
SPATIAL PATTERN OF GROWTH RATE OF MALE POPULATION IN KOLHAPUR DISTRICT

Dr. Navnath K. Bansode

Assistant professor in Geography, Bhogawati Mahavidyalaya, Kurukuli, Dist. Kolhapur.

Abstract:

Growth of population means any change in population in number, further it refers to the growth of the human population in a particular area during a specific period of time. The net change in population between two points in time is expressed in percentage and is described as the growth rate of population. Population growth is also measured in terms of absolute increase. The study of population growth, particularly in a developing region, unfolds various facts of man environment relationship and the quality of human life. The study of growth rate is important from the view point of future planning. Analysis of gender wise growth rate is essential because it effects on demography of the region as well as its future trend is also controlled by the gender wise growth rate. Therefore attempt is made here to analyze spatial pattern of growth rate of male population in Kolhapur district. The paper is based on secondary data source. To analyze of decadal variation in the growth rate of male population within the study area, the tahsils of Kolhapur district are divided into high, medium, low with the help of Mean and Standard deviation.

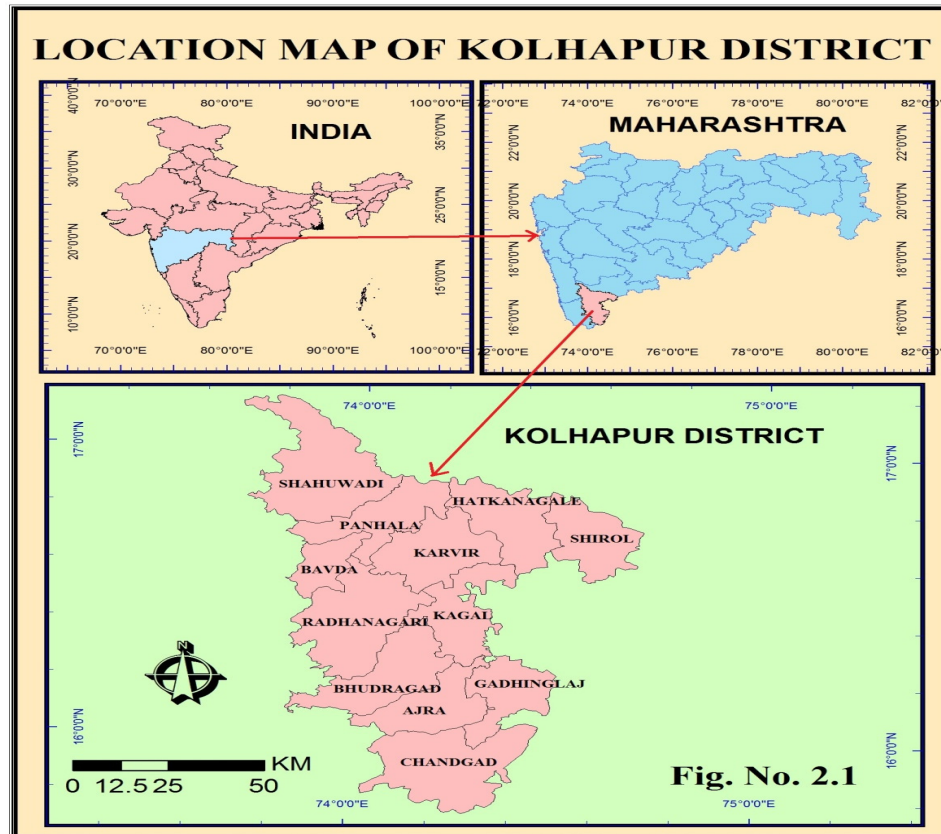
Key words: *Growth Rate, Mean, Standard Deviation, Decadal Variation.*

Introduction:

