

# POPULATION MONOGRAPH OF BANGLADESH



## CHANGING PATTERNS OF URBANIZATION IN BANGLADESH: AN ANALYSIS OF CENSUS DATA

**Population Monograph: Volume-12**



**Bangladesh Bureau of Statistics**  
**Statistics and Informatics Division**  
**Ministry of Planning**

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COMPLIMENTARY

# POPULATION MONOGRAPH OF BANGLADESH

## CHANGING PATTERNS OF URBANIZATION IN BANGLADESH: AN ANALYSIS OF CENSUS DATA

November 2015



**BANGLADESH BUREAU OF STATISTICS (BBS)  
STATISTICS AND INFORMATICS DIVISION (SID)  
MINISTRY OF PLANNING  
GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH**

ISBN- 978-984-33-9953-3

Changing Patterns of Urbanization in Bangladesh / iii

**Formatting:**

SOMPADONA, an editing and indexing house  
Email- [sompadona@gmail.com](mailto:sompadona@gmail.com)

**Cover design:**

Buzzuuka Marketing Communications  
House # 398-A, Road # 29, New DOHS  
Mohakhali, Dhaka-1206  
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**Published by:**

Bangladesh Bureau of Statistics (BBS)  
Statistics and Informatics Division (SID)  
Ministry of Planning  
Website: [www.bbs.gov.bd](http://www.bbs.gov.bd)

**Disclaimer:**

This report has been prepared by Bangladesh Bureau of Statistics (BBS) in collaboration with Department of Population Sciences, University of Dhaka.

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**Minister**  
Ministry of Planning  
Government of the People's Republic of  
Bangladesh

## Message

I am delighted to know that Population and Housing Census 2011 Project of Bangladesh Bureau of Statistics (BBS), Statistics and Informatics Division (SID) has prepared fourteen Population Monographs using the census data of different years. This is the first time BBS is publishing population monographs with in-depth analysis of the population census data. The present monograph on 'Changing Patterns of Urbanization in Bangladesh: An Analysis of Census Data' is one of such monograph series.

Each monograph deals in a particular issue related to population and housing where census data have been used in multidimensional approaches. In addition, cross country comparison and in country comparison have also been made to oversee the representativeness of data with other national sources. It is expected that the monographs will be useful in national planning and policy making particularly in the field of population and development.

I would like to thank concerned officials of SID and BBS and also authors of the monographs for their relentless effort in preparing these monographs and publication thereof. Special thanks to European Union (EU) and United Nations Population Fund (UNFPA) for their generous support in conducting 5<sup>th</sup> decennial census of Bangladesh and preparing the population monographs.

Dhaka  
November, 2015

**AHM Mustafa Kamal, FCA, MP**





**State Minister**  
Ministry of Finance  
and  
Ministry of Planning  
Government of the People's Republic of  
Bangladesh

## Message

I have come to learn that Population and Housing Census 2011 Project of Bangladesh Bureau of Statistics, Statistics and Informatics Division has prepared fourteen Population Monographs using census data of different years. Population is the main ingredient for national planning and policy making. Therefore, Population Monographs are of vital importance in the field of population planning of the country.

Each monograph has been prepared with a particular issue related to population and housing. To prepare these Monographs census data have been used widely in multidimensional way where secondary data from other sources have also been used. The monographs are a new dimension in the wide use of data generated through national censuses of the country.

My sincere thanks and gratitude to the honorable Minister, Ministry of Planning for his dynamic leadership and active guidance in implementing all our activities including census undertaking. I would like to thank Secretary, Statistics and Informatics Division, Director General, BBS for their relentless effort in preparing these monographs and publication thereof. Special thanks to European Union (EU) and United Nations Population Fund (UNFPA) for their generous support in conducting 5<sup>th</sup> decennial census of Bangladesh and preparing the population monographs.

Dhaka  
November, 2015

**M.A. Mannan, MP**







**Secretary**  
Statistics and Informatics Division (SID)  
Ministry of Planning  
Government of the People's Republic  
of Bangladesh

## Foreword

Population Census is the single most important statistical undertaking in any country. Bangladesh Bureau of Statistics of the Statistics and Informatics Division has conducted the 5<sup>th</sup> decennial census of the country during 15-19 March, 2011. In order to supplement the main census a large scale sample survey was conducted in October 2011 which covered detailed information on Population & Housing. The Monograph on 'Changing Patterns of Urbanization in Bangladesh: An Analysis of Census Data' is mainly based on the findings of main census and sample census conducted during 2011. Data from other secondary sources have also been used to prepare the Monographs.

