

Levels of demographic development of Kathua town: A geographical analysis

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Abstract: Demography is a vital indicator which is helpful for the process of development in a region or area. As man is the major source of developmental process. The proposed study deals with the study of levels of demographic development of the study area. There are four sub indicators of demography which have been taken in the present study. These include i) Total population ii) Density of population iii) Sex ratio and iv) Population growth rate. On the basis of these indicators the ward wise levels of demographic development of the study area is obtained during the year 2001. The levels of demographic development are computed through composite score. Composite score of each wards of Kathua town has been calculated separately. The data collection for the proceeding study is done through primary and secondary survey. The study reveals that there is a great variation in the levels of demographic development of Kathua town. In the study area distribution and density of population are generally higher along the national highway because of industrial growth and better employment opportunities. The population distribution and density is also higher near the down town area where there is facility of all sort of marketing. The population and area of the study area is increasing with time. There are certain factors which are responsible for increasing population of study area. These are: Urban employment, Industrial growth, Educational hub, Administrative unit, Migration due to construction of Ranjit Sagar Dam, Better infrastructure facilities etc. The study area has slightly low to balanced sex ratio and the female enjoy good status and get better employment and education opportunities.

Key words: Composite score; demography; development; indicator; Urban employment.

Introduction

The term demography has been derived from two Greek words meaning 'Demos' the people and 'graphy' to draw or write. Thus literally speaking, demography is concerned about writing concerning the people (Sharma, 2000). The Science of Demography is related with compilation, categorization, inter-relating the data regarding habitation, background sex composition, age structure co-habitational practices, birth, death, procreation, natality, morbidity and migration. It is a study of population behaviour over time and its causes and consequences in temporal and spatial details (Pande, 1990). Demography plays a significant role in the development process of a town or region. The process of development to a large extent is determined by demography of an area, which forms the main ingredient of space. Traditionally it has been recognized as both a factor and a consequence of development (Spengler, 1968) It is well-ascertained fact that the demographic pattern and process of Socio-

economic development cannot be separated from each other. It is to be realized that demographic development is a major component of development process. Various scholars have explained the demographic development in their writings and explanation, while attempting to study over all economic development. Social Statistics division of United Nations identified sixteen demographic indicators and grouped them into four categories: Population stock, birth, deaths and migration. Some additional demographic indicators were also listed under categories and sub-categories (Social Statistics Division, 1975). Rao (1977) suggested sixteen population indicators to discern the stage of Socio-economic development. Growth rate, birth rate, death rate, general fertility rate, net rural-urban migration rate and percentage of urban population. His focus was on different elements of population dynamics as representative of development level. A major point of caution in this case would be to interpret a given population dynamic only in the context of total situation of an area. For instance, rural-urban migration may suggest a high employment potential of towns but in reality, it could be the consequence of rural impoverishment as is the case in many of the densely populated developing countries. Gosal and Krishan (1979) examined the demographic aspects of development through fourteen indicators: one pertaining to urbanization, four to literacy, and nine to occupational structure. Their attempt was pointed as a systematic analysis of pattern of demographic development.

Thus it is clear from the above review that demographic indicator is an important indicator for

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social and economic development of an area. In the present research, demographic aspects like size of population, population growth rate, density of population, and sex ratio have given due importance and been investigated. No doubt there are some other aspects of demography, like migration, birth rate, death rate, life expectancy and age structure etc. which are the indicators of socio economic progress: but data on these counts are generally not available for small units like ward wise. Hence these could not be adopted as indicators for proposed study. In the proceeding study the main concern is about the levels of demographic development of the study area. The levels of demographic development have been calculated with the help of composite score. The main thrust of this study is to find out the spatio-temporal variation of demographic development of Kathua town. The main objectives of the study were: (i) To find out ward wise levels of demographic development of Kathua town, (ii) To analyze how demographic scenario of the study area has been changed with changing time, and (iii) To highlight the reasons for increasing and decreasing demographic development of each wards of the study region.

