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Urban Population Growth in the Municipalities of North 24 Parganas: A Spatio-Temporal Analysis

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Abstract

The rapid growth of urban population causes various problems in urban centres like increased unemployment, economic instability, lacks of urban facilities, unhygienic environmental conditions etc. People were well aware about the importance of population studies from very beginning. Explosively growing of urban population has attracted the attention of urban geographers and town planners. For country like India, it is very important to study the decadal variation of population growth, it helps in realizing problems. The population growth and socio-economic changes are closely related to each other. In present study North 24 Parana's has been chosen as study area. The level of urbanization remained high in the district (57.6 % in 2011). Rapid increase in urbanization can be attributed to growth of Kolkata metropolis.Barasat is now within greater Kolkata (Kolkata 124). From 1991 onwards the real estate business in this district thrived and projects were taken which are more of residential type than business type. The aim of the present paper is to investigate the change in urban population growth rate of municipality wise during the three decades 1981-91, 1991-2001 and 2001-2011. Due to push-pull factors the rural-urban migration is causing the process of urbanization. On micro level municipalities are eyes of birds of people due to vast avenues of employment and urban facilities. For this reason the population of municipalities are changing. This spatio-temporal analysis has verified the stage of population stabilization in the municipalities of North 24 Parganas

Keywords: Spatio-temporal analyses, rural-urban migration, decadal growth, pulls and push factors.

Introduction

The realization of population growth in an area holds the key to the understanding the entire demographic structure of the area. The socio-economic transformation may take longer time, it can also postpone or permanently deny desirable pattern of development if the population growth is rapid. The level of urbanization of North 24 parganas is rapidly changing (57.6% in 2011 whereas 54.3 in 2001).But there is spatial differentiation of urban population growth in the district as population is itself a dynamic resource. So it is a matter of great concern to study spatial and temporal growth of urban population. The thrust of the present paper is to examine the change in urban population growth rate in various municipalities of the district during three decades. On micro level as municipalities are working as magnets in attracting people in view of their vast avenues of employments, the population are changing.

Aims and Objectives

The changing pattern of urban population growth should be explored. How and why these changes are taking place what will be its consequences. To improve the quality of life rural people are migrating to urban areas and the municipalities are being the magnets of the district. This research expects to reflect the light on such aspects. The conclusion will be very helpful for the urban planners, policy makers, administrators, and researchers, the aims and objectives of the paper is as follows-

- 1. To examine the urban population growth rate during three successive decadal years.
- 2. To observe the changing pattern of growth rate in municipalities of North 24 Parganas to search the causes and consequences o9f urban population growth in municipalities of North 24 Parganas

Methodology

The present study is based on municipality level data obtained from District Human Development Report, North 24 Parganas, Development and planning Department, Govt. of West Bengal. The data are concerned to the census 1981.1991,2001 and 2011. The following formula is adopted to calculate Decadal Growth Rate (DGR)

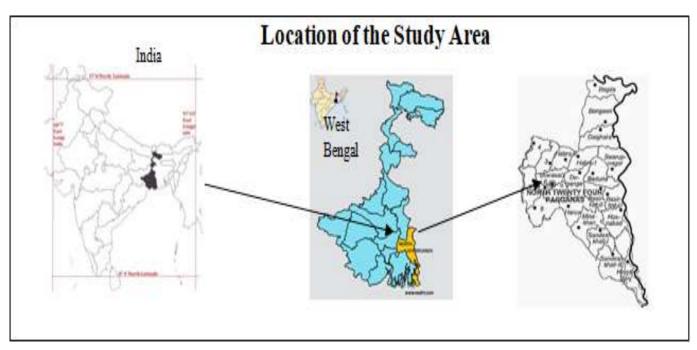
$$PGR = \frac{P_2 - P_1}{P_1} \times 100$$

 $\begin{array}{l} PGR = \mbox{Population Growth Rate} \\ P_1 = \mbox{Population of earlier census} \\ P_2 = \mbox{Population of successive census} \\ The result will be obtained in percentage. Choropleths are used to locate of municipality of the North 24 Parganas. \end{array}$

Study Area

The geographical location of North 24 Parganas is between

22°05'54"N to 23°16'39"N of latitude and 88°20'03"E to 89º06'34"E OF longitude. Total area of the North 24 Parganas is about 4122.76 sq.km.The district lies within the Ganges-Brahmaputra delta. The river Ganges flows along the western border of the district. There are other rivers, which include the Ichhamati, Jamuna, Bidyadhari and Padma etc.. The district comprises 5 sub-divisions, 22 C.D. blocks, 29 statutory towns, 78 census towns, 27 municipalities and 200 grampanchayats. Total populations 10,009,781 with urban population 5,732,162.Percentage of urban population 57.27 where 31.87 in state average according to 2011 census. Decada population growth of the district12.18% whereas 13.84 in the state (2001-2011). This area is connected with Eastern railways and National Highways NH34 and NH35, Grand Trank (GT) road to the other places of West Bengal.Calcutta is only 15 km from Barasat, the head quarter of this district.

