Peer Reviewed International Research Journal of Geography Maharashtra Bhugolshastra Sanshodhan Patrika

A90

ISSN: 0971-6785 (Impact Factor 3.687 (IIFS)) Vol. 33, No.2, Jul-Dec. 2016.pp 26-36

DECADAL VARIATIONS IN POPULATION GROWTH RATE OF PARBHANI DISTRICT.

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Abstracts

In this paper the present study reveals the talukawise growth of population in Parbhani district during 1991-2011. It has studied on the basis census of India report. The secondary data have been collected and computed by research techniques and the results have been brought through tables. During 110 years (1901-2011) the highest decadalgrowth rate of total Population in the district is recorded in 1981 – 91 (28.88%) and lowest in 1911 – 21 decade (- 1.76%). The results has been discussed with the help of population growth rates refers to the change in population growth rate over a unit time period, often expressed as a percentage of the number of individuals in the population, at the beginning of that period.

Keywords- Growth, Population, Change

Introduction

The concept of population growth of the human population in a particular area during a specific period. The growth may be positive or negative. It mainly depends upon three factors – migration, births and deaths. Such a growth change can be measured both in terms of absolute numbers and it terms of percentage. It gives us a general idea of the development of the region and socio – economic characteristics of the region. Therefore, the study of population growths is most important and needful aspect in population geography.

In 21st century, many developed and developing countries of the world are facing an ever increasing pressure of population upon land, water, mineral and energy resources. Under these critical conditions planning of growth of human resource is the only solution for the reason, the study growth of population or spatio – temporal changes in population is most useful

District is the most convenient Geographical unit of the state government and tahsil is the basic unit for purposes of land revenue, land records, magistracy, general administration and a large number of other miscellaneous item of work. It has the closest contact with the rural people. Therefore, understanding of decadal variation of population growth of a district or tahsil level is of very important.

Objectives

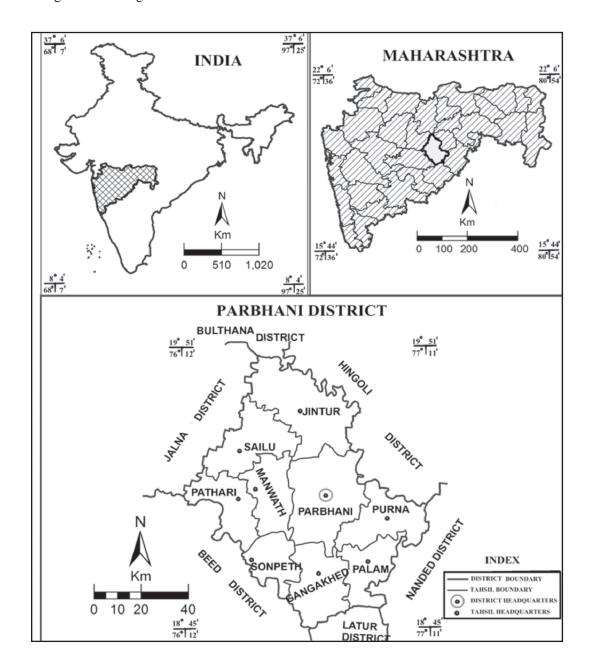
The main aim of this study is to analyze the tahsil wise total, rural, urban and male female population growth in Parbhani district during 1981-2011

The other objectives of the study are as follows.

- 1. To study the trend of population change in Parbhani district.
- 2. To compare the growth of population in Parbhani district with Maharashtra state.
- 3. To study the decadal changes of urban, rural and total population in the district.
- 4. To describe the growth of male and female population in the district.

Database and Methodology

This study is based on secondary data. District and tahsilwise population data. Is obtained from census records. In this paper, at district levelcensus data of 110 years (1901 to 2011) and 30 years 1981 to 2011 census data has been used for the growth of population. Data is processed and presented through tables, maps and graphs. In this study, decadal change in population is calculated by



Population Trend: During 20th Century

The Parbhani district's demographic history of the 20th century can be divided into three distinct periods of stagnant population (1901 - 1921), rapidly growing population (1921 - 71) and steadily increasing population (1971 - 2011). The years 1901 - 1921 have often been recognized as the period of stagnant population. During this period (1911 - 21) district's population decreased from

6.86 lacs. In the era 1911 - 21 the death rate was higher than the birth rate due to the functions of epidemics and famines.