2. Material and methods

2.1 Study Area

The area under study lies in the south of Jammu at the foothills of Shiwaliks. Its boundaries touch Syar khad in the north towards Jammu and Magar khad in the south towards Punjab. Where as it is bounded by foot hills of kandi Shiwaliks belt in the east and Andher plains in the west. The Kathua town stretches between $32^{\circ} 37'$ north to $75^{\circ} 52'$ east longitude (Fig., 1). The study area is well knitted with national highway and link roads which are supposed to be the arteries of economic development. According to the census of 2001 the total area of Kathua town was 12.31 sq. km. As for as the population of the study area is concerned it accounts for 53,555 persons according to the census of 2011. The Kathua town has Municipal Corporation and has 17 wards. The town has great market facility and well transports connection which facilitates the adjoining rural population. The study area has its own importance as it has great hub of industries in its outer growth provide employment not only to local resident but also to the residents of adjoining areas.

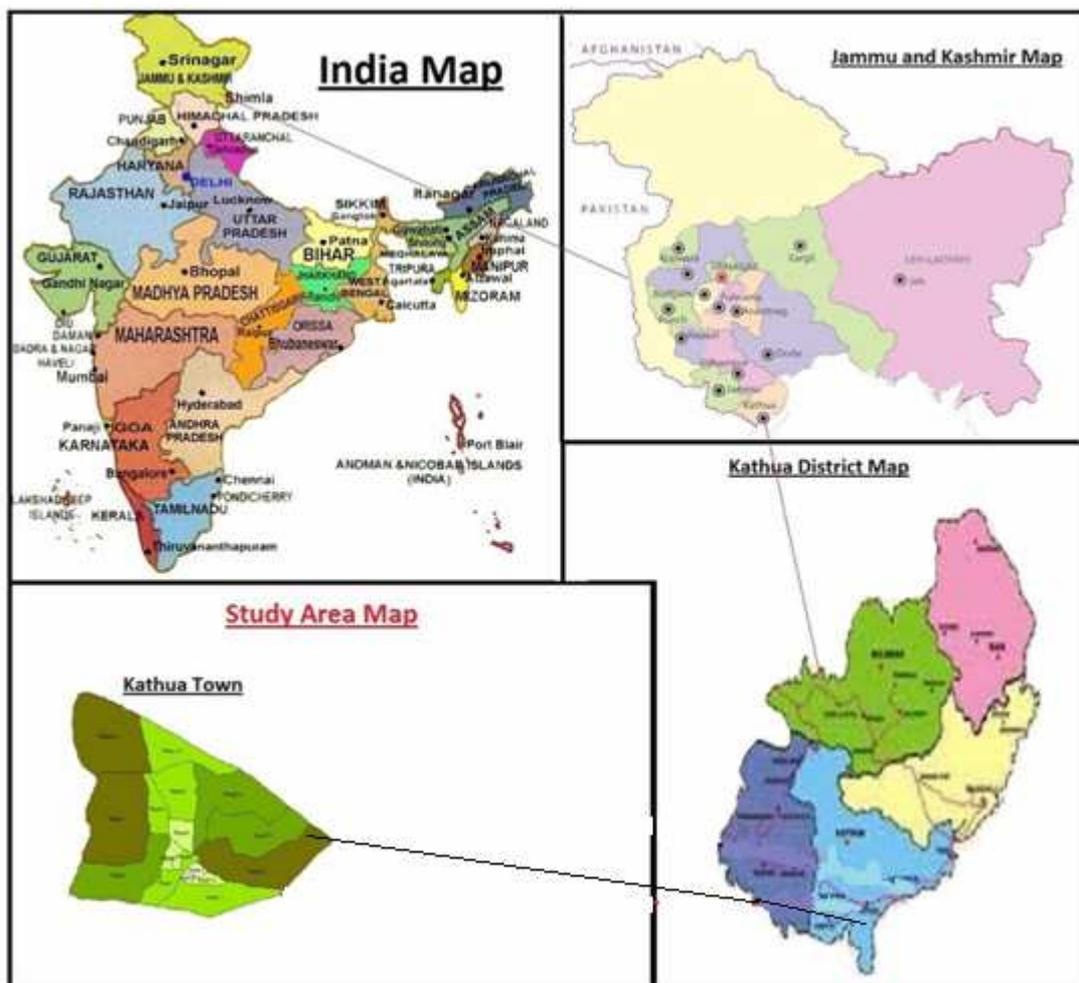


Figure 1. Location map of the study area

2.2 Methodology

Philosophy behind the basic methodology of this study is to assess how human welfare is determined by economic and spatial development which in the modern age is largely gauged through speed. In this study composite score is used to find out the levels of demographic development of Kathua town and for this the values of the indicators have been calculated for each ward. The values of the wards have been given weightage on the basis of the following formula:

$$W_{ji} = \frac{V_{ji}}{V_{ai}}$$

where W_{ji} = weightage on 'I' indicator 'J' ward, V_{ji} = value of 'I' indicator in 'J' ward, and V_{ai} = value of 'I' indicator in study area

After calculating the mean and standard deviation of each indicator their standardized values is found out and on the basis of the mean and standard deviation the values are grouped into five categories.

- Categories : Range of values
- High : Mean + (0.67SD) to mean + (1.15 SD)
