



PATTERNS AND TRENDS OF URBAN GROWTH IN THE DROUGHT – PRONE TAHSILS IN JALGAON DISTRICT (MAHARASHTRA STATE)

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Abstract

Urbanization is a form of social transformation from traditional rural societies to modern urban communities. It is long term continuous process. The level of urbanization is determined as the proportion of urban population to the total population of a region. We can express it in two ways; Percentage of urban population to the total population of a region and Percentage of decadal growth rate. It has been rightly said that the level of urbanization reflects the development of a nation. It varies from region to region and from place to place in a country. The study attempts to understand the Urbanization Process, Trend, Pattern and its Consequences based on census data during 1901-2011 in Jalgaon district. Community Development (C.D) blocks has been selected as the spatial unit for present study. The present study analyses the trend of urbanization and also detect the level of urbanization the study region on the basis of composite standardize values of some selected urbanity and socio economic indicators. The study region urban population has increased from 0.66475 lakh in 1901 to 4.02317 lakh in 2011 due to rapid industrialization and rural to urban migration. Level of urbanization in the study region was slow but it experienced high growth of urban population.

The result shows that Bhadgaon and Jamner (C.D.) blocks have been declared as the urban towns as per the census of 2011. The investigation shows that high level of urbanization has registered in Amalner and Chalisgaon tahsils, medium level of urbanization observed in Pachora tahsil, whereas low level of urbanization observed in Dharangaon, Parola and Erandol tahsils and remaining tahsils have very low level of urbanization registered in Jamner and Bhadgaon tahsils. This article reveals that there is intra spatial disparity in the urbanization level and economic activity of the selected C.D. blocks.

Keywords: Urbanization, Census component, degree of urbanization, trends and growth.

Introduction:

Urbanization is a process of population concentration, structural change and socio-cultural change affecting both people and place. The term urbanization has been used to outline the processes of alteration from a primarily rural to principally toward urban centers. The key dimensions of urbanization are a progressive concentration of people and activities towards towns and cities. Urbanization has also been stated as synonymous with urban expansion particularly the type of urban growth known as urban sprawl (Glaeser, E. L., & Kahn, M. E., 2004; (Bhatta, B., 2009). The Globalization has led to the rapid growth in the world economy and movement of the people, product, capital etc in a faster and easier manner. And because of Globalization, the one concept which comes into full swing is the urbanization. The urbanization has a concept is an integral part of the process of development. Both Industrialization and urbanization are inseparable, just as agriculture fosters villages; industry encourages growth of towns (Maheshwari, 2006). There exist a close relationship between urbanization and economic growth, and good example is the many developed or industrialized countries and also a few developing countries. As a result, many populations are living in urban areas, because cities, towns and other urban areas have facilitated the evolution of knowledge and have been the incubators of civilization and the engines of growth (Singhsodhi, 2003). But, the urbanization process is also accompanied by number of problems, because of unmanageable growth of population in urban areas, and it is related to provision of basic facilities and services in urban areas like water supply, sanitation, housing, transport etc. In India, which is one of the fastest

developing economies, the urbanization process has been growing in good proportion.

Urbanization: A Concept

In the year 1950, only about 30% of the world population lived in urban areas, which increased to above 50% in 2012. It was estimated that by the year 2030 more than 70% of world people will be living in urban areas. The term 'urbanization' means the increasing share of a nation's population living in urban areas. A nation's urban population can grow from natural increase, net rural to urban migration and reclassification [as what was previously a rural settlement becomes classified as urban or as an urban settlement's boundaries are expanded, bringing into its population people who were previously classified as rural] (Satterthwaite; Gordon, and Tacoli., 2010). According to the Census definition of India, an urban area consists of (Census of India, 2011):

1) All Statutory Towns: All places with a Municipality, Corporation, Cantonment Board or Notified Town Area Committee, etc. so declared by State law; and

2) Census Towns: which places and satisfy following criteria:-

- * a minimum population of 5000 ;
- * at least 75% of male working population engaged in non agricultural pursuits; and
- * a density of population of at least 400 persons per sq km.

