

## A Geographical Study Of Demographical Characteristics In Kolhapur District Of Maharashtra

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### Abstract:

*The present research paper is based on secondary data from census of India 2001 and 2011, which intends to analyze the demographic characteristics of Kolhapur district located in the south-west part of Maharashtra. It is observed that growth rate is 9.96 % during 2001-2011. The population has increased during 2001-2011. The density of population is 454 persons per sq. km in 2001 and 504 persons per sq. km in 2011. It is found that the average sex ratio in the study area is 949 in 2001 which has increased to 957 in 2011. It is also observed that literacy rate in study area is 76.93 % in 2001 which is increased to 82.90 % in 2011. The male literacy is higher than female literacy in study area. The male literacy is 91.33 % and female literacy is 74.18 % and disparity was 0.154 in 2011. There are wide disparities between male and female literacy. The study demographic characteristics are useful for planning purposes.*

### Key words:

*Population Growth, Density of population, Sex Ratio, Literacy Rate, Disparity of Literacy.*

### Introduction:

India is second largest populace and developing country in the world after China. About 80 percent world's population living in the developing countries. The rapidly increase of population growth in the developing countries almost all developing countries of the world are always facing same kind of population problem. The developing nation like India are characterized by highest growth rate, unemployment, low per capita incomes and dependence of a major part of workforce on primary activities, by this country in relation to population are discussed following socio-demographic variables of population.

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|-------------------------------|--------------------------|
| 1. Distribution of Population | 2. Growth of population  |
| 3. Density of population      | 4. Sex Ratio             |
| 5. Literacy Rate              | 5. Disparity of literacy |

### Objectives:

For the present study following objectives are taken into consideration.

1. To study the distribution and growth of population in Kolhapur district during 2001 to 2011
2. To study the density of population and sex composition among the male and females.
3. To analyze the spatial pattern of literacy and disparity of literacy at tahsil level in Kolhapur district.

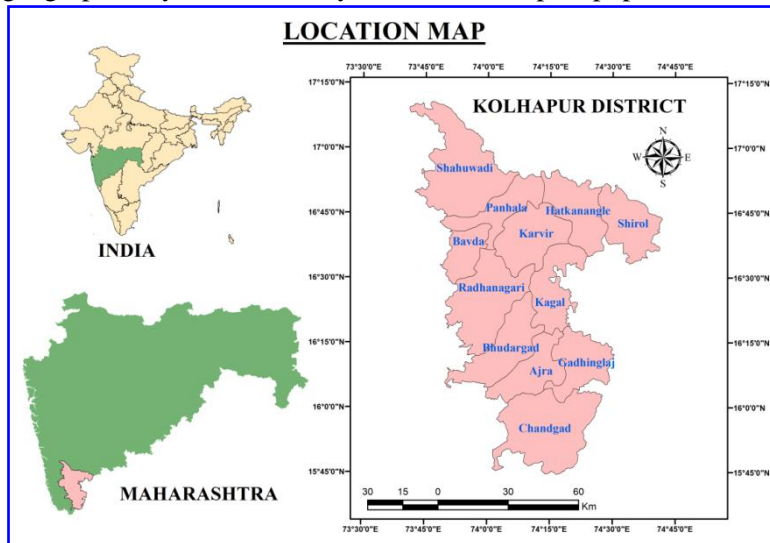
### Study area:

The study area of this paper is a small representative part of Maharashtra. The region under study extends between 15<sup>o</sup> 17' north and 17<sup>o</sup> 17' north latitudes and 73<sup>o</sup> 40' east and 74<sup>o</sup> 42' east longitudes and comprising 12 tahsils. Kolhapur district is enclosed by Sangli district in the north, in the south of Karnataka state in Belgaum district and in the west it is bounded by Ratnagiri and Sindhudurg districts. The district sharing 2.62 % area of the Maharashtra state.

According to 2011 census the total population of the district is 3876001. Kolhapur is the 'Historical and Religious City' is currently emerging as the largest educational center of certain cool stations, goods and services. Kolhapur district having 18 towns and 1196 villages. The highest population in Kolhapur district is Karveer, Hatkangale and Shirol tahsils. The secondary data have been collected and computed by recent research techniques and the results have been brought through tables and maps. The distribution of the total population in the urban and rural areas is 1229896 and 1050353 respectively. It will try to growth of population in Kolhapur district.

