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A GEOGRAPHICAL ANALYSIS OF RURAL INFRASTRUCTURAL FACILITIES IN BELAGAVI DISTRICT, KARNATAKA

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ABSTRACT

Infrastructure is usually defined as "the physical parts of interconnected systems that deliver goods and services needed to allow, maintain, or improve social living conditions" and "the maintenance of the physical environment." The sustainability of an area depends heavily on the availability of balanced infrastructure facilities. The purpose of this study is to investigate the distribution of rural infrastructure in the Belagavi District of Karnataka, which is mostly comprised of rural residents (92.50 percent of the total population). Taluka-specific secondary sources of data were gathered for this from the district statistics office in Belagavi. It has been used to show clearly and look closely at how the district's infrastructure is set up and where it is. The district lacks infrastructure, according to the taluka-by-taluka analysis. The regional growth of the district has been analysed using a variety of infrastructure development factors, including health, transportation, communication, education, and bank amenities. This research area, which includes the fourteen taluka Athani, Bailahongal, Belagavi, Chikkodi, Gokak, Hukkeri, Kagavad, Khanapur, Kittur, Mudalagi, Nippani, Raibag, Ramadurg, and Savadatti, is located in the northern region of Karnataka.



KEYWORDS: Population, Infrastructure, Health, Education, Communication, Bank.

1.INTRODUCTION

Rural infrastructure plays a very important role in the overall development of a country. Still, rural infrastructure facilities are very poor as compared to urban areas in the country. Infrastructure could be defined as organisational structure and physical amenities that are needed by the community in general (Sullivan A, Sheffrin SM, 2003). The basic infrastructure required in rural areas is education, health, housing, drinking water. For this both the public and private sectors have to come together and work together in rural areas for the development of rural economy and social encouragement (Shrikanth N, Naga Chaitanya Kavuri, 2019). The quantity and quality of infrastructure facilities are substantially lower in rural areas than in urban areas (Ghosh, Madhusudhan, 2017). A relatively low density of population, low household incomes and the absence of scale economies are considered to be challenges to the expansion of basic infrastructure facilities in rural areas. Though these infrastructures form an important and integral part of life of any community either rural or urban but they are unequally distributed over space. Many empirical findings have shown that facilities are unequally distributed in our communities such that the vast majority of the people are caught in a never-ending

struggle to gain access to these infrastructures in order to improve their quality of life (Roy, Prosenjith Kayal and Loboni, 2018). Improving basic infrastructure, such as roads, transport, electricity, telecommunications, housing, health, water and sanitation, is essential for development and well-being of the rural population.

2. OBJECTIVES:

The present study covers the following objectives

1. To analyse the distributional pattern of infrastructural facilities in the study area.
2. To assess the condition of infrastructure facilities in study area.

3. DATABASE AND METHODOLOGY:

The present study will be purely based on secondary sources of data. The major source of extensive data for the present study will be collected from the census hand book and district statistical office of Belagavi district. Data will be represented with help of statistical diagrams, charts, graphs and maps by using GIS technology. The findings have been clearly demonstrated in tabular form by using MS Office and MS Excel. The unit of area will be selected for study at Taluka level and analysis will be carried out by selecting time span of one year (2020-2021) for the detail geographical analysis of the distributional pattern and condition of infrastructure facilities in Belagavi District.

4 . STUDY AREA:

The district is located between latitudes 15°25 to 15°55 north and longitudes 74°15 to 75°25 east. It has a size of 13,444 square kilometres. The district is comprised of fourteen talukas. The Belagavi district is in the northwest corner of the state of Karnataka, east of the Western Ghats. It is bordered to the southwest by the state of Goa and to the west and north by the state of Maharashtra. The districts of Vijayapur and Bagalkot are in the northeast and east of the state of Karnataka. The districts of Dharwad and Uttar Kannada are in the south and southwest of the state. The district is drained by three important perennial and non-perennial rivers namely Krishna, Ghataprabha, Malaprabha and its tributaries. The soil found in the district are namely black soil, red soil and laterite soil, which are mixed with red and black soil in the district. The total population of Belagavi District according to 2011 Census was about 4779661 persons, out of which 24,23,063 people are male and 2,356,598 persons are belongs to female population.

