Val II, Issue:VIII, Sept 2012

ISSN : 2230-7850

Indian Streams Research Journal

Impact Factor 0.2105

Monthly Multidisciplinary Research Journal

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IMPACT FACTOR : 0.2105

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RNI MAHMUL/2011/38595 **ISSN No.2230-7850**

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Indian Streams Research Journal
Volume 2, Issue. 8, Sept 2012
ISSN:-2230-7850

Available online at www.isrj.net

ORIGINAL ARTICLE

Population Growth In Upper Krishna Basin (maharashtra): A Geographical Perspective

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Abstract:

Geographical study of population growth of a region is of vital importance for understanding its dynamics as well as planning at the local and regional levels.The growth of population in any area is an index of its economic development, social awakening and many other characters Population growth refers to the growth of human population in a particular area during a specific period of time. This changed growth can be measured both in terms of absolute numbers and in terms of percentage.

The present study is directed to examine the spatial patterns of population growth. The entire study is based secondary data.Tehsil is considered as basic unit of investigation. It is found that growth rate differs from tehsil to tehsil and controlled by the fertility, mortality and mobility. It is also observed that agricultural development, agro-based industrialization, irrigation development, Government policies and control of disease and epidemics have determined the population growth in the study region.

INTRODUCTION:

Geographical study of population growth of a region is of vital importance for understanding its dynamics as well as planning at the local and regional levels.

The growth of population in any area is an index of its economic development, social awakening and many other characters (Chandna and Sidhu, 1980).Population growth is the function of three determinants – fertility, mortality and mobility. The difference between human fertility and mortality is called natural increase of the population.

The spatial patterns of population growth in the region are manifestation of the spatial dimension of socio-economic dynamics of its various parts (Chandna, 1986). The growth rate assumes spatial significance when viewed from temporal perspective. Thus, the concept of net change or increase in population is caused by the interaction of four factors such as birth, death, in-migration and out-migration. Death and out-migration decrease the population growth whereas birth and in- migration increase the population growth. So the population growth or its decline is controlled by a relative strength of mortality, fertility and migration.

Please cite this Article as : R.R. Gharge[1] and D. G. Gatade[2] , Population Growth In Upper Krishna Basin (maharashtra): A Geographical Perspective : Indian Streams Research Journal (Sept. ; 2012)

OBJECTIVES:

The major objective of the study is to find out patterns of population growth in upper Krishna basin over a space and time. However specific objective is to examine the spatio-temporal growth of population.

DATA BASE AND METHOOLOGY:

The present study is entirely based on secondary data. Therefore, required data was collected from the Census of India, District Census Handbook of Satara, Sangli and Kolhapur and socio-economic review and statistical abstracts of Satara, Sangli and Kolhapur districts.

In the present study tehsil is considered as a basic unit of investigation. For the study of temporal changes in growth of population 30 years i.e. 1961-2001 is selected. The growth rate of population for each tehsil and for each decade are calculated and then these have been grouped into four regions viz. low, moderate, high and very high. Table is complied by growth percentage. Dividing the difference between the populations of two decades and multiplying it with 100 obtain the actual growth rate of specific decade.

THE STUDY REGION:

Geographically, the study region extends between 15043' and 18003' north latitude and 73033' and 75010' east longitude. It covers an area of 20,301 sq. km which is 6.59 % of the total state and includes 2,812 rural and 41 urban settlements with a total population of 78,52,069 persons according to the Census 2001, which constitutes 8.12 per cent of the state population. The region consists of 28 tehsils namely Wai, Mahabaleshwar, Jaoli, Koregaon, Khatav, Satara, Patan and Karad of Satara district; Khanapur, Shirala, Walwa, Tasgaon, ,Kadegaon , Palus, Kavathe-Mahankal and Miraj of Sangli district and Shahuwadi, Panhala, Hatkanangale, Shirol, Karveer, Gagan Bavada, Radhanagari, Kagal, Bhudargad, Ajara, Gadhinglaj and Chandgad of Kolhapur district. The Upper Krishna Basin is a part of Maharashtra Deccan basaltic plateau with an average height of 600 metres above the Mean Sea Level and comprises the southern part of Maharashtra state covering an area of Kolhapur district in the south, part of Sangli and Satara districts in the north east. It extends between the Sahyadrian spurs on the west and the Mahadeo ranges on the east.

