Regional Disparities Using Population as a Criteria a Case Study of South Karnataka

M. D. Rathnamma[1], M. J. Abhishek[2*], D. Ashok[3]

[1]Research Scholar, Department of Geography, Bangalore University, Bengaluru, India
[2]Faculty, Department of Geography, Bangalore University, Bengaluru, India
[3]Professor, Department of Geography, Bangalore University, Bengaluru, India

Abstract: **Region is having physical and cultural characteristics together and forms a unique identity. It is easy to reduce the disparities but it is difficult to overcome this. Human interaction can be seen everywhere, the impact of demographic elements in the regional disparities are more. The distribution of population equally in all the regions is a difficult task. There are many factors are playing a vital role in the distribution of the population in the regions. The larger geographical area may be having a small unit of population and the smaller geographical area may be having a large population. Karnataka is located in the Deccan Plateau, the study area has been chosen using the revenue and administration division of Karnataka. Bengaluru and Mysuru division has been taken for the research purpose, it is consists of 17 districts. The objective of the paper is to understand the Regional disparities using population as one of the important criteria. The secondary data have been used to do the research, data have been collected through various sources such as government departments, publications, census boards and others. Geospatial technology is used to prepare the maps and some statistical applications are also used to process the data. The analysis and the result further can be used for preparing regional plans.**

Keywords: **Demography, Deccan Plateau, Geospatial Technology, Census and Cultural.**

1. Introduction

Alexander J. W. and Gibson L. J define "A region, in reality, is rarely are a homogenous area separated from a different region by a boundary line, rather a homogeneous area surrounded by a transition zone in which characteristics of one core area blend with those of the next. This is a very important principle of geography". A Region is the basic concept of the Geographer's because many geographic elements are arranged in certain definite and constant relations. Regions have no individual entity or status being essentially a continuum.

Regional Disparities: Regional Disparities in other terms called the Regional Imbalances. Maintain the balance between the Regions is always important because balances lead to the overall growth towards the development of the region. The government always plays a major role in removing disparities among the regions. Regional disparity means unbalanced spatial structures in some region or different regions ". Regional

disparities are manifested in different conditions of life as well as in unequal economic and development potential. The contrast between city and rural areas can be also understood as a form of spatial disparity. Some of the important indicators used to understand the regional disparities are PCI, GDP, GNP, Degree of urbanization, Employment, HDI and Standards of Living, all these indicators directly and indirectly involve the demographical components.

Location: Karnataka is bordered by the Arabian sea to the west, Goa and Maharashtra in North East and North direction, In East side boundary shared with Telangana state and Andhra Pradesh state, Tamil Nadu state to the Southeast, and Kerala state to the Southwest. The exact location of South Karnataka is 11035' North and 15001' North latitudes and 7405' East and 78035' East longitudes. The North and South extent of the state is about 380 km, and East and West extent of the state is about 400 km. The total geographical area of the study area is 93146 sq. km. and nearly 48 percent of the total state geographical area.
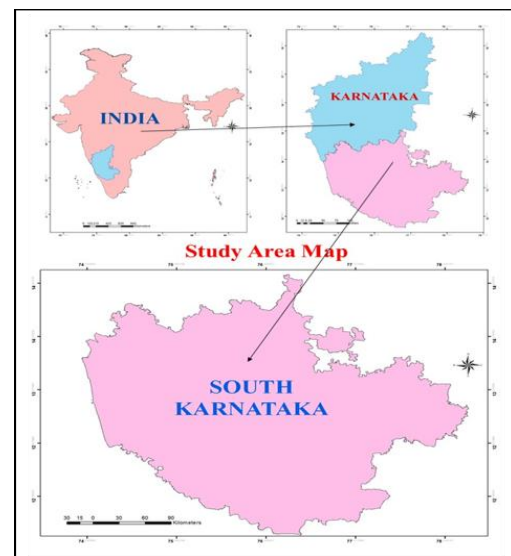

Fig. 1. Map: Study Area Map - South Karnataka

*Corresponding author: abhishek.can@gmail.com

South Karnataka consists of two administrative revenue zones, including 17 Districts, 107 Taluks and 735 Hoblis. Bengaluru Urban district is the smallest district among the other districts and Tumkuru is the largest district in the study area.