Table-1: Proportion of Rural-Urban Population in Parbhani District and Maharashtra State

Census	Parbhani	District	Maharashtra State			
Year	Rural Population	Urban	Rural	Urban		
	%	Population	Population %	Population %		
		%				
1901	89.70	10.30	83.47	16.53		
1911	90.43	09.57	84.81	15.19		
1921	90.35	09.65	81.50	18.50		
1931	87.94	12.06	81.40	18.60		
1941	86.90	13.10	78.87	21.13		
1951	83.96	16.04	71.25	28.75		
1961	85.44	14.56	71.78	28.22		
1971	82.96	17.04	68.83	31.17		
1981	80.13	19.87	64.97	35.03		
1991	77.49	21.51	61.31	38.69		
2001	68.24	31.76	57.57	42.43		
2011	68.97	31.03	54.77	45.23		

(Source: Compiled by author on the basis of Census Handbook of Parbhani District, 1981-2011)

The population of the district has more than tripled since 1921. It has increased from 6.86 lacs in 1921 to 13.38 lacs in 1971 (Table.2). On an average it has increased at a growth rate per annum during 1921-71. Such an increase in the district's population in the fifty years may be attributed to improving conditions of food supply and medical services, all of which have been responsible for bringing further fall in the death rate.

During 1971 – 2011, the population of Parbhani district increased from 13.38 lacs to 18.36 lacs. Thus, a population of 4.98 lacs was added in a period of 40 years.

Decadal Growth of Population in the District.

I. Total Population Growth

During the decade 1901 - 11, population of the district has increased by 20 - 50 percent. Probably due to the recovery from the great famine of 1900. The fall by more than 1.76 percent in the 1911 - 21 decade was due to the severe influenza epidemic of 1918 and the exodus of the population at the time of 1921 census from the district due to severe famine conditions. In the 1921 - 31 the population increased by 11.50 percent due both to the return of migrants to their native place and recovery from the influenza epidemic. The decade 1931 - 41 had been relatively prosperous without any severe famine or epidemic and the population increased by 6.83 percent. Since 1941, the population increased faster, by 10.54 percent.

Table-2: Decadal Change in Population of Parbhani District and Maharashtra State

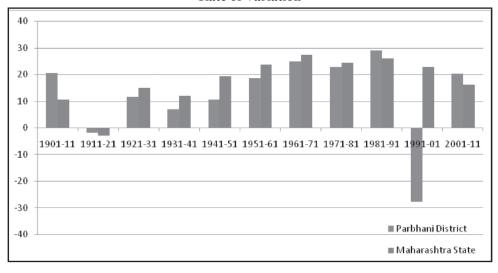
Census	Par	bhani Distric	et	Maharashtra State				
Year	Total	Decade	Rate	Total	Decade	Rate		
	Population	Variation	variation	Population	Variation	variation		
1901	579649	-	-	19441693	-	-		
1911	698457	+118808	+20.50	21474523	+2032830	+10.46		
1921	686182	-12275	-1.76	20849666	-624857	-02.91		
1931	765085	+78903	+11.50	23959300	+3109634	+14.91		
1941	817303	+52218	+6.83	26832758	+2873458	+11.99		
1951	903477	+86174	+10.54	32002564	+5169806	+19.27		
1961	1072067	+168590	+18.66	39553718	+7551154	+23.60		
1971	1338978	+266911	+24.90	50412235	+10858517	+27.45		
1981	1642610	+303632	+22.68	62693898	+12281663	+24.36		
1991	2117035	+474425	+28.88	78937187	+16243269	+25.91		
2001	1527715	-589320	-27.84	96878627	+17941440	+22.73		
2011	1836086	+308371	+20.18	112374333	+15495706	+16.00		

(Source: Compiled by author on the basis of Census Handbook of Parbhani District, 1981-2011)

The high rate of growth of population during 1951 – 61 and 1961 – 71 is the result of the control of epidemics and other diseases since 1950. DDT spraying has controlled malaria that used to be a major public health problem in the district. Campaigns for B.C.G. and vaccination against smallpox also have their share in improving the survival – rate. The death rate has been reduced and resulted in the population growth rate although the birth rate may not have increased.