Physical factors affects on population distribution are relief, climate, soil, vegetation, water and location or mineral and energy resources. In the study area most of the concentration of population is in eastern plain area where fertile soil, good irrigation facility, infrastructure etc. are

rapidly available. In the hilly undulating terrain of western part of the district bearing low portion of arable land, geographically inaccessibility which caused spars population.



**Data sources:**

The present research work is based on the secondary data obtained from District census handbook of Kolhapur district, statistical abstracts of Kolhapur and Maharashtra state and Census of India 2001 and 2011. Other various sources of secondary data have been utilized such as Internet and books etc.

**Methodology:**

The research paper intends to assess the demographic characteristics at the tahsil levels in Kolhapur district 2001 to 2011 with indicators of distribution of population, growth of population, density of population, sex composition, literate population and disparity of literacy. Mainly following techniques have been used in present research paper.

**1. Growth Rate of Population:**

By using following formula population growth rate from one decade to another decade have been calculated at tahsil level.

$$r = \frac{P_2 - P_1}{P_1} \times 100$$

Where, r = Growth rate of population

P<sub>2</sub> = Population of the tahsil in Current year (Decade)

P<sub>1</sub> = Population of the tahsil in Previous year (Decade)

**2. Density of Population:**

Density of population has been calculated to analyze man-land ratio by using following formula.

$$\text{Density of Population} = \frac{\text{Total Population}}{\text{Total Area in sq. km}}$$

**3. Sex Ratio:**

Sex ratio is measured in terms of number of females per thousand males.

$$\text{Sex Ratio} = \frac{\text{Total female population}}{\text{Total male population}} \times 1000$$

**4. Literacy Rate:**

Literacy rate is computed for the population above six.

$$\text{Literacy Rate} = \frac{\text{Literate Population}}{\text{Total Population}} \times 100$$

$$\text{Literacy Rate} = \frac{\text{Total Population above 6 age}}{\text{Total Population above 6 age}} \times 100$$

### 5. David Sopher's Disparity Index of Literacy:

In this study to measure the male-female disparity in literacy, David Sopher's Disparity Index modified by Kundu and Rao (1983) has been employed.

$$D_s = \log \left( \frac{X_2}{X_1} \right) + \log \left( \frac{200 - X_1}{200 - X_2} \right)$$

Here, X<sub>2</sub> is considered for Male literacy rate

X<sub>1</sub> is considered for Female literacy rate

#### Kolhapur District: Distribution of Population:

Kolhapur district is highly populous district in Maharashtra. The total population of the district is 35,23,162 in 2001 and 38,76,001 in 2011 respectively i.e. 352839 population is increased in the study region as per the census. Karveer tahsil is most populous 1037713 followed by Hatkanangle tahsil 807751, Shirol tahsil 391015, Kagal tahsil 275372 and Panhala 259417 respectively.

An examination of rural urban distribution of population reveals that 2,645,992 persons constituting 68.27 per cent of the total population are concentrated in rural areas, while remaining 1,230,009 persons forming 31.73 per cent are living in urban areas of the district. In the district there are eight tahsils viz Karveer 53.31%, Hatkanangle 32.56%, Shirol 5.76 %, Kagal 3.68, Gadhinglaj 2.21 %, Ajara 1.40, Panhala 0.64 % and Shahuwadi tahsil 0.43 % having urban population and remaining four tahsils viz Gaganbavda, Radhanagari, Bhudargad and Chandgad have nil urban population.

**Table No. 1**  
**Demographic Structure of Population in Kolhapur District-2001**

Name of Tahsil	Area per Sq. Km.	Total Population	Density	Sex Ratio	Literacy
Shahuwadi	1038	176859	170	1049	66.93
Panhala	564	238383	420	921	74.16
Hatkanangle	604	709628	1167	911	80.25
Shirol	503	359179	707	941	80.15
Karveer	666	906866	1339	917	83.16
Gaganbavda	271	32525	115	969	60.74
Radhanagari	887	188107	210	946	71.33
Kagal	543	248237	453	949	73.58
Bhudargad	639	144910	223	995	72.92
Ajara	544	121430	220	1082	69.37
Gadhinglaj	476	216257	449	1016	71.81
Chandgad	947	180781	190	1033	66.67
<b>Total District</b>	<b>7682</b>	<b>3523162</b>	<b>454</b>	<b>949</b>	<b>76.93</b>

Source- Based on District Census Handbook, 2001.