Furthermore, Population Census in India classifies urban settlement into six size classes as per the limits indicated below

(Kundu, 2001):

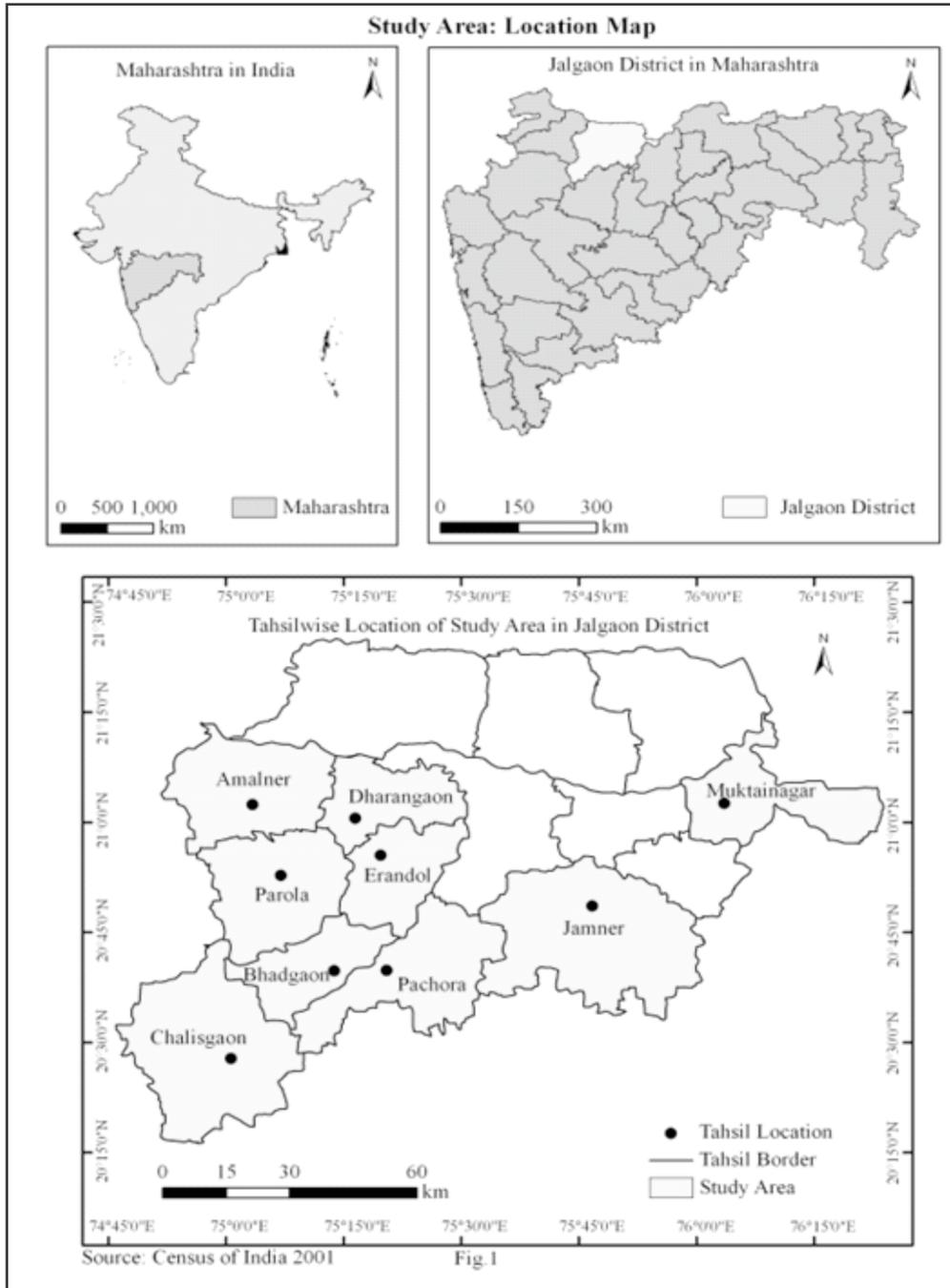
| Population Size | Category |
|------------------|-----------|
| 100,000 and more | Class I |
| 50000 to 100000 | Class II |
| 20000 to 50000 | Class III |
| 10000 to 20000 | Class IV |
| 5000 to 10000 | Class V |
| Less than 5000 | Class VI |

