

Rural–urban transformation in North 24 Parganas District, West Bengal: Drivers, and socio-economic implications

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Abstract

North 24 Parganas district has undergone remarkable rural–urban transformation during the post-independence period. The district experienced rapid demographic expansion, increasing urbanization, occupational diversification, and infrastructural development due to the influence of Kolkata Metropolitan Area. This paper analyzes the transformation using Census data from 1951 to 2011. The study highlights long-term trends in population growth, urbanization, literacy, density, and socio-economic change. Findings reveal that urban population increased dramatically after 1971 due to migration, suburbanization, industrialization and metropolitan expansion. While urban development is going on with education, infrastructure and employment opportunities, it also produced environmental stress, decline of agricultural land, congestion and social inequality. The paper emphasizes the need for sustainable regional planning and balanced development policies for such Rural–Urban Transformation.

Keywords: Rural–urban transformation, urbanization, migration, peri-urbanization, socio-economic change

Introduction

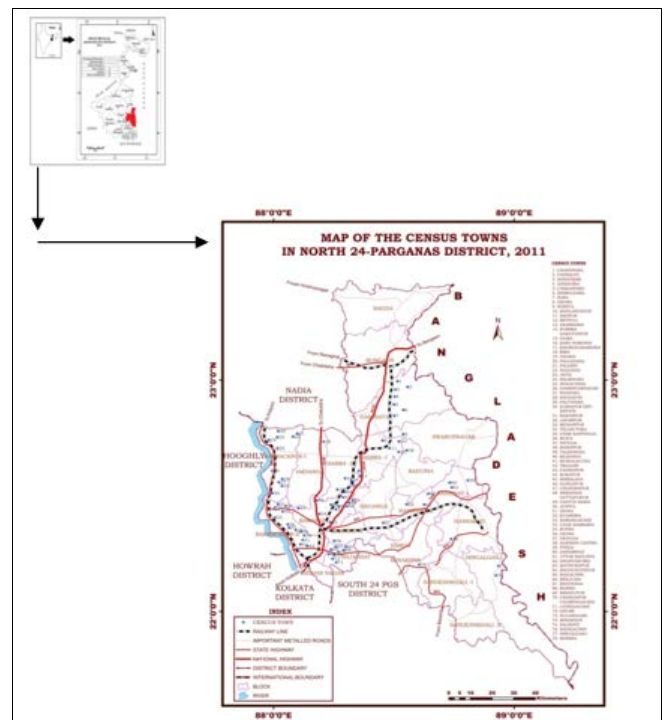
Rural–urban transformation has emerged as a major theme in India’s development trajectory, driven by rapid economic growth, industrialization, infrastructure expansion, and demographic mobility. North 24 Parganas, one of the most urbanized and populous districts of West Bengal, presents a unique case of rural–urban transition. Proximity to Kolkata Metropolitan Area, increasing peri-urbanization, land-use change, and livelihood diversification has accelerated transformation processes, influencing both rural and urban spheres. This study attempts to examine the nature, extent, and socio-economic implications of rural–urban transformation within the district. The district contains a mixture of metropolitan municipalities, industrial towns, census towns, peri-urban settlements, and rural villages. Since the post-independence period, urban growth has accelerated significantly, especially along railway corridors and transport networks.

Urbanization is a dynamic process involving the transformation of rural settlements into urban centers through demographic, economic, spatial, and cultural changes. In developing countries like India, urbanization is strongly associated with industrial growth, infrastructure development, migration, and expansion of metropolitan regions. North 24 Parganas has experienced rapid rural–urban transformation over the last several decades due to its geographical proximity to Kolkata and integration into the Kolkata Metropolitan Region.

Study Area

North 24 Parganas is located in the southern part of West Bengal and forms a major component of the Kolkata Metropolitan Area. The district shares boundaries with Bangladesh in the east and includes highly urbanized municipalities such as Barasat, Bidhannagar, Barrackpore, Madhyamgram, and New Town areas.

