

Population Redistribution in Nadia District, West Bengal, India.

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Abstract: *The district Nadia long experienced virtually interrupted demographic mobility which was reflected in the almost unchecked transfer and resettlement of population in a number of places mainly for partition in 1947 and in 1971. This paper discusses the immigration outmigration and the resulting settlement pattern and growth and distribution of population.*

Keywords: Redistribution, Migration, Settlement, Urbanisation.

1. Introduction

The district Nadia long experienced virtually interrupted demographic mobility which was reflected in the almost unchecked transfer and resettlement of population in a number of places. Such population mobility was due to environmental, socio-economic as well as political causes. Phulia, Santipur, Duttaphulia, Haringhata etc. long provided sanctuaries to people coming from other areas the development of the local industrial or commercial nodes and agricultural growth poles attracted more people, leading to the development of new settlements or the modification of existing ones, subsequently affecting the pattern of population distribution in the given region. During post 1947 and post 1971 period in most of Nadia district, the process was accounted in a number of places by the development of commercial agriculture (eg. Jute cultivation in Chapra, Krishnaganj, Krishnanagar etc.) followed by textile, light engineering, chemical, rubber industry and fishing enterprises and the expansion of the railway network to serve such areas as well as the administrative centres as Nadia got the position to be the capital of Bengal in very previous days.

In later periods, inter and intra-regional population mobility was adversely affected by local resentment against the influx of outsiders. The rise of this antagonism parallels the emergence of regional identities rooted in religious, political and economic differences. The whole trend, as will be seen later, led to a different pattern of population distribution in most areas in Nadia.

Despite the importance of studies on regional and territorial population change and distribution, this field has long been neglected and there is a dearth of research. Even in Western

countries, the existing literature is rather recent and limited (Goodrich 1936; Kuznets and Thomas 1964; Kosinski and Pryor

1978; Golini and Nobile 1979; Comite 1979; Webb, Naukkarinen and Kosinski 1981; and Clarke and Kosinski 1982). Nevertheless, a number of empirical studies at both macro and micro levels, on population distribution, variation and migration provide valuable insight into the pattern and dynamics of change in population distribution and the direction of population shift in and around Nadia.

A good deal of information of a historical demographic nature is available from empirical Gazetteer of Nadia by West Bengal District Gazetteers, Department of Higher Education, Govt of West Bengal – mainly those volumes published prior to 1921 – as well as from the reports of the Census of India since 1881. The social and anthropological studies by Atkinson (1881), Hunter (1897) and others (Moreland 1920; Farmer 1957), and more recently a study on agricultural colonisation in India by Farmer (1974) also provide valuable background on the determinants of population redistribution in some parts of south Asia. A cartographic presentation of a wealth of data can be found in a monumental historical atlas of South Asia especially of India (Schwartzberg 1978). Zachariah's study on migration in India provides a useful lead to the nature of population shift in this country (Zachariah 1964). More recently, Jain (1975), Pareek and Rao (1974) reviewed the trends and the outcome of current research on population, including population distribution, migration and development perspectives in India. In fact West Bengal is well ahead of all Indian states in research on population movement and recent studies are quite numerous (Zachariah 1964; Bose 1967; Kumar 1967; Zachariah and Ambannavar 1967; Gupta 1967; Connell et al. 1974; and Gosal and Krishnan 1975).

2. Major Shifts of Population:

The early patterns of population redistribution and settlement change or expansion in Nadia may be reconstructed from various historical sources. There is evidence that major pockets of human settlement existed along fertile valleys of agricultural value and the areas enjoying trading advantages (Spate 1957). There is also evidence of settlement development in cycles depending upon the prospect of agriculture and trade; when economic activities declined, the population tended to move away to settle elsewhere. Settlement development was also influenced by taxation policies, wars, frequent famines, epidemics and other natural disasters. The advent of British rule still saw fairly extensive uninhabited lands with development potential either under forest cover or in permanent fallow. The economic and political interests of the colonial power have had a significant impact on inter-regional population transfer and settlement expansion in most of Nadia. Thus British India, taken as a whole, saw an 'unprecedented growth in population in the cultivated area' (Farmer 1974).