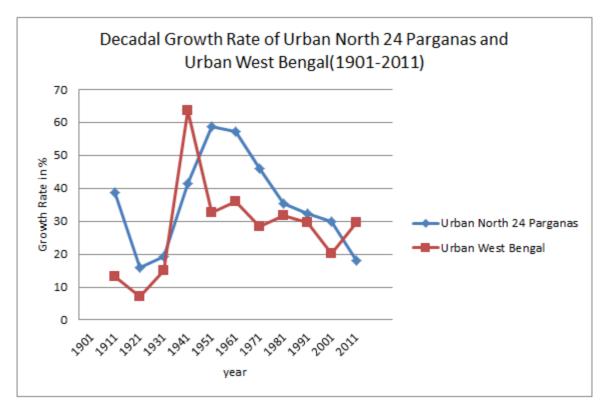


Findings and Analysis

Growth of urban population in the Municipalities of North 24 Parganas

	Decadal Gro	wth Rate	Level of Urbanization	Level of	Change in	Change in
Census	Census Urban North 24 Parganas Urban Bengal		in North 24 Parganas (%)	Urbanization in West Bengal (%)	Change in Urbanization in North 24 Parganas (%)	Change in Urbanization in West Bengal
1901	-	-	58.31	12.20	-	-
1911	38.63	13.7	51.64	13.05	-6.67	0.85
1921	15.92	7.16	48.98	14.41	-2.65	1.36
1931	19.15	15.01	42.20	15.32	-6.78	0.91
1941	41.31	63.69	46.40	20.41	4.20	5.09
1951	58.87	32.52	42.92	23.88	-3.48	3.47
1961	57.16	35.97	45.59	24.45	2.67	0.57
1971	46.03	28.41	49.49	24.75	3.90	0.30
1981	35.49	31.73	51.02	26.47	1.53	1.72
1991	32.22	29.49	51.23	27.48	0.20	1.01
2001	30.00	20.20	54.30	28.03	3.07	0.55
2011	18.17	29.72	57.27	31.87	2.97	3.84

Source: Calculated by the Author



Source: District Human Development Report, North 24 Parganas

Population Growth Rate (PGR) 1991-2001

Category	PGR	No. of Municipal towns	Percentage	Name of Municipal Town
Very low	Below 15	7	25.93	Baduria,Baranagar,Barrackpore,Basirhat,Garulia,Halishahar, Titagarh
Low	15-30	9	33.33	Ashoknagar, Kalyangarh, Bongaon, Gobardanga, Habra, Kamarhati, Kanchrapara, North Barrakpore, Panihati, Taki
Moderate	30-45	3	11.11	New Barrakpore, Khardaha, Bhatpara
High	45-60	3	11.11	North Dum Dum, Madhyamgram, Rajarhat-Gopalpur
Very High	Above 60	5	18.52	Barasat,Bidhannagar,DumDum,Naihati South Dum Dum
Total		27	100	

Source: Calculated by the Author



Source : Drawn by the Author

Population Growth Pattern (1991-2001)

Population growth pattern at municipal towns level of North 24 Parganas are analyzed spatially and temporally. Out of 27 Municipalities, 8 Municipalities have higher population growth rate. The municipality of Dum Dum and Barasat are recorded too much higher population growth rate of 147.35% and 125.52% respectively while Garulia recorded the negative population growth rate (-5.7%) in the decade 1991-2001. Table shows that during 1991-2001, the very high (above 60%) population growth rate recorded in Dum Dum(147.25%) followed by Barasat(125.52%), South Dum Dum(68.44%). Bidhannagar (67.77%) and Naihati (62.34%). Three municipal towns have recorded high population growth rate over 45%. These are Rajarhat-Gopalpur,North Dum Dum and Madhyamgram. The moderate population growth rate (30-45%) are observed in three municipal towns like New Barra pore, Khardah and Bhatpara..Very low population growth rate (below 15%) has been observed in seven municipalities, they are Baduria, Baranagar, Barrakpore, Basirhat, Titagarh, Halishaha

r and Garulia. There is an exceptional case of Garulia where negative population growth rate is recorded.

According to the above analysis 24% municipalities have recorded highest growth rate during the decade 1991-2001. The rapid increase in population in these municipalities was due to expansion of employment, urban sprawl,rural to urban migration and socio-cultural uplift of people.Besides the urban functions are also emerged in rural areas. The moderate population growth rate are observed about 12%. Due to industrial hub of the area, migration and job opportunities are main factors of population growth.Lower population growth rate is recorded about 64%. Many of the old urban settlement are now growing at a very low rate. Thus Halishahar, an old town in the western part of the districts now growing at the rate of 9.17% per decade. According to the findings of the (UHS),SUDA,2006, a high percentage of households under Ashoknagar-Kalyangarh and Baduria municipalities live in kuccha houses. So we can say that municipality of this category has lower growth rate due to old towns, rural

based, low urban facilities, out migration etc. In terms of growth rate of population, Garulia is a decaying town.The

population of Garulia declined by 5.7% over the last census decade.

