

CHAPTER 1

INTRODUCTION

1.1 Introduction

“Urbanization is a process of population concentration. It proceeds in two ways: the multiplication of points of population concentration and increase in size of individual concentrations”¹. Therefore, urbanization refers to the transition from a dispersed pattern of human settlement to one concentrated around cities and towns. It is also a process that has a beginning and an end. From a demographic point of view urbanization depends on the spatial interaction of two factors, i.e. the rural-urban differential in natural increase and the migration exchange between the rural and urban areas. But the demographics of urban population growth and urbanization are only manifestations of more fundamental structural changes in national economies, undergoing their transformation from agrarian to industrial societies. Thus from an economic point of view the growth of population in urban centers appears to be inevitable if there is economic development either by industrialization, development of mining or by commercialization and improvement of agriculture. However, from regional development perspective, two important components of urbanization are increased productivity of labour and promotion of industrialization. Because the advanced productive elements like high level technology and skills as well as modern plants and equipments are concentrated in cities and economies of scale operates there.

With the spread of colonialism and subsequent advent of industrial capitalism, urbanization reached the developing world by the mid 19th century. However, till the mid 20th century the level of urbanization in the developing world was very low. This happened because when industrial capitalism was followed by monopoly capitalism towards the end of the 19th century, monopoly capitalists mainly involved themselves in ruthless exploitation of peripheral areas. Their main market was in the developed world of Western Europe and North America, so monopoly capitalism produced further urban growth and urbanization in the expanded core where as urban development in the periphery remained limited.

After the mid 20th century, developing world urbanized as a consequence of a new economic order resulting from the reorganization of production, labour, finance, service provision and competition on a transnational basis. Productions shifted to the developing world

basically to penetrate the local market and also to use cheap labour for making goods for sale in the already developed countries. Examples include electronic goods, drugs, motor vehicles, garments, machine tools and domestic appliances. In a reverse process several countries in the developing world expanded their manufacturing capabilities and captured markets for their products in the developed countries. Therefore rather than peripheral supply and core area processing during industrial and monopoly capitalism, under the new economic order it was peripheral production and manufacturing and core area research, development, design, administration and control.

This new economic order is principally responsible for the recent rapid urbanization in the developing world, both directly as a consequence of urban growth in response to foreign investments and indirectly through its impact on traditional pattern of production and employment.² Additionally, the structural reform carried out in these countries as a price or penalty for incorporation with the world economy resulted in release of large number of workers from traditional occupation and these people flocked into the towns and cities and contributed to urban growth and urbanization. Finally, the positive urban bias policy of all post-colonial governments in developing countries also stimulated urban growth by enhancing the attractiveness of towns and cities at the expense of rural areas.

Although India was the home of two ancient urban centers of Harappa and Mohenjodaro, it is usually considered a country where both the level and pace of urbanization is low. Only during the later part of the 19th century few industrial centers appeared, for example Bombay based on cotton textile industry and even more important, the port and industrial city of Calcutta based on jute, coal and iron ore. But even as late as the early 1930s almost 90% of the population lived in rural areas. The 1941-51 decade witnessed a substantial increase in the growth rate of urban population, but this was largely attributed to the influx of refugees from East and West Pakistan and increased industrial activity due to war effort. The following decade (1951 - 61) saw a reduction in the rate of urban growth, despite the fact that this period also experienced a fairly rapid acceleration in the country's industrial sector, especially the heavy industries. In the next decade (1961 - 71) the urban growth rate picked up somewhat, although still falling short of what was experienced during the 1940s and the 1971 census indicate 80% of the population still lived in rural areas. The following decade experienced the highest growth rate of urban population in India. This high growth was due to various reasons; however, the primary one was

the appearance of a large number of new urban centers in the country. The period of 1981 - 91 again saw a declining trend of urban growth rate. The next decade of 1991 - 01 was a landmark watershed in the history of Indian economy. Because in the early period of this decade Structural Adjustment Programmes (SAP) was carried out and the country moved from an era of closed economy to that of an open one. The SAP was supposed to provide a tremendous boost for the growth rate of urban population and scholars projected somewhat around 31 to 32% level of urbanization for 2001 with an absolute increase of about 320 to 330 million people. However the result of the 2001 Census came as a huge surprise for all those scholars as the urban population growth rate declined further and the country could only reach 27.78% level of urbanization with an absolute increase of about 285 million urban populations during 1991 - 01. SAP created very few formal employment opportunities in urban areas as informalization of economy was taking place rapidly during this period. Therefore, cities failed to attract migrants from rural areas during this period resulting in slowing down of urban growth rate. It was also during this period that we neglected our agricultural sector in the process of over enthusiasm with the SAP. So although an urban elite class was emerging (getting six figure salary from the MNCs) during this period, rural poverty was not taken care of, resulting in an increase in the extent of horizontal and vertical inequality. Therefore the main contribution of SAP for the Indian economy has been in increasing the inequality and forcing rural population to a level of distress from where they can only think of suicides. The following decade i.e. 2001 - 11 also witnessed more or less the same rate of urban population growth with an absolute increase of around 91 million urban populations and a level of urbanization of 31.16% which is on a downward side compared to other developing countries with the same level of economic development like Brazil, China and South Africa.

The level of urbanization in North Bengal has been far more lacklustre compared to that of India. Before independence the level of urbanization in North Bengal was below 5%. After independence, gradually the level of urbanization started to increase and reached more than 10% only in 1981. Thereafter it increased to 13.52% in 1991, 14.16% in 2001 and 18.70% in 2011 respectively. Compared to the level of urbanization in India for any particular time during the last hundred years, the level of urbanization in North Bengal has been less by around 10%. Looking at the decadal growth rate of urban population in North Bengal, it can be observed that it has really taken off after 1921 and maintained a consistently high decadal growth rate of urban

population thereafter. The highest decadal growth rate of urban population in North Bengal has been observed during 1941 – 1951 and 1951 – 1961 because of the influx of huge number of migrants from East Pakistan at the time of independence. Infact from 1901 to 2011, except during 1991 – 2001, the decadal growth rate of urban population in North Bengal exceeded that of India by a handsome margin. However, during the same period the rural population growth rate in North Bengal was also quite high, therefore the relatively high decadal growth rate of urban population has not been translated into a high level of urbanization for North Bengal and the disparity in the level of urbanization for India and North Bengal was never wiped out.