In the traditionally populated areas of the river valleys, land abandoned due to famines, epidemics or to a social insecurity were first to be resettled and hence acted as the zones of population redistribution.

3. Immigration in Nadia:

In Nadia, the phenomena of migration has been classified into various types on the basis of motivation, distance and time. On the basis of motivation migration has been classified as economic migration, social migration depending upon the factors that make the migrants move. On the basis of distance distinction has been made between long distance and short distance migration. Similarly the short term and long term migrations have been recognised depending upon the period of stay. Since for a population geographer, migration refers to reallocation of human resources, the distance-based classification carries an appeal. Also as the geographers are interested in the spatio-temporal dimensions of the phenomenon, therefore the criteria of time and motivation are no less important. While the element of time is very crucial in explaining a phenomena like migration which has continuity, no study on migration can afford to ignore the motives behind the move. Thus, distance, time and motivation all are significant in the analysis of migration patterns.

3.1 Internal migration (within India but outside the place of enumeration):

The total number of residents of other districts who were found in Nadia at the census of 1901 was 59,010 representing 3.5 per cent of the total population. The great majority of these, viz., 44,233, came from contiguous districts. In 1891 72,945 immigrants were found in the district. The excess over the number found in 1901 is probably due to the fact that the *Dhulut* ceremony was in progress in Nabadwip when the census was being taken in 1891 and was attended by 15000 persons from neighbouring district.

Table 1
Inter-sectoral Flows for Nadia according to Distance (percentage)

Migration Streams	Short Distance (intra-district)	Medium Distance (inter-district)	Long Distance (inter-state)
Rural to Rural	68.20	63.35	62.65
Urban to Rural	4.64	6.03	6.14
Rural to Urban	8.66	9.79	10.29
Urban to Urban	5.37	8.84	9.11

Source: Census of India, 2001.

1.2 Internal migration (within West Bengal but outside the place of enumeration):

The main contributing state regarding the migration flow from the other parts of India towards Nadia is West Bengal. Out of the total migrants of 1221049 entering Nadia either in short term or in long term from various states of India, 1182476 migrants comes from West Bengal solely which constitute 96.84 per cent volume of migration flow. In this case, rural to rural migration is more common showing a figure of 63.35 per cent. The Ganga deltaic plain of Nadia and its alluvial stretch heavily suitable for agriculture is the significant cause in this regard. The other three types of migration are less common for West Bengal to Nadia. Rural to urban, urban to rural, and urban to urban migration flow is 115746 (9.79 per cent), 71273 (6.03 per cent), 104476 (8.835 per cent) respectively from other districts of West Bengal to Nadia.

3.3 Internal migration (within the district of Nadia, Intra-district migration):

Of the total number of 1182476 inter-district migration flow within West Bengal, towards Nadia, 76.56 per cent comes from the other parts within Nadia which depicts a huge intra district migration flow. The main type of population mobility within Nadia district is rural to rural migration. It consists of 76.56 per cent of the total intra district movement of migrants.

Table 2
Percentage Distribution of Migrants by Inter-District Migration Streams, Nadia 2001.

Migration Streams	Total	Male	Female
Rural to Rural	68.20	17.50	82.50
Urban to Rural	4.64	35.07	64.93
Rural to Urban	8.66	33.22	66.78
Urban to Urban	5.37	41.53	58.47

Source: Census of India, 2001.

3.4 International Migration:

For Nadia, international population mobility have their long established history. According to 2001 census, the total number of international migrants entering to Nadia is 503854 out of which 54.03 per cent migrants are male and the rest 45.97 per cent is female. While the total number of international immigrants is 503854, in rural area (360596) the number is higher than the urban counter part (143258). It is noteworthy that 99.98 per cent volume of migration flow comes from outside India but within Asia. Only 91 migrants come from European countries like France, Germany, Portugal, U.K. (out of 40 migrants, 21 are male and 19 are female); African countries like Kenya, Mauritius, Nigeria, Uganda, Zambia (out of 15, male 7 and female 8); American countries like Canada, U.S.A. (out of 26, male and female are 15 and 11 respectively) and Oceania (10 migrants). One special characteristics is that most of them use to settle in Rural Nadia.

