

Population of Dynamics of Nizamabad Town – A Spatio-Temporal Analysis

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1. INTRODUCTION

Population Studies was important due to increasing concern about high population growth which can lead to influence the quality of city development. The movement of people from rural to urban will influence dimension of city. This Urbanization process has occurred, or is occurring, and may still occur in most of the earth. People enter cities in seek of livelihood and economic opportunities. Urbanization, thus, summarizes the connection between the whole population and its urban component. Urbanization is typically used as a demographic indicator or within the demographic sense, as there is a rise within the proportions of urban population to the whole population over a period of some time.

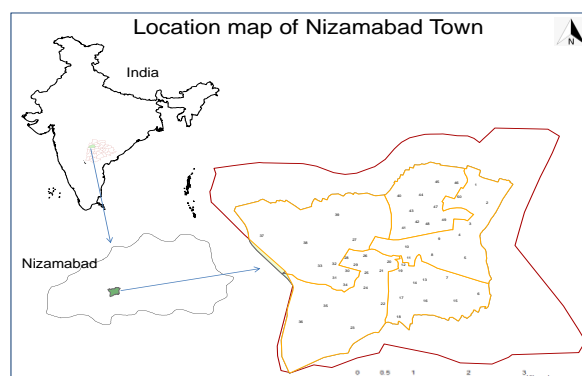
Population dynamic is to assess current state and changes of a location for a period of time. It directly affected by dispersal through the immigration of individuals into populations and by the emigration of individuals out of populations. Understanding population dynamics is the key to understanding. Knowledge about population dynamics also plays a central role in Spatial planning and sustainable development of urban planning. All the major towns are facing the problems of increased urban sprawl — loss of vegetation, loss of open spaces, and a general decline in the size of agriculture. As the problems associated with urban sprawl can have an immense impact on the local land and its populations (flora, fauna, and human), but since these changes occur incrementally, they are often difficult to grasp. and other urban growth patterns for most of these areas have far surpassed the population growth rate that could conceivably justify such expansion.

2. OBJECTIVE OF THE STUDY

The main objectives of the study is to know the dynamics of population ward wise in Nizamabad Town.

2.1. Study Area

The present study is undertaken in Nizamabad Corporation of Telangana state. The corporation comprises 5 zones, 50 divisions consisting a population of 3,11,152 as per 2011 census.



The Nizamabad town is classified into five zones, viz. Zone I, II, III, IV, & Zone V (Fig: 1.5) each zone further divided in to ten divisions that is Zone I consist of 40, 41, 42, 43,44,45,46,47,48 & 49, Zone II consist of 10, 11,12, 13,14,15,16,17,18, & 19, Zone III consist of 20, 21, 22, 23, 24, 25, 26,27,28, & 29, Zone IV consist of 1, 2, 3, 4, 5, 6, 7, 8, 9, & 50, Zone V consist of 30, 31,32,33,34,35,36,37,38, & 39 .

The population dynamics of the study area which include Nizamabad Municipal Corporation jurisdictional area and old seven wards were taken, Ward wise analysis was taken and generated the statistics of seven wards finally generated maps of population and population growth.

3. METHODOLOGY

Secondary data was collected from census department. The ward boundary was generated and extracted satellite data and overlaid, ward wise population maps were generated for the year 1961 to 2011. By using GIS tools the population dynamics analyzed.

4. RESULTS AND DISCUSSION

The ward wise trend of population distribution, between the censuses years 1961 to 2011 (Table 1). In 1961 ward No.1 had the highest population of 13066 accounted for 16.5 percent followed by ward No.9 with 9490 constituting another 12 percent of the total population for the year (1961) in Nizamabad. Ward No. 12 and 11 constituted with the lowest population of 1658 and 1383 with 2.10 percent and 1.75 percent respectively (Fig.1).

In the year, 1971 also ward No. 6 accounted for highest population share with a population of 22906 which constituted 19.81 percent followed by ward No.9 with a population of 15981 sharing 13.82 percent of the total population. Again ward No.12 and 11 had registered with lowest population with 1710 and 1815 accounting for 1.48 percent and 1.57 percent respectively.(Fig.2).

The trends of 1961 and 1971 continued during 1981 in terms of ward wise highest and lowest population distribution. Ward No. 12 and 11 had registered highest population totals of 39,793 and 30,198 accounting for 21.74 percent and 16.50 percent respectively. As witnessed during the earlier censuses years ward No. 12 and 11 have registered the lowest populations of 2886 and 3976 respectively with 1.58 percent and 2.17 percent shares. (Fig.3).