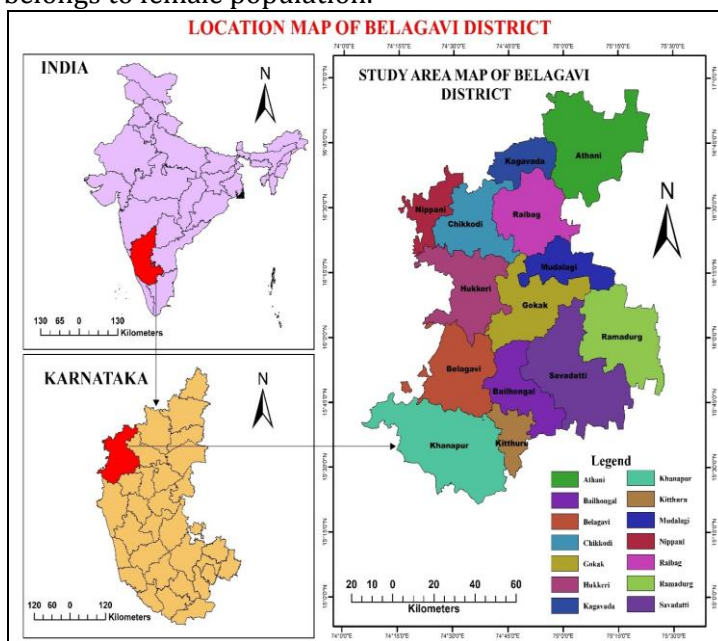


Figure 1

5 Result and Discussion:

5.1 Educational Facilities:

Education is commonly divided into stages such as primary, middle school, high school, junior colleges and diploma collages. The table no 1 indicates that the status of rural educational infrastructure in Belagavi district during 2020-21.

Table No 1 :Taluk wise Availability of Educational Facilities in Belagavi District, 2020-21 (10000 population)

Sl No	Name of the Taluka	No of Villages	Population	Primary School	Middle School	High School	Junior Colleges
1	Athani	88	372575	5	7	3	1
2	Bailhongal	85	288868	2	5	2	1
3	Belagavi	124	957373	2	5	2	1
4	Chikkodi	79	356144	3	6	2	1
5	Gokak	88	398392	2	4	2	1
6	Hukkeri	123	399270	2	6	2	1
7	Kagavad	21	153257	3	6	2	1
8	Khanapur	218	258089	6	8	2	1
9	Kittur	47	92321	4	8	3	0
10	Mudalagi	43	213771	6	11	4	1
11	Nippani	53	272656	3	6	2	0
12	Raibag	59	405489	5	0	3	1
13	Ramdurg	115	258527	5	0	2	1
14	Savadatti	132	352929	3	5	2	1
	Total	1275	4779661	3	6	2	1

Source: Computed by Researcher based on Census Data, 2011

According to the table no 1 show that there are 3 primary schools, 6 middle schools, 2 high schools, 1 junior college for every 10000 population.

