

Trends of Urbanization in West Bengal: A District Level Study

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Abstract: *The 21st century experiences a rapid pace of urbanization in the world and especially in the developing countries like- India. More than half of the world's population lives in cities and towns that symbolize the unprecedented growth of urbanization. This very urbanization is coupled with social, economic, spatial and environmental impacts and challenges. Though higher rate of urbanization seems to be positive sign for economic development and overall prosperity of the regions. The present work intends to study the recent processes and demonstrate the levels of pattern of development and inter-districts disparities of urbanisation of West Bengal by measuring some selected indices: like level of urbanisation, decadal growth of urban population, rate of urbanisation and urban growth, contribution of growth in urban population to total growth and human development index. It is a meso-level study and 19 districts of the state have been selected as units of study. The simple statistical techniques have been used to calculate the level development by the help of the data collected from secondary sources -Census 2001 & 2011.*

Keywords: Urbanization, development, levels of development, regional development, regional disparity, indices of urbanisation, process of urbanisation

I. INTRODUCTION

The term 'urban' refers to an area of mainly cities but also of towns and suburbs (suburban areas). The main characteristics of an area being called an urban are high population density, manmade habitations, occupations of people being in trade and services and industrialization. The means of livelihood for people living in an urban area are mainly commerce and employments. The criteria for determining a human settlement being classified as rural or urban are mainly two: population density and occupation of people. Urban areas display high population density and services as being the occupation. The high density of population in urban areas is caused by continuous migration of people from the rural to towns and to cities. The migration is again caused by many factors such as better job opportunities, availability of better amenities and possibility of better lifestyle. According to Thompson (1935) "urbanization is characterized by movement of people from small communities concerned solely with agriculture to other larger communities whose activities are primarily centered in government, trade, manufacture and allied interests". Panday (2020) characterize "urbanization as a change in the pattern of population distribution and growth in number and size of urban places with increasing concentration of population of such places". The India's Census (2001 similar to 1991) treats "those areas as urban which are either statutory town. i.e. all places with a Municipal Corporation, Municipal Board, Cantonment Board, Town Committee or notified area or which have got a: i) minimum population of 5,000 persons; ii) three-fourth (75 percent) of its male work force being engaged in non-agricultural economic activities; and iii) a density of at least 400 persons/sq.km". With an exception to rural areas urban set-up can be identified by their better status of facilities i.e. education, health, communication, trade and commerce, civic amenities, social interaction and over all better standards of living. Eventually, these in higher concentration cause severe environmental issues and concerns in urbanized areas as well as its surrounding implications.

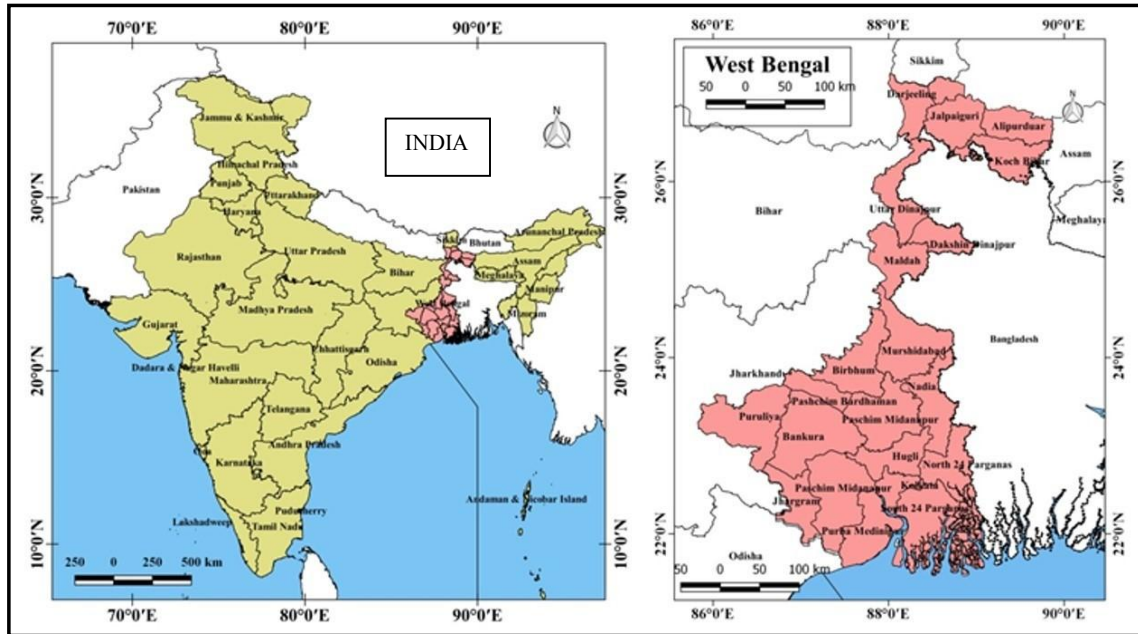
II. THE STUDY AREA

The state of West Bengal is geographically located in the east with its southern part being one of the ecologically sensitive zones of the country, world over known for the *Sundarbans*, the mangrove forest. The level of urbanization in



West Bengal has grown from 23.28 percent in 1951 to 31.89 percent in 2011. The decadal growth between 2001 and 2011 has been much higher being at 68.11 percent. The state is comprised of 19 districts including Kolkata.

Map 1 Showing the Location Map of Coastal Region of West Bengal (Study Area)



Source: Prepared by the Author

It lays between 21°55' N lat. to 26°50' N lat. & 86°30' E long. to 89°58' E long. respectively with an area about 88,752 sq km. The state of West Bengal is bounded to the north by the state of Sikkim and the country of Bhutan, to the east by the country of Bangladesh, to the south by the Bay of Bengal, to the southwest by the state of Odisha, to the west by the states of Jharkhand and Bihar as shown in the Map 1.