Location Map of the Study Area



Source: Prepared by Author

Map- 1

Objectives of the Study

- To study the pattern of rural-urban transformation in the district.
- To identify the major drivers of rural–urban transformation.
- To analyze the socio-economic impacts of the transformation.
- To suggest planning measures for sustainable regional development.

Rural and Urban Population of North 24 Parganas District (1951–2021) ^[3, 7]

The following table presents the decadal rural and urban population trends of North 24 Parganas district based on

Census of India records and projected estimates for 2021 (since the 2021^[7] Census has not been officially conducted/published).

Table 1: Degree of Urbanization in North 24 Parganas District, 1951 ^[3]-2011

Census Year	Rural Population	Urban Population	Percentage of Rural Population	Percentage of Urban Population	Urban Rural Ratio in Percentage
1951	1286927	949243	57.55	42.45	73.76
1961	1730490	1464267	54.10	45.83	84.85
1971	2133883	2066266	50.10	49.19	99.58
1981	2710771	2821366	49.00	5.99	104.08
1991	3539629	3730300	48.69	51.31	105.39
2001	4083339	4850947	45.70	54.30	118.80
2011	4277619	5732162	42.73	57.27	134.00
2021*	4,301,700*	6,728,300*	39.0*	61.0*	156.41*

Source: Computed by authors from different Census Reports, 1951^[3]-2011

Notes: 2021 data are projected estimates because the official Census 2021 was not released.

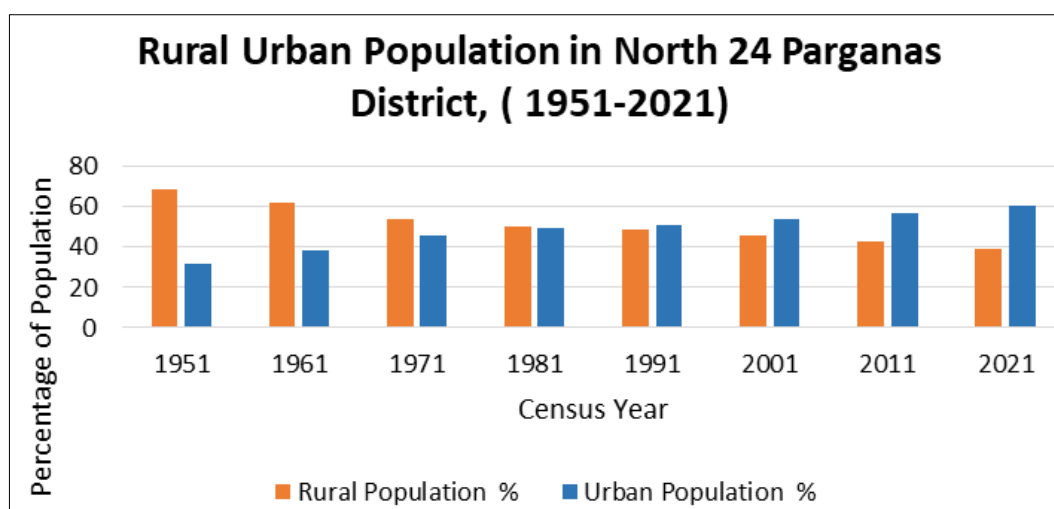


Fig 1

Degree of Urbanization

The degree of urbanization is defined as relative number of people who live in urban areas. Percentage of Urban population ($U/P \times 100$), percent rural ($R/P \times 100$) and urban rural ratio ($U/R \times 100$) are used to measure degree of urbanization. The ratio U/P has lower limit 0 and upper limit is 1. $U/P = 0$ means 100% rural population, $U/P = 1$ means 100% urban population.

