural elements that provide framework supporting an entire structure of development. It is an important term for judging a country or region's development (Sullivan et. al., 2003). Infrastructure is composed of government and private physical improvement such as roads, bridges, water supply, schools, colleges, hospitals etc. the infrastructure is important for economic growth and alleviation of poverty in the city or the country. The adequate infrastructure in the form of road, railway, electricity, airports and

their efficient working is also needed for integration of the region economy with other economies of the world.

Objective and Methodology

To assess the condition of infrastructure facilities like, health care, Education and market and co-operative societies in the study area. The present study is based on secondary data, collected from district statistical office Mandya. Using Micro soft Excel for preparing graphs and tables. Arc GIS software is used for generating the study area and spatial distribution of infrastructure facilities on taluks.

Study area

The Mandya is situated in southern part of Karnataka, it lies between 12° 13' N

to 13°04' N and 76°19' E to 77°20' E. the district bounded by Hassan, Tumkur, Bangaluru, Mysuru and Chamarajanagara. Total geographical of the district is 4962 sq km, the district is divided into 7 taluks i.e., Mandya, Maddur, Malavalli, Pandavapura, Nagamangala, Krishnarajapere and Srirangapatna. The total population of the study area is 1805769 (as per 2011 census) with population density of 355 per sq km. The important rivers of the district are Cauvery, Hemavathi, Shimsha, Lokapavani and Viravaishnavi. Major crops of the region are paddy, ragi, sugarcane and coconut.

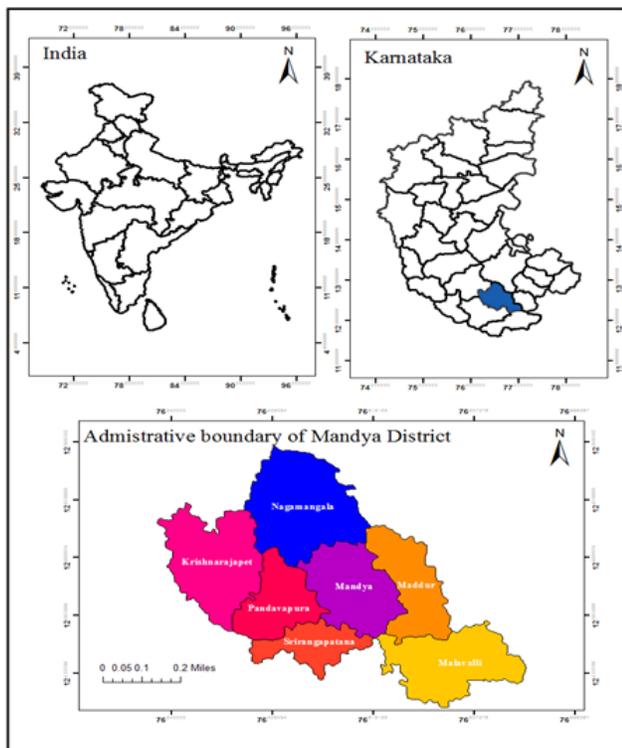


Fig. 1. Study area

Analysis: General infrastructure in the study region

Education facility: Education in its general sense is a form of learning in which the knowledge, skills and habits of a group of people are transferred from one generation to the next through teaching training and research. Education frequently takes place under the guidance of others, but may also be autodidactic (Dewey, 1916, John 1944). Any experience that has a formative effect on the way one thinks, feels or acts may be considered educational.

Education is commonly divided into stages such as preschool, lower primary, higher primary, high school, junior colleges and university or apprenticeship.