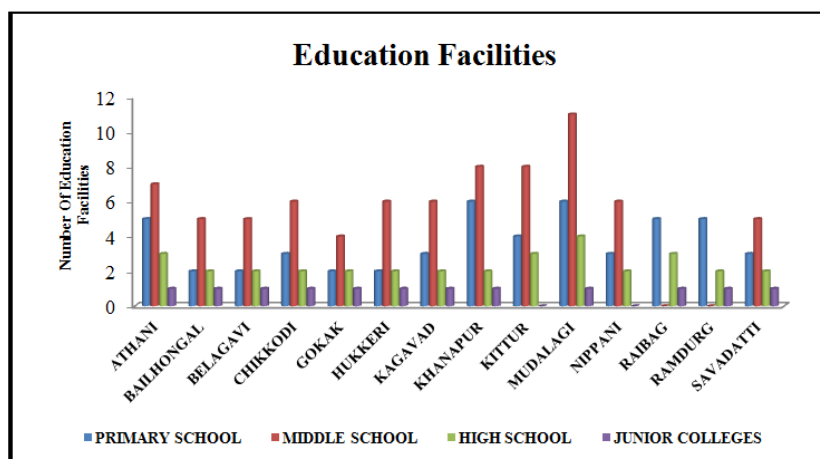


Figure 2

In terms of primary schools per 10,000 population, the highest number of primary schools 6 was observed in two taluka Khanapur and Mudalagi. Athani, Raibag and Ramadurg talukas consist of 5 primary schools per 10000 population. Whereas Kittur taluka consist of 4 primary schools for every 10000 population Chikkodi, Kagavad, Nippani, Savadatti having 3 primary schools and other talukas like Bailhongal, Belagavi, Gokak and Hukkeri found less than 3 primary schools per 10000 population. At middle school level Mudalagi taluka comes under first place with 11 middle schools per 10,000 population. Respectively Khanapur and Kittur taluka consist of 8 middle schools per 10,000 population. Athani taluka consist of 7 middle schools and 6 number of middle schools found in Chikkodi, Hukkeri, Kagavad and Nippani taluka. The lowest level of concentration of middle schools per 10,000 population was noticed in Raibag and Ramdurg. Except Mudalagi, Athani, Kittur, Raibag talukas has 3 middle schools and other talukas having less than three high schools per 10,000 populations. Here notice that only two talukas like Kittur and Nippani has no junior college for per 10,000 population in the study area.

5.2 Health Facilities:

The table no 2 indicates that the distribution of Health Facilities in Belagavi district during 2020-21.

Table 2 Taluka-wise Health Facilities per 20,000 Populations in Belagavi district, 2020-21

Sl No	Name of the Taluka	No of Villages	Population	Primary Health Centres	Health And Wellness Canters	Government Hospitals	Private Hospitals
1	Athani	88	372575	1	4	4	3
2	Bailhongal	85	288868	1	3	3	2
3	Belagavi	124	957373	0	2	2	4
4	Chikkodi	79	356144	0	3	3	3
5	Gokak	88	398392	1	3	3	5
6	Hukkeri	123	399270	1	4	4	1
7	Kagavad	21	153257	1	3	3	1
8	Khanapur	218	258089	1	3	6	1
9	Kittur	47	92321	1	6	6	4
10	Mudalagi	43	213771	1	3	3	1
11	Nippani	53	272656	1	3	3	1
12	Raibag	59	405489	0	2	3	1
13	Ramdurg	115	258527	0	4	4	2
14	Savadatti	132	352929	1	4	4	1
	Total	1275	4779661	1	3	3	2

Source: Computed by Researcher based on district stastical data 2020-21

The above table No 2 reveals that presence of various health centers in Belagavi district. The district has one PHC and 3 health and wellness centers, 3 government hospitals and 2 private hospitals for every 20,000 population.