Table 1.1 Urbanization in India and North Bengal

Census Year	India			North Bengal		
	Urban Population in millions	Level of Urbanization	Decennial Growth Rate of Population in %	Urban Population in millions	Level of Urbanization	Decennial Growth Rate of Population in %
1901	25.85	10.84	-	0.06	2.32	-
1911	25.94	10.29	0.35	0.07	2.32	11.18
1921	28.08	11.18	8.27	0.08	2.63	10.79
1931	33.45	11.99	19.12	0.11	3.39	36.37
1941	44.15	13.86	31.97	0.15	4.15	38.50
1951	62.44	17.29	41.42	0.29	7.30	95.99
1961	78.93	17.97	26.41	0.49	8.82	70.07
1971	109.11	19.91	38.23	0.69	9.26	40.23
1981	159.46	23.34	46.14	1.08	11.45	57.51
1991	217.17	25.72	36.10	1.63	13.52	50.48
2001	285.35	27.78	31.30	2.09	14.16	28.12
2011	377.11	31.16	32.16	3.22	18.70	54.32

Source: Various Census of India publications.

1.2 Literature Review

Urban Studies have attracted a large number of scholars. The interest in urban studies increased as more and more people started to live in urban centers with the progress of civilization, technology, and culture. As urbanization has a very close relationship with economic development, initially urban studies were mostly based on the experiences of the already developed regions of the west. Thus, initially roots of all urban theories were planted in the cities of west. This process continued till the early 20th century because until then urbanization as a phenomena was absent in the developing world. Various reasons crop up to explain this anomaly. However, primarily, as urbanization has a positive correlation with economic development and until the middle of the 20th century developing countries experienced very little development because colonialism was mainly a unidirectional process in terms of economic benefits. So the pace of urbanization in these countries was very slow during this

period. Only after developing countries gained political freedom in the name of independence, the process of urbanization started to gain momentum in these countries.

However, due to complex social structure, high population density, abject poverty, huge unemployment and high illiteracy, rapid urbanization in these countries brought along its own problems. Problems which are very new and different from the western world. These new problems due to their potential destructiveness swept the mind of urban sociologists, urban geographers, urban planners, demographers and urban economists all over the world from the second half of the 20th century. Thus from this period onwards, huge amount of literature in the field of urban studies started accumulating with contributions flowing from researchers of both developed and developing countries.

For the present study only those literatures which are relevant for the topic of analysis has been dealt with. To make the literature review a systematic one, relevant literatures were classified into specific themes and thereafter each theme was treated independently.

1.2.1 Urbanization and Economic Development

Historically, the experience of western countries shows that urbanization and economic development occurred simultaneously for those countries i.e. one process leads to the other. However, this economic interpretation of urbanization virtually evaporates while examining the history of the developing nations. Their history suggest that urbanization does not necessarily leads to economic development and terms like hyper urbanization, over urbanization and unbalanced urbanization became a reality for most of the developing nations of the world. Hoselitz, B.F. (1953) ³ compared the pattern of urbanization in medieval Europe and that of developing countries now. According to him the social structure of urban centers in medieval Europe was fairly uniform and simple while that of developing countries are hybrid institutions formed due to indigenously developed division of labour and as a response to their integration with the world economy. Another significant difference he noted that during the Middle Ages urbanism was not the dominant way of life, while for the developing nations, capitalism centered on urban areas are the predominant form of socio-economic organization. Thus according to Hoselitz, B.F. cities are the center of innovation for the developing countries while in the middle ages they were still struggling for their recognition. In another article Wilkinson, T.O. (1960) ⁴ exploring the relationship between metropolitan structure and economic development concluded

that metropolitan growth is heavily influenced by the structure of the industrialization process and not by industrialization alone. To prove this he put forward the example of Japan. He showed that unlike those western cities where industrialization resulted in suburbanization, in Japan the integration of traditional system of household based handicraft employment with large scale industrial activities retarded population decentralization outside the city boundary. Berry, B.J.L. (1961) ⁵ analyzed the relationship between city size distribution and relative economic development using empirical evidences from 95 countries of the world. He concluded that very little relationship exists between type of city size distribution and either relative economic development or the degree of urbanization. However, he found strong relationship between urbanization and economic development in general. While Schnore, L.F. (1961) ⁶ tried to measure statistically the relationship between urbanization and economic development. He used Spearman's Rank Correlation and Factor Analysis Method at continental level to establish a relationship between urbanization and modernization by choosing 12 variables of urbanization and modernization. He found no linear relationship exists between urbanization and industrialization and only variation in industrial structure was unable to explain the whole process of population concentration. Rather, technological progress like expansion of energy base, improvement in transport and communication also plays significant role in population concentration. Although, he also recognized the fact that technological progress was itself a result of economic development. Finally, he concludes that the relationship between urbanization and economic development is a complex one and urbanization is an integral part of modernization process. Similarly Mckee, D.L. and Leahy, W.H. (1970) ⁷ discussing about various forms of dualism associated with the process of urbanization stressed that if modern economy is situated in and around urban areas then a reinforcement of disparity is likely to occur with increase in urbanization. Thus they conclude that urbanization is by no mean a sufficient condition for economic development as uncontrolled urbanization may lead to an increase in regional disparity. Following the same line of argument, Firebaugh, G. (1979) ⁸ using data from 27 developing countries of Asia and Latin America for two time period concludes that although economic development is the most important determinant of urbanization yet for developing countries additional rural conditions like agricultural density and plantation economy plays a significant role in explaining the pattern of urbanization in these countries. Finally, he criticized the proponents of over-urbanization theory and expressed that the alternative of urbanization i.e.