Figure – 1:Decadal change in population of Parbhani District and Maharashtra State.

Rate of Variation



In 2011, among the 35 districts of the Maharashtra State. Population growth rate was registered at 20.18 percent during the decade 2001-2011 (Table -2). However, the decadal -589320 person to the 2001 population of the district. However, the decadal growth rate of the district is high the Maharashtra state average rate at (16.00%). During the earlier decade of 1991-2001 also, the growth rate of the district (-27.84) was lower compared to the state average (22.73%)

II Rural Population Growth **Table-3: Decadal Change in Rural Population of Parbhani District**

Census	Rural P	opulation		Decade C	Frowth of 1	Rural	Variation Rate of		
Year				Population			Rural Population		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
1901	260293	259708	520001	-	-	-	-	-	-
1911	316383	315242	631625	+56090	+55534	+111624	+21.55	+21.38	+21.47
1921	312962	307028	619990	-3421	-8214	-11635	-1.08	-2.61	-1.84
1931	341896	330952	672848	+28934	+23934	+52858	+9.25	+7.79	+8.53
1941	361546	348676	710222	+19650	+17724	+37374	+5.75	+5.36	+5.55
1951	382285	376299	758584	+20739	+27623	+48362	+5.74	+7.92	+6.81
1961	462866	453122	915988	+80581	+76823	+157404	+21.08	+20.42	+20.75
1971	564147	546645	1110792	+101281	+93523	+194804	+21.88	+20.64	+21.27
1981	666160	650062	1316222	+102013	+103417	+205430	+18.08	+18.92	+18.49
1991	835976	804460	1640436	+169816	+154398	+324214	+25.49	+23.75	+24.63
2001	529729	512800	1042529	-306247	-291660	-597907	-36.63	-36.26	-57.35
2011	651886	614394	1266280	+122157	+101594	+223751	+23.06	+19.91	+21.46

Source: Compiled by author on the basis of Census Handbook of Parbhani District, 1981-2011)

The rural population of the district rose from 5.20 lacs in 1901 to 12.66 lacs in 2011. Decadal variations in rural population recorded an increase during 1901-1911 decade by (21.47%), but decrease in the era 1921 (-1.84%), consequent upon frequent death by epidemics from 1921, the rate of rural population growth in Parbhani district has been continuously increasing. During 1921-31, the rural population increased by 8.53 percent and in 1931-41 by 5.55 percent. Between 1921-71, the rural population increased by 4.90 lacs. During 1941-51, the rural population increased by 6 percent per year, where as in 1951-61, 2.07 percent per year and 1961-71, it was 2.12 percent per year.

The growth rate of rural population has declined from 21.27 percent in 1961 - 71 to 18.49 percent in 1971 - 81; 24.63 percent in 1981 - 91 and -57.35 percent in 1991 - 2001, because in this period jurisdictional changes included carving out of new district Hingoli out of Parbhani district on 1st May 1999, 21.46 percent in 2001 - 2011. During 1971 to 2011, the rural population of Parbhani district increased from 11.10 lacsto 12.66 lacs.

III. Urban Population Growth.

During the last 110 years (1901-2011), urban population of Parbhani district increased by ten times in the last five subsequent decades before 1951, the growth rate of urban population varied between 12.04 to 35.31 percent per decade. But decrease in 1921 (-0.96), consequent upon frequent death by epidemics. During the last six decades (1951-2011), the growth rate of urban population got increased.