Table1. Ward wise Population Distribution in Nizamabad (1961-2011)

Ward No.	Population at centre					
	1961	1971	1981	1991	2001	2011
Ward No. 1	7384	9749	15011	19922	25860	31505
Ward No. 2	6826	8525	11116	10446	9929	7745
Ward No. 3	8741	11161	17928	20396	23956	25356
Ward No. 4	4457	6243	7068	6498	5896	4942
Ward No. 5	6692	10758	17303	18944	19882	20720
Ward No. 6	13066	22906	39793	53600	61943	59572
Ward No. 7	5305	6769	9967	11391	14596	15169
Ward No. 8	5588	7106	8811	7729	6958	6145
Ward No. 9	9490	15981	30198	48273	63071	73837
Ward No. 10	8503	12917	19004	25729	32071	37391
Ward No. 11	1383	1815	3976	14050	20185	24388
Ward No. 12	1658	1710	2886	4056	4375	4382
Total	79093	115640	183061	241034	288722	311152

Source: Census India

Though the highest population contributing wards trend continued in the year, 1991, there was one interesting change, ward No.4 registered as the second lowest population contributor (6498) with 2.70 percent share while ward No.12 remained the lowest (4056) with 1.68 per cent. Ward No.6 had registered the highest population of 53600 with 22.24 percent share followed by ward No.9 with 48273 accounting for 20.03 percent share. (Fig.4).