Growth of population reflects the history of man's response to the environmental possibilities present in the region. Growth of population in any area is an index of its economic development, social awakening and many other characters (Chandana and Sidhu, 1980). The population growth is the most fundamental demographic process with which all other demographic attributes are directly or indirectly associated. Therefore, geographical study of population growth of a region has vital importance for understanding its dynamics as well as planning at the local and regional levels (Gharge, 2007). Growth rate of population is controlled by the birth rate, death rate and migration of the population. These factors are controlled by the various physical, social, cultural and economic components, which are varies from region to region (Ranade, 1990). Growth of population may be approached just by taking into consideration the next growth of population over the basic year. Growth rate of population is expressed as percentage increase or decrease in population over previous census and hence this is generally called as decadal growth rate of population (Ramotra, 2008). The study of growth rate is important from the view point of future planning. Analysis of gender wise growth rate is essential because it effects on demography of the region as well as its future trend is also controlled by the gender wise growth rate. The future trend of crimes related to women employment avenues to be created, future trend of population growth and integrated plan to be chalked for the sustainable development of the region depends on the gap between the growth rate of male and female population and its distributional pattern (Chandna,2009). Hence, here an attempt is made to analyze growth rate of male population.

Study Region:

Kolhapur district is the most developed district of Southern-western part of Maharashtra. The absolute location of district is 15° 43' to 17° 17' North Latitude and 73° 40' and 74° 42' East Longitude.



It is surrounded by Sangli district to its North and East, Belgaum district of Karnataka to its South and Sindhudurg district to the West. The Sahyadri ranges to the west and Warana River to the North forms the natural boundaries. The geographical area of districts 7685 square kilometres, for the administrative purpose the district is divided into 12 Tehsils. The population of the study region is 38, 76, 001 persons, according to 2011 census. The maximum and minimum temperature ranges in between 38°C and 14°C with annual average precipitation 115 cm.

Objectives:

The main objectives of this paper are as following.

- 1) To study spatial pattern of Male population in Kolhapur district
- 2) To analyze change in Male population in Kolhapur district during 1961-71 to 2001-11.

Data collection and Methodology:

The present research paper is entirely based on the secondary data. Hence, the related data has been collected from the Kolhapur District Census Handbook, 1961 to 2011. Collected rough data are processed.

To calculate decadal growth of male population following formula is employed

$$r = \frac{P_n - P_0}{P_0} \times 100$$

Where,

r = Growth rate

P_n = is the male Population at the end of the period

P_0 = is the male Population at the beginning of the period

To analyze spatial pattern of male population in Kolhapur district are grouped into five categories on the basis of mean and standard deviation.

Result and Discussion:

Pattern of Growth Rate of Male Population During 1961-1971:-

The table 1 reveals that the district as a whole has 28.80 percent growth rate of male population during 1961-71 that of state is 27.84 percent which indicate that the growth rate of male population of Kolhapur district is higher than the state but spatial distribution varies from tahsil to tahsil. The figure 3.5 A shows that the high growth rate of male population is recorded in Hatkanangale and Karvir tahsils i.e. above 34.36 percent due to the development of agro-based industries such as cotton textile, milk, sugar industry and high growth of industrialization resulted into in-migration of male population. The moderate growth rate of male population is found in Panhala, Shirol and Radhanagari tahsils i.e. 24.78 to 34.36 percent. The low growth rate of male population is registered in Shahuwadi, Bhudargad, Ajra, Gadhinglaj and Chandgad tahsil i.e. 15.20 to 24.78 percent because of adverse geographical conditions, less productive soil, less percentage of arable land and problem of unemployment. The very low growth rate of male population is recorded in Bavda tahsil i.e. 7.64 percent due to the out-migration. The negative change is recorded Kagal tahsil i.e. -13.91 percent because of out- migration.

