SUMMARY AND CONCLUSIONS

Karnataka state is located in western part of the Deccan peninsular region of India between 11°35' and 18°35' North latitudes and 74°5' and 78°35' East longitude. It is the seventh largest states of the country in terms of size, covering 5.83 percent of the total area of the country and 5.3 percent of population of the nation. The state consists 27 districts, 175 taluks and 745 hoblies. Physiographically state may be divided into three regions viz (i) The maidan (ii) The malnad (iii) The costal. Geologically more than three fourth of the total geographical area of the state is covered by the oldest rocks of the earth and substantial part of north Karnataka is covered by Deccan trap. The drainage system of Karnataka can be classified into two divisions, the east flowing and west flowing, among east flowing, Krishna, cauvery and their tributaries are major river system in the state, among west flowing Kali, Sharavathi and Nethravathi are important river system. Climatically it experiences tropical monsoon type. The state consists of wide variety of soils; the major soils are laterite soils, Red soils, Black soils, alluvial soils the annual rainfall in the state varies from 50 to 350 cm.

Agriculture is the main economic activity in the state and nearly 65 percent of the total workforce is employed in agricultural sector. 56.22% of the total geographical area of the state is net sown area and 16% is covered by forest and the remaining land is under other categories of land use, 24% of the cultivable areas get irrigational facilities. The major crops of state are cereals, pulses, oil seeds and cash crops. The state produce about 85 lakh tones of food grains, 17 lakh tones of oils seeds and 10 lakh tones of other crops. And there are about

172
several large and medium scale industrial units and small and village industries found in Karnataka, employing several lakh people. The major industries of Karnataka are iron and steel, engineering, machine tools, automobile, silk, sugar, paper, soap, fertilizers, cement, watches, sandal wood oil, vanaspati and motor cycles. The growth rate of the economy of the state was 6.2% during the period of 2000 –2001 and growth rate of industry was 7.1%, agriculture was 3.2% and tertiary sector was 7.2% and the state is also in the forefront in information technology sector and also in the field of transport and communication state’s position is better.

The first hypothesis of the present study was that there is spatial variation in demographic characteristics in the state. And fifth hypothesis is that the historical, geographical, social and political factors play major role in differentiating the state demographically from one part to another. The following findings prove both the hypotheses of the study.

Distribution and density of Karnataka’s population is not same all over the state. Topographical and climatic condition socio-economic and spatial relations affected the distribution and density of population in the state. Distribution of population varies from concentration of index of $< 0.50$ to $> 2.50$. In 2001, very high population concentration of more than 2.50 is found in small pocket of north western part, south coastal southern part of the state where industries are very well developed and commercial activities and urbanization is predominant. Very low population concentration of less than 0.50 is found in malnad region, northern part of costal and pocket of central part of Karnataka, because of hilly character and thickly forested, difficult terrain, isolated location and scarcity of rain.

Density of population in Karnataka has always been low compared to the national average since 1901 and in fact the gap between national and state’s
density has increased after 1951. There are wide spatial variations in Karnataka from one part to another part in density which is same as the national pattern. Regional pattern of the density in the state is associated with the different characteristics of the regions in the state. The high density in some is attributable to either the location of urban and large scale industrial and commercial centre or the intensive agriculture operation usually accompanied by irrigation in them. Malnad region with its hilly terrain and large forests has a very low density. The density has gradually increased in north western part of the state since 1961. Increase in the rate of density was very high in south eastern part of the state due to urbanization and industrialization of the region. The growth rate of density was very low in the long belt along the malnad region and north eastern part of the state since, 1961 due to the vast forest areas which are not available for settlements on large scale in the former region and little and uncertain rainfall and inadequate local source for irrigation in the later.

Population growth of the state has been much lower compared to the national average. The states decadinal population growth rate was not similar in all decades it varied from decade to decade, negative population growth rate recorded in during the decade of 1911-21, but after the decade of 1921 it was continuously increased up to decade of 1981, but it starts the dealing trend after decade of 1991. In the decade of 2001 state's average of population growth rate was 17.25 percent and also growth rate is not equally distributed all over the state.