overpopulation in rural areas may well be more detrimental for a nation than overpopulation in urban areas. In a different kind of work, Wheaton, W.C. and Shishido, H. (1981)⁹ using data from 34 countries of the world developed a model showing the relationship between the level of economic development and regional urban concentration. Their model shows that economic behaviour plays a significant role in determining the spatial pattern of urbanization. They also found after some times, with the progress of a country, diminishing urban agglomeration eventually begins to occur and from that point onwards urbanization moves from a phase of concentration to one of decentralization. Working with towns and small cities in developing countries, Rondinelli, D.A. (1983)¹⁰ pointed out the functions small towns and cities perform for regional and national development. This they perform by providing positive forces for developing their hinterland, by transforming subsistence into commercial agriculture and by integrating rural and urban economies. He also opposed the historical notion of development by setting large scale manufacturing units, rather he pleaded that various functions like service, distributive, commercial, marketing and agro-processing which towns and small cities perform offer a better base for stimulating growth and diversification of a region. Mohan, R. (1985)¹¹ analyzing the urbanization pattern in India concluded that there is a strong relationship between levels of urbanization and economic development across the Indian states. However, there is a tendency of slowing down of urban growth in more advanced states which is in contrast to international experience. Finally, according to him for a balanced urban growth regional disparity in the levels of agricultural development should be addressed at first. While Scott, A.J. (1986)¹² analyzing the relationship between industrialization and urbanization from a geographical point of view claimed that industrialization as a process of economic organization and social integration is the basis of modern urban development. Because, the intricate ramifications of the social division of labour, the transnational structure of production and the dynamics of local labour market create forces which pervasively underpins the whole spatial pattern of a metropolis. Roberts, B.R. (1989)¹³ was worried about the current trend of urbanization in the non-core countries. Because he found that cities in the non-core countries are no longer the privileged beneficiaries of development rather their high social and economic cost of living is acting as a negative force. Moreover, the future of emerging intermediate cities, which help in broadening the urban system, is very bleak because their economic dynamics depend on fragile links with the world economy. Therefore, cities are more likely to be socially

and economically volatile than in the past as their future now depends on world economy and its cycle. Sharma, S. (2013) ¹⁴ analyzing the potential of BCIM Economic Corridor pointed out the underdevelopment in North Bengal districts compared to the districts of South Bengal. According to him this BCIM project if successful will be a game changer for this region and may lead to economic development of North Bengal very rapidly in future. Kumar, A. and Rai, A.K. (2014) ¹⁵ in their study of India's urbanization, process, trend and pattern said majority of the country's population in future will live in cities. However, the urbanization process which is being experienced now will not create an urban and industrial society that will be stable, self-sustaining and self-renewing. Therefore, they advocated for a farsighted policy looking to balance city's population and regional resource base so as to maintain a high level of development in all aspects for the common people.

Thus from the study of the above literature it is clear that though researchers believe that economic development and urbanization is very closely associated but their association is not at all straight forward. For different countries with different social and economic characteristics, their relationship varies. Especially for the developing countries with huge population pressure, agrarian crisis, integration with the world economy and huge poverty; rapid urbanization may not lead to economic development rather it may lead to an increase in both the horizontal and vertical imbalances.

1.2.2 Focus on Urban Problem

Urban problems gained importance with the advent of urbanization in the developing world because in most of the cities of these countries urban population growth is not simultaneously followed by an expansion in employment opportunities. This resulted in a situation, where these cities are overpopulated with respect to their economic base. Thus rural poverty got transformed into urban poverty and cities are transformed from 'islands of privilege' into 'cities of despair'. According to Sovani, N.V. (1964) ¹⁶ over-urbanization refers to a situation when the percentage of population living in urban area is substantially greater than the percentage of labour force in non-agricultural sector of a country. He found huge rural population exerting tremendous push pressure as the main cause of over-urbanization. He also observed that over-urbanization will result cities to lose their dynamic forces to change society and culture. Davis, K. (1975) ¹⁷ studying the pattern of urbanization in Asia noted that although

Asia has relatively low level of urbanization, yet its size of urban population is huge. Thus in future with higher level of urbanization, problems in Asia will multiply. Additionally, the agricultural base and huge urban poverty will complicate the already accentuating urban problems in Asia. This will result in a pattern of urbanization which he called 'urbanization without opulence'. Gugler, J. (1982) ¹⁸ trying to analyze the concept of over-urbanization focused on various issues of 3rd world urbanization. According to him urban surplus labour in the form of unemployment, underemployment and misemployment and very low opportunity cost of rural to urban migration are the two main economic cause of high population pressure in urban areas. Henderson, V. (2002) ¹⁹ studying the urbanization process in developing countries found rapid urbanization in these countries is accompanied by excessively high level of population concentration in very large cities, a feature more common for Asian cities in particular. This concentration of population is the result of a number of factors like externalities of congestion and pollution are relatively underpriced in megacities, centralization of bureaucratic control, infrastructure investment and public services concentrated in large cities and a poorly developed regional transport and communication facilities. Roy, T.B. and Saha, S. (2011) ²⁰ studying the urban growth of Siliguri Municipal Corporation highlighted the factors which lead to rapid growth of population in Siliguri town. According to them active trade and commerce due to its location in the sub-himalayan region is the main factor for the growth of Siliguri town. With rapid growth of Siliguri town the problems they identified are land use change, transportation problems, proliferation of slums and drinking water shortage. To overcome these they suggested for a planned approach to urban development of Siliguri town in future. Kadi, A.S., Halingali, B.I. and Ravishankar, P. (2012) ²¹ studying the problems of urbanization in India highlighted on the housing problem, water and sanitation problem, industrial pollution, transportation problem in urban centres of India. According to them an effective programme is required to educate the general public regarding ways to find solutions for these problems. According to Samanta, G. (2012) ²² in recent years there is a tendency for private capital to locate in suburban areas and non-recognized urban territories to take advantage of lack of control and policy measures under poorly equipped rural local level government. The result is environmental deterioration, pollution, land degradation, land acquisition and displacement in suburbs and non-recognized urban territories. Banerjee, S. and De, D. (2014) ²³ focused on the spatial variation in the level of urbanization within North 24 Parganas District in West Bengal and observed concentration of

civic amenities and urban infrastructure in some pockets resulting in deterioration of urban environment and a possible chance of breakdown of urban system in the district in future due to concentration of urban population in few urban centres. According to Aktar, N. and Sultana, C. (2014) ²⁴ partition of the country and the resultant influx of refugees in 1947 stimulated the process of urbanization in West Bengal. This rapid urbanization after partition brought along with problems like urban sprawl, overcrowding, housing shortage, high rate of unemployment, proliferation of slums and squatter settlements, transportation problem, water supply problem, sewerage problem, solid waste problem, urban crime, urban pollution and widening socio-economic disparity. They also pointed to the fact that urbanization process in West Bengal is not dispersed at all; rather it is Kolkata centric development.