Table 3
International Migration streams in Nadia, 2001.

International migrants	Total Migrants	Rural (360596)		Urban (143258)	
		Male (%)	Female (%)	Male (%)	Female (%)
Migrants from outside India	503854	54.4	45.56	53	47.01
Migrants from outside India but within Asia	503763	54.4	45.56	53	47.01
Migrants from Bangladesh	503186	54.4	45.57	53	47.02
Net Migration	503854	100 %		100 %	

Out of the total migrants of 503763 who came from outside India but within Asia, again 99.88 per cent of population is from Bangladesh and 72 per cent of them use to settle in Rural Nadia which have a long established historical background. Following the 1947 partition, Nadia on the West Bengal side was flooded with migrants not only from Kushtia, its severed Siamese twin, but also from Khulna, Barisal, Dacca, Mymensingh, Pabna, Rajshahi, Noakhali and Tipperah. Overall, in terms of being a migrant-receiver, Nadia ranked

third in West Bengal, behind Calcutta and Twenty-Four Parganas. Between 1947 and 1951, Nadia witnessed a mammoth influx from East Bengal of about 426,907 Hindus.

2. Out-migration in Nadia:

The total number of residents of other districts who were enumerated in other districts at the census of 1901, was 123,737, which represents 7.4 per cent of the total population of the district This is a far larger percentage of emigration than is shown by any other districts in the presidency Division.

The scenario of out migration from the district Nadia has rather got an enlarged volume than that of immigration. Within the state West Bengal, the gross migration for Nadia is 567814, while the number of immigrants are 238957 and the number of out-migrants are 328857.

4. Redistribution of Population in Nadia:

The study of population movement in Nadia presents methodological complications owing to a paucity of statistical information. The first recorded census of Nadia was taken in 1872 with additional censuses following at intervals of about 9 years for the second time and 10 years in the next preceding years. The censuses undertaken prior to 1951 were not only highly unreliable but incomplete in their coverage of the regional breakdown of population as well. Therefore, a reasonably accurate study of various population aspects could be made only for the recent periods. It is notable that the population censuses of the district do not contain direct information on the intra district migration, nor has there been any well substantiated study on migration at the national level. The few studies which have been completed and are of local nature, are limited in their coverage.

In the present study, data on migration have been based on birthplace statistics. However such statistics are not available for village and town level. Therefore variations in growth rates have been considered as indicators of rural-urban migration. The assessment of migration has been made by computing absentee population. Estimates made by various authors have also been used to indicate the magnitude of migration during historic periods. By assessment of population redistribution, finally an analysis of socio-economic problems in relation to population movement and growth has also been assessed.

Table 4
Redistribution of population, Nadia, 2001-2011

Name of C.D. Blocks/ Municipality/ N.A.	Population		%		Difference In (%) 2011-2001	Sum of other all positive or all negative
	2011	2011	2001	2001		
Nadia	5167600	100	4604827	100		
Karimpur I	183556	3.55	166725	3.62	-0.07	
Karimpur II	217136	4.2	191948	4.17	0.03	
Tehatta I	244322	4.73	217489	4.72	0.01	
Tehatta II	151231	2.93	134131	2.91	0.02	