In the decade of 1961 to 1971 decadal population growth rate was very high in the Hydrabad – Karnataka region, and in south eastern part of the state, But an interesting point to note here is that in Hydrabad-Karnataka region's population growth was much higher in the decade of 1961 to 1971, compared to 1991 to 2001, which brings as important point to light that is there is little improvement in this region both socially and economically.
An important and a major change that has taken place in the population growth between 1961 to 1971 and 1991 to 2001 is that the entire malnad region and south of southern maidan which had very high growth of population in the decade of 1961 to 1971 shows low growth of population in the decade of 1991 to 2001.

Regional pattern of the population growth in the state is associated with the different characteristics of regions in the state. The regions which have recorded high population growth rate are either industrially or agriculturally prosperous; the latter with irrigation, generally large urban centers exist in these areas. Over the period of 40 years the lower population growth is recorded in the belt of malnad and west of Bangalore. The lower population growth is mainly attributed to mainly geographical and economic conditions of that region. Malnad region is hilly terrain and large area is covered by dense forest, west of Bangalore region is mainly dry area with no irrigational facilities and no major industries. Number of taluk in the range of negative population growth has decreased from decade to decade but it was high during the decade of 1981-91. These taluks are mainly found in drier and hilly part of the state. In these taluks migration is predominant. There has been a gradual decrease in the population growth rate in southern maidan, malnad and coastal region since the decade 1961-71. North-eastern part maintains a very high population growth rate since the decade of 1961-71, north western part of northern maidan also maintained a relatively high population growth since the decade 1961-71.

Karnataka state has always maintained a higher sex ratio compared to the national average since 1901 and in fact the gap between national and state’s ratio has increased after 1961. There has been consistent lowering of sex ratio both at the national and state level which is very puzzling and very difficult to account for because it requires extensive primary level investigation. Higher sex ratio in Hyderabad-Karnataka indicates out migration of males in search of jobs outside
the region where the same higher sex ratio in coastal belts reflect the impact of not only out migration of males but also changes in the social structure of the region in terms of higher literacy, better treatment of females etc.

Regional pattern of the sex ratio is closely associated with the type of economy of different regions in the state. The regions recording high sex ratio suffer from poor agriculture and show emigration, while the regions of low sex ratio have undergone an industrial development attracting an in-migration. Lower sex ratio in Bangalore and higher in the surroundings of Bangalore reveals the direction of male’s migration. There has been a consistent and the gradual increase in the sex ratio of Malnad region since 1961 which is responsible for the widening gap between the sex ratio of Karnataka and India after 1961. There has been improvement in the sex composition of Hyderabad-Karnataka region though at a slower rate reflecting the impact of government efforts and the resultant changes in the society.

In 1961, percentages of agricultural workers to total workers was very high in southern maidan, north of south eastern part, central part of the state, northern maidan and north western part. However the percentage of agricultural workers to total workers has rapidly decreased in the coastal region and malnad region and in south eastern part in 2001 compared to 1961, because the activities such as mining, fishing, plantation, animal husbandry, were under the category of Agriculture, but in 2001, above said category of occupations were considered as non agricultural activities, hence the agricultural workers have decreased in 2001.

Karnataka’s percentage of agricultural workers to total workers is always lower compared to the national average since 1961 except 1991. There are wide variations in Karnataka from one part to another part in terms of percentage of agricultural workers to total. Very high percentage of agricultural workers to total workers is found in southern maidan, central part of the state, northern maidan,
north western part and north eastern part of the state. Regional pattern of percentage of agricultural workers to total workers in the state is associated with the differences in structural characters of the region. Regions which have recorded very high percentage of agriculture workers to total workers are normally under developed in non agricultural sector. The regions which have lower percentage of agricultural workers to total workers are mainly found in malnad and costal belts. The decreasing rate of percentage of agricultural workers to total workers is high in southeastern part of the state.