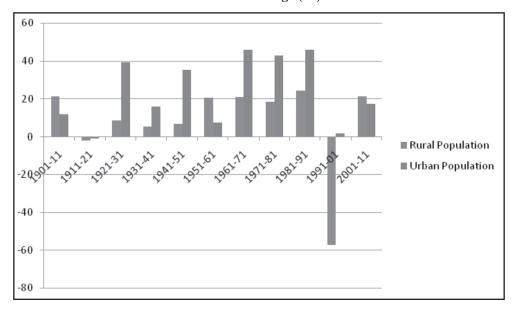
Table- 4: Decadal Change in Urban Population of Parbhani District

Census Year	Urban I	Populatio	n	Decade Growth of Urban Population			Variation Rate of Urban Population		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
1901	30161	29487	59648	-	-	-	-	-	-
1911	34160	32672	66832	+3999	+3185	+7184	+13.26	+10.80	+12.04
1921	33969	32223	66192	-191	-449	-640	-0.56	+1.37	-0.96
1931	47774	44463	92237	+13809	+12240	+26045	+40.56	+37.99	+39.35
1941	55469	51612	107081	+7695	+7149	+14844	+16.11	+16.08	+16.09
1951	74083	70810	144893	+18614	+19198	+37812	+33.56	+37.20	+35.31
1961	80969	75110	156079	+6886	+4300	+11186	+9.29	+6.07	+7.72
1971	119223	108963	228186	+38254	+33853	+72107	+47.25	+45.07	+46.20
1981	168851	157537	326388	+49628	+48574	+98202	+41.63	+44.58	+43.04
1991	247818	228781	476599	+78967	+71244	+150211	+46.77	+45.22	+46.02
2001	250462	234724	485186	+2644	+5943	+8587	+1.07	+2.60	+1.80
2011	290984	278822	569806	-194202	+44098	+84620	+77.54	+18.79	+17.44

(Source: Compiled by author on the basis of Census Handbook of Parbhani District, 1981-2011)

Figure 2:- Decadal change in rural and urban population of Parbhani district.

Decadal Change (%)



IV.Male and Female Population Growth.

The male population of the district increased from 2.90 lacks in 1901 to 9.42 lacks in 2011. In addition, the female population of the district rose from 2.89 lacks in 1901 to 8.93 lacks in 2011. Since 1921, the male and female population in the district has been continuously increasing. Except 1911-21 and 1991-2001 in every decade. The growth rate of male population is higher than growth rate of female population. During the first half of the 20th century, the growth rate of male and female population in rural area was higher than the growth rate of male and female population in urban area.

Table. 5: Decadal	Change in	Male and	Female F	Population	of Parbhani district.

	Population				growth of	Variation rate of population			
Year	Male	Female	Total	Male	Female	Total	Male	Female	Total
1901	290454	289195	579649						
1911	350543	347914	698457	+60089	+58719	+118808	+20.69	+20.30	+20.50
1921	346931	339251	686182	-3612	-8663	-12275	-1.03	-2.49	-1.76
1931	389670	375415	765085	+42739	+36164	+78903	+12.32	+10.66	+11.50
1941	417015	400288	817303	+27345	+24873	+52218	+7.02	+6.63	+6.83
1951	456368	447109	903477	+39353	+46821	+86174	+9.44	+11.70	+10.54
1961	543835	528232	1072067	+87467	+81123	+168590	+19.17	+18.14	+18.66
1971	683370	655608	1338978	+139535	+127376	+266911	+25.66	+24.11	+24.90
1981	835011	807599	1642610	+151641	+151991	+303632	+22.19	+23.18	+22.68
1991	1083794	1033241	2117035	+248783	+225642	+474425	+29.79	+27.94	+28.88
2001	780191	747524	1527715	-303603	-285717	-589320	-20.01	-27.65	-27.84
2011	942870	893216	1836086	+162679	+145692	+308371	+20.85	+19.49	+20.19

(Source: Compiled by author on the basis of Census Handbook of Parbhani District, 1981-2011)

During 1911 - 21 the growth rate of male and female population was negative. In that period the growth rate of male population was -1.03 percent and the growth rate of female population was -2.49 percent. While in 1981 - 91 decade, it was 29.79 percent male and 27.94 percent. In this decade, the growth rate of male and female population was higher than all the decades of 20th century.