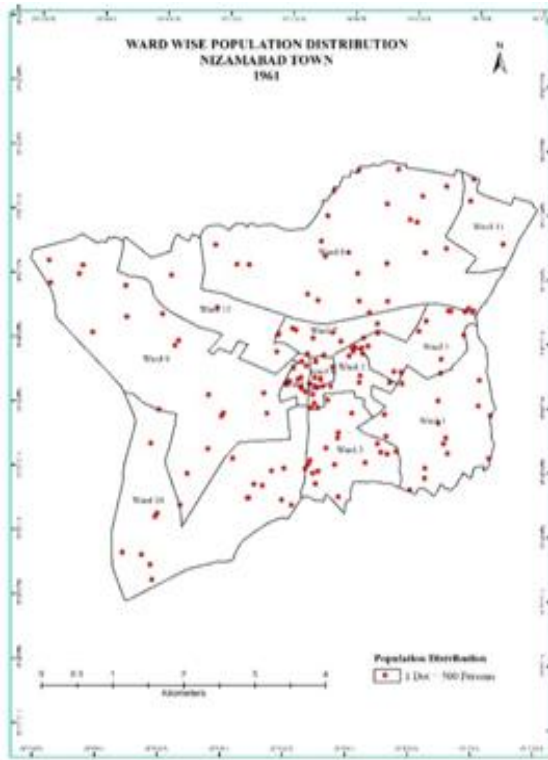


Figure1. *Ward wise Population Distribution in Nizamabad - 1961*

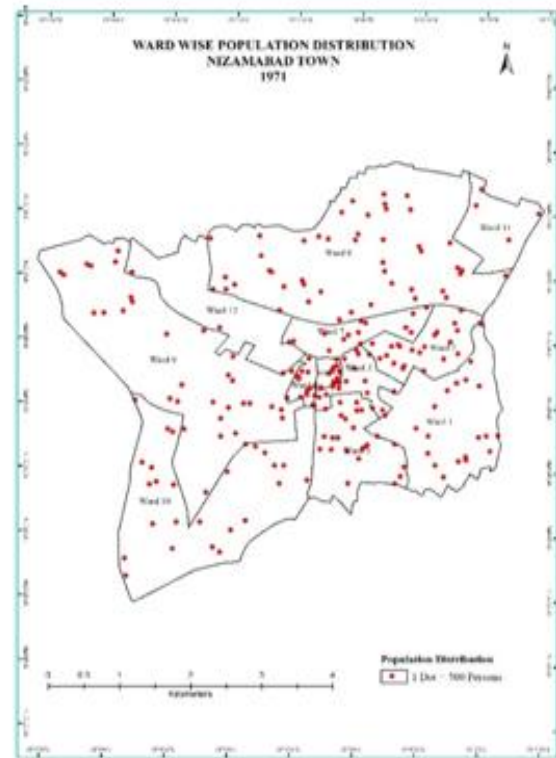


Figure2. *Ward wise Population Distribution in Nizamabad - 1971*

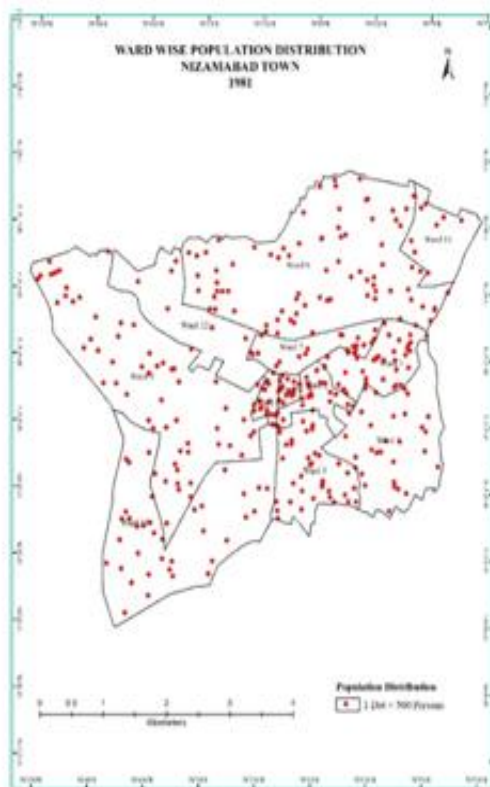


Figure3. *Ward wise Population Distribution in Nizamabad - 1981*

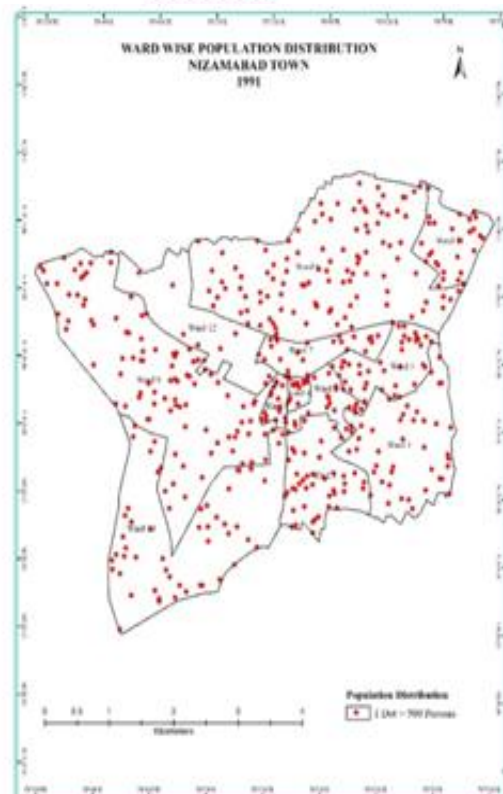


Figure4. *Ward wise Population Distribution in Nizamabad - 1991*

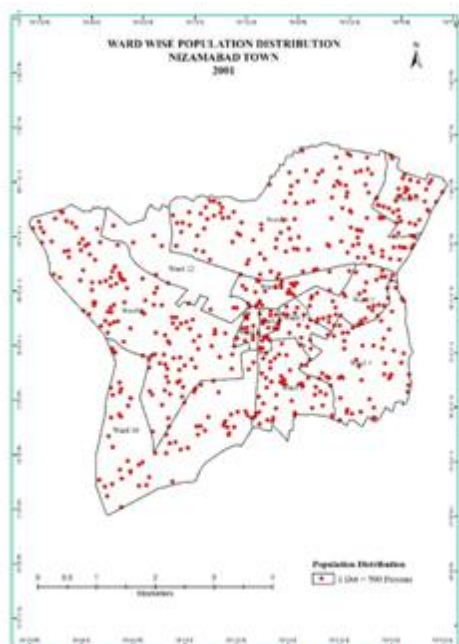


Figure5. Ward wise Population Distribution in Nizamabad - 2001



Figure6. Ward wise Population Distribution in Nizamabad - 2011

In the year, 2001 ward No. 6 and 9 have swapped the regular trend of 1st and 2nd positions as ward No.9 registered with highest population (63,071) among the wards followed by ward No. 6 with 61,943 population constituting 21.84 percent and 21.45 percent shares respectively. Ward No. 12 and 4 have registered the lowest population among the wards with 4375 and 5896 accounting for 1.52 percent and 2.04 percent respectively.(Fig.5).