Karnataka’s percentage of nonagricultural workers also is always higher compared to the national averages since 1961. There are wide variations in Karnataka from one part to another. Very high percentage of non agricultural workers is along costal, north and south of malnad region, pocket of south eastern part and small pocket of south of southern maidan and extreme west of north western part of the state. The regions recording higher percentage show the diversified economic activities. Southern maidan, central part of the state, northern maidan north eastern part and northwestern part of the state show lower percentage. The growth rate of non-agricultural workers is very high in costal region and in north and south of malnad region and in pocket of southeastern part of the state.

Karnataka has a better share of urban population to total population compared to the national average. There is however wide variation in Karnataka from one part to another part. Very high proportion of urban population is found in pocket of south – eastern part, south of southern maidan, south and north of costal, east of malnad, central Karnataka, northern maidan, north eastern part, west of north western part. The higher proportion of urban population to total population in some regions is attributed to the characteristics like industrial and commercial developments. Very low proportion of urban population to total population is
recorded in west of Bangalore, along the malnad region, central part of Karnataka and northern maidan. Number of taluks in range of non urban population has decreased from decade to decade but it had little variation during the decade of 1991, because of changes in the definition of urban. The rate of increase in urban population to total population is high along the costal belt and central Karnataka, increasing rate is slow in southern maidan and northern maidan, increasing rate is better in some part of malnad, north eastern and south of northern maidan.

In 1961 proportion of urban population was very high in south eastern part, east and south of southern maidan, east of malnad, south of northern maidan and south of north eastern part. In 2001 proportion of urban population has much improved in south and north of coastal belt, central part, north western part and north eastern part of the state, because of development non agricultural sector.

The percentage of scheduled caste population to total population in Karnataka is lower than the country's average over the period of time. In 1961 the state's SC population was 13.0 percent it has increased to 16.81 percent in 2001, mainly because in 1976 the government had included some category of backward castes in SC groups; hence, the percentage of scheduled caste population has increased in 1981.

There are wide variations in Karnataka from one part to another part in percentage of scheduled cast population over the period of time. Very high percentage of scheduled caste population is in extreme east of south eastern part, pocket southern maidan, north of northeastern part; the higher percentage of scheduled caste population to total population in these regions is attributed to the characteristics like agriculture predominance, etc.

Very low percentage of scheduled caste population to total population is recorded in south of costal and small pocket of extreme north of costal and malnad
region. Number of taluks in the range of higher percentage of more than 25.0 percent has increased from the decade 1971 onwards; number of taluks in the range of lower percentage of below 5.0 has decreased in 2001 compared to 1961. The percentage of scheduled caste population to total population is very rapid in north of northeastern part and extreme east of southeastern part, but it is low along the malnad and costal region.

The trend of Percentage of scheduled tribe population to total population in India has been same as scheduled caste population over the period of time. Country’s ST Population was 6.8 in 1961; it has increased to 10.1 percent in 2001. During 1971-1981 nearly one percent of ST population was added because in 1976 the government of India has added some minority groups in to ST. Once again some communities were incorporated in to ST population during 1991-2001; hence the percentage of ST population has increased during 1991-2001.

The percentage of scheduled tribe population to total population is lower in Karnataka compared to the country’s percentage over the period of time. There is wide variation in Karnataka from one part to another part in terms of the percentage of scheduled tribe population to total population. Very high percentage of scheduled tribe population is found in eastern and central part of the state, north and south of north eastern part and small pocket of the south of southern maidan in 2001. Very low percentage of scheduled tribe population is recorded in middle part of southern maidan, north of costal, north of malnad, extreme north of northern maidan. The number of taluks in the range of non tribal population has decreased from decade to decade due to the merge of backward classes into ST population. The number of taluks in the higher percentage of more than 15.0 ranges has increased from decade to decade. The number of taluks in the range of lower percentage of below 3.0 ranges decreased from decade to decade. The percentage of scheduled tribe population to total population is very rapid in eastern...
and central part of the state, south of northeastern part. The percentage of scheduled tribe population to total population is low in middle part of southern maidan, north of malnad, coastal and north of northern maidan.

