

Demographic Trends in India and Karnataka- A Macro Level Analysis

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Abstract:

The present paper mainly focuses on analyzing the demographic trends and changes in India in comparison with Karnataka state. The study of demography is vital to understand the changes occurring in the composition of population growth through various dimensions and its consequences on the socio-economic sectors of the regions. It acts as an accelerating factor and a stimulant towards economic growth and at the same time bears evil effects leading to low level of economic development across the regions. There are different indicators pertaining to demographic trends of a particular region.

Keywords: *Demographic Trends and Patterns. Population Growth, Socio-Economic Development.*

I. Introduction:

Population is an important factor and a critical input for the development process of the regions. The socio-economic development of various regions is reflected through fluctuations and changes in population. Vast country like India is not only rich in terms of natural resources, but is also abundant in case of human resources. It stands second position in terms of population across the countries in the world. It contributes 17.5 per cent in the total world's population according to 2011 census. The demographic researchers have identified and projected that if the current trend continues, then India will overtake China by 2020. It has considerable demographic diversity and heterogeneity and has its effect on the varying levels of socio-economic development across the various states. Presently it is endeavoring to emerge as a developed nation. Presently, India is endeavoring to emerge as a developed nation. According to 2011 census, India remains the second most populated country in the world, the first being China, and the projected population shows that, if the current trend continues India will overtake China by 2020. The contribution of China and India in the world population is 19.4 percent and 17.5 percent according to 2011 Census. Karnataka with an area of 1,91,791 sq. km and total population of 5, 27,33,958 (as per 2001 Census) increased to 6,11,30,704 during 2011 census. Among different states, Karnataka occupies the ninth rank in population as per 2011 Census. Density of population increased from 275 in 2001 to 319 persons per sq.km in 2011 Census. Similarly, Sex ratio increased from 964 in 2001 to 968 in 2011 Census and literacy rate also increased from 64.04 in 2001 to 75.60 percent in 2011. In Belgaum district total population increased from 42, 14,505 in 2001 to 47, 78,439 according to 2011 Census and Density of population has registered from 314 in 2001 to 356 in 2011 Census. Sex ratio of this district drastically increased from 960 in 2001 to 969 in 2011, similarly literacy rate also increased from 64.20 to 73.94 percent

according to 2011 Census. The various dimensions of the population are assessed through the study of Demography. The term “demography” has been derived from Greek word “demos” and “grapho” which implies the meaning “the people” and “writing, description or measurement” respectively. It is an analytical study which involves population dynamics by assessing three major components namely birth, migration and aging (including death). These three components stand out as the reasons for changes in population. Nowadays demographic change has become the topic of debate among the politicians, researchers and policy makers. The study of demography is vital to understand the changes occurring in the composition of population growth through various dimensions and its consequences on the socio-economic sectors of the regions. It acts as an accelerating factor and a stimulant towards economic growth and at the same time bears evil effects leading to low level of economic development across the regions. There are different indicators pertaining to demographic trends of a particular region. The present paper mainly focuses on analyzing the demographic trends and changes in India in comparison with Karnataka state. The study of demography is vital to understand the changes occurring in the composition of population growth through various dimensions and its consequences on the socio-economic sectors of the regions. It acts as an accelerating factor and a stimulant towards economic growth and at the same time bears evil effects leading to low level of economic development across the regions. There are different indicators pertaining to demographic trends of a particular region.

II. The growth Pattern of Population in India and Karnataka:

Table 1 presents an overview of the growth of population in India and Karnataka. In the early decade of 20th century in 1901, the share of Karnataka’s population in India’s population stood at 5.48 per cent. Up to 1941, it is observed that the state’s share of population in India’s total population has consistently declined. Further in the year 2011, the share declined considerably and stood at 5.05 per cent. On the whole, the Karnataka’s share of population in India’s population during the period 1901 to 2011 has been roughly dwindling across 5 per cent with average share being at 5.3 per cent.