GROWTH RATE OF POPULATION (1961-2001)

Table 1 reveals the spatio-temporal analysis of population growth rate in the study region during 1961-2001. It shows that growth rate fluctuates over decades and differs from tahsil to tehsil.Analysis of population growth is carried with help of following four regions:

Very High Growth of Population (Above 30 per cent)

lt is evident from table 1that very high growth of population (above 30 %) in the study region is confined to Karveer (35.85%) and Hatkanangale (39.78%) tahsils during 1961-71. These tahsils are agriculturally developed and have sound source of irrigation from the rivers of Krishna and Panchaganga. These are also industrially as well as agro based industrially developed having dense transport network. The improvement in medical facilities have also caused low death rate. In these tahsils, Kolhapur, Gandhinagar, Ichalkaranji, Jaysingpur have the industrial, trading, administrative and commercial centres which attract the population from surrounding regions.

During 1971-81, growth rate of population of the study region was declined due to severe drought conditions of 1972. The effective implementation of family planning programmes in Hatkanangale tehsil resulted in decline in growth of population (35%). The employment in textile industrial sectorattracted population from other regions to Hatkanangale tahsil, which experienced the same status during 1981-91. Shirol tehsil noted increasing growth of population due to reducing rate of infant mortality of female.

TABLE 1
GROWTH OF POPULATION IN UPPER KRISHNA BASIN (1961-2001)

Name of Tehsil	Year			
	1961-71	1971-81	1981-91	1991-2001
Wai	19.43	14.44	17.01	12.99
Mahabaleshwar	23.89	20.81	22.03	22.52
Jaoli	14.79	14.51	12.06	05.65
Koregaon	18.45	15.90	18.05	12.54
Khatav	13.83	14.20	15.53	11.23
Satara	25.44	21.94	26.05	19.40
Patan	15.16	12.22	17.58	8.46
Karad	23.60	23.03	20.19	18.23
Khanapur	-16.28	16.97	16.54	13.06
Shirala	18.18	23.04	13.11	07.06
Walwa	25.02	18.47	20.56	17.64
Tasgaon	21.83	19.91	13.01	17.94
Kavathe Mahankal	N.A.	15.10	17.48	22.62
Miraj	9.56	23.90	25.34	18.93
Shahuwadi	19.14	15.58	14.50	11.46
Panhala	29.99	15.16	21.13	15.32
Hatkanangale	39.78	35.05	34.77	23.32
Shirol	24.78	30.62	25.10	16.57
Karveer	35.85	28.34	21.87	21.78
Gagan Bavada	8.51	6.34	19.14	16.71
Radhanagari	24.52	20.68	12.00	10.57
Kagal	23.11	15.25	16.42	16.47
Bhudargad	19.82	14.66	18.03	13.66
Ajara	23.51	11.91	12.62	14.13
Gadhinglaj	20.69	13.41	13.06	09.43
Chandgad	19.67	19.18	19.79	13.18

NB: Figures denote the percentage.

Source:
1Compuled by the researches
2Census of India, District Census Handbook of Sangli, Satara and Kolhapur districts, 1961-91.
3Census of India2001,Final Population Totals, Maharashtra, Series 28

HIGH GROWTH OF POPULATION (20 TO 30 PER CENT):

Generally the high population growth was registered in the tehsils of the central part of the study region. This consists of fertile part of Krishna, Panchaganga, and Varana rivers. This part of the study showed high degree of urbanisation with industrial development (agro-based and manufacturing). It has been observed that the twelve tehsils namely Mahabaleshwar, Satara, Karad, Walwa, Tasgaon, Shahuwadi, Shirol, Panhala, Radhanagari, Kagal, Ajara and Gadhinglaj have recorded high population growth rate (20 – 30 %) during 1961-71. These tahsils are located in the central and southern parts of study region having higher agriculture development. Heavy emphasis was laid on agricultural development and investment. The positive role of the State Government and role of co-operative sectors, development of transportation and communication, improved medical facilities, which controlling diseases, have resulted in to high growth of population.