Percentage of total literacy rate is also not uniform over the state there is wide variation from one part to another. Malnad and coastal region of the state is important highest literacy belt, this region's average literacy rate is >75%, in this region socio economic condition is better, educational faculties have improved and non agricultural activities are predominant, pocket of south eastern part is one more important part of higher percentage of literacy rate in the state, this part is administrative center of the state highly urbanized and economically industrially forward region, large number of educational institution are established and also in migration is very high.

Very lower percentage of total literacy rate is recorded in Hyderabad-Karnataka region, extreme south of southern maidan and north of northern maidan due to the under development of education sector and rural bias. The percentage of total literacy rate is very low in those areas where agriculture is very predominant and larger proportion of population resides in rural areas due to lack of educational facilities in rural areas and majority of agriculturalists are uneducated. Those regions which have recorded lower percentage total literacy rate are also the regions where scheduled caste population is highly concentrated as average literacy rate is very low among scheduled castes compared to the general group.

In 2001, the percentage of female literacy rate was 57.45% in the state, it was higher than the country's average but spatial distribution of female literacy is not again equal in the state, the highest percentage of female literacy rate of >65.0% is mainly found along costal and malnad region, in this belt the sex ratio being very high and female dominated house hold industries are also very high, improvement in socio-economic condition and better educational facilities. Female literacy rate is also very high in small pocket of south eastern part, south
of southern maidan, central part of the state and extreme west of north western part of the state reason for they are development of urban centers and service sector, availability better educational facilities and establishment of educational institutions.

Very low percentage of female literacy rate is mainly recorded in Hyderabad-Karnataka region, north of northern maidan, extreme south of southern maidan. The percentage of female literacy rate is very high in the places of urbanized area and where non agricultural activities are predominant. Those places which have high percentage of female literacy rate also have high percentage of total literacy rate. This is also true of the place of lower percentage. The percentage of female literacy rate is very slow in the places where agricultural activities are predominant and in non-urbanized area.

The following nine demographic indicators were selected as criteria to delineate the demographic regions of Karnataka state. The variables are

i) Density of population 
ii) Growth of population 
iii) Sex ratio 
iv) Literacy 
v) Female literacy 
vi) Population of urban population to total population 
vii) Ratio of non agricultural workers to total workers 
viii) Ratio of scheduled caste population to total population 
ix) Ratio of scheduled tribe population to total population.

On the basis of the composite score of the variables following demographic regions have been demarcated. They are

1. Very high developed demographic region.
2. Relatively high developed demographic region.
3. Moderately developed demographic region.
4. Low developed demographic region.
5. Very low developed demographic region.

The second hypothesis of the study area is that the Coastal area appears to be demographically forward region due to historical and educational factors. The following findings prove this hypothesis.

Very high developed population region of the state is mainly concentrated along the costal belt because this belt is predominated by non agricultural activities in this belt literacy (both total and Female) and sex ratio are very high and decadal population growth rate and density is very low except Mangalore, Kundapura, Udupi and Kumta taluks in coastal region and Badravati and Shimogga taluks in malnad regions. In Malnad part plantation activities are predominant and this belt literacy (both total and Female) and sex ratio are very high and also decadal population growth rate is low. Here one interesting point is that Scheduled caste and scheduled tribal population is very low and low level of urban development except Mangalore and Karwar taluks in coastal and Shimogga in malnad region. These are attributes of very high developed population regions.

Seven taluks of Southern maidan, three taluks in northern maidan region is another important parts of the very high developed population regions of the state. These parts are characterized by high urbanization; percentage of non-agricultural activities like commercial, industrial activities is more than in the other parts of the state. Density is more particularly surrounding area of Bangalore, Huballi-Darwad and Balgam taluks than in the other parts of the region. Scheduled caste and scheduled tribe population is low both general and female literacy is more but sex ratio is low. Further the population growth rate is very high due to the migration from other parts of the state and country.
Southern maidan and malnad areas have demographic characteristics, which are favourable, and similar/closer to Kerala / Tamil Nadu pattern. This is fourth hypothesis of the study area and following paragraphs proves this hypothesis.