Tahsil Wise Population Growth.

The population of Parbhani district increased from 1642610 in 1981 to 1836086 in 2011. The total population of Parbhanitahsil in the 1981 census was 316234, which has increased to 440194 in the census of 1991, in 2001 it was 460778 and in 2011 it was 537810. Jinturtahsilrecordedthe population of 196714 in 1981, which was increased to 252558 in 1991 and in 2011, it was 282756. Hingolitahsil population of 241588 in 1981, which increased to 304477 in 1991. Kalamnuri and Basmathtahsil population serially counted by 198477 and 222611 in 1981, which was increased to 304477 and 293883 in 1991. But 1st May 1999 new district Hingoli out of Parbhani district. Gangakhedtahsil in the 1981 census was 229033 which was increased to 299610 in the census of 1991 and in decreased in 2011 it was 202867. Pathritahsil in the 1981 census was 237958 which have increased to 289321 in the census of 1991 and was decreased in 2011 it was 139046. In the year 2001 created new tahsils of Parbhani district namely Sonpeth, Sailu, Manwath, Purna and Palam.

I Total Population Growth of Tahsils.

The rate of population growth of tahsils in Parbhani district has continuously positive since 1981. Within the district, growth rate varies from one tahsil to another. In 2001 - 2011, the rate of population growth was nearly 35 percent for Sonpethtahsil. While it was 20 - 30 percent for Pathri, Palam, Gangakhed, Sailu, Jintur and Manwathtahsil and 10 - 20 percent for Parbhani and Purnatahsils.

The growth rate during 1981-91 was highest inParbhanitahsil (39.20%) and was lowest in Kalamnuritahsil (19.41%). In 1991-2001 population rate was the lowest in Pathritahsil(-61.90) and highest in Parbhanitahsil (4.68%). During 2001-2011 out of the 09 tahsils in the district, Sonpethahsil has the highest growth rate of 34.21 percent while Purnatahsilhas the lowest growth rate of 12.54 percent.

Sr.No.		To	otal popula	tion		Decadal change (%)			
	Tahsils	1981	1991	2001	2011	1981 -	1991 -	2001 -	
						1991	2001	2011	
1	Parbhani	316234	440194	460778	537810	+39.20	+4.68	+16.72	
2	Jintur	196714	252558	234405	282756	+28.39	-7.19	20.63	
3	Hingoli	241588	304477	-	-	+26.03	-	-	
4	Kalamnuri	198472	236992	-	-	+19.41	-	-	
5	Basmath	222611	293883	1	-	+32.02	-	-	
6	Gangakhed	229033	299610	164080	202867	+30.82	-45.24	+23.64	
7	Pathri	237958	289321	110218	139046	+21.58	-61.90	+26.16	
8	Sonpeth	-	ı	66748	89582	i	-	+34.21	
9	Sailu	-	-	139352	169194	-	-	+21.41	
10	Manwath	-	-	97025	116817	-	-	+20.40	
11	Purna	-	-	162306	182652	-	-	+12.54	
12	Palam	-		92804	115382	-	-	+24.33	
Total district		1642610	2117035	1527715	1836086	+28.88	-27.84	+20.19	

Table – 6: Decadal changes in total population by tahsils

(Source: Compiled by author on the basis of Census Handbook of Parbhani District, 1981-2011) **II. RuralPopulation Growth of Tahsils.**

Different tahsils have shown great variations in growth their rate of rural population growth. During 1981-91, the highest rural growth rate was recorded in Basmattahsil(30.54%) and Kalamnuritahsil registered the lowest rural growth rate by (18.54%). The rural growth rate of Basmat, Gangakhed, Jintur, and Hingolitahsils was above the district average growth rate (24.63%).