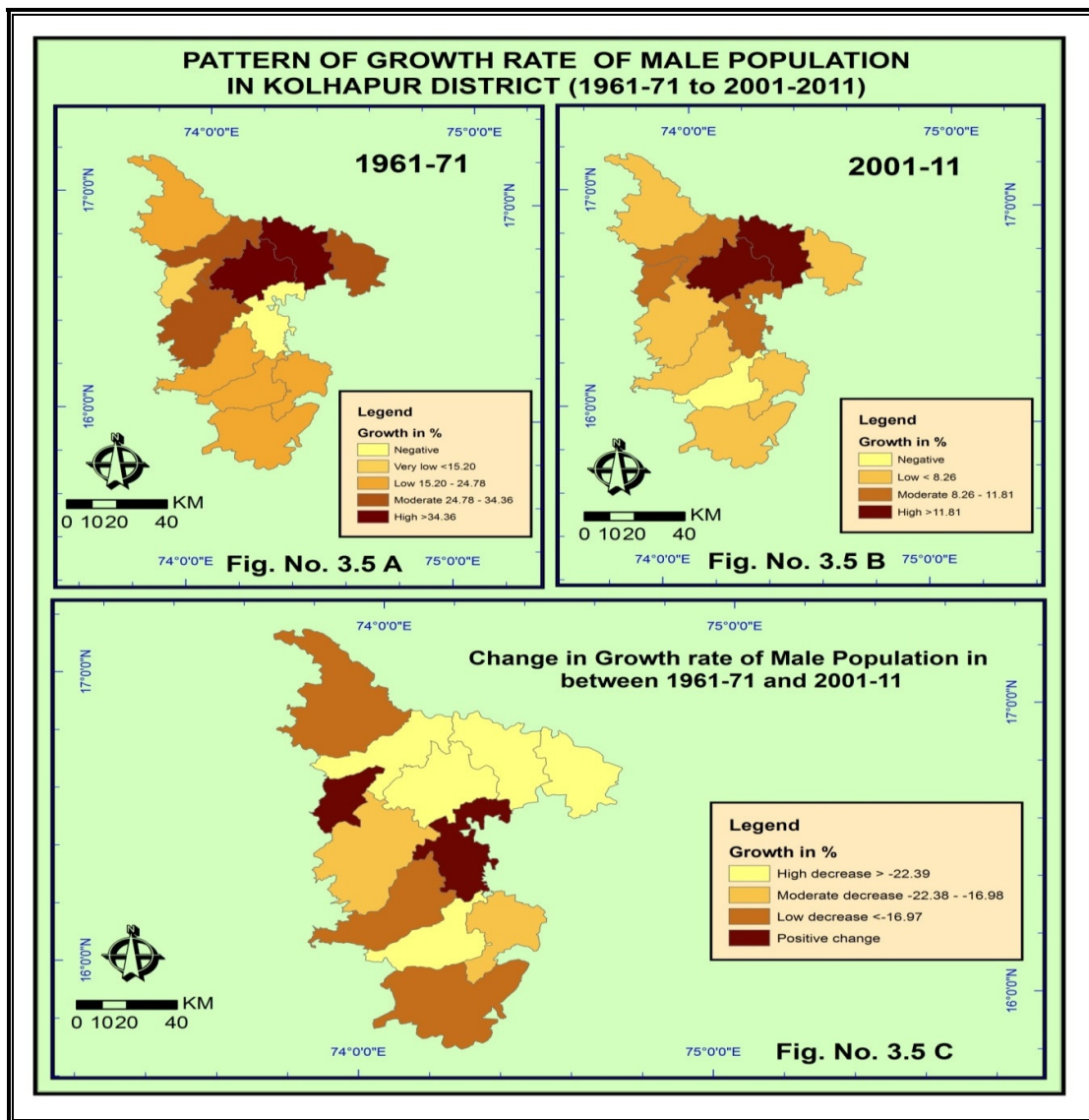
Table 1 Growth Rate of Male Population in the Kolhapur District, 1961-2011(in %)