Study area

The region selected for the study is the drought-prone tahsils. They are located in the Jalgaon district of Maharashtra State. There are 09 drought-prone tahsils identified by V. Subramaniam, (Review Committee, 1987). These tahsils are Amalner, Dharangaon, Parola, Erandol, Chalisgaon, Bhadgaon, Pachora, Jamner and Muktainagar. Looking into its delicate ecology and poor socio-economy, the study region is one of the most vulnerable regions of Maharashtra State. The topography of the region is hilly, plateau, undulating and rolling. The degraded soils with exposed rocks resulted from severe erosion is the common landscape. It covers an area of about 6994.54 km². It lays between 20°11'0" to 21°13'0" North latitudes and 74°46'0" to 76°24'0" East longitudes (Fig. 1). Average rainfall is 682.8 mm in the said area. Also, temperature and relative humidity varies 18°C to 35°C and 45% to 72% over the year respectively.

Objectives

- * To analyze the spatiotemporal pattern of urbanization of the selected C.D. block.
- * To assess and identify the trend of urbanization in the C.D. blocks of the study area from period 1901-2011.
- * To find out the main causes responsible for urbanization and intra – tahsil inequalities in levels of urbanization in the study region.
- * To suggest appropriate measures for regional inequalities in urbanizations.



Database and Methodology:

Data for the purpose of spatiotemporal behavior of urbanization, growth trend of individual urban centers have been collected mainly through census publications, i.e. Town Directory, District census Handbooks, Jalgaon, (1971-2011) Maharashtra State. Several statistical publications of the government, Census of India, and published articles and journals from government and other organizations have also taken into consideration. The descriptive statistics and cartographic techniques would be applied in the present study to examine the trend of urbanization in the study region. The study is based on the secondary sources of data. Decadal variations in urban population of 8 towns have been collected for the spatiotemporal trend and pattern analysis. Information data about the independent variables would be obtained from the related agencies and topographical sheet.

Being the thrust on the level of urbanization only those C D blocks which have urban area selected for the present study and other C D blocks have been exempted. Several indicators have been selected for calculating the urbanization level of each C D block. These are as follow: i. % of Urban Area to the total area of the C D block (U.A). ii. % of Urban Population to the total population of the C D blocks (U P). iii. Urban Population Density (U.P.D) = urban population / urban area of the P.S/ C.D block. iv. % of Urban Households to the total households of the C.D. blocks (U.H). v. Female Literacy Rate (%) (FLR) = (literate female/ total female)*100. Vi. Male Literacy Rate (%) (MLR) = (literate male/ total male)*100. Vii. Urban sex ratio (USR) = (Female Population / Male Population x 100). Z score for each indicator for each C.D. block has been calculated by using the following formula; $Z_j = (X_j - \text{Mean of } X_j) /$

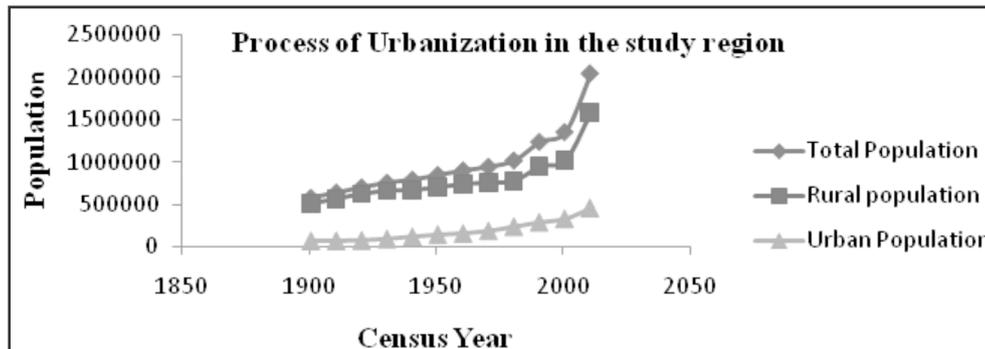


Fig.2

Table - 1 Volume, level of urbanization and urban rural ratio in the study region (1901-2001)