Kaliganj	334881	6.48	290957	6.32	0.16	0.16 = Net Redistribution Of Population (2001-2011)
Nakashipara	386569	7.48	334989	7.27	0.21	
Chapra	310652	6.01	272289	5.91	0.1	
Krishnaganj	146705	2.84	133359	2.9	-0.06	
Krishnanagar I	314833	6.09	280386	6.09	0	
Krishnanagar M	153062	2.96	139110	3.02	-0.06	
Krishnanagar II	139472	2.7	124159	2.7	0	
Nabadwip	135314	2.62	121807	2.65	-0.03	
Nabadwip M	125543	2.43	115016	2.5	-0.07	
Santipur	241080	4.67	217318	4.72	-0.05	
Santipur M	151777	2.94	138235	3	-0.06	
Hanskhali	293040	5.67	260969	5.67	0	
Ranaghat I	232282	4.49	207394	4.5	-0.01	
Ranaghat M	75365	1.46	68749	1.49	-0.03	
Birnagar M	30799	0.6	26597	0.58	0.02	
Taherpur N.A.	20894	0.4	20051	0.44	-0.04	
Ranaghat II	368681	7.13	330243	7.17	-0.04	
Cooper's Camp N.A.	18843	0.36	17765	0.39	-0.03	
Chakdaha	405719	7.85	362983	7.88	-0.03	
Chakdaha M	95203	1.48	86999	1.89	-0.41	
Kalyani M	100575	1.95	82135	1.78	0.17	
Gayeshpur M	58998	1.14	55048	1.2	-0.06	
Haringhata	231068	4.47	207967	4.52	-0.05	
					=0.16(%)	

So, index of redistribution = 0.16 %

However, this index is just a descriptive tool.

It does not tell anything about the process of change

5. Growth of Population:

Between 1971 and 2011, the total population of Nadia increased from 1.7 million to 5.17 million or by 201.61 per cent. However, the increase during successive decades was extremely irregular. The total population in 1921(711706) was lower than that recorded in 1911(775986) and 1901(773202). There was apparently a decline of 7.95 per cent during the period from 1901 to 1921. Insufficiency of medical facilities, the influenza epidemic, famine of 1918 may have contributed to this decline. However, more likely reasons were either over-enumeration in 1901 or under-enumeration in the subsequent censuses of 1911 and 1921. During the inter-censal period of 1941 – 1951, the percentage growth of population was 3.62 per annum. It increased to 4.75 per cent per annum during the inter-censal period of 1951-1971. The growth of population jumped to 19.54 per cent from 1991 to 2001.

Table 5
Growth of Population by Sex, Nadia (in per cent)

Name of District/Sub – division	Population growth 1991-2001			Population growth 2001-2011		
	Total	Male	Female	Total	Male	Female
Tehatta sub-division	16.9	16.3	17.5	12.1	11.8	12.39
Krishnanagar sub-division	18.1	17.7	18.55	13	12.8	13.1
Ranaghat sub-division	23.1	22.2	23.97	11.3	11.7	10.91
Kalyani sub-division	19.8	19.2	20.4	12.1	11.5	12.8
Nadia	19.5	18.9	20.11	12.2	12	12.3

Source: Calculated by the author.

In Nadia, total population growth during 2001 – 2011, the percentage shows a volume of 12.22. The growth rate during the 2001-2011 period was relatively low in the lower middle part, especially in Ranaghat sub-division, where as it was significantly higher for the span of 1991-2001 period when the growth was 23.06 per cent, depicting the highest figure in the whole district. For 1991-2001, the growth of male population was distinctively lower than the female population. The contributor for this scenario may be social determinants like marriage. In the northern alluvial plain, ecological variation form a distinction that is this part is the most rural in character in comparison to the whole district. Here the growth rate was slightly higher (16.87) in 1991-2001 than that of 2001-2011 span. For the previous 30 years the male growth was less than the female population growth in Tehatta sub-division as mentioned in the above table. For Kalyani (19.79 per cent) sub-division and Krishnanagar sub-division (18.09 per cent) the growth of total population are more or less similar in their percentage.

It is noteworthy and must be mentioned that at the sub district level or at intra-district level, for the previous 30 years, the female population growth is higher than male forms a striking feature except for inter-censal period of 2001-2011, at Ranaghat sub-division, where the growth rate is 11.67 per cent for male and 10.91 per cent for female. Perhaps at intra-district level, the educational facilities, urban amenities, better opportunities for job attracts male migrants. The inflow from Bangladesh across the international boundary has contributed much to the population growth of the district at all parts specially at middle and southern counter part of Nadia.