III. REVIEW OF LITERATURE

For the purpose of present research several studies are reviewed and their major findings are discussed in the following sections. Most of these works focus on urbanization, urban development in different scales. Review of literature is divided into three levels: international (or global), national, and regional. Allen, N. (2015) showed how urban growth management strategy has been initiated among Pacific Rim cities in Australia, North America, Auckland and New Zealand on the basis of two notions-Liveability and a "quality compact city". In terms of method, the structured interviews were recorded and transcribed. Study suggested that information from the resident were the market on the supply side of housing and comments on the choices of replying yes or no to the objectives of the marked urban management Strategies. Ismail, M., Ishaku, E., Yahaya, M. A., Tanko, A.M. and Ahmed, H.T. (2015) examined how Karu local government area of Nasarawa state in Nigeria is facing great problem due to rampant urban growth and infrastructure. Descriptive statistics and co-relation analysis were applied for analyzing the data. The study revealed poor sanitary system, uncleaned sewage, inadequate basic amenities, insufficient accessibility and improper planning of infrastructure and housing in the area. Study suggests that to avoid further urban sprawl, a master plan authenticated by government should be incorporated. Fazal, S. (2000) assessed the destruction of agricultural land due to the urbanization process in Saharanpur City between 1988 and 1998. Study is based on remote sensing application like-aerial photograph and satellite images. This study reveals responsible factor of non-agricultural land use for agricultural land loses. Study brings the fact that high quality agricultural land reduces the urbanization process as well. If one kind of and use to grow, it will have its own spatial effects. Ali, J.M. and Varshney, D. (2012) studied about spatial distribution of population and socio-economic facilities and placed the urban centres in terms of hierarchical order in



the urban centres of India. Various advanced statistical technique as well as government published secondary source has been taken for analysis. This paper finds that to enhance the quality of life, level of living, human well-being and the welfare city planning formulation and policy making is to be needed in a proper way. Chatterjee, A. and Ayadi, O.F. (2001) studied and analyzed the pattern of urbanization in West Bengal. Indicators related to urbanization, economic growth, human development, and also socio-economic condition had been taken and compared them between State of West Bengal. It suggests that in 1990s the new capital investments as tool for fast economic development has brought manifold spatial transformations in and around major cities. This demands a deeper research in spatial spread of urbanization and urban growth and its larger implications in the state. Kolkata Urban Services for the Poor (2010) report assessed basic services for the urban poor. It studied urban strategy in West Bengal at present and find out future requirements in the cities. This includes social, economic, environmental, institutional and infrastructural indicators in the assessment spatial dimension of urban services. The paper finds that it is needed to formulate an ideal urban strategy in West Bengal that mitigate the fault of different urban and geographical regions and various sectors. Aktar, N. and Sultana, C. (2014) in their paper studied the existing level of urbanization in association with rising spatial patterns, process of urbanization, regional variation in level of urbanization, probable reason for noted regional discrepancy in the gradation of urbanization. The concern is practically proved by the secondary data obtained from the census of India. The finding of the study is that rapid urbanization is accompanied by industrial development, socio-economic upliftment, easily accessible transportation routes and in-migration of workers, all that leading to population explosion in urban areas. Banerjee, S. and De, D. (2014) attempted to highlight degree and prosperity of urbanization of the chosen Community Development Blocks and their economic specialization with reference to the degree of urbanization. Under methodology secondary sources of data had been taken. The Z score is calculated for each indicator for each C.D block to study degree of urbanization at block level. Further, Location Quotient (L.Q) is used for finding economic specialization in the State. The study finds that an intra spatial difference in the urbanization level and economic dynamism of the marked C.D. blocks. Ghosh, B. and Chakma, N. (2014) attempted to study the recent urbanization process in West Bengal. Different measures have been applied like level of urbanization, decadal growth rate of urban population, growth in urban population to total growth and rural-urban displacement and also using the Principal Component Analysis. Study reveals spatial variation in the level of urbanization and concentration of urbanization in the state. Findings suggested that proper planning of state as well as central government can enrich with to tackle inequality of the state. Anisujjaman, Md. (2015) studied the current tendency and array of urbanization in West Bengal exploring its relationship with the urbanization and Human Development Index (HDI). To justify the present concern Census of India (2001) i.e. secondary data source has been used. The findings of the paper is lethargic urban growth rate but a fruitful correspondence is observed between the level of urbanization and the HDI at district level.

IV. OBJECTIVES

The present research study makes an attempt to address the following major objectives in the context of urbanization of West Bengal, India:

- To provide the historical perspective and contemporary nature of urbanization of West Bengal;
- To provide the spatio-temporal perspective and urban growth in the coastal region of West Bengal;
- To examine the spatial pattern of levels of development of West Bengal;
- To evaluate inter-district disparity according to level of development;
- To identify various factors influencing the regional disparity; and
- To identify the patterns of urbanization and categories them into various level of development.

V. METHODOLOGY

The methodology of the present study is based quantitative methods of analysis and interpretation. For present study, secondary data and information are used to execute, comprehend and understand the research problem. The process of urbanisation has been analyzed on the basis of selected urban indices— Rate of Urbanisation; Rate of Urban Population Growth; Spatial Pattern of Urbanization; Decadal Growth rate; Number of Class; Size of Towns; Level of Human

Development Index (Sivaramakrishnan et al., 2005). The secondary source of data is collected from various sources books, research articles, Census of India 2001 & 2011, District Statistical Handbook 2011, Human Development Report 2011, State Statistical Handbook, 2011, West Bengal Development Report 2010.