Table 1: Population Growth in India and Karnataka

Year	Karnataka (in lakhs)	India (in lakhs)	Karnataka’s % Share in India	CAGR* of population (% per annum)	
				Karnataka	India
1901	131	2384	5.48	-	-
1911	135	2521	5.37	0.35	0.56
1921	134	2513	5.32	-0.11	-0.03
1931	146	2790	5.24	0.90	1.05
1941	163	3187	5.10	1.05	1.34
1951	194	3611	5.37	1.78	1.26
1961	236	4392	5.37	1.97	1.98
1971	293	5482	5.34	2.19	2.24
1981	370	6833	5.42	2.37	2.23
1991	450	8463	5.31	1.96	2.16
2001	529	10286	5.13	1.60	1.97
2011	611	12102	5.05	1.48	1.64

CV@	59.8	61.9	-	-	-
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Note: * refers to Compound Annual Growth Rate, @ refers to Co-efficient of Variation

Source: Census Documents, Government of India

The growth of population in Karnataka has increased by 1.41 percent whereas India's population growth has increased by 1.49 per cent. A closer outlook reveals that during 1921, there is negative growth in both the regions but otherwise positive increase in population growth is witnessed across the years. During the year 2011, the population in Karnataka stood at 611 lakhs with an increase by 1.48 per cent over the previous census year 2001. Similarly, the population of India in 2011 stood roughly at 12102 lakhs, registering an increase of 1.64 per cent over 2001. CV indicates that there is relatively lesser variation in population growth in Karnataka vis-à-vis India.

2.1. Population by regions and gender

The study reveals the growth of population by region and gender in Karnataka in comparison with India. Region-wise outlook indicates that the urban population has grown tremendously in the state and is relatively more when compared to rural areas. Gender-wise account of population growth in the state reveals that the rate of increase in the male as well as female population has declined from 1991-2001 to 2001-2011 period. The share of male population to the total in the state has registered marginal decline from 51 per cent in 1991 to that of 50.8 per cent in 2011.

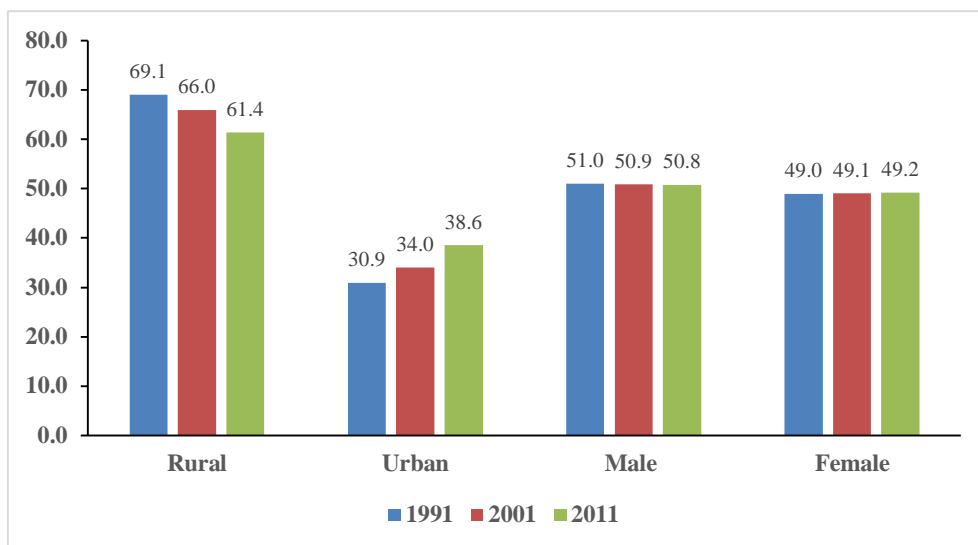
Table 2: Population by regions and gender in India and Karnataka

Karnataka	Population (lakhs)			Decadal Growth (% p.a.)	
	1991	2001	2011	1991-2001	2001-2011
Total	450	529	611	1.63	1.47
Rural	311	349	376	1.17	0.74
Urban	139	180	236	2.59	2.76
Male	230	269	311	1.60	1.45
Female	220	260	301	1.65	1.48
India	Population (lakhs)			Decadal Growth (% p.a.)	
	1991	2001	2011	1991-2001	2001-2011
Total	8463	10286	12102	1.97	1.64
Rural	6287	7425	8337	1.68	1.17
Urban	2176	2861	3771	2.77	2.80
Male	4392	5322	6233	1.94	1.59
Female	4071	4965	5876	2.00	1.70