It may be mentioned that Bangladesh Bureau of Statistics (BBS) has been publishing a number of Population Monograph series and Population Monograph on 'Changing Patterns of Urbanization in Bangladesh: An Analysis of Census Data' which is one of the fourteen monographs being published by BBS using Population Census Data. Monographs are the in depth analysis of a particular topic of interest. It is worth mentioning that in Bangladesh the process of urbanization is growing rapidly and new urban settlement are increasing which need special attention.

In light of that, population monograph on 'Changing Patterns of Urbanization in Bangladesh: An Analysis of Census Data' will be useful for proper planning for the newly developed urban areas of the country. This monograph has covered detailed information on urbanization process in Bangladesh.

I like to express my sincere thanks to Director General, Deputy Director General of BBS, Project Director of Population and Housings Census 2011 Project and his team for preparing this Monograph. I acknowledge with gratitude the support of European Union (EU) and United Nations Population Fund (UNFPA) for successful completion of the Population and Housing Census 2011 and preparing the Monographs.

Dhaka  
November, 2015

**Kaniz Fatema ndc**





**Director General**  
Bangladesh Bureau of Statistics (BBS)  
Statistics and Informatics Division (SID)  
Ministry of Planning  
Government of the People's Republic of  
Bangladesh

## Preface

The fifth population and housing census of Bangladesh was conducted during 15<sup>th</sup> March to 19<sup>th</sup> March, 2011. The main objective of the census was to collect information on the basic characteristics related to housing, households and population for developing a comprehensive database for development planning and human resource development programmes as well as economic management.

Population and Housing Census 2011 were conducted in three phases. In the First Phase, basic data about all households and individual members of the households were collected through ICR formatted questionnaire during 15<sup>th</sup> March to 19<sup>th</sup> March, 2011. In the Second Phase, quality and coverage of the main count were verified through a Post Enumeration Check (PEC) survey during 10<sup>th</sup> April to 14<sup>th</sup> April, 2011. For the first time in the census history of Bangladesh, PEC was conducted by an independent organization, namely Bangladesh Institute of Development Studies (BIDS). In the Third Phase, detailed socio-economic information was collected by administering a long machine readable questionnaire in a sample survey held during 15<sup>th</sup> October to 25<sup>th</sup> October, 2011.

One of the objectives of the Population and Housing Census 2011 Project was in-depth analysis of census data and preparation of Population Monograph series. Monographs are useful to the users to know the detailed information about the related area for taking appropriate policy measures and further research.

The Population Monograph on 'Changing Patterns of Urbanization in Bangladesh: An Analysis of Census Data' is one of the 14 monograph series which covered the urbanization process in Bangladesh over the years.

I express my heartfelt gratitude to the Honorable Minister for Planning for his effective guidance and significant cooperation in making the census a success. I express my deepest gratitude to Secretary, Statistics and Informatics Division (SID) for her whole-hearted support and cooperation to the census. Moreover, members of 'Steering Committee', 'Standing Technical Committee', Consultants and the participants of the Seminar-cum-Expert Consultation deserve special thanks for their valuable contributions for finalizing the questionnaire and the census programme. I am thankful to the Department of Population Sciences, University of Dhaka for preparing this monograph. Thanks to European Union (EU) and United Nations Population Fund (UNFPA) for their technical and financial support to the Population and Housing Census 2011 Project.

Finally, I like to thank Deputy Director General, BBS, Project Director, Population and Housing Census 2011 Project, members of the Technical Committee and other officers & staff members of BBS for bringing out this monograph.

Dhaka  
November, 2015

**Mohammad Abdul Wazed**





Representative  
UNFPA Bangladesh

## Message

This report is part of a series of 14 monographs developed by the Bangladesh Bureau of Statistics (BBS) with support from the United Nations Population Fund (UNFPA). UNFPA has supported the BBS since the very first census in 1974, a cooperation that has grown stronger with each census. Through the “Support to 2011 Bangladesh Population and Housing Census” project UNFPA has been working closely with the BBS to ensure that best use is made out of the resources invested in the census. The project has put a major emphasis on in-depth analysis of census data and the production of thematic reports in the form of these monographs. This series will provide its readers a better and clearer understanding of the trends, the current country scenarios and the gaps indicating where targeted interventions are necessary.