VI. HISTORICAL BACKGROUND OF URBANIZATION IN WEST BENGAL

The history of urbanization process in India and West Bengal has been geographically uneven. During the pre-colonial period the different towns of West Bengal were treated as especially commercial points, revenue centres or the places of religious abode (Anisujjaman, 2015). Tamralipta was one of the other major towns' as port cities. It is reported that "In the ancient history, except Tamralipta, which was a sea-port (and had a population of 45000 in c. 630), we do not find any mention of any other urban settlement situated in the southern part of West Bengal" (Chandler, 1974). Due to patronage of foreign interest, the growth of textile trade led to the growth of urban centres viz. Murshidabad (which was also the capital), Malda and Cossimbazar. In this period most of the urban centres were found on the river side in West Bengal because in Bengal the river network and water transport has been the most dominant type of transport. Through these towns conducted huge trade system by the river transport mainly Ganga River, even the foreign ships communicated with these towns. So, the urbanization level was high at that time.

Thus, history witnesses the deficiency of substantial urbanisation during pre-Mughal phase in West Bengal. Only two large famous towns namely Tamralipta and Gaur have been referred to in the period before Christ was born. During the reign of pre-Mughal emperor, evidence testifies Gaur to be the largest urban centre having 200000 persons in 1514 followed by Pandua having 150000 persons in 1400 (Chandler, 1974). In ancient times, urbanisation solely depended on the extraction of agricultural excess and their distribution among the people living in it. To circulate excess materials, the feudal kings and the religious institutions played pivotal role and sometimes under a single authority (Champakalakshmi 1996, Roy b.1400). It is undeniable that the progression and expansion of the urban settlement can take place truly under the supervision of the administration in a unique way (Bairock, 1988). But unfortunately, Bengal was neither the foreground of large kingdom nor having potential Brahminical religion foundation on which proper urban settlement could flourish. Hence, the outcome was limited number of towns and unstable urban settlement, system in the region. Bengal remained inferior to the Mughal emperors during the golden age of their reign. They did not pay full heed to the region with full of rivers and bogs and had least interest in that region. Naturally, no larger urban settlements are to be found here. On the other hand, with the invasion of the British rulers to Bengal by winning Battle of Plassey, Bengal became the centre of three major urban settlements-Calcutta having a population of 117000 in 1752, Chandernagore having population 120000 in 1753 and Murshidabad with population 200000 in 1750 (Chandler, 1974).

West Bengal earns name and fame for the most popular and urbanised city namely Kolkata (earlier Calcutta) in India since the dawn of the 20th century. According to Dasgupta (1987), "urbanization pattern was eventually evolved by the policy of the labourers were hired to work in the tea-gardens in Assam and to plantation in Africa from Bihar, Orissa and Uttar Pradesh". Now, Kolkata and Asansol, the centres of the large number of refugees invading from Eastern part of Bengal are slowly but gradually becoming populated (Giri, 1988).

During British reign Calcutta was the administrative headquarters for its natural location and thus consequently changing spatial structure of the British, the economy and the colony on the basis of which the development started flourishing in Bengal. The setting up of colonies proved to be bliss as they supplied raw materials and goods to the industry located in the Great Britain. Slowly but steadily, they took interest in commercial agriculture, plantation and mining of raw materials in Bengal. Now, standing in the 21st century we can observe a great difference of development of new Census towns, statutory towns and the district level spatial pattern of urbanization. The pattern of urbanization now-a-days is unbiased of the metropolis and prevailing urban-industrial areas (Samanta, 2012).

VII. TRENDS OF URBANIZATION IN WEST BENGAL

It shows that in 1991 around 13.05 percent of state of Bengal lived in urban areas compared to 10.41 percent of India. Up to 1931 the spreading of urbanization was very slow in progression in West Bengal. During 1901 and 1931 the expansion of urban population was about three percent from 12.20 to 15.32. However, rapid growth of urbanization between 1931 and 1941 was seen in this state more than five percentage point increase in the percentage of urban

population. In the first quarter of post-independence period, urbanization gradually has increased. It is said that in 1951, 24 percent people of the total population lived in urban centers of West Bengal. With passage of time this percent grew gradually over the decades. By 1971, the level of urbanization increased to 24.70 percent. In the Census years 1981 and 1991 urban people resided in urban area was at the rate 26.47 percent and 27.48 percent of the total population respectively. In Census year 2001, the rate of urban population reached at 28 percent. Census of India, 2011 reveals that West Bengal is the 4th most populous state (91,276,115 persons) of the country with a population density of 1,029 persons per sq. km. Recent urbanization rate of West Bengal is 31.87 percent, slightly above the national average (Census of India, 1901-2011).

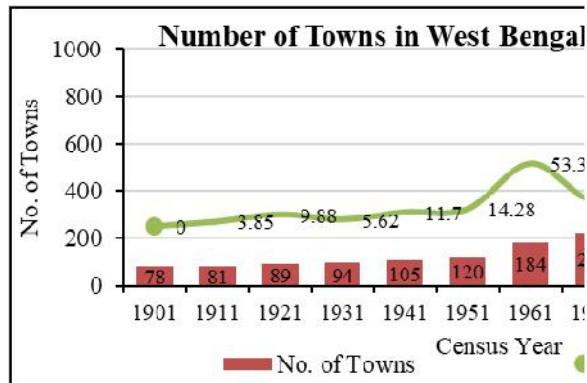
In Appendix 1 there are three concepts mainly relating to urbanization, namely, a) level of urbanization, b) rate of urbanization and c) urban growth rate. By level of urbanization, we have meant percentage of urban population in total population. The trend in urbanization level in West Bengal has grown from 12.02 percent to 31.89 percent from the Census year 1901-2011. This is more than twofold increase in level of urbanization in West Bengal. However, level of urbanization in the country increased threefold from 10.99 in 1901 to 31.16 by 2011. By rate of urbanization, it is meant the change in urban population as a percentage of total population in the current Census year compared to that of the immediately preceding Census year. West Bengal in this regard possess rank high in during 1941 (33.23 percent) and 1951 (17.00 percent) Census year. In India the urbanization rate is reported high in the Census year 1951 (22.73 percent) and next during 1981 (16.98 percent). By urban growth rate, it is meant a percentage change in total urban population in the current Census year compared to that of the immediately preceding census year. In West Bengal the urban growth rate is reported high in the Census year 1941 (63.09 percent) and next in 1961 (35.97 percent) slightly higher than 1951 (32.52). Urban growth rate in India possessed high rate in the Census year 1981 (46.15 percent).