The trends of 2001 ward wise population distribution in Nizamabad carried forwarded to 2011 as ward No. 9 and 6 were registered the top two populous wards among all the wards with populations of 73,837 and 59,572 that accounted for 23.73 percent and 19.15 percent respectively while ward No. 12 and 4 registered the lowest population with 4382 and 4942 constituting 1.41 percent and 1.59 percent shares. (Fig.6).

Table12. Ward wise Population Growth Rate in Nizamabad (1961-2011)

Ward No.	Population (in percent)					
	1961	1971	1981	1991	2001	2011
Ward No. 1	9.34	8.43	8.20	8.27	8.96	10.13
Ward No. 2	8.63	7.37	6.07	4.33	3.44	2.49
Ward No. 3	11.05	9.65	9.79	8.46	8.30	8.15
Ward No. 4	5.64	5.40	3.86	2.70	2.04	1.59
Ward No. 5	8.46	9.30	9.45	7.86	6.89	6.66
Ward No. 6	16.52	19.81	21.74	22.24	21.45	19.15
Ward No. 7	6.71	5.85	5.44	4.73	5.06	4.88
Ward No. 8	7.07	6.14	4.81	3.21	2.41	1.97
Ward No. 9	12.00	13.82	16.50	20.03	21.84	23.73
Ward No. 10	10.75	11.17	10.38	10.67	11.11	12.02
Ward No. 11	1.75	1.57	2.17	5.83	6.99	7.84
Ward No. 12	2.10	1.48	1.58	1.68	1.52	1.41
Total	100	100	100	100	100	100

Source: Census India

The average annual population growth trends in Nizamabad, as shown in Table 2.3, suggest that, the city had witnessed the highest growth rate during 1971-81 with 5.83 percent while, with 4.62 percent growth rate during 1961-71 occupied the second highest. The city has been witnessing a decreasing trend after the decade of 1971-81 reflecting the urban sprawl outside the Nizamabad Municipal Corporation boundaries and also the general population decrease. The annual average population growth rate was significantly decreased to 1.98 percent by 1991-01 decade and it was further decreased to 0.78 percent by 2001-11.

The ward wise annual average growth rates distribution among the wards in Nizamabad also widely varied from 1961 to 2011. During the decade of 1961-71(Fig.6), ward No. 6 and 9 have registered the highest growth rates with 7.53 percent and 6.84 percent respectively while ward No.12 and 2 have registered the lowest growth rates with 0.31 percent and 2.49 percent respectively.

During the decade of 1971-81(Fig.7), ward No. 11 has registered the highest annual growth rate with 11.91 percent followed by ward No. 9 with 8.90 percent while ward No. 4 and 8 have registered the lowest growth rates respectively with 1.32 percent and 2.40 percent growth rates.

Three wards in Nizamabad 2nd, 4th and 8th wards, witnessed negative growth rates during the decade 1981-91(Fig.8). As far as the highest annual growth rates are concerned, 11th ward registered the highest growth rate with 25.34 percent followed by 9th ward with 5.99 percent while 8th and 4th wards have been registered with lowest annual growth rates with -1.23 percent and -0.81 percent respectively.