- Medium : Mean - (0.67SD) to mean + (0.67SD)
- Low : Mean - (1.15SD) to mean - (0.67SD)

In spite of composite score certain quantitative techniques; GIS techniques, tables and simple statistical techniques were processed. Data collection is done through primary and secondary survey.

3. Results and discussion

3.1 Levels of demographic development

Demography is a vital indicator which is helpful for the process of development in a region or area. As man is the major source of developmental process. There are four sub indicators of demography which have been taken in the present study. These include; (i) Total population, (ii) Density of population, (iii) Sex ratio, and (iv) Population growth rate.

3.2 Total population

Figure 2 shows that ward no. 1, 3 and 13 had high concentration of population with composite score of more than 1.35 of Kathua town in 2001. This high concentration of population is because of large amount of migration to these wards from Basholi and adjoining areas due to construction of Ranjit Sagar Dam. The location of DC office and Government College near ward no. 1 and 3 also boost population distribution. The second line of population concentration i.e. medium category with composite score ranging between 0.65 and 1.35 is found in ward no. 2, 4, 6,7,10 and 12. This medium category of population concentration is because these wards are generally located near the market centre which facilitates the people to reside there. The third and the last line of population concentration with composite score less than 0.65 includes four numbers of wards i.e. ward no. 5, 8, 9 and 11. The reason behind the low

concentration of population in these wards is that these wards have less space for spreading of human population due to which people forced to migrate to other wards of the town which have open space for settlement. The category and composite score of total population of Kathua town ward wise is shown with the help of table 1 given below.

Table 1. Total Population of Kathua town.

Categories	Composite Score	Number of wards	Name of wards
High	> 1.35	3	1, 3 & 13.
Medium	0.65 - 1.35	6	2, 4, 6, 7, 10 & 12.
Low	< 0.65	4	5, 8, 9 & 11.