According to Census of India, 2001 shows share of rural and urban areas in total population of the country and West Bengal. An interesting phenomenon is to be seen is that face of urbanization highly picked up from middle of twentieth century in West Bengal. This has been in accelerated form since independence of the country. A higher growth in urban population, in 1980s is also experienced in the state.

After independence West Bengal witnessed a concentration of urbanization in large urban centers. These urban centers are mostly agglomerations consisting of some adjacent cities and towns. The peculiarity of urbanization in West Bengal is that urbanization maintained very slow pace but urban size concentration that is the rate of people being settled in cities is relatively faster. The urban agglomerations and cities with populations of 1,00,000 or more accounted for 75.00 percent of the urban population in the year 1951, while in 2011 about 84.44 percent of urban population lives in such cities and urban agglomerations. Moreover, the ratio of urban population residing in lower order towns in incoherence (not part of urban agglomeration) gradually declined consistently or somewhere nearly same over the decades as revealed through according to Census of India, 2001.

It is observed between 1901 and 1951 from Figure 1 that the number of towns in the State was comparatively growing tardy. However, this slow growth was disintegrated afterwards and in the inter-censal decade 1951-1961, there was more than 53 percent increase in the number of towns here. The State in its towns list assimilated few new towns i.e. 39 new towns during 1961 and 1971 and 68 new towns during 1971 and 1981. The State observed an improvement in the number of towns in 1991 having 382 towns but in 2001 it witnessed negative growth of having only 375 towns. Causes behind the decrease in number of towns in 2001 have been elaborated below. Over different censuses many of the medium towns especially those in class II have shifted to class I category due to migration and also natural increase. In the year 2011 it reaches in 909 towns. The Census year between 1901 and 1951 the decadal growth rate of towns was relatively very slow in West Bengal. In fact, in the concern of the first half of the entire period (1901-1951) the decadal growth rate was 10.43 percent and in the second half of this period (1961-2011) the growth rate reached to 89.07 percent. Here, if relook at entire period of 100 years from 1911 to 2011 the decadal growth rate of towns in West Bengal has proceed at 138.55 percent.

Figure 1 Number of Towns in West Bengal between 1901 and 2011 & Decadal Growth Rate



Source: Census of India, 2011

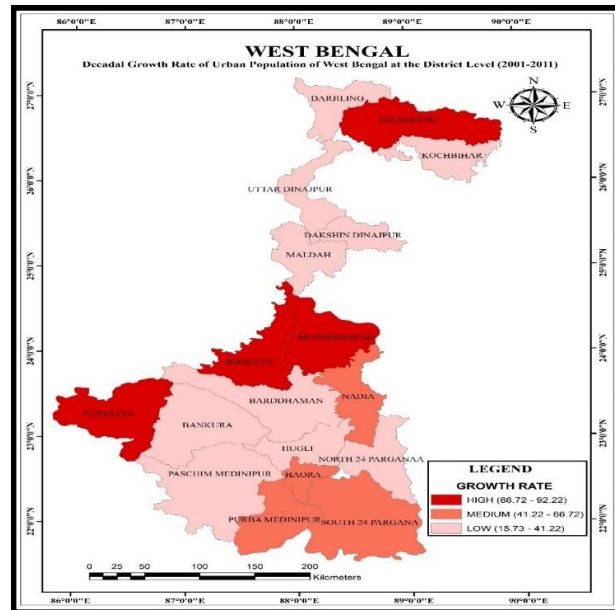
VIII. DISTRICT-WISE SHARE OF URBANIZATION IN WEST BENGAL

District-wise urban population in West Bengal during the Census 1951-2011 share of each district in total urban population of state a spatial variation in distribution across the district is quite visible. Certain districts have been on advantageous side in terms of spatial concentration of urban population and these are Kolkata, 24-Parganas, Howrah, Hooghly and Burdwan. During the last decades the concentration of urban population in such districts remained higher than that in others. Districts like South Dinajpur and South 24-Parganas the urban population from 1951 to 1981 has been considered for previous administrative area of districts because before that two districts were known as West Dinajpur and 24-Parganas respectively. In the same way urban population since 1951 to 2001 is shown for the Medinipur district as a whole. After year 2001, the Medinipur district is divided in two parts, viz. Purba Medinipur and Paschim Medinipur. The Table clearly represents that the urban population concentration in respect of time is gradually increasing in rest of districts, but remained below 5 percent. In the coastal region which includes Purba Medinipur and South 24-Parganas, concentration of urban population has gained a pace during the last three decades. However, this change in urban population is more rapid in South 24-Parganas compared to Purba Medinipur.