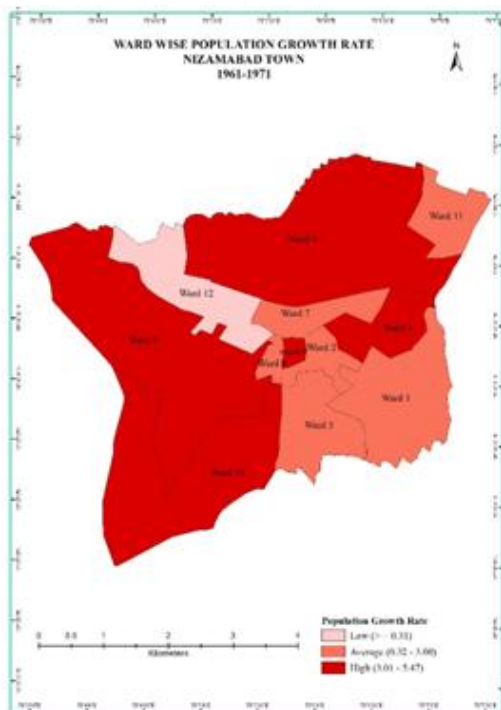


Figure6. Ward wise Population Growth in Nizamabad - 1961-1971

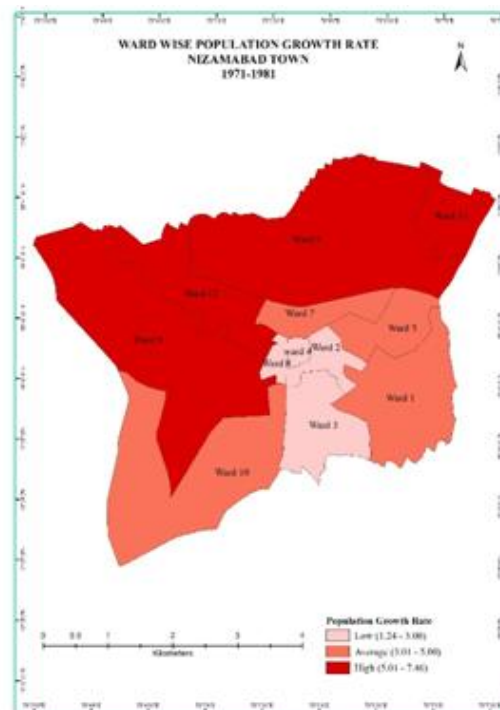


Figure57. Ward wise Population Growth in Nizamabad- 1971 – 1981

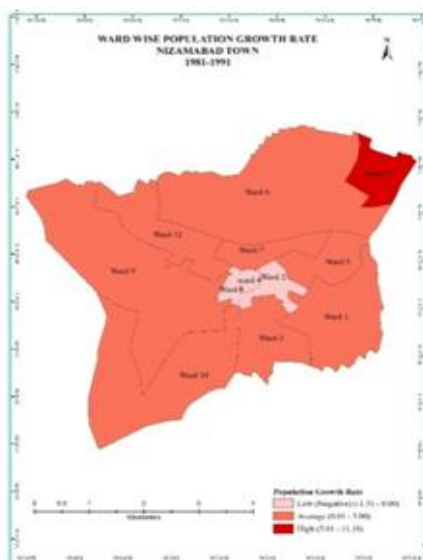


Figure8. Ward wise Population Growth in Nizamabad- 1981 - 1991

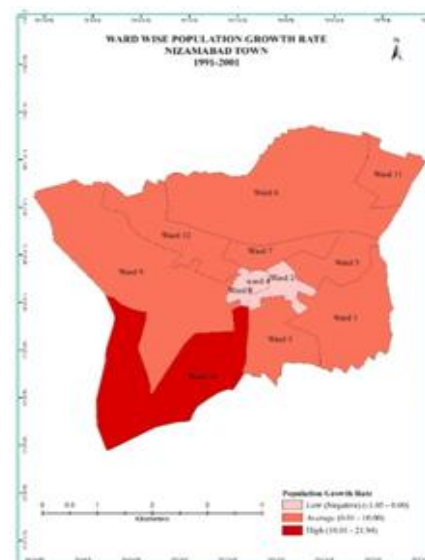


Figure9. Ward wise Population Growth in Nizamabad- 1991 - 2001

Table3. Ward wise Annual Population Growth Rate in Nizamabad City (1961-2011)

Ward No.	Annual Population Growth Rate (in percent)				
	1961-71	1971-81	1981-91	1991-01	2001-11
Ward No. 1	3.20	5.40	3.27	2.98	2.18
Ward No. 2	2.49	3.04	-0.60	-0.49	-2.20
Ward No. 3	2.77	6.06	1.38	1.75	0.58
Ward No. 4	4.01	1.32	-0.81	-0.93	-1.62
Ward No. 5	6.08	6.08	0.95	0.50	0.42
Ward No. 6	7.53	7.37	3.47	1.56	-0.38
Ward No. 7	2.76	4.72	1.43	2.81	0.39
Ward No. 8	2.72	2.40	-1.23	-1.00	-1.17
Ward No. 9	6.84	8.90	5.99	3.07	1.71
Ward No. 10	5.19	4.71	3.54	2.46	1.66
Ward No. 11	3.12	11.91	25.34	4.37	2.08
Ward No. 12	0.31	6.88	4.05	0.79	0.02
Total	4.62	5.83	3.17	1.98	0.78

Source: Census India

The same wards that registered negative annual growths during 1981-1991 also registered the negative trend during 1991-2001 as 8th, 4th and 2nd wards have registered with -1 percent, -0.93 percent and -0.49 percent respectively while 11th and 9th wards have registered 4.37 percent and 3.07 percent of growth rates.