During 1971-81, Karveer tehsil has high population growth due to the decline of death rate and in migration. Shirala tahsil moved up into this category due to the declaration of Mandur as new Census town. Rural-urban migration in Miraj tahsil leads to its position to this category. Whereas Mahabaleshwar, Satara, Karad, Walwa, Miraj, Shirol and Karveer tehsils have remained under this category during 1981-91.Panhala tehsil hasmoved up into this category. Urbanization, agricultural development and rich historical background are major factors resulting into increase in the growth of population During 1991-2001, Kavathe Mahankal tehsil has changed its category, due to technological improvement in grapevine cultivation and agro-based industrial Development. Whereas Hatkanangale tehsil has fallen under this category

MODERATE GROWTH OF POPULATION (10 TO 20PER CENT)

The commercial agricultural practice and concentration of huge medical facilities caused medium growth of population in north-eastern and southern tehsils. It is due to good agricultural activities and growth of agro-based and cottage industries. During 1961 the moderate growth of population was found in eight tehsiils Viz. Wai, Jaoli, Patan, Shirala, Bhudargad, Chandgad, Koregaon and Khatav . These tehsils on the highland zone are characterised by the existence of undulating terrain associated with hill ranges, steep slopes, thick forest and lack of cultivation, poor industrialization, transportation, lack of communication, lack of infrastructure facilities, small tiny and scattered villages and absence of towns. These adverse conditions have affected the growth of population.

During 1971-81 Khanapur belonged to this category due to the control of out-migration of population. Shahuwadi, Tasgaon, Panhala, Kagal and Gadhinglaj tehsils have fallen into this category. The out-migration of population in search of employment opportunities and decline in birth rate (i.e. 257 / thousand population in 1971 and 171 thousand population in 1981) were major causes moderate the growth of population in Bhudargad tahsil (14.66%).

The declining growth of population was also due to sound medical facilities in rural areas, and effective implementation of family planning programmes which checked the birth rate all over region. The newly formed Kavathe Mahankal tehsil has also acquired the same category. The consistency in the efforts made to implement family planning programmes (1971) in the state in general and study region in particular has led to cut down overall birth rate sharply. Due to this Radhanagari and Chandgad tehsils have shown decline in growth of population. Bhudargad tehsil recorded increase in growth of population during 1981 due to the extension of cultivable land and reclamation of degraded lands associated with improved irrigation facilities.

After 1991, higher literacy rate and awareness of family planning programme have cut down the birth rate which was resulted in adding Karad, Walwa, Tasgaon, Panhala, Miraj and Shirol tahsils to moderate growth of population category

LOW GROWTH OF POPULATION (BELOW 10 PER CENT)

Low population growth was noted in tehsils of western part of study region. This is mainly due to undulating terrain, low rainfall, less development of industries, lack of transport and communication facilities. The said situation resulted in population migration for employment in other regions. Table1 depicts that during 1961-71 that three tehsils namely Gaganbavada, Khanapur and Miraj recorded low growth of population (8.51%, -16.28% and 9.56% respectively). Gaganbavada tehsil is characterized by undulating terrain, heavy rainfall (above 5000 mm), and unemployment and under development causing

out migration of population. Khanapur and Miraj tahsils recorded low growthof population due to process of inter tahsil migration. Gaganbavada tahsil experienced decline (6.36%) in the growth of population, due to the transfer of villages in newly created Vaibhavwadi tahsil of Sindhudurg district. In 1991-2001, similar position was marked by Jaoli (5.65%), Shirala (7.06%), Patan (8.46%) and Gadhinglaj (9.43%) tehsils. These tehsils have recorded low growth of population.

After the independence, the implementation of five year plans, medical facilities to control diseases and epidemics, implementation of family planning programme to control birth rate, development of agriculture, irrigation, human resources and economic activities have all played significant role in changing the growth rate of population in the Upper Krishna Basin. The high rural population led to out-migration because of lack of agricultural and industrial development.

SUMMARY

Foregoing analysis reveals that growth rate of population differs from tahsil to tahsil and fluctuates over decades. During last forty years the population of the region grew in absolute numbers but the growth rate exhibited declining trend up to 2001. It is found that in the study region growth rate of population was low as compared to state average. Generally the high population growth was registered in the tehsils of the central part of the study region. The commercial agricultural practice and concentration of huge medical facilities caused medium growth of population in north-eastern and southern tahsils. Low population growth was noted in tahsils of western part of study region.

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