| Year | Total Popn | Total Urban Popn | Total Rural Popn | % of Rural Popn. to total popn | % of Urban Popn to total Popn | Decadal growth rate of Urban Pop. | Urban Rural Ratio |
|------|------------|------------------|------------------|--------------------------------|-------------------------------|-----------------------------------|-------------------|
| 1901 | 571193 | 66475 | 504718 | 88.36 | 11.64 | 0.00 | 0.13 |
| 1911 | 632990 | 69231 | 563759 | 89.06 | 10.94 | -6.02 | 0.12 |
| 1921 | 695620 | 74661 | 620959 | 89.27 | 10.73 | -1.87 | 0.12 |
| 1931 | 751200 | 91965 | 659235 | 87.76 | 12.24 | 14.06 | 0.14 |
| 1941 | 786200 | 117475 | 668725 | 85.06 | 14.94 | 22.05 | 0.18 |
| 1951 | 841700 | 141868 | 699832 | 83.15 | 16.85 | 12.80 | 0.20 |
| 1961 | 895200 | 155182 | 740018 | 82.67 | 17.33 | 2.85 | 0.21 |
| 1971 | 938396 | 184091 | 754305 | 80.38 | 19.62 | 13.17 | 0.24 |
| 1981 | 1013314 | 235733 | 777581 | 76.74 | 23.26 | 18.59 | 0.30 |
| 1991 | 1232578 | 284897 | 947681 | 76.89 | 23.11 | 4.27 | 0.30 |
| 2001 | 1349962 | 326547 | 1023415 | 75.81 | 24.19 | 4.65 | 0.32 |
| 2011 | 2042033 | 452083 | 1589950 | 77.86 | 22.14 | -8.48 | 0.28 |

Source: Jalgaon District Census Handbook, 1901-2011

percent rural has shown the gradual decrease from 88% to around 75% over the study region. The degree of urbanization in the study region has moved up from 12.24 in 1931 to over 24.19 in 2001 which recorded an increase of 169.33 percent per decades. An annual increase of 2.4 percent has been recorded, which decreased of percent – 8.48 in 2011. However during the decade of 1911-21 the average annual rate of decrease in the level of urbanization is about- 6.02 % to -1.8 % and it has further stretch to 0.64% in the year 1991. Demographically, the speed of growth known as 'tempo of urbanization' which has noticeably plunge down from 18.59 % in 1981 to -8.48 % in 2011 resulting from the reduction of urban area. At the moment, the study region is among the district of low level of urbanization. The urban towns have grown from 6 in 1981 to 4 in 2011. Number of population residing in urban areas has increased from 91965 in 1931 to 235733 in 1981 (fig 2 & table 1). At this instant, as per 2011 census there are 1 IV and 1 VI Class towns in the study region. The IV class town having more than 10000 population and VI class town having less than 5000 population. They have accommodated only 2.35 percent of urban population. The study region is one of those regions in Jalgaon district of Maharashtra State, which is traditionally rural in character with agriculture and allied activities being the primary occupation of its population. The study region is one of the least urbanized regions of the Jalgaon district. While the share of urban population to total population of the region in 1921 was only 10.73 %, it increased to 24.19% in 2011, which is still lower than the national average of 27.78% (fig 2).

Urban-rural ratio is measuring number of urbanites for each rural person in an area unit experiences an increasing trend during 2001 and decreasing trend during 2011 in the process of urbanization in the study region. The urban-rural ratio for the study region in 2011 turns out to be around 24, meaning that against every 100 ruralites there are 24 urbanites in the study area in 2001. All these indices pinpoint that the study area is in the process of urbanization and it is at the acceleration stage of urbanization (fig.3).