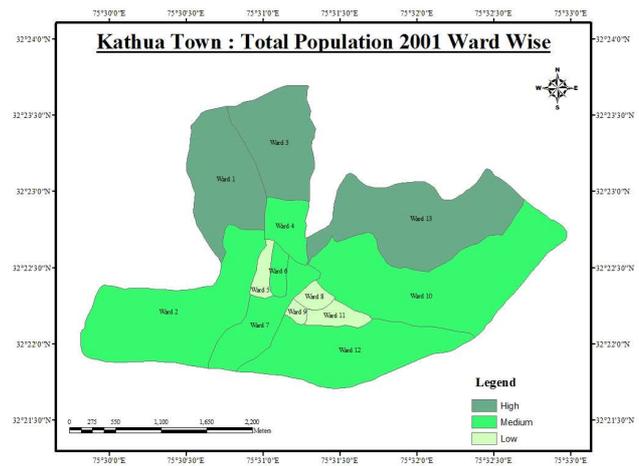


Figure 2. Ward-wise population of Kathua town

3.3 Density of Population

It is evident from figure 2 that ward no. 5, 6, 8 and 9 comes under high population density with composite score more than 1.64. The main reason behind the high population density of these wards is that the wards have less space and high population due to which persons per sq. km is higher in these wards. The second line of medium population density with composite score ranging between 0.34 to 1.64 includes five numbers of ward i.e. ward no.1, 3, 4, 7 and 11. The reason behind the medium density of population in these wards is that these wards have good infrastructure facilities and well developed colonies than other wards of the town. There are four number of wards in the low category of population density with composite score less than 0.34. It includes ward no. 2, 10, 12 and 13. The reason behind the low density in these wards is that these wards have larger area and less population. Some of these wards have well developed agricultural land due to which people do not sell their land for residential purposes, more over these lands were mostly occupied by land owners which restricted the settlement in these wards.

Table 2. Kathua Town: Density of Population 2001

Categories	Composite Score	Number of Wards	Name of Wards
High	> 1.64	4	5, 6, 8 & 9.
Medium	0.34 to 1.64	5	1, 3, 4, 7 & 11.
Low	< 0.34	4	2, 10, 12 & 13.

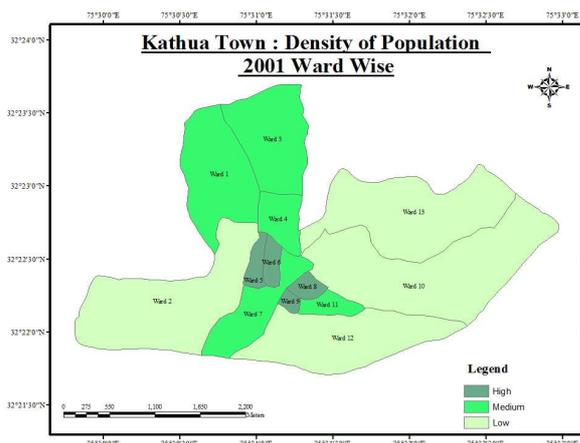


Figure 2. Population density in various wards of Kathua Town

3.4 Sex ratio

The next sub indicator of demography is sex ratio. Sex ratio is an important indicator for socio- economic development of an area. The area with high sex ratio depicts the high and healthy status of women in that area whereas on the other hand the area with lowest level of sex ratio shows the lower and poor status of women. Figure 3 tends to show that ward no. 6 and 11 comes under high sex ratio with composite score more than 1.06. The second line of medium category of sex ratio with composite score ranging between 0.96 to 1.06 includes nine numbers of wards i.e. ward no. 2, 3, 5, 7, 8, 9, 10, 12 and 13. These medium and high categories of sex ratio in these wards is due to male selective migration in these wards for the sake of getting employment in industrial and other sectors. Ward no. 1 and 4 comes under low category of sex ratio with composite score less than 0.96. This is because of high rate of female mortality in these wards.

Table 3. Ward-wise sex ration of Kathua Town

Categories	Composite Score	Number of Wards	Name of Wards
High	> 1.06	2	6 & 11.
Medium	0.96 to 1.06	9	2, 3, 5, 7, 8, 9, 10, 12 & 13.
Low	< 0.96	2	1 & 4.