The availability of quality, reliable and timely data, as well as a thorough, methodologically sound and user-friendly analysis of data is more important than ever before. The information generated by population and housing census, the numbers of people, their distribution, their living conditions, are all critical for development. Without accurate data, policymakers do not know where to invest in schools, hospitals or roads and the most in need remain invisible. The implementation and monitoring of the Sustainable Development Goals, the guiding framework for the development agenda 2030, will require the production and analysis of a large amount of data, big data, requiring strong and independent National Statistics Offices, which UNFPA will continue to support.

I would like to take this opportunity to congratulate and thank the Statistics and Informatics Division and the Bangladesh Bureau of Statistics’ authority and the project team for their efforts to produce this series, as well as the experts who contributed to the development of the monographs. My special gratitude goes to the Delegation of European Union in Bangladesh for their generous support and co-operation in implementing the “Support to Bangladesh Population and Housing Census 2011” project and in the preparation of these monographs.

Dhaka  
November, 2015

**Argentina Matavel Piccin**  
Representative  
UNFPA Bangladesh





### **Project Director**

Population and Housing Census 2011 Project  
Bangladesh Bureau of Statistics  
Statistics and Informatics Division  
Ministry of Planning

## **Acknowledgements**

It is my great pleasure to acknowledge the contributors who were engaged in preparing the fourteen Population Monographs of Bangladesh under Population and Housing Census 2011 Project of Bangladesh Bureau of Statistics (BBS). This initiative of BBS is a new dimension with regard to the wide use of census data in the country and the abroad.

Monographs have been prepared by the BBS in collaboration with public universities, research organizations and a local consultant of this project. A series of review meetings were organized to finalize the draft monographs.

I would like to express my profound regards and deep sense of gratitude to the Secretary, Statistics and Informatics Division (SID) and Director General, Bangladesh Bureau of Statistics for their valuable suggestions, continuous guidance and all out support in smooth completion of all the activities of this project and bringing out the population monographs.

It is worth mentioning that European Union (EU) has provided generous support in the implementation of the Population and Housing Census 2011 Project. I take the opportunity to express my indebtedness to United Nations Population Fund (UNFPA) for the partnership of this project of BBS.

I am extremely grateful to the institutions and the authors who were engaged in preparing the monographs. My sincere thanks to Mr. Nicholas Jhon Mcturk, Technical Expert on Population Development, Asia and the Pacific Regional Office, Dr. Chrisophe Lefrance, Technical Advisor, Population and Development, UNFPA Regional Office and the local consultant of this project Mr. Md. Shamsul Alam for their whole hearted co-operation in the preparation of monographs.

Thanks are also due to Mr. Iori Kato, Deputy Representative, Dr. Shantana R. Halder, Chief PPR and Mr. Mahboob-E-Alam, NPO, UNFPA for their kind support and help. I am grateful to Mr. Md. Mostafa Ashrafuzzaman, Deputy Director, Mr. Md. Khorshed Alam, Assistant Statistical Officer, Mr. Mohammad Abdullah, Assistant Statistical Officer and all other officials of Population and Housing Census 2011 project of BBS who worked hard to conduct the census and to prepare the monographs.

Dhaka  
November, 2015

**Md. Mashud Alam**





## Executive Summary

The process of urbanization in Bangladesh was relatively low compared to other Asian countries. However, the country has experienced a remarkable progress of urbanization and urban growth in terms of increasing proportion of urban population and urban centers since the country's independence in 1971. A significant number of studies conducted so far which focused on the growth of urbanization and urban centers and its consequences. However, very few researches have been conducted to examine that the urbanization and urban growth in Bangladesh that possess the characteristics of 'real' urbanization and urban growth. In this context, this monograph broadly focused on the tempo pattern of the level of urbanity in different urban centers since 1991 by using census data. The specific objectives of this research monograph were to: (1) investigate the tempo of urbanization and urban growth in Bangladesh; (2) scrutinize the changing concentration pattern of urban areas/agglomerations in Bangladesh; (3) examine the growth rate of urban centers in terms of 'rank-size rule' and 'law of the primate city'; and (4) examine how urban the urban centers are in Bangladesh.