Urbanization in the study area has been relatively slow compared to Jalgaon district of Maharashtra State. In 1901, there was only 11.64 percent urban population in the study region. This implies that the urban population has increased three folds in last 100 years. But the urban population shows fluctuating trends from decade to decade. Table - 1 supports this statement. 1911 witnessed negative growth rate of urban population. It was 11.64 percent in 1901, which decreased to 10.94 percent in 1911 and 10.73 percent in 1921. It was because of famine and plague that occurred in 1901-1921. The decade 1911-1921 was associated with influenza epidemic. In 1931, again there was negligible increase in the level of urbanization, it was only 12.24 percent. 1921-1931, was the year of agricultural depression. Therefore, in the span of first 30 years i.e., 1901-1931 there was slight increase in the level of urbanization. It was mainly after 1931, that the urbanization process gained momentum and the urban population increased at a faster rate. In 1941, it was 14.94 percent and the growth rate was 14.06 percent during 1931-41. The decade 1941-1951 records of the high growth urban population i.e. 22.05 percent and the percentage of urban population in urban areas was 16.85 percent. It is because of independence of India. However, in the year 1951-1961 the decennial growth rate in the study region showed a declining trend after reaching the peak in 1961-1971. In 1971-1981, it was 18.59 percent and the level of urbanization was 23.26 percent. It slightly decreased 23.11 percent in the year 1991, and the decadal growth rate of the year 1981-1991 was – 0.64 percent showing the continuation in the trend. In 1991-2001, it was increased 24.19 percent urban population in the 2001 census, which slowly decreased 22.14 in 2011. It is because of globalization small town population diverted towards metropolitan centers, and newly two urban centers namely Bhadgaon and Jamner originated in the study region. The third reason was agrobased industries and cooperative sectors collapsed due to mismanagement create lack of employment these reasons are responsible for decreasing urbanization in the study region.

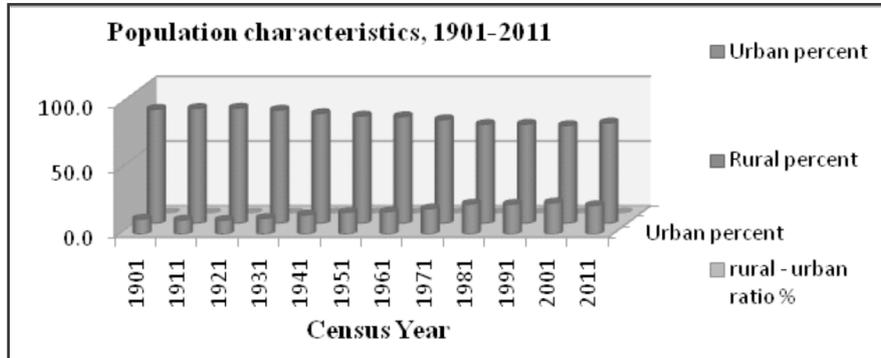


Fig.3

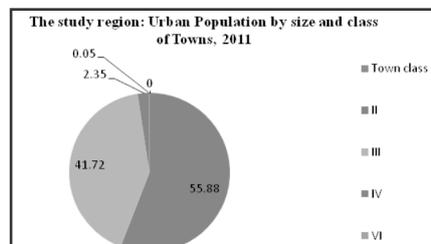
Table - 2 Tahsil wise Urban Population and number of towns, 2011

| Tahsil | Urban Population | No. of towns | % of Urban Population to total region Population |
|--------------|------------------|--------------|--|
| Amalner | 95994 | 1 | 21.23 |
| Dharangaon | 35375 | 1 | 7.82 |
| Parola | 37666 | 1 | 8.33 |
| Erandol | 31071 | 1 | 6.87 |
| Chalisingaon | 108181 | 2 | 23.93 |
| Pachora | 59820 | 2 | 13.23 |
| Bhadgaon | 37214 | 1 | 8.23 |
| Jamner | 46762 | 1 | 10.34 |
| Region | 452083 | 10 | 100.00 |

Source: Census Handbook of Jalgaon District, 2011

Table - 3 Urban population by size and class of towns, 2011

| Town class | No. of towns | Population | % |
|------------|--------------|------------|--------|
| II | 3 | 253154 | 55.88 |
| III | 5 | 188088 | 41.72 |
| IV | 1 | 10630 | 2.35 |
| VI | 1 | 211 | 0.05 |
| Total | 10 | 452083 | 100.00 |



Spatial Pattern of Urbanization in the study region:

1. Area with very high degree of urbanization (0.30 <)

After computing the Composite Z Score, we are able to detect the combined impact of all the indicators on the level of urbanization. Composite index of degree of urbanization shows that there is wide intra tahsil variation in the level of urbanization in the region under study. It varies from -0.48 (Jamner) to 0.89 (Amalner and Chalisgaon tahsils). As a whole five levels have been detected, as shown in table 2. It is vivid that among the blocks Amalner and Chalisgaon tahsils second rank urban centre show very high level of urbanization compared to the other tahsils in the study region. The tahsil Amalner and Chalisgaon have composite index value ranging i.e. 0.89 and 0.57 respectively (table – 4). It is because of along major highways and railway roots, administrative head quarter, availability of employment, high urban population are responsible factors for the very high level of urbanization in these tahsils.