During the 1991 – 2001 decade, rural population growth of tahsils has decreased. Because. 1st May 1999 new district Hingoli out of Parbhani district.

In 2001-2011 decade, rural population growth rates are above the district average in 07 tahsils and below the district average in remaining 02 tahsils. The high rural growth rate of 37.40% was registered by Sonpethtahsil, while Purnatahsil has the lowest rural growth rate (13.28%). Due to migration of rural peoples to the neighboring urban places.

Table.7: Decadal Changes in Rural Population by Tahsils

		Rural	Population	1		Deca	dal chang	ge (%)
Sr.No.	Tahsil	1981	1991	2001	2011	1981-	1991 -	2001 -
						1991	2001	2011
1	Parbhani	184173	221103	201449	230640	+20.05	-8.89	+14.49
2	Jintur	176463	224283	196293	238465	+27.10	-12.48	+21.48
3	Hingoli	200020	250020	1	-	+25.00	-	-
4	Kalamnuri	186627	221228	-	-	+18.54	-	-
5	Basmat	192693	251545	-	-	+30.54	-	-
6	Gangakhed	201377	261258	123652	152976	+29.74	-50.67	+23.71
7	Pathri	174869	210999	78217	102193	+20.66	-62.93	+30.65
8	Sonpeth	-	-	53726	73817	-	-	+37.40
9	Sailu	-	-	99501	122259	-	-	+22.87
10	Manwath	-	-	67806	84329	-	-	+24.37
11	Purna	-	-	129081	146219	-	-	+13.28
12	Palam	-	-	92804	115382	-	-	+24.33
Total l	District	1316222	1640436	1042529	1266280	+24.63	-36.45	+21.46

(Source: Compiled by author on the basis of Census Handbook of Parbhani District, 1981-2011)

III. Urban Population Growth of Tahsils.

The urban populations have been growing continuously since 1981. There was relatively an increase in urban population during the decade of 2001-2011. This was probably due to the increased opportunities for employment and education in the urban areas.

During the decade of 2001 – 2011, the rate of urban population growth of Parbhani, Sonpeth, and Sailutahsils are above the district average (17.44%) and the growth rates of remaining tahsils (Jintur, Gangakhed, Pathri, Manwath and Purna) are below the district averagegrowth rate. Among the 09 tahsils of the district, the rate of urban population growth rate is the highest of Sonpethtahsil (21.06%) and lowest in Gangakhedtahsil (5.14%).

During the previous decade (1991 - 2001), the decadal growth rate of the urban population was the highest in Jinturtahsil (34.79%). Pathritahsil has lower growth rate than the district average (1.80%). In 1981 - 91 Parbhanitahsil has registered the highest urban population growth rate (65.90%), while Pathritahsil has the lowest growth rate (24.15%).

IV.Male – Female Population Growth of Tahsils.

All the tahsils of the district has followed the same increasing trend from one census to another since 1981. During the 1981 – 91 decade the growth rate of male – female population of tahsils was 18 to 39 percent. In this decade, Parbhanitahsil has the highest and Kalamnuritahsil has the lowest growth rate of male and female population (Table. 9). The growth rate of all tahsils was below the district average.

In 1991-2001 decade, the highest growth rate of male and female population was registered in Parbhanitahsilwhile lowest in Pathritahsil. In this decade, the growth rate of female population, in Parbahni and Pathritahsil were higher than the growth rate of male population.