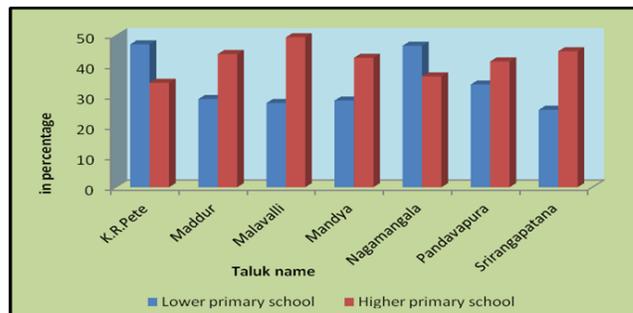


Fig. 2. Distribution of lower primary and higher primary schools in Mandya District (2015-16)

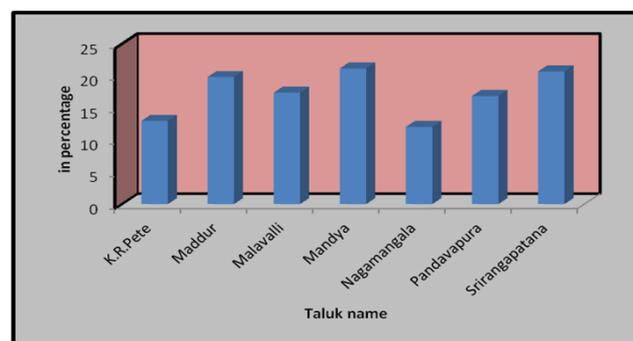


Fig. 3. Distribution of high school in Mandya District (2015-16).

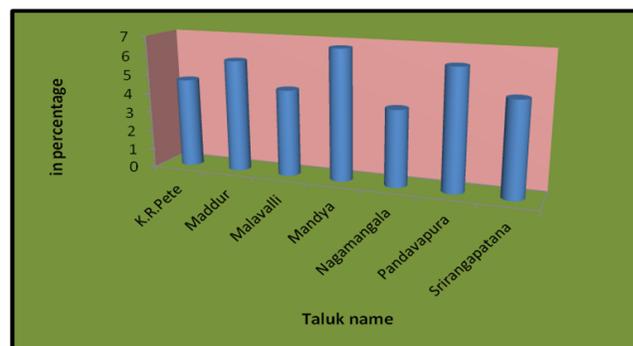


Fig. 4. Distribution of Junior colleges in Mandya District (2015-16)

Table 1. Distribution of education facilities in Mandya district

Sl.No	Name of the Taluka	No of Villages	Lower Primary School	Pri- mary School	Higher Pri- mary School	High School	Junior Colleges	Degree Colleges	Polytechnic Colleges	Total
1	K.R.Pete	316	203 (47%)	148 (34.33%)	57 (13%)	20 (4.64%)	2 (0.46%)	1 (0.23%)	431	
2	Maddur	160	121 (29%)	181 (43.82%)	82 (19.85%)	24 (5.81%)	4 (0.96%)	1 (0.24%)	413	
3	Malavalli	189	105 (27.70%)	187 (49.34%)	66 (17.41%)	17 (4.48%)	4 (1.05%)	0	379	
4	Mandya	183	148 (28.51%)	221 (42.58%)	110 (21.19%)	35 (6.74%)	5 (0.96%)	0	519	
5	Nagamangala	367	189 (46.55%)	148 (36.45%)	49 (12.06%)	16 (3.94%)	2 (0.49%)	2 (0.49%)	406	
6	Pandavapura	169	98 (33.79%)	120 (41.37%)	49 (16.89%)	18 (6.20%)	4 (1.37%)	1 (0.34%)	290	
7	Srirangapatna	96	70 (28.45%)	110 (44.71%)	51 (20.73%)	12 (4.87%)	2 (0.81%)	1 (0.40%)	246	
Total		1480	934	1115	464	142	23	6		

Source: District at glance 2015-16

Above table shows the education facilities in study area. As per the study K.R.Pete taluk is having highest primary schools i.e., 203 (47% compare to other education facility in K.R.Pete taluk). Srirangapatna is having very less 70 (28.45%), Mandya having 148 (28.51%), pandavapura 98 (33.79%). And rest of the taluks having more than 100 lower primary schools.