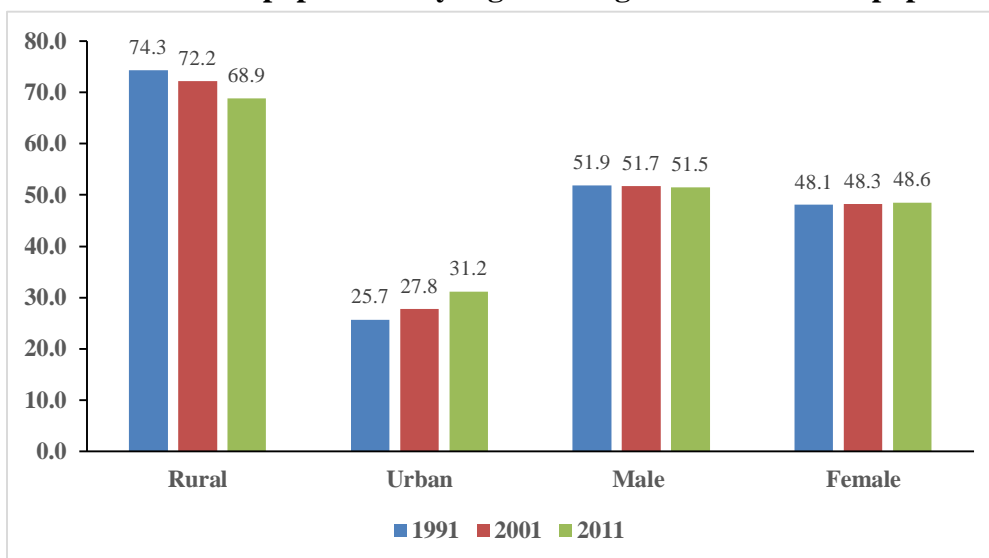
Note: Decadal Growth is calculated using Compound Annual Growth Rate

Source: Census Documents, Government of India

On the other hand, the share of female population to the total has marginally increased by 0.1 point in every decade. It was 49 per cent in 1991 and it increased to 49.2 per cent in 2011 (See Chart 1).

Chart 1: Share of population by region and gender in Karnataka (%)

Region-wise glance of India indicates that the urban population has grown tremendously in the country and is relatively more when compared to urban population growth in Karnataka state. The rate of population growth during the period 1991-2001 stood at 2.77 per cent which further increased by 2.80 per cent during 2001-2011 decade. The share of urban population in the total population of the country has increased by 25.7 in 1991 to that of 31.2 per cent in 2011 (See Chart 2). On the other hand, the rate of population growth across rural areas in the country has marginally declined from 1.68 per cent in 1991-2001 to that of 1.17 per cent during 2001-2011. In terms of its share to the total population of the country, it has declined from 74.3 per cent in 1991 to that of 68.9 per cent in 2011.

Chart 2: Share of population by region and gender to the total population in India (%)

III. Population by States and Union Territories in India:

This section gives us the insight regarding the state-wise growth of population in India. During 1991 there were 25 states and 7 union territories. Comparative glance across state reveals that Karnataka had the highest

population, followed by Bihar and Maharashtra in 1991. Among union-territories, Delhi had the highest population.

The lowest population across the states was seen in Sikkim with just 4.1 lakhs. Madhya Pradesh was bifurcated and new state named Chhattisgarh state was formed on November 1, 2000. Later on 6 November 2000, Uttarakhand state was created from Karnataka and on 15 November 2000, another state named Jharkhand was carved out of southern part of Bihar. With these formations, currently there are 28 states and 7 union territories in India. During 2001, Karnataka regained the top position with 1.8 per cent over the previous census year 1991. It was followed by Maharashtra with 2.1 per cent increase and Bihar with a negative growth rate of 0.4. If we analyse with regard to growth rate of population in 2001, it seems that Nagaland registered highest growth rate of 5.1 per cent among the states whereas Dadar and Nagar Haveli had highest growth rate among union territories.

Table 3: State-wise Population in India (in lakhs)