2. Area with high degree of urbanization (0.10 - 0.30)

Tahsil which is having Z score composite index value between 0.10 – 0.30 is classified as areas with a medium level of urbanization (table 4). Out of 6 CD blocks there is only one CD block namely Pachora tahsil falls in high level urbanization category. Pachora urban centre has major highways and railway roots, administrative head quarter and availability of employment responsible factors for high level of urbanization in this tahsil.

3. Area with Medium degree of urbanization (0.10 - 0.10)

Erandol and Parola tahsils fall in medium degree of urbanization. In these tahsils have major highways, administrative head quarter and high urban population is responsible factors for the medium level of urbanization in these tahsils.

4. Area with Low degree of urbanization (-0.10 - 0.30)

Low degree of urbanization is recorded in Dharangaon and Bhadgaon tahsils of the region under study. These tahsils have emerged as newly urban towns. They have low level of industrial development, low social awaking, low diversification in economic activities and agro – based economy.

5. Area with Low degree of urbanization (Below - 0.30)

Very low level of urbanization is recorded in Jamner tahsil of the region under study. This blocks show low level of urbanization as it has strong rural base.

Table 4 The study region: Levels of Urbanization, 2011

| Tahsil | I Z Score | II Z Score | III Z Score | IV Z Score | V Z Score | VI Z Score | VII Z Score | Composite Index |
|------------|--------------|---------------|----------------|---------------|--------------|---------------|----------------|--------------------|
| Amalner | -0.22 | 1.90 | 0.26 | 2.06 | 0.82 | 0.97 | 0.73 | 0.89 |
| Dharangaon | -0.57 | -0.30 | 0.64 | -0.50 | -0.45 | -0.75 | 1.45 | -0.11 |
| Parola | -0.69 | -0.51 | 1.10 | -0.49 | 0.97 | 0.57 | -0.61 | 0.08 |
| Erandol | -0.64 | -0.59 | 1.37 | -0.57 | -0.40 | -0.30 | 1.33 | 0.09 |
| Chalisgaon | -0.27 | 0.67 | -0.29 | 0.73 | 1.16 | 1.25 | 0.50 | 0.57 |
| Bhadgaon | 2.38 | -0.25 | -1.25 | 0.12 | -0.34 | -0.90 | -0.73 | -0.26 |
| Pachora | -0.12 | 0.12 | -0.68 | -0.22 | -0.32 | 0.10 | -0.73 | 0.17 |
| Jamner | 0.15 | -1.49 | -1.15 | -1.17 | 0.03 | 0.39 | -0.48 | -0.48 |

Reference: I= Z- Score for Urban area ratio, II= Z- Score - Urban population ratio, III= Z- Score - density of towns, IV = Z - Score - Urban household V= Z- Score - Urban male literacy, VI = Z - Score - Urban female literacy & VII - Z- Score - Urban sex ratio.
Source: Compiled by the researcher based on Census Handbook Jalgaon district, 2011

Trends of Urbanization

The trends of urbanization have been studied through twelve census years (1901-2011). During this 120 years urban population of the study region shows a threefold increase from 66475(1901) to 452083 (2011) and also the urban centers have jumped to 10(2011) from 6(1901).