Category	PGR	No. of Municipal Town	Percentage	Name of Municipal Towns
Very Low	Below 5	9	33.33	Baranagar,Bhatpara, Halishahar, Kanchrapara, Khardah,Naihati, South Dum Dum, Taki, Titagarh
Low	5-10	8	29.63	Ashoknagar-Kalyangarh, Bongaon, Barrakpore, Gobardanga, Kamarhati, New Barrakpore,North Barrakpore, Panihati
Moderate	10-15	5	18.52	Baduria,Basirhat,Dum Dum,North Dum Dum, Garulia
High	15-20	1		Habra
Very High	Above 20	4	14.81	Barasat,Bidhannagar,Madhyamgram,Rajarhat-Gopalpur
Total		27	100	

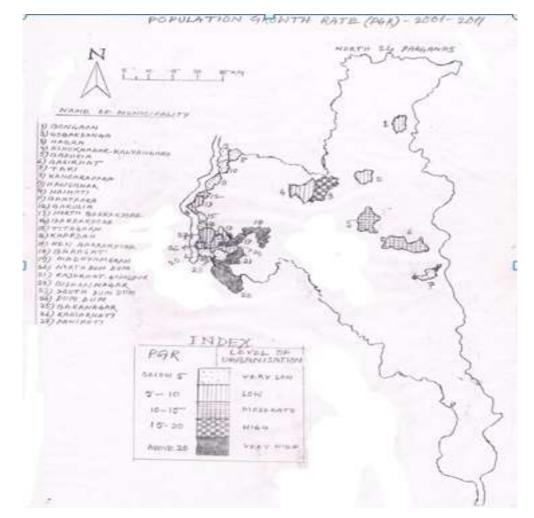
Population Growth Rate (PGR) (2001-2011)

Source: Computed by Author

Population Growth Pattern (2001-2011)

A rapid increase in urban population growth was observed in decade 2001-2011 but some municipal towns have negative growth of urban population in this decade. Table shows that out of 27 municipalities five recorded high population growth rate and 17 municipalities have recorded lowest population growth and five municipalities have moderate population growth rate in the decade 2001-2011.Rajarhat-Gopalpurmunicipality has recorded highest population growth of 48.22 % while Halishahar municipality has registered the lowest population growth of merely 0.37% in the decade 2001-2011.Besides four municipalities have been observed negative signs of urban population growth like Bhatpara(-12.66%),Khardah(-6.67%),Titagarh(-6.17%) and Baranagar(-2.16).

The character of the municipalities changed radically following the partition of Bengal. With influx of people from East Bengal even the rural municipalities gradually lost character. Some municipalities such as New Barra pore, Habra, Ashoknagar-Kalyangarh municipalities had come up in the areas populated by emigrants from East Bengal.



Source: computed by author

Several new townships came into existence in the suburbs of Kolkata in North 24 Parganas in the wake of the influx of immigrants. Three such townships namely Laketown, Bangur colony cropped up within South Dum Dum municipality. These three townships had its genesis in the refugee colonies. The trend of influx of people from Bangladesh to its adjacent areasof North 24 Parganas is still going on with very rapidly. This is the major factor of high urban population growth of the municipalities of Habra, Barasat, Basirhat, Madhyamgram etc. Due to new township facilities are given in Rajarhat-Gopalpurmunicipality,there is observed very high population growth rate.Similarly, Madhyamgram, Bidhannagar,Barasat, Dum Dum, North Dum Dum all these municipalities have registered high population growth due to a lot of factors like expansion of employments, urban sprawl, rural-urban migration,sociocultural uplift of people as well as natural increase.

Changing Pattern	Category	Range	1991-2001 to 2001-2011	
Changing Fattern			No of Municipality	Percentage
Negative	Very Low	Below -60	04	14.81
	Low	-60 to -30	04	14.81
	Moderate	-30 to 0	18	66.67
Positive	High	Above 0	01	3.70
Total			27	100

Changing Pattern of Population Growth in Municipal Towns of North 24 Parganas

Source: Computed by Author

Conclusion

After the overall discussion about urban population growth in the municipalities of North 24 Parganas, it is clear that North 24 Parganas has retained a high level of urbanization since independence. In spite of this high level, there is spatial disparity in urbanization level Barista, Dum Dum, Bidhannagar, South Dum Dum and Madhya gram show maximum growth of urban population and urban activity which in turn may leads to deterioration of urban environment or may become vulnerable in terms of per capita availability of infrastructure and may possess a threat to the urban system of the district. Therefore all the public amenities must be uniformly distributed among municipalities and urbanization process should operate in a balance way otherwise the system may not be consistent. Education and effectual check the population growth which will turn in better health, fine economic status and better opportunities for education and services.

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