States	1991	2001	2011	Decadal Growth (in %)		Share to the Total population (in %)		
				1991-2001	2001-2011	1991	2001	2011
A &N Islands	2.8	3.6	3.8	2.4	0.6	0.03	0.03	0.03
Andhra Pradesh	665.1	762.1	846.7	1.4	1.1	7.86	7.41	7.00
Arunachal Pradesh	8.7	11.0	13.8	2.4	2.3	0.10	0.11	0.11
Assam	224.1	266.6	311.7	1.7	1.6	2.65	2.59	2.58
Bihar	863.7	830.0	1038.0	-0.4	2.3	10.21	8.07	8.58
Chandigarh	6.4	9.0	10.5	3.4	1.6	0.08	0.09	0.09
Chattisgarh		208.3	255.4		2.1	0.00	2.03	2.11
Dadar & Nagar Haveli	1.4	2.2	3.4	4.8	4.5	0.02	0.02	0.03
Daman and Diu	1.0	1.6	2.4	4.5	4.4	0.01	0.02	0.02
Delhi	94.2	138.5	167.5	3.9	1.9	1.11	1.35	1.38
Goa	11.7	13.5	14.6	1.4	0.8	0.14	0.13	0.12
Gujarat	413.1	506.7	603.8	2.1	1.8	4.88	4.93	4.99
Haryana	164.6	211.4	253.5	2.5	1.8	1.95	2.06	2.09
Himachal Pradesh	51.7	60.8	68.6	1.6	1.2	0.61	0.59	0.57
Jammu & Kashmir	77.2	101.4	125.5	2.8	2.2	0.91	0.99	1.04
Jharkhand		269.5	329.7		2.0	0.00	2.62	2.72
Karnataka	449.8	528.5	611.3	1.6	1.5	5.31	5.14	5.05
Kerala	291.0	318.4	333.9	0.9	0.5	3.44	3.10	2.76
Lakshadweep	0.5	0.6	0.6	1.6	0.6	0.01	0.01	0.01
Madhya Pradesh	661.8	603.5	726.0	-0.9	1.9	7.82	5.87	6.00
Maharashtra	789.4	968.8	1123.7	2.1	1.5	9.33	9.42	9.29
Manipur	18.4	21.7	27.2	1.7	2.3	0.22	0.21	0.22
Meghalaya	17.8	23.2	29.6	2.7	2.5	0.21	0.23	0.24
Mizoram	6.9	8.9	10.9	2.6	2.1	0.08	0.09	0.09
Nagaland	12.1	19.9	19.8	5.1	0.0	0.14	0.19	0.16
Orissa	316.6	368.0	419.5	1.5	1.3	3.74	3.58	3.47
Puducherry	8.1	9.7	12.4	1.9	2.5	0.10	0.09	0.10
Punjab	202.8	243.6	277.0	1.8	1.3	2.40	2.37	2.29
Rajasthan	440.1	565.1	686.2	2.5	2.0	5.20	5.49	5.67

Sikkim	4.1	5.4	6.1	2.9	1.2	0.05	0.05	0.05
Tamil Nadu	558.6	624.1	721.4	1.1	1.5	6.60	6.07	5.96
Tripura	27.6	32.0	36.7	1.5	1.4	0.33	0.31	0.30
Uttar Pradesh	1391.1	1662.0	1995.8	1.8	1.8	16.44	16.16	16.49
Uttarakhand		84.9	101.2		1.8	0.00	0.83	0.84
West Bengal	680.8	801.8	913.5	1.6	1.3	8.04	7.79	7.55
ALL INDIA	8463.0	10286.1	12101.9	2.0	1.6	100.00	100.00	100.00
CV	129	127	128					