From the above discussion it is cleared that the present pattern of urbanization has evolved over one hundred years ago as a consequence of administrative policies. The study region has long history of urbanization characterized by different rates of urbanization in different periods. During 1991-2001 the study region had registered a high level of urbanization, which is 24.19 percent (fig.5). The percentage of increase of urban population, urban centers and the rural urban ratio increases remarkably; showing a high pace of urbanization in Amalner and Chalisgaon tahsils. This high urban growth is attributed mainly by large scale migration from rural areas of the study region. Urban gathering was found mainly around Chalisgaon and Amalner tahsils railway route, highways and development of agro base industries due to its favorable economic condition and proximity to the Jalgaon district. The period between 1951-'61 show a slow but steady urban growth. The reason may be the good agricultural year. Huge disparity in the level of urbanization of blocks signifies that the urbanization process have not operated in a balanced way. High level of urbanization promotes economic diversification whereas low level of urbanization is associated with concentration of one economic activity like agriculture.

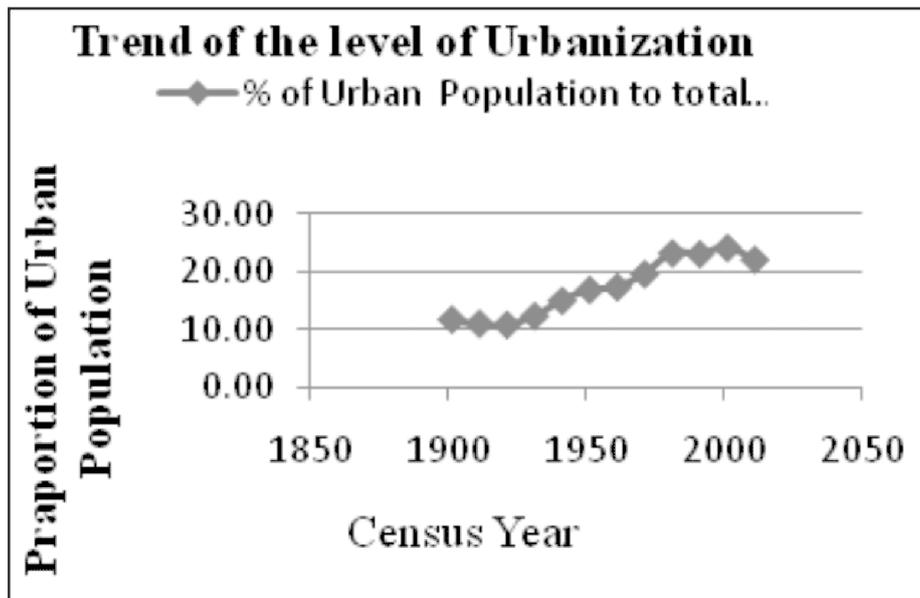


Fig.5

Findings

The level of urbanization increased faster during 1991 - 2001, and the declining trend in the urban population growth rate observed during 2001s and 2011s was reversed at the study region. The urban population grew from 0.326547 million in 2001 to 0.452083 million in 2011 at the growth rate of – 8.48 percent. The urban town increased from 6 in 1901 to 10 in 2011. The reversal in the declining trend in urban population growth rate at the study region is a major feature revealed by 2011

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census.Among the tahsils in the study region Amalner and Chalisgaon tahsils have shown major increase in urban population.During 2011, it has been found that, Chalisgaon and Amalner tahsils alone has second rank urban towns in 2011.

Out of the total urban population of the Jalgaon district 33.67 % urban population is accommodated in the study region. According to 2011 census, the proportion of urban population to total population in Jalgaon district is 31.74percent while it is 22.14 percent in the study region which lives in 10 urban centres. There is spatial variation in levels of urbanization. Amalner and Chalisgaon tahsils are most urbanized tahsils while the least level of urbanization is observed in Bhadgaon, Dharangaon and Jamner tahsils.Out of 10 urban centers 6 urban centres are having very low level of urbanization.

Conclusion

It rightly said, that presenal century is urban century, where more people are living in urban areas. The urbanization concept provides both the challenges and opportunities for every country or region, although it may not be uniform in every country or region. In study region also, the urban population is increasing in good number, but there exist a problem of infrastructure deficit, which was a big hurdle in the way of providing basic services to the people and also more importantly the economic growth of the study region. Thus, it is the right time for our region, to think and act seriously about the negative implications of the urbanization concept, and make it useful for the development of the region. But, urbanization needs to be sustainable in two counts i.e. First, it is need to equally benefit all the people in the society.i.e. socially inclusive and secondly, environmentally sustainable.

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