IX. DECADAL GROWTH RATE

The growth pattern of urban population in the districts of West Bengal after independence the decade-wise growth rate of urban population has been discussed to the following paragraph. Census of India, 2011, series-20, West Bengal presents no any uniform pattern in the districts of West Bengal of decade-wise growth rate of urban population. It is also revealed that between first two consecutive censuses districts like-Medinipur as well as 24-Parganas, have faced a declining decade-wise growth rate of urban population. In the decadal year 2001-2011, Purba Medinipur of West Bengal the decadal growth rate of urban populations has doubled at a rate from the state level average and South 24-Parganas district stands here in approximate more value from the state level average. In Hooghly and Burdwan districts have recorded very low rate of decadal growth due to higher concentration of urban population. Due to poor quality of urban services resulting from more concentration of people in a particular area, the growth rate in Kolkata has been found negative. The status of decadal growth rate (1951-2011) is more from rural sector to urban sector in Purba Medinipur, South 24-Parganas and in West Bengal. In state of West Bengal overall decadal growth was 17.85 percent in 1951-61, which increased to 43.13 percent by 1961-71. Since 1971-81, decadal growth has shown a declining trend in the state. During this period, it came to 25.98 percent. It further declined to 25.93 percent in 1981-91 and 21.54 percent in 1991-01. There has been slight growth in 2001-11 having increased to 29.90 percent.

Figure 2 Decadal Growth Rate of Urban Population in West Bengal (2001-2011)



Source: Prepared by the Author

Decadal growth pattern of urban population in West Bengal (2001-2011) are shown in Figure 2. The rate has been categorized into three parts having high growth rate (66.72-92.22), medium growth rate (41.22-66.72) and low growth rate (15.73-41.22). Out of all districts Purulia, Murshidabad, Birbhum, and Jalpaiguri have highest growth rate of urban population and that ranges percentage from 66.72 to 92.22. Nadia, Haora, Purba Medinipur, South 24-Parganas fall in the medium category growth rate of urban population having percentage from 41.22 to 66.72. Low growth rate is observed in Darjeeling, Cooch Behar, Maldah, Uttar and Dakshin Dinajpur, Bankura, Bardhaman, Hooghly, North 24-Parganas and Paschim Medinipur district varying percentage (15.73- 41.22).

X. SPATIAL PATTERN OF URBANIZATION: DISTRICT WISE

West Bengal has 19 districts. District wise urbanization pattern are given below in Table 1. In the census year 2001 and 2011 Kolkata reached 100 percent degree of urbanization. On the basis of level of urbanization this state divided in to three main categories (See, Appendix 2). Like-A. Areas having high degree of urbanization, having more than 27.81 percent of the total population as urban. B. Areas having moderate degree of urbanization, having 14.13 to 27.81 percent of the total population as urban. C. Areas having low degree of urbanization, having less than 14.13 percent of the total population as urban (Figure 3).

Table 1 Patterns of Urbanization Among the District of West Bengal (2011)

Category	Index	No. of Districts	Name of the Districts
High	>27.81	06	Darjeeling, Burdwan, North 24-Parganas, Hooghly, Howrah and Kolkata
Medium	27.81-14.13	07	Jalpaiguri, Uttar Dinajpur, Dakshin Dinajpur, Murshidabad, Nadia, Paschim Medinipur and South 24-Parganas
Low	<14.13	06	Cooch Behar, Malda, Birbhum, Bankura, Purulia and Purba Medinipur

Source: Computed by the Author

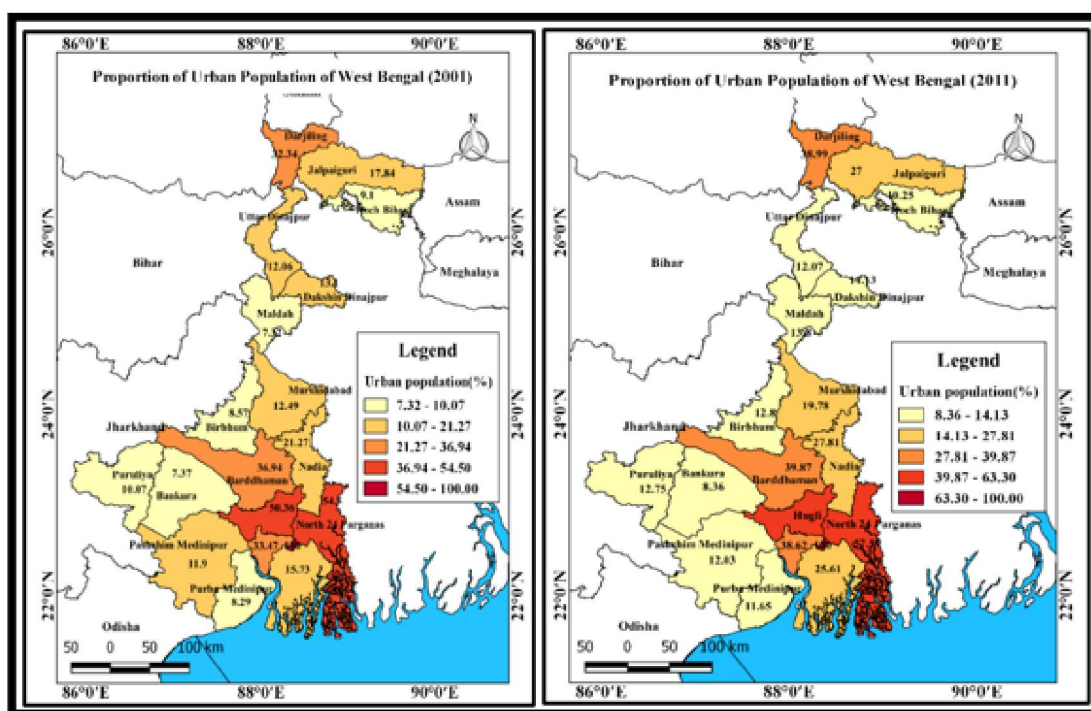
Areas with highest degree of urbanization: The Table reveals that the level of 27.81 percent and above urban population is concentrated in the districts which indicate high degree of urbanization. These districts are Darjeeling, Burdwan, North 24-Parganas, Hooghly, Howrah and Kolkata. High degree of urbanization means in these districts all

kind of facility like- road, rail ways well developed infrastructure as well as social awakening due to high level of male female literacy rates.