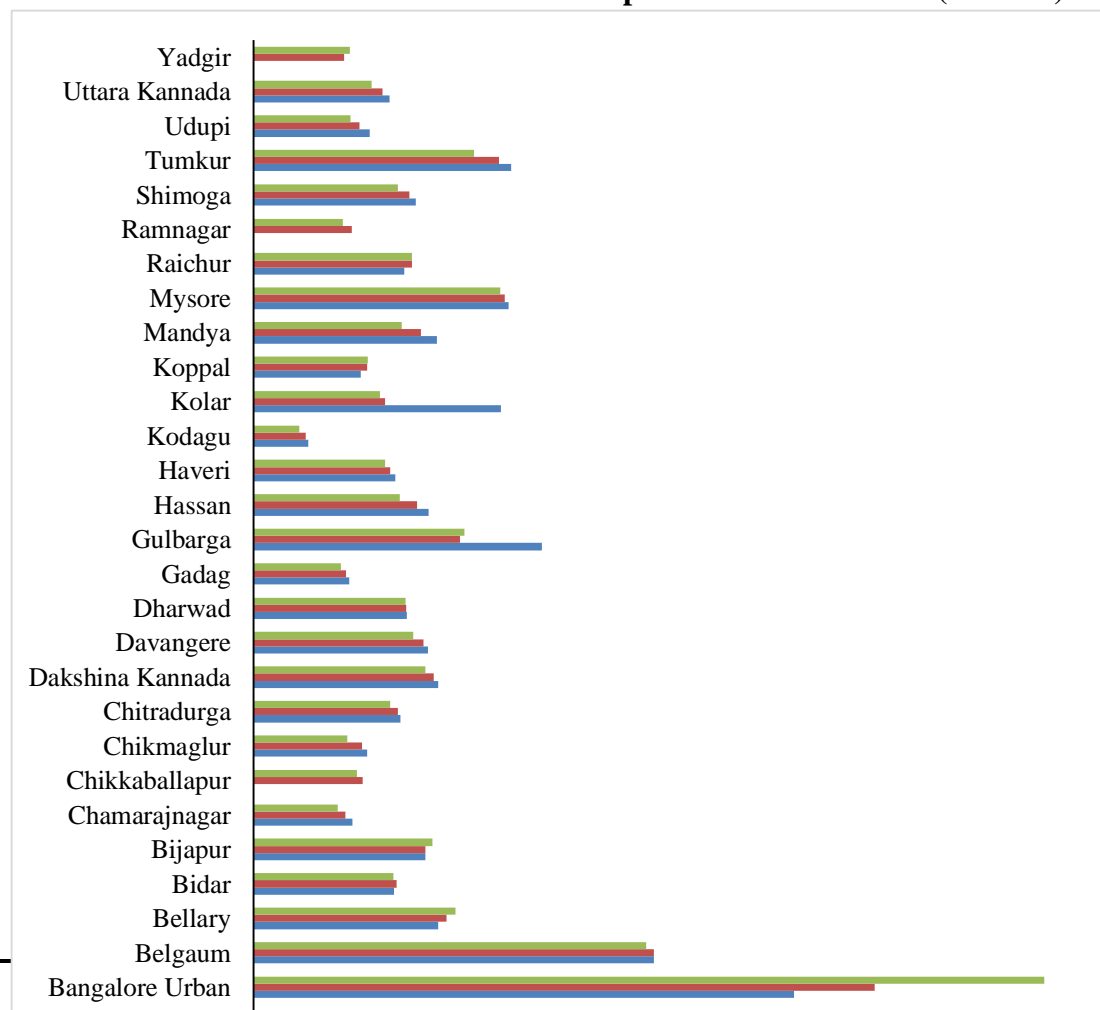
Source: Census Documents, Government of India

Similarly during 2011 also Karnataka topped among the states followed by Maharashtra and Bihar in terms of population. Growth-wise details of population in 2011 reveal that Meghalaya state has the highest growth rate of 2.5 per cent over 2001 whereas Dadar and Nagar Haveli had highest growth rate among union territories. An attempt is made to study the inter-state disparities in terms of population with the help of Co-efficient of Variation. The thumb rule indicates that if the value of CV is higher than 50 per cent, there is more variation and disparity. During 1991, CV stood at 129 percent which further reduced very marginally by 1 point in 2011 and stood at 128 per cent.

IV. The District-Wise Growth of Population in Karnataka.

This section gives us the insight regarding the district-wise growth of population in Karnataka. During 1991 there were 27 districts. Chart 3 indicates the share of population of the districts in total population of Karnataka.

Chart 3: District-wise Population in Karnataka (in lakhs)



It reveals the similar trend that was observed with regard to population. During 1991, 2001 and 2011, Bangalore Urban acquired the highest share in total population with 10.76, 12.37 and 15.75 per cent respectively. However, in 1991 it was followed by Belgaum and Gulbarga. But in 2001 and 2011, Belgaum acquired the second highest share and Mysore had the third highest share. Similarly, Kodagu has the relatively lowest share of population in Karnataka.

4.2. Population by age-groups among regions and gender:

For the purpose of meaningful analysis, age-wise population is being categorised in three age groups namely 0 to 14 comprising child population, 15 to 59 as working population and 60 and above as old-age population or senior citizens. Table 4.2.1 provides the respective shares of age-groups to the total population by regions. It reveals that the share of population in the age group of 0 to 14 in India has noticed decline by 4.59 points during the period 2001-2011 whereas in Karnataka state, it has registered decline by 5.64 points. On the other hand, the share of working age population and old-age population has increased.