Karnataka is a vast state in terms of geographical area,

Table 1
Taluk wise Population Distribution in South Karnataka

District	Taluk	2001	2011	2021
Bengaluru Rural	Nelamangala	174880	212389	236954
	Doddaballapura	268332	291494	337387
	Devanahalli	185326	209552	239764
	Hoskote	222430	273822	314754
Bengaluru Urban	Bangalore (North)	830061	352420	375481
	Bangalore-South	1009924	205233	246516
	Anekal	299428	513975	592547
	Bangalore East	NA	102607	111140
	BMP & BBMP	4397711	8414675	9635187
Chamarajanagar	Gundlupet	213082	223170	246251
	Chamarajanaraga	337571	357798	398854
	Yalandur	77971	82141	102545
	Kollegala	336838	357853	415235
Chikkaballapur	Gauribidanur	271119	290992	316547
	Chikkaballapur	191122	212516	248279
	Gudibande	51828	55832	85966
	Bagepalli	169689	183498	216584
	Shidlagatta	193965	214169	236547
	Chinthamani	271284	297370	325891
Chikmagalur	Sringeri	36930	36539	45981
	Koppa	87780	84882	96743
	Narasimharajapura	65639	66090	78357
	Tarikere	224170	225172	259314
	Kadur	289406	291568	326148
	Chikmagalur	295565	305368	335696
	Mudigere	141415	128134	154126
Chitradurga	Molakalmuru	126742	141284	162547
	Challakere	332718	366784	396143
	Chitradurga	376506	423879	541539
	Holalkere	197766	207176	237262
	Hosadurga	219445	235116	251364
	Hiriyur	264719	286139	301597
Dakshina Kannada	Mangalore	882856	994602	1210551
	Bantwal	361554	395380	426514
	Belthangady	246494	266589	281437
	Puttur	266072	287851	309346
	Sulya	140754	145227	152680
Davanagere	Harihar	245654	254170	289841
	Jagaluru	158883	171822	183304
	Davanagere	602523	681979	778430
	Honnali	222592	233206	270921
	Channagiri	292507	302317	366907
	Nyamati	268793	302003	326907
Hassan	Sakleshpura	134345	128633	145904
	Belur	183755	184458	187004
	Arsikere	303044	315339	334796
	Hassan	361147	396166	481285
	Alur	86071	85255	98508
	Arkalgud	199958	204585	239418
	Holenarasipura	175244	182187	219874
	Channarayapatna	278105	279798	316910
Kodagu	Madikeri	142012	146583	188965
	Somawarpet	205921	206505	221750
	Virajpet	200628	201431	220993
Kolar	Srinivaspura	184721	202304	229047
	Kolar	342593	385410	456424
	Malur	207009	236920	269010
	Bangarpet	421437	452832	498726
	Mulabagilu	231302	258935	297061

