

Concentration of Population Growth in West Bengal: Location Quotient Analysis

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ABSTRACT

Rapid population growth is one of the major issues of West Bengal. Rapid population growth is severely hampering the overall development of the study area. This research work attempts to study the concentration of population growth in West Bengal based on secondary data obtained from Census of India (2001 & 2011) and statistical abstract of West Bengal. The 'Location quotient' technique has been applied to determine the concentration of population growth in West Bengal. This work finds high concentration of population growth in Uttar Dinajpur, Malda, Murshidabad, South 24 Parganas, Koch Bihar, Birbhum, Purba Medinipur, Darjeeling, Jalpaiguri, Paschim Medinipur districts in West Bengal.

KEYWORDS: Population growth, Concentration, West Bengal, Location quotient.

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I. INTRODUCTION

West Bengal is the fourth most populous state in India (Census 2011). Rapid population growth is one of the major issues of West Bengal. Rapid population growth is directly hindering the socio-economic development and human development of the study area. The concept of population growth is often used to connote the change in the number of inhabitants of a territory during a specific period of time, irrespective of the fact whether change is negative or positive. Such a change can be measured both in terms of absolute numbers and in terms of percentage (Chandna, 2014). According to Census of India (2011), the total population of West Bengal is 91276115 of which 62183113 are rural population and 29093002 are urban population. As per 2011 Census, the total population of West Bengal has increases 11099918 persons during 2001-2011 and the decadal growth rate of population of the state is 13.84 percent. In this study, an attempt has been made to analyze the concentration of population growth in West Bengal and identify the regions of high concentration of population growth in the state.

II. OBJECTIVES

- 1.To find out the concentration of population growth in West Bengal.
- 2.To find out the concentration of rural population growth in West Bengal.
- 3.To find out the concentration of urban population growth in West Bengal.

III. MATERIALS AND METHODS

The study focuses on the concentration of population growth in West Bengal. The study is entirely based on secondary data which has been obtained from Census of India (2001 & 2011) and Statistical Abstracts of West Bengal. Location quotient technique has been applied to determine the concentration of population growth in West Bengal. The formula is:

$$LQ = \frac{Gr / Pr}{Gn / Pn}$$

Where,

Gr = Number of population growth in the district

Pr = Total population of the district

Gn = Number of population growth in the state

Pn = Total population of the state.

IV. RESULTS AND DISCUSSIONS

Concentration of population growth: This section describes the concentration pattern of population growth in West Bengal in 2011.

Table 1: Concentration of Population Growth in West Bengal (2011)

Name of the Districts	Total Population (2001)	Total Population (2011)	Population Growth (2001-2011)		LQ
			Number	Percentage	
Bankura	3192695	3596674	403979	12.65	0.924
Burdwan	6895514	7717563	822049	11.92	0.876
Birbhum	3015422	3502404	486982	16.15	1.143
Dakshin Dinajpur	1503178	1676276	173098	11.52	0.849
Darjeeling	1609172	1846823	237651	14.77	1.058
Howrah	4273099	4850029	576930	13.50	0.978
Hooghly	5041976	5519145	477169	9.46	0.711
Jalpaiguri	3401173	3872846	471673	13.87	1.001
Koch Bihar	2479155	2819086	339931	13.71	1.167
Kolkata	4572876	4496694	-76182	-1.67	-0.139
Malda	3290468	3988845	698377	21.22	1.440
Murshidabad	5866569	7103807	1237238	21.09	1.432
Nadia	4604827	5167600	562773	12.22	0.896
North 24 Parganas	8934286	10009781	1075495	12.04	0.883
Paschim Medinipur	5193411	5913457	720046	13.86	1.001
Purba Medinipur	4417377	5095875	678498	15.36	1.095
Purulia	2536516	2930115	393599	15.52	1.105
South 24 Parganas	6906689	8161961	1255272	18.17	1.265
Uttar Dinajpur	2441794	3007134	565340	23.15	1.546
West Bengal	80176197	91276115	11099918	13.84	-

Source: Calculated by author based on Census of India, 2001 & 2011.

It has been observed from table-1 that the LQ values of Uttar Dinajpur (1.546), Malda (1.440), Murshidabad (1.432), South 24 Parganas (1.265), Koch Bihar (1.167), Birbhum (1.143), Purulia (1.107), Purba Medinipur (1.095), Darjeeling (1.058), Jalpaiguri (1.001), Paschim Medinipur (1.001) districts are greater than 1.0 which indicates high concentration of population growth. Moderate concentration of population growth is found in Howrah (0.978), Bankura (0.924), Nadia (0.896), North 24 Parganas (0.883), Burdwan (0.876), Dakshin Dinajpur (0.849) districts where LQ values are 0.8 to 1.0. The LQ values of Kolkata (-0.139), Hooghly (0.711) districts are less than 0.8 which denotes low concentration of population growth.

Concentration of Rural Population Growth: This section expresses the concentration patterns of rural population growth in West Bengal in 2011.