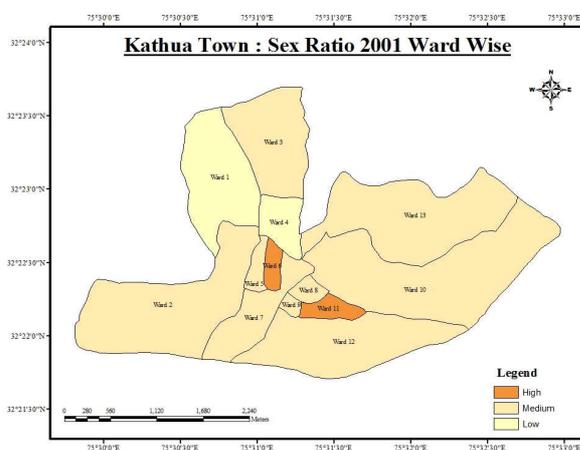


Figure 3. Sex ratio of Kathua town

3.5 Population growth rate

As we are talking about the population growth rate of Kathua town it was 35.58% in 1981 which increased up to 73.35% in 2001. This shows that in the gap of twenty years the population growth rate of Kathua town had increased up to 37.77%. This increase in population growth rate is because of expansion of Kathua town from 1.67 sq. km in 1981 to 12.31 sq. km in 2001 and secondly the natural cause of increase in population. It is evident from the figure no. 4 that ward no. 3, 4 and 13 comes under high category with composite score more than 1.48. This is because ward no. 3 and 4 were newly constructed wards and have well planned colonies which attract the people from densely populated wards to these wards. On the other hand ward no. 13 was well connected with national highway and industrial estate which attracts the people to reside there. That is why these wards depicts high population growth rate.

The medium category of population growth rate with composite score ranging between 0.52 to 1.48 includes ward no. 1, 2, 5, 6, 9 and 12. The reason behind the medium population growth rate in these wards is that most of these wards are near to market centers and occupied by government offices which facilitates the people to live there. The last category of population growth rate is low which includes ward no. 7, 8, 10 and 11. The low category of population growth rate in these wards is only because these wards are deprived of proper infrastructure facilities and other development programmes which force the population to migrate from these wards to other wards of the town.

Table 4. Population Growth Rate of Kathua town.

Categories	Composite Score	Number of Wards	Name of Wards
High	> 1.48	3	3, 4 & 13.
Medium	0.52 to 1.48	6	1, 2, 5, 6, 9 & 12.
Low	< 0.52	4	7, 8, 10 & 11.

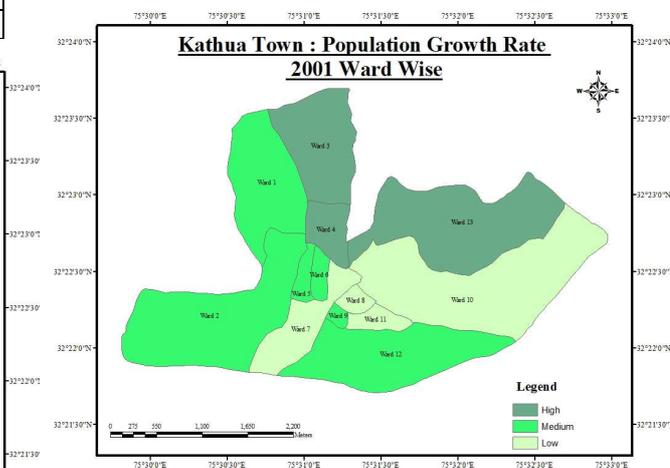


Figure 4. Population growth rate of various wards of Kathua town.

Conclusion

Demography is a vital indicator which is helpful for the process of development in a region or area. As man is the major source of developmental process. The process of development to a large extent is determined by demography of an area, which forms the main ingredient of space. Traditionally it has been recognized as both a factor and a consequence of development. It is well-ascertained fact that the demographic pattern and process of Socio-Economic development cannot be separated from each other. From the above discussions it is summarized that there is a great variation in the levels of demographic development of Kathua town. The study shows that the wards which are near the national highway and near the market centre have the high levels of demographic development. On the other hand the wards which have improper market facilities and less space for residential areas have medium and low levels of demographic development. The population and area of the study area is increasing with time. There are certain factors which are responsible for increasing population of study area. These are: Urban employment, Industrial growth, Educational hub, Administrative unit, Migration due to construction of Ranjit Sagar Dam, Better infrastructure facilities etc. The study area has slightly low to balanced sex ratio and the female enjoy good status and get better employment and education opportunities.

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