Areas with moderate degree of urbanization: Level of 27.81-14.13 percent of urban population to total population is in this category. Out of 19 districts only 7 districts like- Jalpaiguri, Uttar Dinajpur, Dakshin Dinajpur, Murshidabad, Nadia, Paschim Medinipur and South 24-Parganas are in this category. Behind the formation of this region some responsible factors are establishment of small and medium scale industries, location along major transportation, and moderate level of industrial development as well as literacy.

Areas with low degree of urbanization: This category includes some districts which are below 14.13 percent growth of urbanization, here 06 districts like- Cooch Behar, Malda, Birbhum, Bankura, Purulia and Purba Medinipur districts out of 19 districts are under low level of urbanization. These areas of this district are low degree of urbanization due to unsatisfactory agricultural and industrial development, stooping diversification, backwardness of socio-cultural activity, low literacy among male and female. The location of this area is mainly north, central, western and southern part of the state.

Figure 3 Proportion of Urban Population of West Bengal between 2001 and 2011



Source: Census of India, 2001 & 2011

XI. TOWN CLASSIFICATION ACROSS DISTRICTS OF WEST BENGAL

The census reports on the basis of size of population of India towns have been categorized into six classes- Class I to Class VI. Towns containing population of 100000 or above are called class-I town. Class-II towns have population of 50000 or above but less than 100000. Class-III towns having population of 20000 or more but less than 50000. Towns having a population size 10000 or more but less than 20000 are termed class-IV towns. Class-V towns have population of 5000 or more but less than 10000. Class-VI towns are formed having population of less than 5000.

It shows the number of different type of towns in West Bengal at the district level given below. The district-wise number of 6 classes of towns in the state of West Bengal in the last two censuses i.e., 2001 and 2011 on the basis of this classification of towns is being presented in the following with the relevant data. Appendix 3 focuses on the number of Class I towns in West Bengal had decreased from 58 in 2001 to 2 in 2011, a decline of about 4.88 percent as well as the number of Class II towns declined from 29 to 5, a decline of more than 2.08 percent. The Class-III towns declined from

56 to 52, a decline of 0.34 percent and the number of Class-IV towns increased from 76 to 186, an account of about 9.58 percent. However, there is some sort of progression in the number of Class-IV, Class-V and Class-VI towns' viz. 9.58 percent, 26.89 percent and 5.57 percent respectively. The primary cause behind the decline of the class-I, class-II and class-III towns is that some such towns may have got the status of low value in indicators of growing condition of towns.

A critical observation in Appendix 4 on the discontinuity and fluctuation in the growth of old and new towns and the apparent importance of new towns can express the spatial variation development of small, medium and large towns in West Bengal and can change the structural pattern of the state. For example, it was mentioned earlier, that the urban process of west Bengal has always been a high orientation towards large cities and limited extensively to the highly urbanized districts, causing lowering down of urban growth. Large towns inside all the districts of West Bengal have reported of degradation in their population concentration. Maldah witnessed the largest fall between 2001 and 2011 (about 30 percentage points) followed by South 24-Parganas (25 percentage points), Darjeeling (18.5 percentage points) and Medinipur (10 percentage points) during 2001-2011.

The Population share of medium towns has been decreasing over the period, but it is not really important except in the case Birbhum and Nadia. Principally, northern districts have experienced a surplus in their medium town population share in 2011. Birbhum is such a district where the growth of small towns has been noteworthy with equally striking fall in the population share of medium towns. But for Kochbihar, Urban growth has been associated with medium sized urban centres and has no chance of small towns to be grown. Here, in case of Medinipur and South 24-Parganas the development of small town is respectively 9 and 30 points.

XII. HUMAN DEVELOPMENT AND WEST BENGAL

Human Development Index (HDI) is one of the determining and independent report human developments, originated by the United Nations Development Programme (Human Development Reports, 2009). This HDI has combined index containing three basic dimensions to measure the level of development in country level and published in annually in the Human Development Report. Human development is a method of expanding people's choices and change over time that is the main motivation behind the formation of HDI in 1990. In terms of three essential levels of development, first one is people to lead a long and healthy life, second one is to acquire knowledge and third one is to have access to resources needed for a decent standard of living. When essential choices of level of development are not available than any other opportunities remain inaccessible (UNDP, 1990). Amartya Sen propound the human development approach which is closely related with the idea of human capability and also further developed by Robeyns (2005). Here, Ravallion (2014) summarizes that discrimination within a population can postponed the possible growth in a country, further suggest the similarity of wealth and resources to enhance the human development.

The Human Development Report displays a brief indicator on the level of human development in each country known as Human Development Index (HDI). It is a one kind of development of a country that linked with the creation and enhancing of living conditions which helps to the people of their maximum power potential, can develop long and healthy life and improve a proper education system. At global level, "United Nations Development Programme has been defining Human Development as, the progression of enlarging people's choice, lead a long and healthy life, to be educated, to enjoy a decent standard of living, as well as political freedom, other guaranteed human rights and various ingredients of self-respect" [Human Development Reports, 1997 (UNDP)]. Thus, "Human development is all about human freedoms: freedom to realize the full potential of every human life, not just of a few, nor of most, but of all lives in every corner of the world—now and in the future. Such universalism gives the human development approach its uniqueness" (UNDP, 2016). Mishra & Chaudhary, 2014 disclose that the "Human Development Index is a statistical tool utilized for evaluating countries overall performances in the peripheries of society and economy". The value of the HDI determined the rank of any country. For an example, UNDP-HDR 2004 (UNDP, 2004) ranks India 127th among 177 countries as per the value of HDI (=0.595). Other three sub-indices, the value of life expectancy index is highest (=0.64), followed by education index (=0.59) and GDP index (=0.55) (Fukuda, 2003).