Table 4: Region-wise age-group population (in per cent to the total population)

Age Group	INDIA					
	Rural		Urban		Total	
	2001	2011	2001	2011	2001	2011
0 to 14	37.17	32.82	30.64	26.21	35.35	30.76
15 to 59	54.84	58.04	62.36	65.27	56.93	60.29
60 and above	7.74	8.79	6.70	8.10	7.45	8.58
Age not stated	0.25	0.35	0.30	0.42	0.27	0.37
Age -group	KARNATAKA					
	Rural		Urban		Total	
	2001	2011	2001	2011	2001	2011
0 to 14	33.12	27.09	29.46	24.86	31.87	26.23
15 to 59	58.51	62.44	63.91	67.04	60.34	64.22
60 and above	8.28	10.40	6.53	8.02	7.69	9.48
Age not stated	0.09	0.07	0.10	0.08	0.11	0.07

Source: Author's Calculations from Census documents

With regard to share of 15 to 59 in total, the India's share has enhanced by 3.36 points during 2001-2011 and in Karnataka, the share of 15 to 59 population has risen by 3.88 points during the respective period. Similarly, with regard to share of old age population in total, the India's share has enhanced by 1.13 points and the share in Karnataka has risen by 1.79 points during the respective period. Among the three age-groups, the highest share of population is noticed across working age-population. It stood at 60.29 per cent in 2011 in India whereas in Karnataka the share is relatively higher as it stood at 64.22 in 2011.

Gender-wise outlook on share of age-group population reveals that in 2011, the share of male-female across 0-14 stood at 31:30 in India. Whereas in Karnataka, the share of male-female is relatively lower with ratio at 26:25. The male-female ratio across the working age-group of 15 to 59 years stood equivalent at 60 per

cent in India and at 64 percent in Karnataka during 2011. The old age population reveals that there are more females in this group across India and Karnataka. It is at 8.98 per cent in India and at 10.1 per cent in Karnataka (See Table 5).

Table 5: Gender-wise age-group population (in per cent to the total population)

Age Group	INDIA					
	Male		Female		Total	
	2001	2011	2001	2011	2001	2011
0 to 14	35.61	31.18	35.07	30.31	35.35	30.76
15 to 59	57.01	60.20	56.90	60.30	56.93	60.29
60 and above	7.10	8.19	7.83	8.98	7.45	8.58
Age not stated	0.28	0.43	0.20	0.41	0.27	0.37
Age -group	KARNATAKA					
	Male		Female		Total	
	2001	2011	2001	2011	2001	2011
0 to 14	32.05	26.59	31.7	25.86	31.87	26.23
15 to 59	60.70	64.50	60.0	64.0	60.34	64.22
60 and above	7.15	8.87	8.24	10.1	7.69	9.48
Age not stated	0.10	0.04	0.06	0.04	0.11	0.07

Source: Author's Calculations from Census documents

V. Sex Ratio and Density of Population in India and Karnataka:

These are the important indicators to analyse the demographic trend across the regions. Sex ratio implies number of females for 1000 males across the regions. Density of population indicates the volume of population in one square kilometre. Table 6 presents the trend with regard to these two indicators in India and Karnataka. It reveals that the average sex ratio during the period 1901 to 2011 in India stood at 945 and in Karnataka's average sex ratio stood at 966. Therefore, the sex ratio of Karnataka is higher than India's sex ratio. In absolute terms, it reveals that the sex ratio in India has declined from 972 in 1901 to 940 in 2011. Similarly, the sex ratio of Karnataka has also declined from 983 in 1901 to 968 in 2011. Comparative outlook reveals that the decline in sex ratio in India is highest when compared to Karnataka with 32 points decline in India and 15 points decline in Karnataka over the period 1901-2011. On the other hand, density of population in India reveals that it has increased from 77 per sq.km in 1901 to 385 per sq.km in 2011, with a CAGR of 1.47 per cent. Similarly, the density of population in Karnataka has increased from 68 to 319 in the respective period, with a CAGR of 1.42 per cent.