In addition to the 2nd, 4th and 8th wards that have registered negative trends during 1981-1991 and 1991-2001 6th ward also registered negative annual growth rate during 2001-2011 thereby increasing the numbers to four wards. The negative growth rates were -2.20 percent (2nd ward), -1.62 percent (4th ward), -0.38 percent (6th ward) and -1.17 percent (8th ward). The 1st ward with 2.18 percent has registered highest annual growth rate followed by 11th ward with 2.08percent.

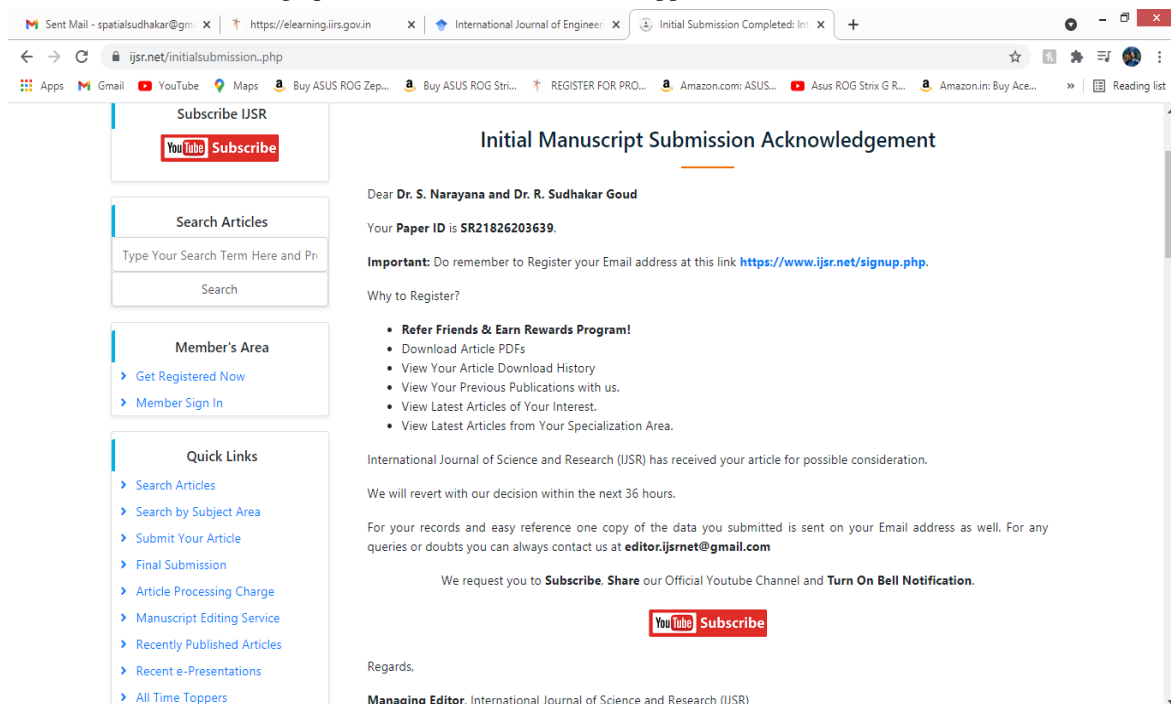
5. CONCLUSION

The ward wise a trend of population distribution in Nizamabad city, between the censuses years 1961 to 2011, was not evenly distributed, in fact, shown wide variations among the wards. Nizamabad city witnessed wide population growth variations during the period of 110 years between 1901 and 2011, had enormously increased to 3.1 lakhs in 2011 from 12.8 thousand in 1901. The population growth of the Nizamabad city, during the period between 1901 and 2011 had been divided into 5 distinct phases i.e. 1901-21, 1921-41, 1941-61, 1961-81 and 1981-2011. During the first phase between 1901-21 witnessed a mix of both positive (34.8%) and negative (-9.70%) trend of population growth, during 2nd phase between the census years 1921-41 the growth rate was positive, it was negative in third phase (1941-61), was positive again in fourth phase (1961-81) and during the fifth phase between 1981-2011, it saw again a phase of negative population growth. It is crystal clear that by 1991-2001 the annual population growth rates have sharply declined and the growth was occurring in the wards which are located away from the city centre, hinting the signs of urban sprawl in Nizamabad city.

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