Table. 8: Decadal changes in Urban Population by Tahsils

		Urba	n Popula	tion		Dec	Decadal change (%)			
Sr.N o .	Tahsil	1981	1991	2001	2011	1981 -	1991 -	2001 -		
						1991	2001	2011		
1	Parbhani	132061	219090	259329	307170	+65.90	+18.37	+18.45		
2	Jintur	20251	28275	38112	44291	+39.62	+34.79	+16.21		
3	Hingoli	41568	54457	-	-	+31.01	-	-		
4	Kalamnuri	11845	15764	-	-	+33.09	-	-		
5	Basmat	29918	42338	-	-	+41.51	-	-		
6	Gangakhed	27656	38352	40428	49891	+38.68	+5.41	+5.14		
7	Pathri	63089	78322	32001	36853	+24.15	-59.14	+15.16		
8	Sonpeth	-	-	13022	15765	-	-	+21.06		
9	S ai lu	-	-	39851	46915	-	-	+17.73		
10	Manwath	-	-	29218	32488	-	-	+11.19		
11	Purna	-	-	32225	36433	-	-	+13.06		
12	Palam	-	-	0	0	-	-	-		
Tota	Total District		476599	485186	569806	+46.02	+1.80	+17.44		

(Source: Compiled by author on the basis of Census Handbook of Parbhani District, 1981-2011)

After 2001, the growth rate of population of tahsils declined. In 2001 - 2011 growth rate of female population of tahsils was lower than the growth rate of male population. However, in rural area, the growth rate of female population was higher than the growth rate of male population, out of 09 tahsil of the district, only Parbhanitahsil has the highest growth rate of female population (17.21%) than the growth rate of male population (16.45%).

Table-9: Decadal Changes in Male-Female Population by Tahsils

Sr.	Tahsils			Decadal	change (%)			
No.			Male Popula	tion	Female Population			
		1981 -1991	1991 -2001	2001 -2011	1981 -1991	1991 -2001	2001 -2011	
1	Parbhani	+39.68	+4.31	+16.45	+38.69	+4.88	+17.21	
2	Jintur	+22.74	-7.25	+21.63	+60.19	-7.12	+19.60	
3	Hingoli	+26.37	-	-	+25.68	-	-	
4	Kalamnuri	+20.63	-	-	+18.14	-	-	
5	Basmat	+33.30	-	-	+30.69	-	-	
6	Gangakhed	+32.65	-45.23	+24.63	+28.94	-45.24	+22.60	
7	Pathri	21.92	-61.85	+27.46	+21.24	-66.96	+24.80	
8	Sonpeth	-	-	+36.88	-	-	+31.47	
9	Selu	-	-	+20.42	-	-	+20.34	
10	Manwath	-	-	+22.06	-	-	+18.71	
11	Purna	-	-	+13.06	-	-	+11.60	
12	Palam	-	-	+25.98	-	-	+22.60	
	Total	+16.58	-2801	+20.85	+14.84	-27.65	+19.49	

(Source: Compiled by author on the basis of Census Handbook of Parbhani District, 1981-2011)

Conclusion

On the basis of the above finding and analysis of census of last 110 years the research work concluded on the following conclusions:

*During the period of 110 years (1901-2011), it was noted that the highest decadal of population growth rate in the district was recorded in 1981-1991 by 28.88% while during 1911-1921 decade, which was lowest by -1.76%.

*In this population growth rate share of urban population was forever higher in Maharashtra as well as in Parbhani district were more and less similar to that of Maharashtra. The main region of urban population growth was migration from rural region for employment, education and medical facilities purpose.

*It was noted that except in the decade 1911-1921 in the 20th century the growth rate of male population was higher than the growth rate of female population.

*Since from the 1981 population growth rate of Parbhani districts. Tahsils shows positive growth. Whereas urban area shows higher population growth rate as compared to rural area.

*The population growth rate during the decade 1981-1991 was lower than the district average in the tahsils of Kalamnuri, Pathri, Hingoli and Jintur.

*Also, during the period of 2001-2011, the population growth rate was highest i.e.37.40% in the tahsils like sonpeth, while Purnatahsil has lowest 13.28%.

*As the rural population shows migration towards the urban area for different purposes, due to that among the twelve tahsils of Parbhani district the population growth rate was highest in Parbhanitahsil i.e. 18.45%, while in the Gangakhedtahsil it was 5.14%

*Lastly in conclusion during studying the population growth rate of Parbhani district it was noted that male population was always higher than female population in all the tahsils.

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