Mandya	Krishnarajpet	248245	260479	296145
	Nagamangala	190770	187897	199546
	Pandavpura	175009	183352	198571
	Srirangapatanam	162984	180191	193049
	Mandya	414105	415153	476291
	Maddur	290783	295432	359543
	Malavalli	281809	283265	333987
Mysuru	Piriyapatna	224254	243076	270491
	Hunsur	253926	282963	319684
	K R Nagar	239199	252657	280651
	Mysuru	1038490	1281768	1450658
	H D Kotte	245930	263706	291464
	Nanjangud	360223	384922	436519
	T Narasipura	279005	292035	369417
Ramanagara	Magadi	202417	203841	266514
	Ramanagara	238347	266614	295924
	Channapatna	252574	261304	281430
	Kanakapura	337208	350877	389471
Shimoga	Sagara	200995	206319	241859
	Soraba	185572	200809	281964
	Shikaripura	213590	238229	289681
	Hosanagar	115000	118220	136984
	Thirthahalli	143207	142006	169874
	Shimoga	445192	507324	529533
	Bhadravathi	338989	339846	346841
Tumkuru	Chiknayakanahalli	209622	212130	265148
	Sira	301473	313758	359716
	Pavagada	246255	245194	273510
	Madhugiri	265884	267866	283654
	Koratagere	160952	167591	174362
	Tumkuru	516661	592397	688479
	Gubbi	256413	262518	276581
	Tiptur	217124	222749	235054
	Turuvekere	174297	168994	198306
	Kunigal	236030	225783	297084
Udupi	Kundapur	377420	398471	421869
	Udupi	529225	562799	636315
	Karkala	205598	216091	283066
Total		30282113	35052413	39970994

Source: Census of India, Government of India.

different kinds of landforms have been identified in the study area. Maintaining uninformative in the physiography of the geographical area is not possible, because all physiographic aspects depend upon the natural conditions of the study area. Karnataka experienced Mountains, Hills, Plains, Maidana, Coastal regions and Malanda regions. South Karnataka is having 93146 sq. km. of geographical area, this is shared by the Cauvery Drainage, West-flowing river basin, South Pennar, North Pennar and Palar Drainage. The rivers and river systems conform to the physiographic divisions, the principal water-divide being the Western Ghats stretching north-south, giving rise to west-flowing and east-flowing river systems. Nandidurga in the east is another source in which three river systems have their origin.

Objective: The objective of the research paper is to understand the Demographical Regional disparities using population as one of the important criteria.

Data Sources: Spatial and Non-spatial data set have been used to write this research paper. Spatial data includes, vector layers of study area and relevant vector layers. Government's records and other department published data sources have been used as the secondary and Non-spatial data. Basic statistical operation have been used and GIS software used to prepare maps.

2. Result and Discussion

The population distribution of the region is always a great resource of the region. South Karnataka is having good human resources while compare to North Karnataka. The total population of South Karnataka is about 35052413 persons per km2 as per in 2011 census. It was 30282113 persons per km2 in the 2001 census. The estimated population will be 39970994 persons per km2 on the 2021 census. Nearly 58% of the total Karnataka population is concentrated in South Karnataka.

The distribution of population is uneven, there is a huge gap between some taluks, because of the resources available in that regions, and even infrastructure is also an important element in the distribution of the population. Population distribution shows us how the population is spread across the region with favorable characteristics. Some taluks are large in the geographical area but have less population, whereas some districts are small in geographical area but have a huge population. Bengaluru district and its Taluks are the best examples for less geographical area and huge populations. The taluks in Tumkuru, Shimoga and Chikkamagaluru is an example of a

large geographical area but less population. The population of the taluks can be studied using the male and female population distribution and urban and rural population distribution. Sringeri taluk is having only 36000 population in

populated taluk in the district, Gudibande is the lowest populous taluk in the district. There are three taluks (Sringeri, Koppa and Narasimharajapura) in Chikkamagaluru which has less than one lakh population. Chikkamagaluru taluk is having

Table 2
Top 10 less populated taluks in South Karnataka

District	Taluk	2001	2011	2021
Chikmagalur	Sringeri	36930	36539	45981
Chikmagalur	Narasimharajapura	65639	66090	78357
Chikkaballapur	Gudibande	51828	55832	85966
Chikmagalur	Koppa	87780	84882	96743
Hassan	Alur	86071	85255	98508
Chamarajanagar	Yalandur	77971	82141	102545
Bengaluru Urban	Bangalore East	NA	102607	111140
Shimoga	Hosanagar	115000	118220	136984
Hassan	Sakleshpura	134345	128633	145904
Dakshina Kannada	Sulya	140754	145227	152680