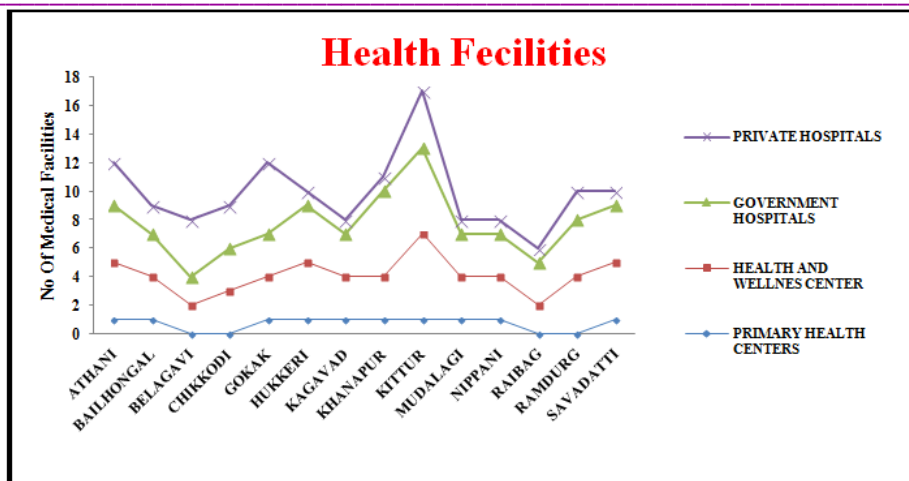


Figure 3

In terms of PHC, Except Belagavi, Chikkodi, Raibag and Ramdurg taluka other 10 talukas of Belagavi district consist of 1 PHC per 20000 population. In terms of health and wellness centers per 20,000 population Kittur taluka has 6 centers. And other talukas like Athani, Hukkeri, Ramdurg and Savadatti has 4 health and wellness centres per 20,000 population. Respectively Belagavi and Raibag has two health and wellness center per 20,000 population. And Bailhongal, Chikkodi, Gokak, Kagavad, Khanapur, Mudalagi Nippani thalukas observed with 3 health and wellness center per 20,000 population. According to the table no 2 Khanapur and Kittur taluka ranked first with 6 Government Hospitals per 20,000 population. 4 Government Hospitals found in Athani, Hukkeri, Ramdurg and Savadatti taluka. Apart from Belagavi other six talukas have 3 Government Hospitals per 20,000 population. If comes to the distribution private hospitals in Belagavi district Gokak taluka comes under first place with 5 private hospitals per 20000 population. 4 private hospitals found in Belagavi and Kittur taluka. 3 private hospitals per 20000 population were observed in Athani and Chikkodi taluka. The 2 private hospitals were noticed in Bailhongal and Ramdurg taluka per 20,000 population. Respectively other six talukas like Hukkeri Kagavad, Khanapur, Mudalagi Nippani, Raibag, Savadatti consist of 1 private hospital per 20000 population.

5.3 Banking Facilities:

The availability of banking facilities like regional rural banks, public sector banks, private sector banks, credit co-operative banks, and non-credit co-operative banks and ATMs makes a village self-sufficient in terms of financial needs and helps in the development process of rural population. These credit societies cater the financial needs of the poor villagers. The table no 3 indicates that the distribution of Rural Banking Facilities in Belagavi district during 2020-21.

Table 3 Taluka-wise Rural Banking Facilities in Belagavi district, 2020-21(In Numbers)

Sl No	Name of the Taluka	No of Villages	Regional Rural Banks	Public Sector Banks	Private Sector Banks	Credit Co-Operative Societies	Non-Credit Co-Operative Societies	Total No of Banks	No of ATMs
1	Athani	88	14	20	16	129	283	462	14
2	Bailhongal	85	11	14	6	112	170	313	34
3	Belagavi	124	25	118	46	324	536	1049	296
4	Chikkodi	79	18	27	17	237	394	693	48

5	Gokak	88	9	31	11	114	257	422	40
6	Hukkeri	123	13	16	7	145	234	415	28
7	Kagavad	21	4	3	1	129	148	285	7
8	Khanapur	218	11	14	3	91	164	283	23
9	Kittur	47	6	4	1	42	56	109	5
10	Mudalagi	43	9	4	2	148	257	420	2
11	Nippani	53	7	10	6	204	233	460	20
12	Raibag	59	15	14	3	313	552	897	22
13	Ramdurg	115	9	13	2	68	185	277	21
14	Savadatti	132	16	19	5	164	232	436	29
	Total	1275	167	307	126	2220	3701	6521	616

Source: Computed by Researcher based on District Statical Data 2020-21

According to the Table No 3 in the rural parts of Belagavi district there are total 167 regional rural banks, 307 public sector banks, 126 private sector bank, 2220 credit co-operative banks, 3701 Noncredit co-operative banks and 616 ATM's

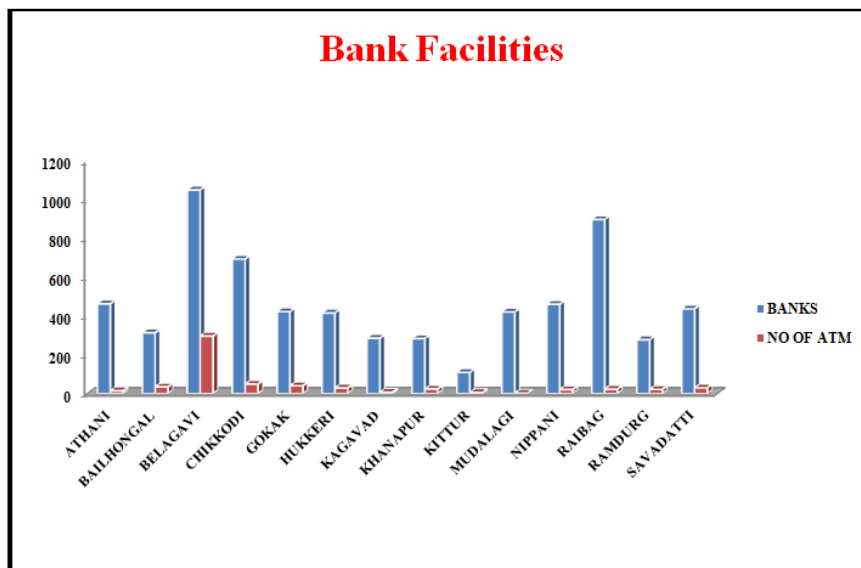


Figure 4

Above table No 4 describe the availability of banking facilities in numbers. Belagavi taluka has the highest number of banks (1049) and ATM's (296). Followed by Raibag has 897, Chikkodi has 693, Athani, Nippani, Savadatti, Mudalagi and Gokak has more than 400 banks banks. And Bailhongal has 313 banks. Kagavad, Khanapur, Ramadurg has more than 200 banks and Kittur taluka has only 109 banks.