Thus the discussion shows that urban problem across developing countries is not uniform. Some problems are regional in nature and their solutions lie in their regional structure. Finally, though over-urbanization as a concept has ardent followers yet it's acceptance as a universal truth needs more time. Because scholars are divided while analyzing the costs and benefits of population concentration in urban areas so further research is necessary in this field.

1.2.3 Urban Primacy

Urban Primacy refers to a situation, when one or few cities dominate the urban structure of a country. These cities usually get a disproportionately high share of country's investment as a result of which they attract the chunk of country's urban population. Such top heavy urban structure is very common in developing countries with huge population pressure and a long history of colonialism. Because the colonial powers created for their own interest some regional centers of seaport location for siphoning off resources. These cities after independence became the primate cities of those countries. Mehta, S.K. (1964) ²⁵ studied the urban structure of 87 countries of the world and concluded that 'Primate City' urban structure does not appear to be a function of the level of economic development, industrialization or urbanization rather to some extent it is a function of geographical area and population size. Linsky, A.S. (1965) ²⁶ analyzing the urban structure of 39 countries concluded that size of a country and per capita income is negatively associated with urban primacy while colonial history, export oriented economies, agriculturally dominant economy and rate of population growth of a country is positively associated with urban primacy. Mera, K. (1973) ²⁷ analyzing the relationship between growth of

per capita GDP and change in primacy noted that larger cities are more productive in developing countries, therefore a decentralized policy of investment and population distribution should not be encouraged if the national goal is to maximize the growth rate of GDP. However he also noted that urbanization generally increase the per capita income of a region so a decentralized urbanization policy is effective for achieving a more equitable distribution of income across regions. Brutzkus, E. (1975)²⁸ said a high degree of urban concentration of population and investment is not a good policy measure for the progress of developing countries because a polarized urban structure is not ideal for advancement of agriculture, better utilization of natural resource, raw material oriented basic heavy industry and probably even not for labour oriented manufacturing industry with serious prospects of export. Mutlu, S. (1989)²⁹ discussing urban primacy noted that primacy is negatively related to the area of country, size of population and level of economic development while it is positively related to income inequality, ethnic homogeneity, centralization of administration and free enterprise type of economy. Das, R.J. and Dutt, A.K. (1993)³⁰ analyzing the rank–size distribution and primate city characteristics in India found although there is no primate city in India at the national level, but since India is a very large country and it has a quasi-federal political structure which may result in formation of primate city at the regional and state level. Konar, D.K. (2009)³¹ in his study of urbanization in West Bengal after independence pointed out the fact that rate of urbanization in West Bengal has been slightly higher than that of India. The striking feature of this urbanization process is it has been centered on Kolkata and surrounding districts. Therefore, according to him adequate measures are required to disperse this Kolkata centric development to far off districts, otherwise tremendous population pressure will lead to rapid deterioration of Kolkata’s environment. Kundu, A. (2011)³² said the urbanization process in India has become concentrated in developed regions and large cities in recent years while backward areas and smaller towns are showing tendency to stagnate. The reason for this type of development is rooted in the neoliberal policy paradigm where the responsibilities of resource mobilization and launching infrastructural projects have been given to local agencies putting large municipal bodies located in developed regions at an advantageous position. Chatterjee, M.³³ in her study has pointed out the fact that dominance of primate city Kolkata in the urban scenario of West Bengal is because of its colonial legacy. The process of urbanization in West Bengal is mainly offshoot of the manufacturing industry followed by tertiarization. She also pointed out how government

machinery in the 1970's tried to correct this imbalance by putting emphasis on agricultural growth and strengthening of small and medium towns which however, was later swept away by the forces of globalization.

Thus the discussion shows urban primacy is necessary to maximize the overall economic growth of a country. However, primacy also increase regional inequality and retards a balanced regional development. Therefore in the initial stages of development, primacy may be encouraged up to a certain level so that in the later stages of development a corrective dose can reinstall the equilibrium.

1.2.4 Urban Growth

Urban growth usually refers to the growth of urban population. In the developed countries during their phase of rapid urbanization, urban growth was mainly fueled by rural to urban migration. While for the developing countries now, both natural increase of urban population and rural to urban migration plays equally significant role for experiencing stupendous urban population growth. Fuguitt, G.V. and Thomas, D.W. (1966)³⁴ analyzed the growth of small towns in United States for two consecutive census period using a statistical method. They found small towns are not disappearing in the United States rather they are growing continuously and still forms an important part of the nation's settlement fabric. They also found highest growth of small towns occurs adjacent to large cities while the least growth was associated with non metropolitan areas. Stark, O. (1980)³⁵ discussing the government policy measures to slow down rural to urban migration in metropolitan cities of Asia noted that governments does not effectively pursue anti migration policy because this may lead to breakdown of political power structure of the country. Moreover he felt, to stop rural to urban migration compensatory measures should be undertaken, however such measures require huge social cost like heavy subsidization of labour replacing capital intensive machinery or incentives should be given to locate industries where the potential migrants belong to i.e. to pursue a policy of rural industrialization programme. Rogers, A. (1982)³⁶ contributed to the ever increasing debate on urban population growth by examining the data of various countries across the world. Rogers found during different period of a country's urbanization process, its urban population may grow primarily as a result of either net immigration or by natural increase. He also differentiated the consequences of these two types of increase. He said the principal effect of