From above table it is clear that percentage of urban population has increased from 42.45% in 1951 to 57.27% in 2011. Whereas percentage of rural population has shown the gradual decrease from 57.55% in 1951 to 42.73% in 2011. The urban rural ratio for the district in 2011 turned out to be 134, meaning that against every 100 ruralites there are 134 urbanites. This ratio gradually increased from 73% (1951) to 134% (2011). All these indices focused the high degree of urbanization of the district. In other hands urban rural ratio in West Bengal is 47% and in India is only 45%. These features indicate high pace of urbanization of the district compared to state and nation. This high urban growth is attributed mainly by large scale migration from rural areas and international migration from Bangladesh. Hooghly industrial belt and near of Kolkata metropolitan area are also responsible for the high level of urbanization of this district. The significant fact is that though there is constant increase in rural population from 1951 to 2011 in the district but the

percentage share of rural population have shown a constant decrease. At the same time, there is constant increase in percentage share of urban population to total population of the district from 1951^[3] to 2011.

This indicates strong rural–urban transformation in the district. Urban population exceeded rural population for the first time around 1991, showing the district's transition into a predominantly urbanized region. Major factors for rural–urban transformation in the district: Expansion of Kolkata Metropolitan Area, Refugee migration after Partition, Industrialization, Railway and road connectivity, Growth of municipalities and census towns, Development of Rajarhat-New Town, Migration and suburbanization.

Decadal Urban Population Growth

The decadal growth rate is the growth rate of population by preceding decade. These may be positive or negative value. The Table-3 show the population decade of 1951-61 decade, the rate of growth of rural population (34.47 percent) was much lower than the urban population (54.26 percent). This figure is witnessed the highest rate of urban growth, compared to the next several decades. Because the decadal growth rate of urban, rural and total population gradually decreased from 1951 to 2011. But the decadal growth of urban population is greater than that rural and total population in every census year. In the decade of 2001-

2011, the growth rate of urban population (18.17 %) is higher than rural population (4.76%) and total population (12.04%). This means the district gradually reached saturated condition in case of rural, urban and total population. So, the district represents as a most important populated district of the state as well as nation.

Table 2: Decadal Growth of Population in Percentage, North 24 Pgs District (1951^[3]-2011)

Census Year	Rural Population	Urban Population	Total Population
1951-1961	34.47	54.26	42.87
1961-1971	23.31	41.11	31.47
1971-1981	27.03	36.54	31.71
1981-1991	30.58	32.22	31.41
1991-2001	15.36	30.04	22.89
2001-2011	4.76	18.17	12.04

Source: Computed by authors from different Census Reports, 1951^[3]-2011

From decadal growth rate in urban population of North 24 Parganas district went on declining consistently over the census decades, so the level of urbanization went on

increasing. The decadal growth rate was 55% in 1951^[3] and 18% in 2011. This means the district gradually reached to saturated condition in urban population. But the decadal growth rate of urban population in West Bengal and India has been oscillating in nature from decade to decade. This represent the urban population density is high in the district, compare to state and nation. From this point of view to control the urban population load of the district, the urban areas have to need increase in surroundings of suburban areas and need to plan for existing urban areas.

The *Census Towns* (CT) is first recognized by the census of India in 1971. The *census towns* are administered by Gram Panchayat, but their physical character is like an urban areas. After independence of India, influx of huge refugees from neighbouring country, industrialization, improvement of civic amenities and other pull factor of urban centres which lead to rapid growth of Census Towns. As a result number of Census Towns increased from 13 in 1951^[3] to 78 in 2011. Population of census towns are gradually increasing from 4.62 percent in 1951^[3] to 12.74 percent in 2011. By this processes rural area converted as Census Town and Census Town transformed as Urban Local Bodies

Table 3: Growth Rate of Urban Area and Urban Population of Urban Local Bodies and Census Towns in North 24 Parganas District (1951^[3]-2011)

Census Year	Population of Urban Local Bodies	Area of Urban Local Bodies in sq. km.	Population of Census Towns	Area of Census Town in sq km.	Total Number of Urban Centers	Total Urban Area in sq km	Total Urban Population
1951	905427	287.13	43816	44.45	36	331.58	949243
1961	1377174	312.35	87093	51.57	40	363.92	1468398
1971	1909047	302.9	157219	51.57	40	354.47	2125002
1981	2535493	332.35	285873	71.68	59	404.03	2821366
1991	3242414	346.55	487886	89.04	70	435.59	3730300
2001	4656718	467.1	194229	32.8	55	499.9	4850947
2011	5001716	451.43	730446	172.48	111	623.91	5732162