Source: Compiled by Research scholar

Table 3
Top 10 high populated taluks in South Karnataka

District	Taluk	2001	2011	2021
Bengaluru Urban	BMP & BBMP	4397711	8414675	9635187
Mysuru	Mysuru	1038490	1281768	1450658
Dakshina Kannada	Mangalore	882856	994602	1210551
Davanagere	Davanagere	602523	681979	778430
Tumkuru	Tumkuru	516661	592397	688479
Udupi	Udupi	529225	562799	636315
Bengaluru Urban	Anekal	299428	513975	592547
Chitradurga	Chitradurga	376506	423879	541539
Shimoga	Shimoga	445192	507324	529533
Kolar	Bangarpet	421437	452832	498726

Chikkamagaluru, there are many reasons that can be identified to justify why population distribution is very less in particular taluks. After having good resources some taluks have very less population, just because of lack of infrastructure. To reduce the regional disparities government has to take some measures and develop the backward taluks and regions. That increases the levels of imbalances between the taluks, districts and areas.

Bengaluru rural district was divided into Ramanagara and Bengaluru rural district in the 2007 financial year. So in the population and geographical area is shown in 2001 was changed in 2011. It consists of four taluks, Doddaballapura having the highest population and the lowest population is recorded in Nelamangala taluk. Male and female population distribution is 54-46 ratio in Bengaluru rural district. There is a lesser female population in Bengaluru Urban district because of migration, and other socio-economic conditions. Out of 2196 km2 area, BBMP region is covered 741km2, which has nearly 1 crore population as predicted in 2021. The lowest population in the district is in Bengaluru east taluk. In 2017 Bengaluru North taluk split into Yellahanka taluk, but maximum pressure of the district in BBMP region.

Chamarajanagar is one of the backward districts of South Karnataka, it has 4 taluks Yalandur is the lowest populous taluk in the district. Kollegala taluk is having the highest population in the district. Chamarajanagar is having a good male and female population composition. The Chikkaballapur district was divided from Kolar district in 2007, it has 6 taluks it is near to Bengaluru urban district so it is influenced by the Metropolitan environment. Chinthamani is the highest

the highest population in the district, followed by Kadur and Tarikere. Slow population growth can be seen in the Chikkamagaluru district, every decade it is increasing only little population that can be seen in Table number 18. Chitradurga taluk is having the highest population, Molakalmuru taluk is having the lowest population in the district. Chitradurga is known for its hill ranges and mines. Dakshina Kannada is one of the important coastal districts in South Karnataka, it has 5 taluks. Mangalore is having a 10 lakhs population in 2011, and the projected population for 2021 is about 12 lakhs population. Sulya taluk is having the lowest population in the district. Mangalore is one of the posh city in Karnataka having all the facilities in it. All type of transportation is available in Mangalore city and taluk. It is well connected to the international routes.

Davanagere is also known as Bennenagari, is also called Manchester of Karnataka. It is having good educational institutions and agro-processing industries. Jagaluru taluk is having the lowest population, and the highest population is recorded in Davanagere taluk of Davanagere district. Since the last decade, the population of the district is increased gradually. The male and female population composition is also good and satisfactory in the Davanagere district. Hassan district population has been increased nearly 3 lakhs in last 10 years. The lowest population is recorded in Alur taluk, followed by Sakleshpura and the highest population is recorded in Hassan taluk followed by Arsikere and Channarayapatna taluks. The district is having 8 taluks, in Karnataka, it is one of the fastest growing districts. Kodagu is the lowest populated district in