migration is on the level of urbanization whereas that of natural increase is to determine the rate of urban population growth. Bala, R. and Krishnan, G. (1982)³⁷ in their study of urbanization in border districts of western India found urbanization process suffered in the border region and it slowed down considerably after partition. The biggest impact was on the larger towns while the smaller towns deriving economic support from their local surroundings were in a less vulnerable position. Crook, N. and Dyson, T. (1982)³⁸ analyzing the 1981 census data found a significant increase in the pace of India's urbanization process which according to them was fueled by two interrelated factors; first, a shift in the spatial pattern of new urbanization away from the traditional areas of urban growth; and second, a concentration of growth in intermediate size cities. Rondinelli, D.A. (1983)³⁹ studying the growth of secondary cities in developing countries found in the initial stages these cities grew rather randomly. However, in the later stages synergies are crucial for the growth and development of secondary cities. He identified 14 factors which are crucial for continuous growth of secondary cities; which according to him are initial growth factors, reinforcing influences, consolidating forces, internal and external linkage effect, advantages of proximity, creation of comparative advantages, agglomeration and multiplier effect, new diversifying forces, economies of scale, new reinforcing factors, new consolidating forces, broadened linkages and networks of exchange and size-ratchet advantage to protect against drastic decline. Lowry, I.S. (1990)⁴⁰ discussing the source of urban population growth in developing countries said that although rural to urban migration tend to drive urban growth in the early stages of urbanization, natural increase governs urban growth in the later stages. Shaw, A. (1999)⁴¹ studied in detail the pattern of investment in Indian cities after the structural reform and their implications for urban growth. She found new urban cores are emerging with investment in automobile production, consumer electronics, computer software and information technology, petrochemicals and steel production. These cores are geographically confined to the Ahmedabad-Pune corridor, the southern triangle of Bangalore-Chennai-Coimbatore, the northern region centered on Delhi and new hubs of growth in the south such as Hyderabad, Vishakapatnam and Kochi. However, rest of the metropolitan cities is virtually bypassed by the new growth process experienced after liberalization. The continuation of this process will lead to an increase in the already existing disparity among the northern and southern states of the country. Bhagat, R.B. (2005)⁴² examining the growth of urban centres in India by size-class categories found the rate of urbanization in India started to increase continuously from

the second quarter of the 20th century, reached its peak in the 1970's and thereafter slowing down considerably. The million plus cities continue to dominate the urban scenario in recent years, however urban growth is rapid in the newer metropolitan cities compared to the older and established ones. Ali, Md.J. and Varshney, D. (2012)⁴³ in their study of urban hierarchical system in Aligarh district has shown urban centres grow in a hierarchical manner and there is concentration of population and facilities in larger urban centres. Devi, K.B. (2012)⁴⁴ in her study found a great variation in urban growth and the level of urbanization in North East India. The low level of urbanization in this region is due to its location and infrastructural problems. Therefore, she advocated for planned development of secondary sector and urban infrastructure to usher rapid urbanization in North East India. Koiri, P. (2014)⁴⁵ in her study of urbanization in North East Indian states found the decadal growth of urban population in North Eastern states have declined during the last decade. According to her, this happened because the formal employment opportunities in urban areas have not expanded and people who are migrating to urban areas are ultimately absorbed in informal sectors leading to proliferation of slums and squatter settlements. Pandey, V.N. (2015)⁴⁶ in his study of urbanization in India pointed out the rapidly growing size of urban population and their concentration in new cities are posing serious problems in the field of management of urban services. According to him urbanization in India is not accompanied by industrialization, augmentation of infrastructure and urban services resulting in a chaotic situation in urban areas. Chakraborty, S., Chatterjee, S., Das, K. and Roy, U. (2015)⁴⁷ in their study of changing pattern of urbanization in West Bengal concluded that the process of urbanization in West Bengal has been slowing down after independence due to its top-heavy orientation. They also emphasized on the trend of rapid increase in number of census town compared to that of statutory town in recent years and as a result the major share of urban population growth in recent years is also from these census towns.

Thus from the work of the above scholars it becomes clear that urban growth in developing countries is a very dynamic process. It not only depends on the urban industrial environment, rather the dynamics of rural development also modifies urban growth pattern. Moreover after liberalization, not only forces originating in rural areas affect urban growth but international business cycle and investment pattern also plays huge role in shaping up the urban industrial structure of developing countries.

1.2.5 Urban Employment

From the days when more and more people started to live in urban areas of the developing nations, issues in urban employment became prime concern for the policy makers and scholars. This problem however did not crop up in that way for the developed countries during their phase of rapid urbanization because there urbanization and industrialization went hand in hand. Therefore the migrants from rural areas found very little difficulty in securing jobs in the city environment. However in the developing countries, lack of industrialization, high rate of natural increase and rural push factors resulted in a situation best described as ‘too few jobs for too many people’ in urban areas. Such pathetic condition forced poor people to enter urban informal sector characterized by irregular and very little wages. Thus under such condition cities in developing countries failed to act as ‘engines of economic growth’ because urbanization in these countries only helped in transferring rural poverty into urban poverty. Moir, H. (1977)⁴⁸ studying the relationship between urbanization, labour force structure and development found for the developing countries, the relationship between level of urbanization and the non agricultural share of the labour force neither affects nor has been affected by the level of development. Thus he concludes that urbanization policies might be advocated on social grounds but not as a mechanism to aid development. Schofield, J.A. (1980)⁴⁹ analyzing the urban size and unemployment in Canada found unemployment rate bears an inverse relationship with urban size. He also found the degree of industrial specialization in manufacturing industry is positively and significantly related to the unemployment rate for both females and males. From a different angle Bradshaw, Y.W. (1987)⁵⁰ using the data from selected developing countries empirically found urbanization was positively associated with service sector employment, suggesting that rural migrants take low paying jobs in the service and informal sector of urban economy. Overall, his result suggests that developing nations are experiencing a gradual transition from an agrarian to a service and informal economy, which according to the writer will impede further economic expansion. While Yamada, G. (1996)⁵¹ studying the pattern of urban informal sector employment in Peru concludes that workers self-employed in informal sector does it voluntarily and is competitive in terms of earnings with other sectors of economy. However, only those individuals who do well in informal self-employed sector stays while rest with less entrepreneurial ability leaves informal self-employment for other suitable options. Kundu, A. (1997)⁵² in a detailed study of the pattern of urban employment in India pointed out that

employment in the organized sector would not grow significantly in future rather a decline in the proportion of salaried workers are likely to happen. This is because much of the employment growth in the economy is taking place through the process of subcontracting, using casual and self-employed workers. Moreover the industrial employment in urban areas is declining due to shifting of large industries outside the metropolitan boundary in the light of stringent environmental protection laws. Kundu, A. and Sarangi, N. (2005) ⁵³ in another article found households, that are economically better off can afford to wait and choose in the labour market for suitable jobs. Therefore unemployment rate in small towns is comparatively less than in large and medium towns. Similarly, the percentage of unemployed is much higher among non-poor group compared to the poor people in small and medium towns. Thus the writers proposed some form of employment guarantee scheme similar to that of rural areas for the urban poor.