Sr. No	Name of Tahsils	Decades					Change in Growth rate in between 1961-71 and 2001-2011
		1961-71	1971-81	1981-91	1991-2001	2001-2011	
1	Shahuwadi	18.02	12.72	15.97	13.05	6.45	-11.57
2	Panhala	32.23	14.37	22.15	16.89	9.17	-23.06
3	Hatkanangale	40.39	34.59	33.70	23.15	12.59	-27.80
4	Shirol	32.46	24.20	24.46	16.14	8.00	-24.46
5	Karvir	36.27	28.52	21.14	22.90	13.26	-23.01
6	Bavda	7.64	-59.18	15.55	17.89	11.78	4.14
7	Radhanagari	24.95	20.83	12.50	12.80	6.74	-18.21
8	Kagal	-13.91	64.14	16.86	17.73	10.95	24.86
9	Bhudargad	19.34	13.47	18.84	15.28	4.40	-14.94
10	Ajra	21.52	8.66	14.13	17.42	-1.57	-23.09
11	Gadhinglaj	20.24	11.41	14.07	9.66	3.20	-17.04
12	Chandgad	19.56	19.09	18.14	13.83	4.29	-15.27
	District	28.8	19.77	21.77	18.54	9.58	-19.22
	Maharashtra	27.84	24.12	25.95	23.45	15.79	-12.05

Source: Compiled by Researcher on the basis of District Census Handbook of Kolhapur District, 1961 to 2011.

Pattern of Growth Rate of Male Population during 2001-2011

The table 1 exhibits that the district has a whole has 9.58 percent growth rate of male population during 2001-2011 that of state is 15.79 percent which indicates that the growth rate of male population of Kolhapur district is lower than the state average but spatial distribution varies from tahsil to tahsil. The figure 3.5 B designates that the high growth rate of male population is recorded in Hatkanangale and Karvir tahsils i.e. above 11.81 percent because of in-migration due to the industrialization and urbanization. The moderate growth rate of male population is found in Panhala, Bavda and Kagal tahsils ranging from 8.26 to 11.81 percent. The low growth rate of male population is registered in Shahuwadi, Radhanagari, Bhudargad, Chandgad and Gadhinglaj tahsils i.e. 4.71 to 8.26 percent due to the undulating topography, less industrialization and out migration. The negative growth rate of male population is recorded Ajra tahsil i.e. - 1.57 percent during 2001-2011 because of undulating topography, poor irrigation facility, less economic development resulted into out-migration of male worker.



Change in Growth Rate of Male Population from 1961-71 and 2001-2011

The table 1 designates that the district as a whole has -19.22 percent decrease in growth rate of male population from 1961-71 to 2001-2011 that of state is -12.05 percent, it means that decrease in growth rate of male population of Kolhapur district is higher than the state but spatial distribution varies from tahsil to tahsil (figure 3.5 C). The high decrease in growth rate of male population is found in Karvir, Panhala, Ajra, Shirol and Hatkanangale tahsils i.e. above -22.39 percent due to agricultural development and high literacy. The moderate decrease in growth rate of male population is recorded only in Radhanagari tahsils ranging from -22.39 to -16.98 percent. The low decrease in growth rate of male population i.e. below -16.98 percent is found in Shahuwadi, Bhudargad, Chandgad and Gadhinglaj tahsils due to undulating topography, heavy rainfall, dense forest caused low literacy. The positive growth rate of male population is recorded in Bavda and Kagal tahsils due to traditional society and lack of social awareness.

Conclusions:

The development of irrigation and economic activities have played significant role in changing the pattern of population variation in Kolhapur district. The high growth of male population in Karvir and Hatkanangale tahsil is mainly due to the location of district headquarter in Karvir tahsil and develop agro-based industry such as cotton, milk, sugar industry in both tahsils. The low growth rate of male population in Shahuwadi, Radhanagari, Bhudargad, Chandgad and Gadhinglaj tahsils is mainly due to the rugged topography resulted into lower development irrigation facility and agro- based industries. The growth rate of male population is decreased in all most all the tahsils, except Bavda is the result of socio-economic development of the district, which was initiated before independence by great king Late Shri. Chh. Shahu Maharaj and took sustainable shape after 1990s. Increased literacy, increase in medical facilities, change in attitude of the people, etc. are some of the other reasons responsible for the decrease in the growth rate of male population.

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