Mandy taluk is having highest higher primary school i.e., 221, high schools 110 Junior college 35 and 5 Degree colleges including government and private. K.R.Pete taluks having second highest education institutes in the district. 148 in higher primary, 57 high schools 20 junior colleges, 2 degree colleges and only one polytechnic college respectively.

Nagamangal taluk is also having more than 400 education institute, 189 lower primary, 148 higher primary, 49 high schools, 16 jounior colleges, 2 degree colleges and 2 polytechnic respectively. Malavalli taluk having 379, Pandavapura 290 and Srirangapatna is having 246 education institutions respectively.

Health Faculty: The World Health Organization (WHO 1946) has defined health as a state of complete physical, Mental and social well being and not merely absence of diseases and infirmity. Several analyses of health service have defined the status of the health as a condition of absence of decreases, joyful living with creativity. Thus, health services are preventive curative and have a crucial role to play in human resource development and also human development. The care systems and there facilities in ay society are most essential to keep the people in sound condition physically and mentally. The health care systems facilities in the study area include western allopathic sector and indigenous auyrvedic and unani system of medicine distribution in rural settlements of Mandya district. The taluk wise distribution of health facilities in study area are as given in the following table 2.

Totally 115 public health centers are situated in the study region, out of that 28 PHCs in Mandya taluk, 19 in Malavalli, 20 in K.R.Pete, 18 in Maddur, 14 in Nagamangala and 8 is in Pandavapura and Srirangapatana respectively. Each taluk have taluk hospitals except Mandya, this taluk having district

hospital. K.R.Pete, Mandya and Nagamangala taluks having 2 community health centers rest of taluks having only one CHC.

Table 2. Distribution of Medical Facilities in Mandya District

Sl.No	Name of the Taluka	No of Vil- lages	PHC	CHC	Taluk HQ
1	K.R.Pete	316	20	2	1
2	Maddur	160	18	1	1
3	Malavalli	189	19	1	1
4	Mandya	183	28	2	1
5	Nagamangala	367	14	2	1
6	Pandavapura	169	8	1	1
7	Srirangapatna	96	8	1	1
Total		1480	115	10	7

Source:2011 Census report

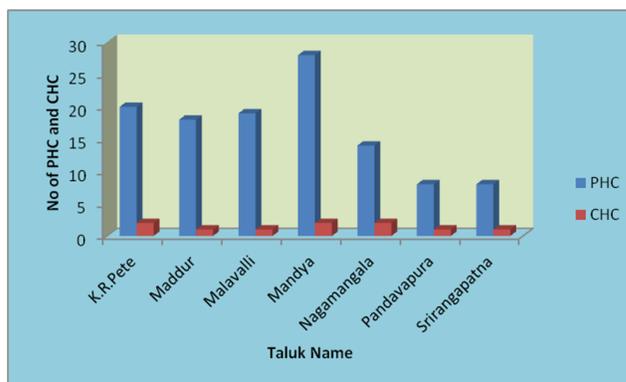


Fig. 5. Distribution of Medical Facility in Mandya district (2015-16)



Distribution of Market Facilities in Mandya District

The word Market is derived from the latin word “mercatus” which means the place or method of contact between buyers and sellers. William Applebaum is widely regarded as the chief architect of marketing geography as a distinct field of study in the United States. Applebaum (1954), defined marketing geography as “It concerned with the delimitation and measurement of markets and with the channels of distribution through which goods move from producer to consumer”.

Geographically, market is a well-defined area varying from a small village market to a Metropolitan centre. Markets are interrelated with different geographical aspects which perform its functions deeply involved with the behavioral approach of different market mechanisms, growth and its process depending upon the nature and extent of the region and their link in terms of transportation and communication system. The functions of marketing are an integral part and playing a vital role in the modern capitalist system. It is a major factor in the differential growth of cities and in the changing economic aspect of rural areas. Some markets are performing with specific goods and services and are highly specialized with a relatively small number of users, whereas for other goods and services the demand is widespread. The market and market functions have become so effective with the efficient channels of distribution when the surplus and deficit areas have been linked by the market. Channels of distribution are the various economic organizations that perform functions in the transfer of goods and services form producer to consumer.