From the above discussion it is clear that the question of providing basic employment for urban poor is increasingly becoming difficult to tackle. The lack of proper employment opportunities for urban youth is forcing them to experiment with alternative paths which may be harmful for the society. Therefore, under the given situation policy measures like guaranteed employment opportunities in urban areas could bring in a lot of relief to the poverty ridden urban poor.

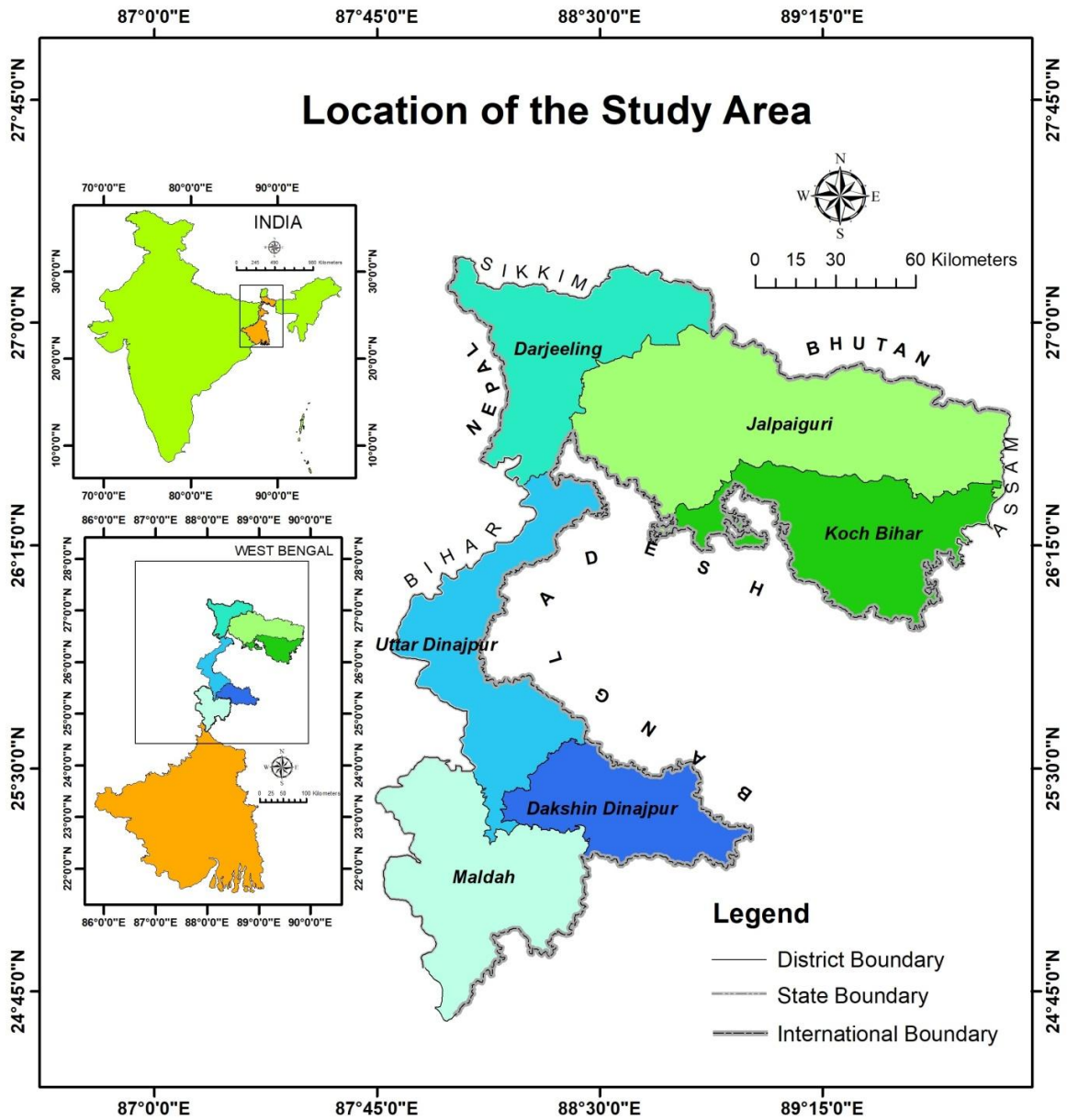
1.2.6 Urban Social and Demographic Characteristics

Social and demographic characteristics like literacy rate and sex-ratio varies among rural and urban settlements. In urban areas it is generally believed that availability of social infrastructure is far better than in rural areas. This is precisely due to the fact that public spending in urban areas is disproportionately high and also the awareness about the benefits of education is high among the urban residents. Whereas the sex-ratio in urban areas is more than often tilted towards the male, because the rural to urban migration in developing country is a function of both age and sex. Hunt, C.L. (1965) ⁵⁴ trying to establish a relationship between industrialization and female sex-ratio in urban areas pointed out that direct relationship exists between industrialization and the type of female emancipation in urban areas. He observed that education is the most important factor determining the female occupational pattern. However, the social custom of a country also plays significant role in determining the female occupational pattern. For example, though United States and Japan are both industrially developed yet practice of

female subordination in Japan does not allow females to work freely in industrial units whereas in the United States equality of gender allows females to join industrial units and migrate to urban areas making the sex-ratio in favour of females. In another article, Dutt, A.K., Monroe, C.B. and Vakamudi, R. (1986)⁵⁵ observed the general level of literacy is higher among urban population in comparison to their rural counterparts, however in both the subgroups literacy for female is considerably below the level for male. They also found an increase in literacy rate by city size is much sharper for female than for male because female are freed from traditional roles and modes of behavior in urban areas. Analyzing sex-ratio they found a negative correlation with urbanization because in the initial stages of development, employment in urban areas is male dominant. Brockerhoff, M. and Brennan, E. (1998)⁵⁶ analyzing the infant mortality rate and children's living condition in developing regions concludes that except in Asia, the advantage of big-city residents are declining in terms of general living condition, because in Asia no substantial big-city advantage ever existed.