Over the period, the number of urban centres have increased. There were 48 urban centres in 1901, which increased to 108 in 1971. The rapid growth has been observed in 1981. The total number of urban centres reached to 500 in 1981, which further increased to 532 in 2001 but due to definitional change the number reduced to 506 in 2011. The number of urban centers increased over time but the pressure on the primate city which is Dhaka has not reduced; rather increased steadily. This increased dependency on the primate city has been tested by using the 'rank-size rule' and 'law of the primate city'. The findings show that there is huge gap between primate city and other cities in terms of the population size and this has increased over time.

To measure the level of urbaneness, We used the following indicators to consider an urban area as urban: (1) population density per square kilometre (D); (2) population size (P); (3) literacy rate (L); (4) access to tap water for drinking in the dwelling (W); (5) access to sanitary toilet facilities in the dwelling (S); and (6) access to electricity in the dwelling (E). A numerical score of '1' or '0' was assigned for the presence or absence of each of these indicators for each of the urban areas. A reliability analysis was then performed to assess the strength of selecting these indicators. Finally, for each of the urban area, the obtained numeric scores were summed up to classify their level of urbaneness. The findings show that in 2011 only 7 (seven) urban centers fulfilled all the conditions of urbaneness considered in this research monograph while 206 urban centers out of 424 urban centers across the country didn't fulfill the conditions of urbaneness except the population size. Overall, the findings suggest that the situation is improving over time.

The findings of this monograph suggest that 'urban' definitional consistency should be maintained in such a way that comparison and analytical consistency can be achieved for policy formulation. The monograph clearly shows that the growth of urban centers and urbanness are not in line.

It has been observed that different urban services (provision of safe drinking water, sanitary latrine, access to electricity) are highly unequally distributed across the urban centers.

In conclusion, this monograph suggest that initiatives should be taken to equalize urban services which will eventually help us to reduce Dhaka city's primacy. In this connection regional development should be prioritized to lessen present pressure on the existing primate city. This monograph suggest to explore the causes of unequal urbanization by linking up the economic and industrialization related variables (internal and international migration, per capita GDP, industrialization, etc.).

## 1. BACKGROUND

### 1.1 Introduction

The growth of cities and urbanization of the world is one of the most impressive facts of modern times which wrought profound changes in virtually every phase of social life (Wirth, 1938). It is an inevitable and unavoidable feature in the process of development. In demographic and economic literature, urbanization is frequently used as an indicator of development. Urbanized society in which a majority of people live crowded together in towns and cities represent a new and fundamental step in man's social evolution. Although towns and cities themselves first appeared some 5,500 years ago, the process of modern urbanization began with the industrial revolution, first in England, from which it spread to the European continent and especially after 1850 with the development of steamship and railway, to the overseas areas of European settlement in all the continents of the world (Davis, 1996).

The 21<sup>st</sup> century is becoming an urban century. In 2008, humankind has crossed a socio-demographic milestone for the first time in history by having half of its population living in the urban areas (UNFPA, 2007). Urban population is projected to become 66% of the total population of the world by 2050 (UN, 2014). Bangladesh is not detached from this historic metamorphosis. Urban population growth rate has always been higher than the national population growth rate since 1901 (BBS, 2011). The level of urbanization is now 28% which is projected to become 56% in 2050 (UN, 2014). The number of urban population is projected to become a staggering 112.44 million in 2050 (UN, 2014). Its capital Dhaka is now the 11<sup>th</sup> largest megacity in the world and projected to become the 6<sup>th</sup> largest megacity in 2030 with a population of 27.37 million (UN, 2014). This entire extreme scenario poses serious major socioeconomic and infrastructural transformation of the country with other related changes.

The process of urbanization in Bangladesh was relatively low compared to other Asian countries. However, the country has experienced a remarkable progress of urbanization and urban growth in terms of increasing proportion of urban population and urban centers since the country's independence in 1971. A significant number of studies conducted so far which focused on the growth of urbanization and urban centers and its consequences. However, very few researches have been conducted to examine that the urbanization and urban growth in Bangladesh that possess the characteristics of 'real' urbanization and urban growth. In this

context, this monograph will broadly focus on the tempo pattern of the level of urbanity in different urban centers since 1991.