Human Development Index has contributed the basic measurement of human development bearing three indices viz. as long and healthy life, access to knowledge and awareness, and standard of living and promotion in life expectancy. Although, this basic three parameters are connected with different sub-indicators measuring of human development.

Here, in terms of access to knowledge and awareness the parameters are such as institutional facility, access to knowledge evaluated concerning adult literacy rate and gross enrolment ratio, in long and healthy life, the health index, utilization of sanitation etc. and in standard of living and upliftment in life expectancy the parameters are facility of drinking water, earning dimension calculated regarding per capita income. The United Nations Development Programme (UNDP) has been bringing out the global Human Development Report (HDR) since 1990 to 2014. Every year, the HDR highlights on a unique theme that has implications in explaining and measuring of multidimensional nature and process of human development (HDR, 2014).

West Bengal, in 2011 claims to be the fourth most popular state having 91 million people and having maximum population density of 1028 persons per square kilometer. Where in 2001 the population was 82 million and the population density was 904 persons per square kilometer, population increased to 13.84 percent. This larger population pressure means additional pressure on basic infrastructure like- education services and availability of health. The excessive high population density evidently affects per capita resource allocation; so here West Bengal has acquired though getting the best population density within the entire nation. In this regard, the variation of indicators across the districts are considering in inter-district differences of human development.

West Bengal is placed in the middle of all Indian states in terms of the more obvious indicators of human development. Demographically West Bengal has been successful in decreasing both birth rates and death rates. The birth rate in West Bengal per thousand during the period 2001-2011 saw a decline from 25.4 to 16.3. This is nearly doubled the all-India average during that period. Similarly in the same period the death rate in West Bengal recorded a decline of one and a half times with that of the national average. West Bengal witnesses a decrease in the event of Infant mortality gradually than the rest states of India. Life expectancy in West Bengal is well above the national average. West Bengal is placed middle-income state and in terms of both per capita income and per capita consumption expenditure ranked among the fifteen major states. This state is enough for having more equality of access than any other states in India. In terms of infant mortality rates gradually decreased and the sex-ratio of this state is also increased in West Bengal.

Table 2 Human Development Indices by district in West Bengal, 2004

Sl. No.	State/Districts	Human Development Indices (HDI)
1	West Bengal	0.61
2	Darjeeling	0.65
3	Jalpaiguri	0.53
4	Koch Bihar	0.52
5	Uttar Dinajpur	0.51
6	Dakshin Dinajpur	0.49
7	Maldah	0.44
8	Murshidabad	0.46
9	Birbhum	0.47
10	Burdwan	0.64
11	Nadia	0.57
12	North 24-Parganas	0.66
13	Hugli	0.63
14	Bankura	0.52
15	Purulia	0.45
16	Medinipur	0.62
17	Haora	0.68
18	Kolkata	0.78
19	South 24-Parganas	0.60

Source: Human Development Report of West Bengal (2004), United Nation Development Programme

A mixed scenario is found in the case of human development in West Bengal. Variation across districts in the states have complicated this scenario further. **Table 3.16** shows the mapping of the Human Development Index in terms of different districts and the whole state as well. As per the Table 2 the HDI differs substantially across districts ranging

between 0.78 (Kolkata) and 0.44 (Malda) with Medinipur and South 24-Parganas standing at 0.62 and 0.60 respectively.

XIII. SUMMARY

Urbanization involves dislocation and displacement of human population from rural to urban areas leading to a relative rise in the number of city dwellers. West Bengal's urbanization traces back to late 18th century when Kolkata, previously called Calcutta emerged as the first port town and a commercial city. Urbanization was at a peak during the British region. Prior to that, Tamralipta and Gaur were the centers during pre-colonial period. According to the provisional data of census 2011 (Census of India 2011), West Bengal remains one of the highly urbanized states of the country with currently 32 percent of the state's population residing in urban areas and it ranks fourth highest urbanized states in the country. Out of total population of West Bengal, 31.89 percent people live in urban areas. The total figure of population of rural areas of West Bengal was 62,213,676 (68.11 percent).

On the basis of Census data, the presents study reported changing patterns, reasons for out- migration and spatial pattern and permanent or temporary migration in West Bengal. It is observed that the proportion of migrants in West Bengal has in-creased from 27 percent in 1991 to 30 percent in 2001. It is also mentioned that employment is the root cause of men's displacement. Although factors like industrial growth, social, factors, economic problems and modernization are not much behind. The level of urbanization is being increased from 27.81 percent in 2001 to 32 percent in 2011 and the process is still uprising with the passing of years in Bengal. Study reveals that there has been departure of urbanization from big cities to regional level urban centres in West Bengal. This has changed somehow landscape of urbanization in the region. With the urbanization in coastal areas, it has caused environmental concerns as well.