Thus our study shows that social and demographic characteristics in urban areas are not uniform. The size of urban center plays a significant role in shaping urban social and demographic characteristics. Level of economic development, degree of industrialization and social customs also determine the urban social and demographic characteristics.

Map No. 1.1



Source: Prepared by the researcher.

1.3 Statement of problem

North Bengal comprising the six districts of West Bengal viz. Darjeeling, Jalpaiguri, Kooch Behar, Uttar Dinajpur, Dakshin Dinajpur and Maldah has an important strategic location. On one hand it acts as the main connection between the north east India and the rest of India. Infact the 20 km wide Siliguri corridor connects the north east India with the main land. On the other hand the six districts of North Bengal share international border with Bangladesh, Nepal and Bhutan. More over the central government's 'look east policy' to connect with south east Asian countries and developing a road linkage with Myanmar and other south east Asian countries increase the importance of this region manifold. The porous international border with Bangladesh, Nepal and Bhutan also increase the vulnerability of this region. Under the given situation it is very important to study the pattern of urbanization unfolding in North Bengal recently. An increase in economic activity because of its strategic location ultimately affects the growth of urban centres of this region in the future. The availability of urban infrastructure in particular will come into question with an increase in economic activity perceived to be manifold compared to the present. The urban centres in north Bengal also have an additional responsibility of acting as a break of bulk point for trading with neighbouring countries like Nepal and Bhutan. Infact the inhabitants of Bhutan and Eastern Nepal depends heavily on the urban centres of North Bengal to fulfill their daily requirements. An immediate example of which was seen during the devastating Nepal earthquake recently.

Not only is studying the pattern of urbanization in North Bengal important from an international point of view because North Bengal itself has a variety of physical and social conditions which ultimately affects the trajectory of urbanization in this region. On one hand there is the Darjeeling Himalaya where the process of urbanization started during the colonial period. Urbanization in the hills during the last few decades has been very unplanned and haphazard raising questions about the sustainability of the present pattern of urbanization in the hills. Infact the growth of urban population in Darjeeling hills has been phenomenal during the last few decades making the population more vulnerable to natural disasters like landslides and earthquakes. The rampant unscientific tourism development in this region of late has increased the potential destructiveness of catastrophic events in the future. On the other hand the districts like Jalpaiguri, Koch Bihar, North Dinajpur and South Dinajpur and Maldah have a very low level of urbanization even today. The problem is more structural because all these districts are

some of the most backward in the country with respect of any indicators of development. The higher percentage of population belonging to scheduled caste, scheduled tribe and minority group in these districts also increases the problem manifold. Given the physical diversity and social backwardness of this region the urbanization process which is imperative should be planned, undertaken and managed properly so that a cordial balance is maintained between the factors of change leading to economic development and the factors which resist rapid change because of their environmental and social considerations.

1.4 Objectives

1. To trace the origin of urban centres in North Bengal.
2. To analyze the recent trend of urbanization and growth of urban centres in North Bengal.
3. To analyze the socio-economic condition of urban centres in North Bengal.
4. To analyze the level of infrastructure development among the urban centres in North Bengal.
5. To analyze the problems associated with the process of urbanization in North Bengal.

1.5 Hypothesis

1. The tempo of urbanization will increase with the passage of time for all the districts of North Bengal.
2. Most of the districts in North Bengal is in an urbanizing mode i.e. $RGUP > RGTP > RGRP$.
3. Class I cities will dominate other size-classes of urban centres in terms of their population share and growth rate.
4. Higher the population size of an urban centre, lower will be their annual exponential growth rate.
5. The sex-ratio will deteriorate with an increase in the size of urban centres.
6. The level of infrastructural development will be higher for the larger urban centres compared to smaller urban centres and also for the statutory towns compared to census towns.
7. The problems associated with urban development are more for the larger urban centres.

1.6 Database and Methodology

The source of data for this study will be both secondary and primary in nature. Majority of the data related to population size, infrastructure development and housing condition will be collected from various Census of India publications. The analysis will mainly be done taking into consideration the three census year of 1991, 2001 and 2011 for secondary data. However, wherever required the temporal span may be increased if the situation demands accordingly.

In this study a systematic analysis involving both qualitative and quantitative techniques will be used to find out the dynamics of urban development in North Bengal and to get an idea about the growth of urban centres in this region. The spatial and temporal variation of various aspects of urban development will be shown with the help of GIS maps prepared under Arc GIS platform and tables where ever required.

To fulfill the first objective i.e. to trace the origin of urban centres and development in the process of urbanization in North Bengal various published and unpublished works related to the history of urban development in North Bengal will be consulted.

To fulfill the second objective i.e. to analyze the recent trend of urbanization and growth of urban centres in North Bengal a number of analysis will be carried out both at the district level and size-class level. First the percentage of urban population in each of the districts of North Bengal will be compared with that of North Bengal as a whole, West Bengal and India to get an idea about the level of urbanization in this region. Secondly, the distribution of urban population of North Bengal among the six districts will be calculated from 1991 to 2011 to get an idea about the process of urbanization. Moreover, the urban-rural ratio of population for each of the districts will be calculated from 1991 to 2011 to get an idea about the relative growth of urban population in comparison to rural population and will again be compared with that of West Bengal and India. Fourthly, the annual exponential growth rate of urbanization and growth rate of urban-rural ratio will be calculated for all the districts from 1991 to 2011 and will be compared with West Bengal and India to get a better insight about the tempo of urbanization in North Bengal. Fifthly, the decadal and annual exponential growth rate of urban population will be calculated for each district from 1991 to 2011 and will again be compared with that of West Bengal and India to get an idea about the pace of urbanization. Moreover, the urban-rural growth differential will also be calculated for each district from 1991 to 2011 and again compared with that of West Bengal and India to get an idea about differential rate of growth of population. Additionally, the

RGUP (Rate of growth of urban population), RGTP (Rate of growth of total population) and RGRP (Rate of growth of rural population) will be compared to find out the districts in urbanizing mode. Sixthly, to analyze the degree of concentration of urban population across the districts location quotient will be applied. Seventhly, to analyze the degree of urban primacy and urban population concentrated within the district, Rank-Size Rule and H-Index value will be calculated for each district and compared among the districts and across time. Eighthly, the percentage of urban area to total area of the district and urban population density will also be calculated for each district to get an idea about the degree of urban development. Finally, the number of urban centres and the growth of urban centres in each district will be analyzed across the time period. The number of urban centres per lakh rural population will also be calculated for each district to get an idea about the availability of urban centre in each district.