## 1.2 Research Objectives

The specific objectives of this research monograph are:

1. To investigate the tempo of urbanization and urban growth in Bangladesh;
2. To scrutinize the changing concentration pattern of urban areas/agglomerations in Bangladesh;
3. To test the growth rate of urban centers in terms of 'rank-size rule' and 'law of the primate city'; and
4. To examine how urban the urban centers are in Bangladesh.

## 1.3 Outline of the Research Monograph

This monograph consists of six chapters. The chapter one is on background of the study, which includes introduction, research objectives and outline of this research monograph. Chapter two has focused on the conceptualization of urbanization. Chapter three explored the history of urbanization in pre-Bangladesh period. Chapter four is on methodology of this research monograph where data and analytical approach are explored. Findings of this research monograph have been organized in chapter five. Finally, chapter six is on discussions, policy implications and conclusion of this study.

## 2. CONCEPTUALIZING URBANIZATION

### 2.1 Definition of Urbanization

Urbanization throughout the world has been uniquely a characteristic feature of the recent history. The word 'urban' was hardly used in the English Language before the 19<sup>th</sup> century. It is derived from the Latin 'urbs' - a term applied by the Romans to a city - more specially the 'City of Rome' (Notridge, 2007). While a few cities have existed for millennia, it is only within the past two hundred years that they have become so universally apparent. The growth of town life is synonymous with a quickening of the tempo of civilization. The history of man proves this fact, whether we examine the civilizations of Egypt, India, Mesopotamia, Greece, Rome or Byzantium. Urbanization in its minimal meaning is the study of the growth of cities. More specifically it is the study of the process of population concentration within human settlements (the city), as well as the expansion of cities into surrounding communities (suburbanization) and regions (Hutchison, 2010). The recommendations of the United Nations on urbanization are those made for the 1970 censuses under "topics to be investigated". Because of national differences in the characteristics that distinguish urban from rural areas, the distinction between the urban and the rural population is not yet amenable to a single definition that would be applicable to all countries or, for the most part, even to the countries within a region<sup>1</sup>.

The Statistical Office of the United Nations has classified the definitions in use into five principal types. The underlying concept is that of 1) administrative area, 2) population size, 3) local government area, 4) urban characteristics, or 5) predominant economic activity (Shryock et. al., 1976).

#### 2.1.1 Administrative Area

The concept treats as urban the administrative divisions that have been so classified by the national government or such parts of them as their administrative centers, capitals or principal localities. This classification is based primarily on historical, political or administrative consideration, rather than on statistical considerations. It tends to be relatively static and is not automatically changed after each census.

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<sup>1</sup><http://unstats.un.org/unsd/demographic/sconcerns/densurb/densurbmethods.htm>

### 2.1.2 Population Size

This concept treats as urban those places (cities, towns, agglomerations, localities etc.) having either a specified minimum number of inhabitants or a specified minimum population density. The discussion of this concept in the United Nations Handbook recognizes that suburbs of large places, densely populated fringes around incorporated municipalities and the like are sometimes classified as urban in this approach. This type of classification can readily be brought up-to-date at the time of each census.

### 2.1.3 Local Government Area

This concept defines urban as those places, agglomerations or localities "possessing some form of local government". For some countries, at least these places might be interpreted as referring to a particular form of local government, especially one having relatively great autonomy. The American equivalent would be the incorporated municipalities (city, town, borough or villages). Other terms cited by the Handbook include "chartered towns", 'local government areas' "municipal communities" and "burghs". No minimum population size is used in this definition.

### 2.1.4 Urban Characteristics

This concept requires an urban place possess specific types of urban characteristics, such as established street patterns, contiguously aligned buildings and public services such as sewer system, piped water supply, electric lighting, police station, hospitals, school, court of law and local transportation system. A classification of this sort would need to be developed during or shortly before the census canvass. This concept has possibility of regular up-dating.

### 2.1.5 Predominant Economic Activity

Here places or other areas qualify as urban if they have at least a specified proportion of their economically active population engaged in non-agricultural activities.

The definitions of 'urbanization' or of 'urban' vary from country to country and a country can also change its definition from time to time. Sometimes mixed criteria are also used to define urban. So it is very difficult to define urban or urbanization in absolute terms.

Comparison is also difficult for the same reasons. United Nations Demographic Yearbook 2005 has compiled different countries criteria to define urban<sup>2</sup>.