It is found that the highest ratio in terms of number of ATMs in Belagavi with 296 and Bailhongal place second place with 34 units of the Study area. Apart from Kagavad, kittur, Mudalagi and Athani taluka other talukas has more than 20 ATM.

5.4 Transportation:

Transportation plays a crucial role in creating contact between city or market and its surrounding villages to these urban places. The rural areas of the district mainly consist of roads that

help in the movement of people and goods efficiently. The table no 2 indicates that the distribution of Road length and Density in Belagavi district during 2020-21.

Table 4 Taluka-Wise Distribution of Road Length and Density in Belagavi District in 2020-21

Sl No	Name of The Taluka	Population	Length of The Road	Area (In Sq Km)	Road Density Per Sq Km
1	Athani	372575	1634.7	1554	1
2	Bailhongal	288868	1053.9	760	1
3	Belagavi	957373	1443	1032	1
4	Chikkodi	356144	1651.7	851	2
5	Gokak	398392	1263.6	1146	1
6	Hukkeri	399270	1013.1	987	1
7	Kagavad	153257	1267.4	437	3
8	Khanapur	258089	1456.9	1742	1
9	Kittur	92321	496	360	1
10	Mudalagi	213771	1047.3	397	3
11	Nippani	272656	816.7	412	2
12	Raibag	405489	1952.3	952	2
13	Ramdurg	258527	1623.1	1225	1
14	Savadatti	352929	1772.4	1578	1
	Total	4779661	18501.1	13433	1

Source: Computed by Researcher based on District Stastical Data 2020-21

Above table No 4 reveals that the length of the roads in the rural areas of the Belagavi district in kilometer. It reveals that Belagavi district has road of 18501.1 kilometers length. Taluka-wise analysis of road in 2020-21 shows that the utmost 1952.3 km. length of the road was found in Raibag. Followed by 1772.4 km. length of the road was found in Savadatti. Minimal length 496 km road was found in Kittur taluka.

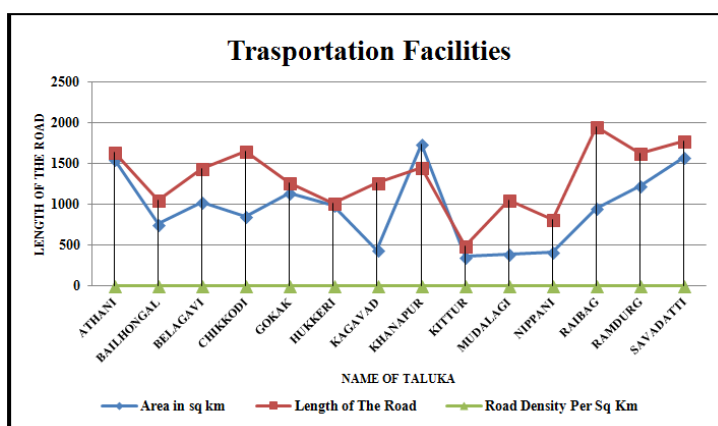


Figure 5

According to the Table No 4, further reveals that taluka wise distribution of road density in Belagavi district. The average density of roads in the study area is 1 Kilometer Per Sq. Km. There are two talukas which have been categorised as highest density of road i.e. Kagavad and Mudalagi 3

Kilometers Per Sq Kms and Chikkodi Nippani, Raibag consist of 2 Kilometers Per Sq Kms. While the remaining nine talukas has been observed minimum road density of 1 kiloeter Per Sq. Kms of the study area.

5.5 Communication:

The communication facilities in the modem world play a significant role in communication between the people and areas and bring the people closer. Such facilities enhance the level of spatial interaction. In the modern world economy, these facilities have become almost like basic needs. The table no 5 indicates that the distribution of communication facilities in all fourteen taluks of Belagavi district during 2020-21.