### Growth of Population:

Population growth rate is the average change in population as a result of the surplus of birth over the death in addition to the net migration in the country in a specified period of time. (Thorat S.D.2012). The total growth rate of Maharashtra is 16.02 percent while the rural growth rate is 10.3 percent and the urban growth rate is 23.7 percent. A higher urban growth swing in migration.

According to census 2011, the growth rate of Kolhapur district is also declined as compared to 2001. It is found that the growth rate of Kolhapur was 17.85 during 1991-2001 and it is further declined in 2001-2011 is 9.96 percent respectively. Table 2 reveals that the maximum growth rate was 14.38 % in Karveer tahsil followed by 13.79 % in Hatkanangle tahsil, 10.73 % in Kagal and 10.00 % in Gaganbavda tahsil. In the remaining eight tahsils the growth rate was below to the district average. The growth rate was lowest in the tahsil of western part of the district viz. Chandgad 3.59 % due to agriculturally backward. In the district only Ajara tahsil was negative (-1.08 %) growth rate, because out migration for employment opportunities in Belgaum, Kolhapur and Mumbai city also.

**Table No.2**  
**Demographic Structure of Population in Kolhapur District-2011**

Name of Tahsil	Area per Sq. Km.	Total Population	Growth Rate	Density	Sex Ratio	Literacy Rate			Disparity of Literacy
						Total	Male	Female	
Shahuwadi	1038	185661	4.77	178	1021	74.09	86.45	62.19	0.227
Panhala	564	259417	8.73	456	915	80.94	90.54	70.54	0.181
Hatkanangle	604	807751	13.79	1315	932	85.99	92.63	78.88	0.122
Shirol	503	391015	8.89	777	957	84.85	92.34	77.07	0.136
Karveer	666	1037713	14.38	1549	937	88.2	94.25	81.83	0.110
Gaganbavda	271	35772	10.00	127	937	70.78	82.85	58.06	0.238
Radhanagari	887	199713	6.09	224	935	78.06	89.57	65.91	0.218
Kagal	543	275372	10.73	503	948	79.98	89.95	69.64	0.185
Bhudargad	639	150368	3.78	234	983	78.65	90.05	68.28	0.199
Ajara	544	120265	-1.08	219	1095	75.07	86.86	64.47	0.208
Gadhinglaj	476	225734	4.34	469	1039	77.59	87.72	67.97	0.181
Chandgad	947	187220	3.59	197	1019	74.22	86.21	62.5	0.222
<b>District</b>	<b>7682</b>	<b>3876001</b>	<b>9.96</b>	<b>504</b>	<b>957</b>	<b>82.90</b>	<b>91.33</b>	<b>74.18</b>	<b>0.154</b>

*Source- Based on District Census Handbook, 2001.*

**Density of Population:**

Density of population is a simple concept of relating population size to the land area with a view to assessing crudely the pressure of population upon the resources of area. The population densities for the tahsils of Kolhapur district more or less are evenly distributed. The topography of the district has significant effect on the population density distribution. In 2001 census, the population density for the district varies from 1339 persons per sq.km in Karveer tahsil to 127 persons per Sq. km. in Gaganbavda tahsil. The population density of the district is 454 persons per sq. km.

Table 2 reveals that the population of the Kolhapur district is 3876001 which spread over the 7682.00 sq. km. area. The density of population is 504 persons per sq. km in 2011 and the tahsil level density of population is uneven. The analysis of population density shows the great contrast in the western, central and eastern part of the study area. The tahsils of Shahuwadi, Gaganbavda, Radhanagari, Bhudargad, Ajara and Chandgad have low population density in comparison to other tahsils because these tahsils located in western hilly and geographically inaccessible. Medium density is observed in the tahsils of Panhala, Kagal and Gadhinglaj, which is medium development of transport network.

Karveer, Hatkanangle and Shirol tahsils having high density is comparison to other tahsils (Table 2) it is due to well fertile soil, good irrigation facilities and urbanization and industrial development. This high density is mainly due to high agricultural base characteristics by high production efficiency agro-industry development.