Moreover, to analyze the growth of urban centres in North Bengal based on the six size-class categories identified by the Census of India, the urban centres will be classified accordingly at first. Then the total number of urban centres in each class and their corresponding population will be identified for North Bengal as a whole. The percentage of total urban centre in each class and the percentage of total urban population in each class will also be calculated. Secondly, the annual exponential growth of urban population in each class will be calculated. Thirdly, the decadal growth rate of number of urban centres in each class will also be calculated. Fourthly, the whole exercise will again be done at the district level to analyze the variation among the districts. This size-class analysis will be done for the three years of 1991, 2001 and 2011 to identify the temporal variation in North Bengal and the districts individually. Fifthly, the balance sheet of population for various size-classes will be calculated for the two decade of 1991-2001 and 2001-2011 for North Bengal as a whole to identify the percentage change in population by place and by class. This will not only give an idea about the growth of population by place but also disaggregate the growth by size-class into various components like percentage change of population due to growth of places, net shift of growing and declining towns in and out of the class, addition of places and loss of places.

The components of the Balance Sheet will be follows:

t = Total places in class in earlier census.

T = Total places in class in later census.

G = Places added to class by later census, due to growth from smaller size-class.

D = Places added to class by later census, due to decline from larger size-class.

N = New places, in class in later census, but not earlier one.

g = Places subtracted from class by later census, due to growth to larger size-class.

d = Places subtracted from class by later census, due to decline to smaller size class.

n = Places dropped, in class in earlier census but not in later one.

The use of any term above with a subscript 1 stands for the population of all places in this particular Balance Sheet category in the earlier census, and the use of any term above with a subscript 2 stands for the corresponding population in the later census.

Finally the Balance Sheet equation will be as follows:

$$T = t + G + D + N - g - d - n.$$

Therefore percentage change by class is

$$\frac{(T_2 - t_1) * 100}{t_1} \text{ -----1.}$$

Percentage change by place is

$$\frac{(t_2 - t_1 - n_1) * 100}{t_1 - n_1} \text{ -----2}$$

In the second formula, population of the town dropping out over the decade are excluded (n_1), since the purpose of the measure is to follow the same place overtime.

Next, to find the individual components of class change, the places in the Balance Sheet may be divided into three groups:

1. Places in class both the time (i.e. two consecutive census periods): $t - g - d - n$.
2. Places in class first time only (i.e. present in the earlier census but absent in the later census): $g + d + n$.
3. Places in class second time only (i.e. absent in earlier census but present in the later census): $G + D + N$.

In terms of these three groups, the population change in the size-class over a decade is equal to the population change of the place in the class both times minus the earlier census year population of places moving out of the class plus the later census year population of places moving into the class.

Algebraically this is denoted by:

$$T_2 - t_1 = \{(t_2 - g_2 - d_2) - (t_1 - g_1 - d_1 - n_1)\} - (g_1 + d_1 + n_1) + (G_2 + D_2 + N_2)$$

$$\text{Or, } T_2 - t_1 = \left\{ \underset{1}{(t_2 - g_2 - d_2)} - \underset{1}{(t_1 - g_1 - d_1 - n_1)} \right\} + \underset{2}{(G_2 - g_1)} + \underset{3}{(D_2 - d_1)} + \underset{4}{N_2} - \underset{5}{n_1}.$$

Dividing both sides of the above equation by t_1 and multiplying by 100 gives the percentage change of the size-class divided into five components:

1. Component of change due to growth of places staying in size-class.
2. Component of change due to net shift of growing towns into and out of size-class.
3. Component of change due to net shift of declining towns into and out of size-class.
4. Component of change due to addition of new places at the later census.
5. Component of change due to loss of places dropping out at the later census.

Finally, the annual exponential growth rate of population for each urban centre will also be calculated for the three years and effort will be made to establish a relationship between the population size of each urban centre and their annual exponential growth rate.

To fulfill the third objective i.e. to analyze the socio-economic condition of urban centres in North Bengal few indicators will be taken and analyzed accordingly. Firstly, the percentage of scheduled caste and scheduled tribe population in each urban centre will be calculated and the change will be noted over the time period. Secondly, the literacy rate along with male and female literacy rate will be calculated and the gender disparity in literacy rate will be calculated by Sopher's Index modified by Kundu and Rao. This will give an idea about the educational level in each urban centre over the period of time. Thirdly, the sex-ratio and child sex-ratio will also be calculated for each urban centre over the period of time. Finally, to get an idea about the work participation rate and distribution of population into the main, marginal and non workers over the time period the population of urban centres will be classified accordingly.

To fulfill the fourth objective i.e. to analyze the level of infrastructure development among the urban centres in North Bengal at first a distinction will be made between the statutory towns and census towns. Secondly, effort will be made to analyze the growth of population and the number of these two types of towns in each district of North Bengal over the period of time. Thirdly, the rank of all the towns will be determined with respect to availability of various infrastructure like road length, availability of railway station, availability of fire fighting station, electricity connection, healthcare facility, educational infrastructure, number working women's hostel, number of stadium, number of cinema hall, number of public library, number of banks and number of non agricultural credit society individually for 1991, 2001 and 2011 respectively. Finally, a composite index of infrastructure development for each urban centre will be calculated by equal weightage method and the urban centres will be classified into various categories based

on the composite score for 1991, 2001 and 2011. This will not only portray the difference in the availability of infrastructure facility between the census town and statutory town but also give an idea about the urban centres improving their infrastructure facilities with the passage of time.

To fulfill the fifth objective i.e. to identify and analyze the problems associated with the process of urban development in North Bengal major emphasis will be given to problems associated with percentage of slum household, drinking water, sanitation, housing, air quality, noise pollution and traffic congestion. In this regard problems like water quality, air quality, noise pollution and traffic congestion will be analyzed by collecting primary data for some selected urban centres spread across North Bengal while for rest of the indicators where secondary source of data will be used analysis will be done for all the urban centres.

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