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APPENDIX

Appendix 1 Process of Urbanization in West Bengal and India (Figure in percent)

Census Years	West Bengal			India		
	Level of Urbanization	Rate of Urbanization	Urban Growth Rate	Level of Urbanization	Rate of Urbanization	Urban Growth Rate
1901	12.02	-	-	10.99	-	-
1911	13.05	6.97	13.70	10.41	-5.28	0.35
1921	14.41	10.42	7.16	11.34	8.93	8.29
1931	15.32	6.32	15.01	12.19	7.50	19.12
1941	20.41	33.23	63.69	14.08	15.50	31.95
1951	23.88	17.00	32.52	17.28	22.73	41.43
1961	24.45	2.39	35.97	17.96	9.93	26.42
1971	24.75	1.23	28.41	19.90	10.80	38.22
1981	26.47	6.95	31.73	23.28	16.98	46.15
1991	27.43	3.63	29.49	25.71	10.44	36.43
2001	28.03	2.19	20.20	27.79	8.09	31.17
2011	31.89	3.90	29.90	31.16	3.38	32.01

Source: Computed Census Report

Appendix 2 District wise Level of Urbanization and Ranks obtained thereby, 2001 and 2011

Sl. No.	State/ Districts	Level of Urbanization				Annual Growth Rate of Urban Population in Percent (2001-2011)
		2001		2011		
		Urban (Percent)	Rank	Urban (Percent)	Rank	
1	Bankura	7.37	16	8.33	17	2.74
2	Bardhaman	36.94	3	39.89	3	2.09
3	Birbhum	8.57	15	12.83	12	7.39

4	Dakshin Dinajpur	13.1	9	14.1	10	2.00
5	Darjeeling	32.34	5	39.42	4	3.99
6	Medinipur	10.24	12	11.93	15	3.37
7	Haora	50.36	2	63.38	1	4.29
8	Hugli	33.47	4	38.57	5	2.61
9	Jalpaiguri	17.84	7	27.38	7	7.47
10	Kochbihar	9.1	14	10.27	16	2.83
11	Maldah	7.32	17	13.58	11	12.48
12	Murshidabad	12.49	10	19.72	9	9.12
13	Nadia	21.27	6	27.84	6	4.69
14	North 24-Parganas	54.3	1	57.27	2	1.82
15	Purulia	10.07	13	12.74	13	4.62
16	South 24-Parganas	15.73	8	25.58	8	9.22
17	Uttar Dinajpur	12.06	11	12.05	14	2.30
18	West Bengal	28.03	-	31.87	-	2.97

Source: Primary Census Abstracts, 2001 and 2011, West Bengal

Appendix 3 District-wise Classifications of Towns in West Bengal

Sl. No.	Districts	Class I		Class II		Class III		Class IV		Class V		Class VI		Total
		2001	2011	2001	2011	2001	2011	2001	2011	2001	2011	2001	2011	
1	Darjeeling	2	-	-	-	2	1	2	7	2	12	1	4	33
2	Jalpaiguri	1	1	1	2	4	2	7	5	2	4	1	4	34
3	Cooch Behar	-	-	1	-	2	2	5	1	1	5	1	4	22
4	Uttar Dinajpur	1	-	1	-	1	-	1	1	2	4	-	-	11
5	Dakshin Dinajpur	1	-	1	-	-	-	-	-	-	4	-	1	7
6	Malda	1	-	1	-	-	-	-	11	3	15	-	1	32
7	Murshidabad	1	-	3	-	7	13	5	18	13	32	-	2	94
8	Birbhum	-	-	3	-	2	-	-	5	1	8	-	1	20
9	Burdwan	6	-	2	-	6	5	14	20	27	44	11	19	154
10	Nadia	3	-	5	1	3	3	4	20	10	27	-	4	80
11	North 24-Parganas	22	-	2	-	4	3	7	21	12	50	1	4	126
12	Hooghly	9	-	2	-	4	3	6	16	16	40	3	5	104
13	Bankura	1	-	1	-	1	-	1	1	1	8	-	-	14
14	Purulia	1	-	-	-	3	2	2	3	5	19	1	1	37
15	Howrah	3	1	1	1	7	10	14	31	23	80	5	20	196
16	Kolkata	1	-	-	-	-	-	-	-	-	-	-	-	1
17	Medinipur	3	-	4	1	4	1	4	2	4	25	2	2	52
18	South 24-Parganas	2	-	1	-	6	7	4	24	6	60	2	20	132
19	West Bengal	58	2	29	5	56	52	76	186	128	437	28	92	1149
20	Percentage	5.05	0.17	2.52	0.44	4.87	4.53	6.61	16.19	11.14	38.03	2.44	8.01	100

Source: Census of India, 2001 and 2011

Appendix 4 Developments of Different Towns Groups in West Bengal, 2001 and 2011 (in Percentage)

Sl. No.	Districts	Level of City Development		Level of Medium Town Development		Level of Small-Town Development	
		2001	2011	2001	2011	2001	2011
1	Darjeeling	75.52	56.78	16.00	16.06	8.48	27.16
2	Jalpaiguri	47.47	36.70	32.98	37.71	19.55	25.59
3	Koch Bihar	0.00	0.00	59.71	70.18	40.29	29.82
4	Uttar Dinajpur	56.11	50.69	34.09	39.97	9.80	9.34
5	Dakshin Dinajpur	71.72	64.08	28.28	23.79	0.00	12.13
6	Maldah	67.01	37.94	26.13	15.51	6.86	46.55
7	Murshidabad	21.86	14.61	57.33	48.85	20.81	36.54
8	Birbhum	0.00	0.00	96.74	73.44	3.26	26.56
9	Burdwan	70.61	66.14	12.17	12.24	17.22	21.61
10	Nadia	37.66	37.45	46.91	28.51	15.43	34.04
11	Bankura	54.73	45.83	37.97	32.31	7.30	21.86
12	Purulia	44.55	32.65	25.76	19.22	29.69	48.13
13	Medinipur	51.75	43.34	38.77	38.45	9.48	18.21
14	North 24-Parganas	89.66	81.74	6.46	6.36	3.88	11.90
15	Hugli	73.11	61.91	14.22	15.05	12.67	23.04
16	Howrah	68.75	55.73	13.11	10.56	18.14	33.71
17	South 24-Parganas	67.31	41.90	23.81	19.73	8.88	38.37

Source: Census of India, 2001 and 2011