Source: Compiled by Author from Different Census, 1951^[3]-2011

The spatial extent of urbanization in the North 24 Parganas district has undergone significant transformation over the sixty-year period from 1951^[3] to 2011. From Table-3, the total urban area increased from 331.58 sq km in 1951 to 623.91 sq km in 2011, registering an overall growth of approximately 88%. The area under Urban Local Bodies rose steadily from 287.13 sq km in 1951 to 451.43 sq km in 2011, The area under Census Towns has increased modestly from 44.45 sq km to to 172.48 sq km, demonstrating the rapid rural-to-urban transformation, increase of new census towns and emergence of peri-urban landscapes under the influence of Kolkata's suburban expansion.

Figure-2

Drivers of Rural-Urban Transformation

1. Refugee Migration: Partition-related migration after 1947 dramatically increased population and urban growth.
2. Kolkata Metropolitan Expansion: The district became integrated into Kolkata Metropolitan Area through.
3. Industrialization: Industrial belts in Barrackpore subdivision generated employment and urban concentration.

4. Transportation Development: Suburban railway systems and highways accelerated suburban growth and commuting.
5. Real Estate and Planned Urbanization: Rajarhat-New Town transformed rural landscapes into planned urban settlements.

Findings of the Study

The percentage of urban population increased from 42.45% in 1951 to 57.27% in 2011, while the rural population share continuously declined. The urban-rural ratio increased significantly from 73.76 in 1951 to 134 in 2011, indicating that urban population growth surpassed rural growth. The Refugee migration after the Partition of India in 1947 played a major role in population increase and urban expansion. Proximity to the Kolkata Metropolitan Area accelerated rural-urban transformation in the district. The number of Census Towns increased dramatically from 13 in 1951^[3] to 78 in 2011, Urban spatial extent increased considerably from 331.58 sq. km in 1951 to 623.91 sq. km in 2011, and indicating to rural urban transformation in the district. Rural areas surrounding municipalities gradually acquired urban characteristics due to real estate development, industrialization, and improved connectivity, resulting in mixed rural-urban landscapes.

Recommendations

1. Regional Planning

A comprehensive metropolitan and regional planning framework should be adopted to manage urban growth systematically and reduce unplanned urban sprawl.

2. Protection of Agricultural Land and Wetlands

Strict land-use regulations should be implemented to conserve fertile agricultural land, wetlands, and environmentally sensitive areas from indiscriminate urban expansion.

3. Sustainable Urban Development

Urban infrastructure such as roads, drainage systems, public transport, water supply, and waste management should be improved to meet increasing population demands.

4. Rural Development

Greater investment in rural infrastructure, healthcare, education, and employment opportunities is necessary to reduce excessive rural-to-urban migration.

5. Decentralization of Urban Growth

Development of secondary urban centers and satellite towns can reduce excessive pressure on Kolkata Metropolitan Area and promote balanced regional development.

6. Improvement of Local Governance

Municipalities and Panchayats should be strengthened through better financial support, planning capacity, and public participation for effective urban management.

Conclusion

North 24 Parganas has experienced profound rural-urban transformation from 1951 [3] to 2011. Census data demonstrate continuous population growth, rising urbanization, increasing literacy, and major occupational changes. Metropolitan expansion from Kolkata, migration, industrialization, and transport connectivity have reshaped the district's demographic and economic structure. While the transformation has improved economic opportunities and infrastructure, it has also generated serious environmental and socio-economic challenges.

Future development strategies should focus on sustainable and inclusive urbanization that balances economic growth with environmental protection and social equity. Effective planning and governance are essential to manage the continuing rural - urban transformation of the district.

Although urbanization has improved infrastructure and economic opportunities, it has also generated environmental degradation, land-use conflicts, and social disparities. Sustainable planning and balanced regional development are therefore essential for rural-urban development in the district.

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