Table 2: Concentration of Rural Population Growth in West Bengal (2011)

Name of the Districts	Rural Population (2001)	Rural Population (2011)	Population Growth (2001-2011)		LQ
			Number	Percentage	
Bankura	2957447	3296901	339454	11.48	1.444
Burdwan	4348466	4639264	290798	6.69	0.879
Birbhum	2757002	3052956	295954	10.73	1.359
Dakshin Dinajpur	1306324	1439981	133657	10.23	1.302
Darjeeling	1088740	1118860	30120	2.77	0.378
Howrah	2121109	1775885	-345224	-16.28	-2.726
Hooghly	3354227	3390646	36419	1.09	0.151
Jalpaiguri	2794291	2812495	18204	0.65	0.091
Koch Bihar	2253537	2529652	276115	12.25	1.531
Kolkata	-	-	-	-	-
Malda	3049528	3447185	397657	13.04	1.618
Murshidabad	5133835	5703115	569280	11.09	1.400
Nadia	3625308	3728727	103419	2.85	0.389
North 24 Parganas	4083339	4277619	194280	4.76	0.637
Paschim Medinipur	4575651	5190771	615120	13.44	1.662
Purba Medinipur	4051232	4503161	451929	11.16	1.407
Purulia	2281090	2556801	275711	12.09	1.512
South 24 Parganas	5820469	6074188	253719	4.36	0.586
Uttar Dinajpur	2147351	2644906	497555	23.17	2.638
West Bengal	57748946	62183113	4434167	7.68	-

Source: Calculated by author based on Census of India, 2001 & 2011.

It has been shown from table-2 that the LQ values of Uttar Dinajpur (2.638), Paschim Medinipur (1.662), Malda (1.618), Koch Bihar (1.531), Purulia (1.512), Bankura (1.444), Purba Medinipur (1.407), Murshidabad (1.400), Birbhum (1.359), Dakshin Dinajpur (1.302) districts are greater than 1.0 which indicates high concentration of rural population growth. Moderate concentration of rural population growth is found in Burdwan (0.879) district where the LQ values are 0.8 to 1.0. The LQ values of Howrah (-2.726), Jalpaiguri (0.091), Hooghly (0.151), Darjeeling (0.378), Nadia (0.389), South 24 Parganas (0.586), North 24 Parganas (0.637) districts are less than 0.8 which denotes low concentration of rural population growth.

Concentration of Urban Population Growth: This section shows the concentration pattern of urban population growth in West Bengal in 2011.

Table 3: Concentration of Urban Population Growth in West Bengal (2011)

Name of the Districts	Urban Population (2001)	Urban Population (2011)	Population Growth (2001-2011)		LQ
			Number	Percentage	
Bankura	235248	299773	64525	27.43	0.939
Burdwan	2547048	3078299	531251	20.86	0.753
Birbhum	258420	449448	191028	73.92	1.855
Dakshin Dinajpur	196854	236295	39441	20.04	0.728
Darjeeling	520432	727963	207531	39.88	1.244
Howrah	2151990	3074144	922154	42.85	1.309
Hooghly	1687749	2128499	440750	26.11	0.904
Jalpaiguri	606882	1060351	453469	74.72	1.867
Koch Bihar	225618	289434	63816	28.28	0.962
Kolkata	4572876	4496694	-76182	-1.67	-0.074
Malda	240940	541660	300720	124.81	2.423
Murshidabad	732734	1400692	667958	91.16	2.081
Nadia	979519	1438873	459354	46.90	1.393
North 24 Parganas	4850947	5732162	881215	18.17	0.671
Paschim Medinipur	617760	722686	104926	16.98	0.634
Purba Medinipur	366145	592714	226569	61.88	1.668
Purulia	255426	373314	117888	46.15	1.378
South 24 Parganas	1086220	2087773	1001553	92.21	2.094
Uttar Dinajpur	294443	362228	67785	23.02	0.817
West Bengal	22427251	29093002	6665751	29.72	-

Source: Calculated by author based on Census of India, 2001 & 2011.

It has been observed from table-3 that the LQ values of Malda (2.423), South 24 Parganas (2.094), Murshidabad (2.081), Jalpaiguri (1.867), Birbhum (1.855), Purba Medinipur (1.668), Nadia (1.393), Purulia (1.378), Howrah (1.309), Darjeeling (1.244) districts are greater than 1.0 which indicates high concentration of urban population growth. Moderate concentration of urban population growth is found in Koch Bihar (0.962), Bankura (0.939), Hooghly (0.904), Uttar Dinajpur (0.817) districts where LQ values are 0.8 to 1.0. Low concentration of urban population growth is found in Kolkata (-0.074), Paschim Medinipur (0.634), North 24 Parganas (0.671), Dakshin Dinajpur (0.728), Burdwan (0.753) districts where LQ values are less than 0.8.

V. CONCLUSION

The overall analysis of the current study reveals that the concentration of population growth is extremely high in Uttar Dinajpur, Malda and Murshidabad districts of West Bengal. In these districts, the LQ values are more than 1.4 and the decadal population growth rate is more than 21 percent. The main reasons behind that high birth rate, low death rate, immigration, low literacy rate, unemployment, poverty and low socio-economic conditions. Finally, increasing public awareness regarding the negative effects of high population growth and implementation of a strong population control policy by the Government of India can check the rapid population growth in West Bengal.

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