In developing countries like India periodic markets are the characteristic features and considered as strong spatial components these markets are held periodically on some specific day or days of the week or month at some fixed sites and thus provide goods and services to the rural masses (Saxena 1970). Such periodic markets have emerged out of the need of producers to fulfill the demands of consumers in a society where permanent markets are absent or the geo-economic conditions of that region are such that daily marketing is possible. In India these period markets are still flourishing and have formed an integral system of internal marketing activities. The number of existing regulated market and co-operative societies has been table.

According to the table Mandya district is having totally 17 regulated markets, with Combined Maddur and Malavalli taluks having 6 regulated markets. K.R.Pete and Nagaman-gala is having 4, and rest of the taluks having one regulated market. In the study area totally 2058 cooperative societies are there, including credit and no credit societies. Mandya taluk having highest cooperative societies i.e., 469, K.R.Pete and Maddur taluks having more than 300 and Srirangapatana

taluk having 147 cooperative societies respectively.

Table 3. Distribution of Market and Co-operative societies (2015-16)

Sl. No.	Name of the Taluka	No of Vil-lages	Regulated Market	COS
1	K.R.Pete	316	4	316
2	Maddur	160	6	352
3	Malavalli	189	6	267
4	Mandya	183	1	469
5	Nagamangala	367	4	273
6	Pandavapura	169	1	234
7	Srirangapatna	96	1	147
Total		1480	17	2058

Source: 2011 Census Report
 COS: Co-operative Societies (Credit+ Non Credit)

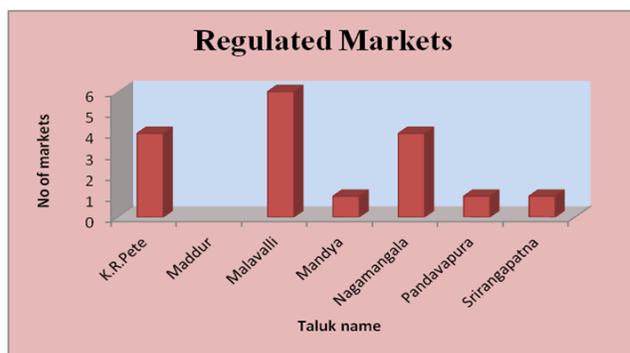


Fig. 6. Regulated Markets in Mandya district (2015-16)

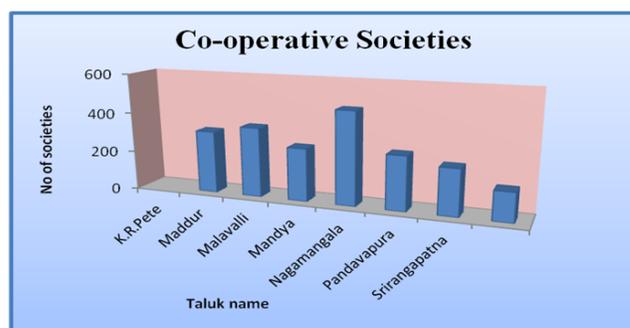


Fig. 7. Cooperative societies in Mandya district (2015-16)



Conclusion

The present studies were about infrastructural condition of the Mandya district. In the education facilities totally 934 lower primary school, 1115 higher primary, 464 high school and 142 junior colleges are there in the district and Mandya taluk having one government medical college. In the study area totally 115 primary health centers and 10 community health centers is recorded, totally 182 health care centers are there including government and private. In the market facilities 17 regulated markets spread over the entire district and 2058 cooperative societies are working in the study area.

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