Karnataka, it has nearly 5.5 lakh population. Madikeri taluk is the district having the lowest population and Somawarpet taluk is having the highest population in the district. People in this district are well educated, this is one of the advanced districts of South Karnataka, and it is also having good tourism industries. Kolar is earlier known for its gold reserves, but now it has nothing to dig in it. Bangarpet and KGF taluk is recorded the highest population and Srinivaspura is having the lowest population in the Kolar district. The male and female population in the Kolar district is almost equally distributed. Kolar is having dry crop agricultural land, and depends on irrigation facilities. After separated from the Chikkaballapur, Kolar is struggling in development.
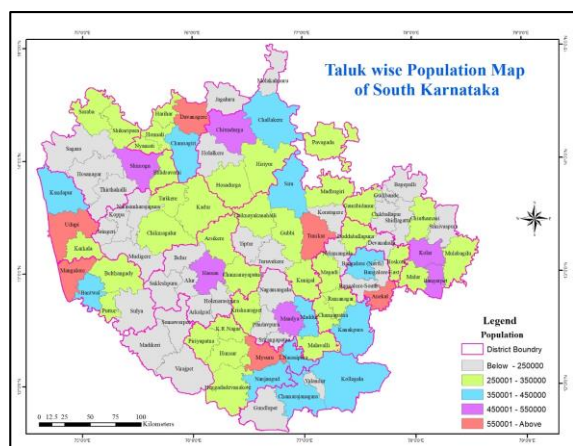

Fig. 2. Map: Population distribution map of South Karnataka.

Sugar town Mandya district population is rapidly increasing since the last decade, Mandya taluk is having the highest population and the lowest population is in Pandavpura taluk. It is also known as Sugar town, the famous KRS dam also in Mandya district. Mysore town is the second populous city in South Karnataka, it is in the Mysore district. It has 7 taluks, Piriyapatna is the lowest populous taluk in the district. Mysore is also known as the cultural capital of Karnataka. Ramanagara district is divided from Bengaluru rural district in 2007, it has 4 taluks. Ramanagara, Channapatna, Magadi and Kanakapura are the major towns in the districts. This district is famous for its silk and its products. Magadi taluk is having less population and Kanakapura is having the highest population in the district. Shimoga is known for its beautiful nature, waterfalls and agricultural lands. Hosanagar, Thirthahalli taluks have been registered the lowest population in the district. The highest population is in District head quarter Shimoga. This district has a more female population the male population. Tumkuru district is having 10 taluks, the highest population is found in Tumkuru taluk and the lowest population is found in Koratagere taluk followed by Turuvekere taluk. Finally, the Udupi district is having 7 taluks as per the 2011 census, but 4 taluks have been created in the district in 2017-18. The Karkala taluks are having a low population and Udupi taluk and district headquarter having highest population in the district.

3. Conclusion

The population is dynamic in character, every minute it will change it distribution. It is difficult to have such measures to control the distribution of the population over the region. At the same time, equal distribution of population is not possible, because population distribution depends on the natural resources, socio-economic conditions, activities of the human being, impact of science and technology, migration and many more. Government can create the infrastructure to attract the people to move from one place to another place. The government encourages the investors to invest in the less developed area, and make those areas economically important regions. All populous areas are city or district headquarter, the reason behind this is major places have all the connectivity and facilities. Bengaluru urban district has an almost 1 crore population that means nearly 29% of the South Karnataka population is located in 2200 km2 area. In recent days Mysuru and Mangalore attracting more and more population the reason for that government policy and other favorable factors available in those regions. Planning commission trying its level best to balance the regions in all respects.

References

[1] Anees Siraj S., Glimpses of Karnataka, Karnataka Gazetteer Department, Bengaluru (2014).
[2] Bettegowda S. Y., Chief Editor, A Hand Book of Karnataka, Karnataka Gazetteer Department, Government of Karnataka, Bengaluru (2017).
[3] District Census Handbook, Census of India 2001 and 2011, Directorate of Census Operations, Karnataka.
[4] Friedman and William Alonso, Regional Development and Planning: A Reader, Cambridge, Mass: The MIT Press, (1964).
[5] Misra R. P, Regional Planning – Concepts, Techniques, Policies and Case Studies, Concept, New Delhi (2002).