Twenty seven taluks have recorded total rank of between 501-600, which are relatively high developed population regions of the state. This taluks are located adjoining the very high developed regions of the state, some part of southern maidan (10 taluks), very small pocket of central part (2 taluks) and little portion of northern maidan (3 taluks) of the state is important relatively high developed population region of the state, because these parts are characterized by urbanization, and small industries and also here commercial activities more and some taluks are both taluk and district head quarters in this regions. 12 taluks of malnad region is comes under the above said range, and larger proportion of people are engaged in plantation activities and also in this belt sex ratio and both general and female literacy is very high.

Forty one taluks have recorded total rank between 651-800, which are moderately developed population regions. These are distributed over the entire state. Out of this 6 taluks are in malnad region where larger percentage of population is engaged in plantation and forestry activity and in this part both total and female literacy is high and sex ratio is also high and territorially closer with high developed population region. But density of population, percentage of urban population to total population and SC and ST population is very low. 18 taluks of southern maidan is another moderately developed population region, these taluks are in and around the Bangalore and this region emerged as mini industrial center of the state and good transport facilities and also an improved commercial activity and again it is closer with high developed population regions.
The third hypothesis of the study was that Northern maidan of the state is closer to demographic characteristics of north India. The following conclusion proves this hypothesis.

Thirty one taluks have recorded total rank between 801-950, which are considered as low developed population regions. 13 taluks in northern maidan region important belts of low developed demographic region of state. this parts are largely rural bias, higher percentage of people depend upon agriculture, lack of industries and irrigational facilities, General and female literacy is low, population growth rate is high are other features of this region and also they are backward both economically and commercially. Low developed population region is mainly found in some part of southern maidan region (11 taluks), because these taluks are socio-economically backward taluks of the state and in this part larger proportion of people are engaged in agricultural activity which depend upon rainfall. Total general and female literacy rate is very low and there are no development of industries and low degree of urbanization. SC and ST population is more, Sex ratio and density of population is low, and population growth rate is moderately low.

The remaining fifty taluks of the state recorded total rank of more than 950. These are Very low developed population region. Which are found in north-eastern part and small pocket of extreme west of north western part, extreme south and north of southern maidan and extreme east of south eastern part of the state. These parts are socio-economically highly under developed and characterized by very low degree of urbanization. Very higher percentage of population depend mainly upon agriculture which is subsistence type, low lack of effective transport facilities, lack of industrial development and household industries and also in this region population growth is very high and mass illiteracy is more, percentage of SC population is high and density of population is low. These findings amply prove the last hypothesis of this study which states that subsistence and backward
agriculture appear to be major factor for demographic under development of the region.

**Limitation of the study**

This kind of study using the secondary data at micro level generally suffers from some limitation. Some of the major limitations of the study are maintained here. One of important limitations is that appropriate secondary data at taluk level are not available for all the demographic variables in all the decades. Some relevant secondary data is confined at district level and above, another important limitation is that it is very difficult to give plausible explanation on the basis of secondary data because of accurate information about different sector like Agriculture, Industry and other economic variables is not available at taluk level in year by year.

**Scope for further research**

The present study was able to bring out a broad aspect of demographic disparity in Karnataka state. The scope and content of the study is too vast for an individual researcher to make an in-depth analysis of various aspects of demographical variables.

There is lot of scope for researcher to concentrate further on various aspects, an important area that needs to be researched further is that viz. growth of population, distribution and density of population, literacy occupational structure, urbanization, migration, distribution scheduled caste and tribe population should be under taken individually for detailed research. Such demographic analysis of the state is very useful asset to the government and the planners to undertake policies and programmes for better development.