6. Population Distribution Pattern:

With a population of 5.17 million and an average density of 1316 persons per sq. km. in 2011, Nadia is a fairly densely populated deltaic plain country. The population is unevenly distributed in the four subdivisions, like, Tehatta, Krishnanagar, Ranaghat and Kalyani sub division. Tehatta sub division with 21.96 per cent of the total area supports 15.41 of the total population, while Krishnanagar sub-division, Ranaghat sub-division and Kalyani sub-division with the rest 78 per cent of the total area contain about 84.59 per cent of the total population. Regional variations in population distribution are closely related to terrain, climate, soil and accessibility.

Kalyani sub-division in the south, with its rich agricultural and industrial resources and easy access, supports the highest density of 1693 persons per sq. km. Towards the north, the density declines with increases with altitude, ruggedness of topography and the absence of urban environment.

7. Distribution of Urban Population:

In the study area 27.84 per cent of the total population lives in urban areas which is much less than the national average (31.16 per cent) and the state average (31.87 per cent). The western plain formed by Hoogly alluvium containing Nakashi para, Nabadwip, Krishnanagar I, Krishnanagar II, Shantipur, Ranaghat I is the most urbanised region of the district as its 21.57 per cent population lives in towns, a percentage just below the district average of 27.84 per cent. It contains slightly

higher than 1/5 of the total urban population. The high concentration of population in urban areas is mainly due to industrial, commercial, administrative, educational and other infrastructural facilities, which have played as a centripetal force in attracting rural mass to these areas.

Table 6
Distribution of urban population and area in the natural division.

NADIA 2011

Natural division	Percentage of urban population to total population of the district	Percentage of urban population to total urban population of the district
Northern alluvial plain	4.54	3.57
Western plain formed by the alluvial deposition of Hooghly	21.57	21.47
Eastern plain formed by the alluvial deposition of Meghna	9.97	7.73
Southern plain	18.05	7.99

Source: Calculated by the author from Districts Statistical Handbook 2012.

Urbanisation usually brings with it regional prosperity as the provision of infrastructural facilities stimulate the utilisation of the increasing regional income and employment level. Hence urbanisation and regional development are closely correlated and can not be separated. The percentage of non-agricultural workers to the total workers (53.48 per cent), literacy rate (63.12 per cent), higher number of family welfare centres (14), higher number of mass literacy centres (4062) etc speak about the level of socio economic development of the region. Thus related with high degree of urbanisation this region is highly developed part of the district.

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Dr. G.C. Debnath has been an Associate Professor at Department of Geography at Visva Bharati, a Central University of India. He has got several Master degrees like MBA, MPS, MSW, MA and Others. He has got a course regarding GIS under AM University, TEXAS, USA. He has been a UNDP project fellow. He has achieved his Ph.D. from Burdwan University. Previously he had been at National ATLAS and Thematic Mapping Organisation (NATMO) and has published several research papers at various National and International Journals.



Dr. Prithvish Nag has been appointed as the vice-chancellor of Mahatma Gandhi Kashi Vidyapeeth, Uttar Pradesh. Governor B L Joshi announced the appointment. Dr. Nag was the Director-National Atlas and Thematic Mapping Organisation. Dr. P. Nag holds a PhD degree from Banaras Hindu University. He has also done Post Doctoral Research from School of Oriental and African Studies, University of London (1982-83). He joined NATMO in June 1976 as a Research officer. He was selected as a Director of the National Atlas and Thematic Mapping Organization, Kolkata

of the Ministry of Science and Technology, Government of India in 1994. He also served as a Surveyor General of India between December, 2001 and February, 2005. He is one of the recipients of Commonwealth Bursary by the Geographical Society on its 150th anniversary. Dr.Nag has more than 140 research papers and 75 books to his [credit](#). He has a vast experience in digital mapping and remote sensing which has helped him to join as a Scientist / Engineer in ISRO. He was an UN Consultant in Oman. He was Chairmen of international commissions: ICA, PCGIAP, ISCGM and was member of IGU Commission (1980 - 88). He was also the President of the [Indian](#) National Cartographic Association (INCA) and Fellow Geographical Society of India, Kolkata. He has been awarded Uttaranchal Ratna by Uttaranchal Nagarik Parisad. He has also received Technology Excellence Awarded by Technocrat Association of India and a Joint Citation from centre for land use management, Hyderabad.