Similarly, the definition of urban area used by the Government of Bangladesh in different censuses has not been uniform. The definition of urban area used in 1981 was continued up to 2001; however, the definition was changed in 2011. In earlier censuses, the urban area included city corporations, municipalities, upazila headquarters, growth centers, cantonment and urban agglomerations adjacent to large cities, i.e., city corporations termed as Statistical Metropolitan Area (SMA). However, in 2011, the concept of SMA, growth center and some other urban areas was abandoned and the areas covered only city corporations, paurashavas, upazila headquarters and cantonment area. In Bangladesh the urban areas have been classified into six categories according to their functions and sizes (BBS, 2014).

**Mega City:** It is metropolitan area having population 5 millions or more.

**City Corporation:** It includes city corporations incorporated and administered by the Ministry of Local Government under City Corporation Act, 2009.

**Paurashava/Municipality Area (PSA):** It includes paurashavas incorporated and administered by local government under Paurashava Ordinance, 1977.

**City:** It is an urban area having population 1,00,000 and above

**Other Urban Area (OUA):** It includes those upazila headquarters which are not paurashavas. The only exception is the 17 unions adjacent to Dhaka City Corporation under Dhaka Metropolitan Area. These unions are treated as other urban areas on the basis of their urban characteristics.

**Town:** It is an urban area having population less than 1,00,000

## 2.2 Concepts of Urbanization in Demographic Theory

Hope Tisdale (1942) in 'The Process of Urbanization' defined the demographic nature of urbanization as:

*..... a process of population concentration. It proceeds in two ways: the multiplication of points of concentration and the increase in size of individual concentrations. It may occasionally or in some areas stop or actually recede, but the tendency is inherent in society for it to proceed until it is inhibited by adverse conditions. ....There is no clear-cut level of concentration at which a city suddenly*

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<sup>2</sup><http://unstats.un.org/unsd/demographic/products/dyb/dyb2005/notestab06.pdf>

*springs into being. It is convenient from time to time arbitrarily to name certain levels beyond which concentrations are designated as cities.... It comes about through the utilization of technological devices, the result if not the object of which, is to increase the population tolerance of the areas in which they operate. Population increase is an incentive to technological advance and urbanization, but it is not the sole incentive. Both can develop somewhat independently of it, given the indefinite expansibility and diversity of man's desires and his capacity for exercising ingenuity in achieving them. The products of the concentrative process, cities, give to society a cultural character which we call civilization. Different people and different technologies produce different civilizations, but urbanization is one and the same throughout though it varies in rate and scope from time to time and from place to place.*

Richard Dewey (1960) takes a very similar stand point. He shows that there is very little consensus in the literature regarding matters that distinguish urbanism from ruralism. To him,

*However it is not logical to hold that the rural-urban continuum has no universal or general referents, merely because of the mistaken assignment to urbanism of a welter of cultural items which can be, and are, independent of city environment. In the first place, it is probably futile to argue for the abandonment of the terms 'rural' and 'urban' as indicators of size and density of population.... The inclusion of both population and cultural based in the term 'urbanism' renders it useless except for labeling time bound phenomena.*

Charles T. Stewart, Jr., however rejected size of place as the proper criterion of 'Urban' versus 'rural' and preferred on economic or sociological concept such as the population or workers in the area who is engaged in non-agricultural pursuits or the socio-cultural folk-urban distinction (Stewart, 1958). On the other side, Henry S. Shryock and Jacob S. Siegel found the rural-urban concept advanced by Tisdale and Dewey is useful in demographic analysis. In many, if not most countries, it is associated with fairly sharp differentials in demographic, social and economic characteristics for persons and families. The precise population size chosen to separate urban from rural is obviously fairly arbitrary within wide range. Nevertheless, there would be some advantages in a uniform definition among all countries (Shryock, et al., 1976).



### 2.3 Classical Theories of Urbanization

The classical theories of urbanization have mainly originated from European and American tradition. Social Psychological Perspective, Social Behaviourist Perspective and Institutional Theory of City have originated from European tradition whereas different thinkers from 'Chicago School' contributed to the American tradition. Some Marxist and Neo-Marxist perspectives were developed by both European and American thinkers. While European tradition mainly concentrated on historical development of European urbanization, American tradition concentrated on the 20<sup>th</sup> century urban development in America. Marxist and Neo-Marxist tradition have focused on the political economy of urban development and role of internal dynamism of capitalism to propel urbanization.