**Sex Ratio:**

Sex ratio is a significant demographic and cultural index and can be of value to the population geographers in a discussion of regional characteristics. According to 2011 census, Kolhapur District, like other district of Maharashtra, except Raigad, Ratnagiri and Satara showed an overall deficiency in females. The Sex ratio in the district was 957 as against 949 in Maharashtra. This disparity between males and females is more striking in urban area than in rural areas. (Sex ratio is 961 for rural areas and 946 for urban areas).

During 2001 and 2011, 4 tahsils have high sex ratio i.e. above 1000 female per 1000 male in Shahuwadi, Ajara, Gadhinglaj and Chandgad. The sex ratio in these tahsils is high because these tahsils located in hilly area where economic development is very low, lack of transportation and communication facilities, and lack of resources in these tahsils. In 2001, Gaganbavda and Bhudargad tahsil have moderate sex ratio. According to 2011 census, 2 tahsils represent moderate sex ratio. These tahsils are Shirol and Bhudargad. The sex ratio in these tahsils is moderate because of satisfactorily development in socio-economical condition in these tahsils. According to 2011 census, 6 tahsil shows low sex ratio. These tahsils are Panhala, Hatkanangle, Karveer, Gaganbavda, Radhanagari and Kagal.

**Literacy Rate:**

Literacy is essential for eradicating poverty and mental isolation, cultivating peaceful and friendly international relation and permitting the free play of demographic processes. Thus, literacy is essential for economic development, social advancement and democratic growth of a country.

According to the 2001 census the average literacy in Kolhapur district is 76.93 %, the level of literacy vary from tahsil to tahsil. The Karveer tahsil has the highest literacy rate (83.16 per cent) while Gaganbavda tahsil has the lowest literacy rate (60.74 per cent) as compared to the district average (76.93 per cent). Total literacy of Kolhapur district during 2011 varies from a minimum of 70.78 per cent in Gaganbavda tahsil to a maximum of 88.2 per cent in Karveer tahsil.

There is broad gap in male-female literacy during 2011. In the district, female literacy (74.18 per cent) was much less than the male literacy (91.33 per cent). The difference between them was 17.15 per cent in the district. Male literacy ranges from a minimum of 82.85 per cent in Gaganbavda tahsil to a maximum of 94.25 per cent in Karveer tahsil in the study area. In case of female, the literacy rate was very low; it varies from a 58.06 per cent in Gaganbavda tahsil to a maximum of 81.83 per cent in Karveer tahsil of the study area. Out of the 12 tahsils only 3 tahsils i.e. Karveer, Hatkanangle and Shirol, the female literacy was above district average. Remaining 9 tahsils are below the district average in study area.

**Disparity of Literacy:**

It is found that the literacy rate in study area is 82.90 % in 2011. The male literacy in study areas is 91.33 % but it is very surprise to note that the female literacy is 74.18 %. The male-female disparity is 0.154 in 2011. Table 2 reveals that the literacy rate in study area varied from a minimum of 70.78 percent in Gaganbavda tahsil to a maximum of 88.20 percent in Karveer tahsil.

In the study area the female literacy rate is 74.18 percent and for male is 91.33 percent in 2011. It shows a wide gap of 17.15 percent literacy between male-female. It is observed that minimum male literacy in Gaganbavda tahsil 82.95 % and maximum in Karveer tahsil 94.25 %. On the other hand, the minimum and maximum female literacy is recorded in Gaganbavda (58.06 %) and Karveer (81.83%) tahsil respectively. It means that females are much left behind in comparison to male literate population.

### Conclusion:

Kolhapur district is the agriculturally well developed district in south Maharashtra. Population of Kolhapur district is increased in 2001-2011. The growth rate of Kolhapur district is found that 17.85 during 1991-2001, but it has further declined in 2001-2011 i.e. 9.96 percent respectively. In Kolhapur district high growth rate is also observed in Karveer tahsil (14.38%) followed by Hatkanangle tahsil (13.79%). It is observed that in the study area average density of population in 2001 is 454 persons per sq. km while in 2011 is 504 persons per sq. km. It is further found that the average sex ratio in the study area is 949 in 2001, which has increased to 957 in 2011. It is observed that literacy rate in study area is 76.93 percent in 2001 which increased to 82.93 percent in 2011. The male literacy is higher than female literacy in study area. The male-female disparity was 0.154 in 2011. There are wide gap disparities between male and female literacy.

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