Table 5 Taluka-wise Distribution of Communication facilities in Belagavi district in 2020-21 (20000 population)

Sl No	Name of the Taluka	No of Villages	Population	Post Office	Telephone Exchanges	Telephones	Mobile Phones	Internet Connections
1	Athani	88	372575	4	1	32	1088	15
2	Bailhongal	85	288868	5	1	48	753	30
3	Belagavi	124	957373	2	0	321	1760	67
4	Chikkodi	79	356144	3	1	152	1556	23
5	Gokak	88	398392	3	1	63	584	21
6	Hukkeri	123	399270	4	1	41	652	11
7	Kagavad	21	153257	2	1	56	63	13
8	Khanapur	218	258089	3	1	54	785	14
9	Kittur	47	92321	5	1	35	647	18
10	Mudalagi	43	213771	3	1	47	204	11
11	Nippani	53	272656	3	1	60	331	30
12	Raibag	59	405489	2	1	39	301	17
13	Ramdurg	115	258527	4	1	60	363	28
14	Savadatti	132	352929	3	1	39	382	16
	Total	1275	4779661	3	1	110	860	29

Source: Computed by Researcher based on District Stastical Data 2020-21

According to the table no 5 shows that there are 3 post-offices, 1 Telephone Exchanges, 110 Telephones, 860 Mobile Phones and 29 internet connections for every 20000 population.

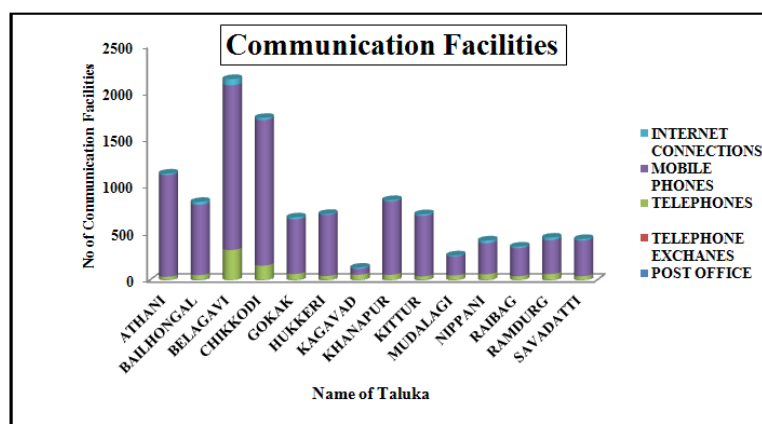


Figure 6

In terms of post-offices for every 20000 population highest number of 5 post-offices was found in Bailhongal and Kittur taluka. Athani, Hukkeri and Ramdurg taluka has 4 post-offices. Talukas like Chikkodi, Gokak, Khanapur, Mudalagi, Nippani, Savadatti has 3 post-offices. Respectively Belagavi, Kagavad, Raibag taluks found with 2 post-offices for every 20000 population. Apart from Belagavi taluka other thirteen talukas consist of 1 Telephone Exchanges for every 20000 population. In terms of Telephones Belagavi taluka consist of 321 Telephones for every 20000 population. Expect Chikkodi other twelve talukas has less than 100 for every 20000 population. Belagavi taluka found with 1760 Mobile Phones for every 20000 population. Athani has 1088 and Chikkodi has 1556 Mobile Phones for every 20000 population. Expect Kagavad (63) other Eleven talukas has less than 800 Mobile Phones for every 20000 population. Then comes to internet connections all Expect Belagavi (65), Bailhongal and Nippani (30) taluka other Eleven taluka consist of less than 30 internet connections for every 20000 population.

6. CONCLUSION:

Present study evaluated the status of rural infrastructure facilities in 14 talukas of Belagavi district, and examined their dimensions of rural infrastructure development. In spite of several public initiatives for infrastructure development in Belagavi district, infrastructure facilities are still inadequate and progress has been mostly unsatisfactory with differential performance across talukas. Because of that appropriate steps should be taken for improving governance, delivery mechanisms and efficiency of local level institutions to ensure various infrastructure services to the rural people. The availability of banking facilities in numbers. Belagavi taluka has the highest number of banks (1049) and ATM's (296) It reveals that Belagavi district has road of 18501.1 kilometers length and density of road is 1 Kilometer Per Sq. Km. There are 3 post-offices, 1 Telephone Exchanges, 110 Telephones, 860 Mobile Phones and 29 internet connections for every 20000 population.

So, there is clear need for government intervention in taken some initiatives and schemes for improving infrastructural facilities in the district that will ultimately improve the socio-economic and backwardness of the district. Government's involvement is inevitable for the sustainable and inclusive growth of the district.

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