**Social Psychological Perspective** mainly concentrated on people's different ways of thinking, feeling and responding in urban environment. Georg Simmel in his 'The Metropolis and Mental Life' described metropolis as a state of 'reification', a social environment created by man in his interaction with other man, which now opposes and threatens to overwhelm him. Urbanization as well as city life is perceived as an association of 'money' economy which is collaged of 'rationality', 'calculability' and 'division of labour'. All these lead to the formation of 'urban personality' which is the basis of its institutions, organization and culture (Simmel, 1903). Ferdinand Tonnies and Max Weber were the two major proponents of **Social Behaviourist Perspective**. Tonnies in his famous typology of '*Gemeinschaft and Gesellschaft*' proposed the distinction between urban and rural life. Urbanization was perceived here to lead to 'individuation'. Relationship of 'rational will' predominate in human relationship which is undertaken for predicted ends and every 'other' is dealt with on calculated and superficial terms (Tonnies, 1988). Max Weber proposed a comparative discussion on the distinctive nature of urban as well as city development in industrial western societies and non-western societies. He hypothesized the presence of 'rationality' and 'traditional action' behind the development of western industrial and non-western urban development respectively (Weber, 1996). **Institutional Theory on City** found the major institutions of the society like economy, religion, family, and politics as the major driving force behind urbanization. Karl Marx explained city in terms of economic institution where pauperization and material degradation happened. But urban development was necessary for destruction of traditional community to facilitate the development of 'utilitarian world of the city'. Fustel de Coulanges argued religion as the institution around which the family and community found their point of integration in the hearth of its religious symbol and worship

of the father as its priest (Coulanges, 1956). Henri Pirenne, like Marx, explained city in terms of economic institutions emerged through the activities of a 'merchant' middle class population and a communal organization (Pirenne, 1939).

The most significant figures of **American Tradition** were Robert E. Park, Earnest W. Burgess, Louis Wirth, Roderick D. McKenzie and Robert Redfield. Their works derived from the organic analogy specifically from the attempted application of Charles Darwin's theory of natural selection to social life. The city is defined as an environment like those formed in nature. All parts of the environment are interdependent and are moved by natural forces. The most important of these forces is competition. Competition forces societies a greater division of labor which, by promoting more efficient social organization, provides greater adaptive capacity. The competitive struggle also tends to create numbers of sub-environments or natural areas within the city. Each of these areas is occupied by a distinctive social group which has adapted to it in much the same way as a plant or animal species adapts to a specialized natural environment. Two concepts developed by the '*Chicago School*' are worthy of special attention. One of the so-called '*ecological approach*' to urban analysis, the other is the 'Urbanism' as a way of life' by Louis Wirth (Gold, 1982).

The **Marxist and Neo-Marxist Approach** began to examine the role of contemporary urban crisis in a critical fashion in the backdrop of different civil and urban unrest in America and Europe during the 1960s. This approach emerged mainly with the publication of Manuel Castells' 'The Urban Question: A Marxist Approach' and David Harvey's 'Social Justice and the City'. This approach included a diversity of ideological constituents and theoretical viewpoints. It basically focused on the role of capitalism, the international economic order, the accumulation and concentration of wealth and power, the relations of social classes, and the role of the state in administering a stable social order ultimately hospitable to economic interests of the capitalists. Cities revealed the inequalities of wealth and power generated by a profit system which represented the arenas where capital accumulation and class conflict were centralized and given spatial expression. This approach exposes the critical view of the marriage of public policy and private interest, and it more or less consistently raised the question of whose interests were being served (Castells, 1979; Harvey, 1981).

### 3. URBANIZATION IN PRE-BANGLADESH PERIOD

#### 3.1 Urbanization and Urban Growth in Pre-Bangladesh

The present Bangladesh, along with other parts of the Bengal, has a rich urban heritage which goes back to the 3rd century B.C (Mohit, 1991). Various factors contributed to the growth of towns in ancient and early medieval periods in Bengal. R C Majumdar identified at least three 'principal causes' like administrative/political, religious (place of pilgrimage) and 'center of routes' by land or by water as the main causes for the urban development in that period (Majumdar et al., 1963). The writings of ancient urban history of Bangladesh largely depend on archaeological findings, traveller's accounts, ancient literature, religious scripts etc.(Karim, 1991). Historical relics of fort towns are found all over Bangladesh. Very recent archaeological excavation and findings at Wari-Bateshwar at Narsinghdi district is revealing older urban settlement in this land which can be dated back to 600 BC to 400 BC. Some artifacts and water management system in the Wari-Bateshwar site are indicating a 1500 to 1000BC older human settlement in this area (Rahman, 2012).