Table 6: Sex Ratio and Density of Population in India and Karnataka

Year	INDIA		KARNATAKA	
	Sex Ratio	Density	Sex Ratio	Density
1901	972	77	983	68
1911	964	82	981	71
1921	955	81	969	70
1931	950	90	965	76
1941	945	103	960	85
1951	946	117	966	101
1961	941	142	959	123
1971	930	177	957	153
1981	934	216	963	193
1991	927	267	960	235
2001	933	325	965	276
2011	940	385	968	319

Source: Census Documents, Government of India

5.1. Literacy Rate by regions and gender in India and Karnataka:

Literacy Rate is an indicator for assessing the educational profile of the human resources of the age group 7 years and above. In Karnataka, the literacy rate has increased from 56.04 per cent in 1991 to that of 75.60 per cent in 2011, with an improvement of 19.56 points. Similarly, the literacy rate of India has increased from 52.21 per cent in 1991 to that of 74.04 per cent in 2011, with an improvement of 21.83 points. Despite of the improvements, India's literacy rate is slightly lower than that of Karnataka in all census years (See Table 7). Rural and urban wise breakup of literacy rates reveals the consistent growth in India and in Karnataka state. Across rural areas of India, it showed an improvement to the tune of 23.11points over the period 1991-2011, while the literacy rate in urban areas improved by 11.02points over the same period. Though the improvement in literacy rate of urban areas is comparatively lower than the literacy rate of rural areas, but the literacy rate in urban areas have always been highest than the literacy rate of rural areas. During 2011, the literacy rate of urban areas in the country stood at 84.10 per cent and the literacy rate of rural areas stood at 67.80 per cent.

Table 7: Literacy rate in India and Karnataka (in per cent)

	INDIA			Decadal change (% p.a.)	
	1991	2001	2011	1991-2001	2001-2011
Total	52.21	64.83	74.04	12.62	9.21
Rural	44.69	59.40	67.80	14.71	8.40
Urban	73.08	80.30	84.10	7.22	3.80
RPI*	0.61	0.74	0.81	0.13	0.07
Male	64.13	75.26	82.14	11.13	6.88
Female	39.21	53.67	65.46	14.46	11.79
GPI**	0.61	0.71	0.80	0.10	0.08
	KARNATAKA			Decadal change (% p.a.)	
	1991	2001	2011	1991-2001	2001-2011
Total	56.04	67.04	75.60	11.00	8.56
Rural	47.70	59.30	68.86	11.60	9.56
Urban	74.20	80.60	86.21	6.40	5.61

RPI	0.64	0.74	0.80	0.09	0.06
Male	67.26	76.29	82.85	9.03	6.56
Female	44.34	57.45	68.13	13.11	10.68
GPI	0.66	0.75	0.82	0.09	0.07

*Note: Decadal change is the difference between the literacy rate of current year with the previous census year; *refers to Regional Parity Index; **refers to Gender Parity Index.*

Source: Census Documents, Government of India

VI. Concluding Remark:

People are searching and best utilize these natural resources according to their needs. The demographics population of Karnataka is a multifarious subject, which is undergoing dynamic change. To understand the population it is very important to understand its all characters in which age composition has an important role. The working population and work participation rate highlights the occupational distribution of a states. The information is essential for calculating state domestic product at factor cost popularly known as “State Income” for important tertiary sectors by adopting statistical methods of interpolation/extrapolation. The generally well performing states are Kerala, Delhi, Himachal Pradesh, Goa, and Punjab, which occupy the first five places in the years. The pace of urbanization has been faster in the state. The level of urbanization has also been faster than most other states. The numbers of urban centers with more than one lakh population have grown slowly over the last thirty years. The distinguishing feature of Karnataka economy is its regional imbalances.

Though the improvement in literacy rate of urban areas is comparatively lower than the literacy rate of rural areas, but the literacy rate in urban areas have always been highest than the literacy rate of rural areas. During 2011. Total Fertility Rate (TFR) is another indicator or determining factor implying potential for population change. It refers to average number of children that would be born per woman if all women lived to the end of their childbearing years and bore children according to a given fertility rate at each age. the life-expectancy in Karnataka stood at 60.7 years which is consistently increased up to 69 years. Gender-wise profile indicates that the life-expectancy of females are higher than males.

The demographic population of Karnataka is a multifarious subject, which is undergoing dynamic change. To understand the population it is very important to understand its all characteristics in which age composition has an important role. Its population increased by over 5.31 per cent and 5.13, 5.05 per cent between 1991 to 2001 and 2001 to 2011 respectively. Work is defined as participation in any economically production activity with or without compensation, wages or profit. Such participation may be physical and/or mental in nature. Work involves not only actual work but also includes effective management and direction of work. The main point to note is that the activity should be economically productive.

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