The trends and patterns of urbanization in Bangladesh were influenced by different politico-administrative eras in different periods of its history. Apart from geographical and climatic reasons, it is very essential to address the political economy of different politico-administrative regimes which shaped the socio-cultural as well as the ups and downs trends of the urban centers since the very beginning of urban development in this part of the subcontinent. Before the independence of the Indian subcontinent in 1947, the present territory of Bangladesh was part of Bengal which was a province during the Mughal and British periods. So to understand the nature and trends of urban development in pre-Bangladesh period should be comprehended in the broader socio-politico-economic context of the Indian subcontinent during different historical periods. For the purpose of accommodating the historical continuity, the history of the trends and patterns of urbanization in pre-Bangladesh period has been addressed in the following phases:

1. Pre-colonial urbanization
2. Colonial urbanization
3. Urbanization during Pakistan period

### 3.1.1 Urbanization in Pre-Colonial Period

Before the British colonial regime, the urban spatial development of the present day Bangladesh territory was shaped in the context of basically two types of politico-administrative situations. Bangladesh was either ruled as a part of a centralized system under the Maurya, Gupta, Palas, Senas and Muslim rulers or as several independent states under independent rulers (Mohit, 1991).

Mahasthangarh in Bogra has been identified as the earliest organized city in Bangladesh which was then the seat of provincial administration under the imperial Mauryas and the Guptas. Chinese traveller Hiuen Tsang mentioned Mahasthangarh as a prosperous city around 630 AD (Bhattacharyya, 1996). Panchanagri in Dinajpur (448 AD), Paharpur or Shampura in Rajshahi (5th century AD), Vikrampur in Munshiganj which was the capital and port city of Bengal under the Sena kings in the 7th century, Mainamoti in Comilla, Chatigram (Chittagong), Kotalipara in Faridpur, Savar and Suvarnagrama (later Sonargaon) were some other important ancient urban settlements in Bangladesh. These towns tended to serve a wide variety of commercial, industrial, political, judicial and military functions (Mohit, 1991; Bhattacharyya, 1996).

Although Sonargaon's origin can be traced back to the period of *Kuru-Pandava* War described in the *Mahabharata*, the most glorious period of Sonargaon began in 1338 when it emerged as the capital of the earliest independent Sultanate of Bengal founded by Fakhruddin Mubarak Shah, the first independent Muslim ruler of Eastern Bengal. Before rising to this position, Sonargaon was administrative headquarter of a province of the Kingdom of *vanga* or *samatata* from sixth century AD to down at least the second or third quarter of the tenth century AD. Ibn Battuta, Chinese envoy Ma Huan, Hou Hien or Ralph Fitch found Sonargaon as a great commercial metropolis which had direct commercial relations with countries like China, Indonesia (Java) and the Maldives. Sonargaon enjoyed the position of a metropolis in the region in the pre-Mughal period (14th to 16th century AD) (Khan, 2012). In this period, other major towns were *Ekdala* (Dinajpur), *Mandaran* (Feni). These towns have considerable importance from the administrative point of view, if not always from that of trade and commerce (Tarafder, 1965). Bagerhat, in South Bangladesh, is an old settlement which dates back to 15th century, when Khan Jahan Ali is said to have built his fortified metropolis of *Khalifatabad* (modern Bagerhat). He was a great builder who also founded some townships,

mosques, educational institutions, roads, highways and bridges, excavated a large number of ponds in the districts of greater Jessore and Khulna. He founded Shatgumbad Mosque which is the largest of the Sultanate mosques in Bangladesh and one of the most impressive Muslim monuments in the whole of the Indian subcontinent (Bari, 2012).

Dhaka, the present capital of Bangladesh, has also a long history dated back to antiquity. Dhaka's urban-commercial aura was evident in the celebrated commercial exposure of the cotton products in different continents since the 'ancient maritime world' (Rizvi, 1975; Islam, 2008). Dhaka's pre-Mughal existence as a small town of some importance was proved by the discovery of two mosque inscriptions, some literary sources and traditions. Dhaka was turned into a *thana* during of the military operations in the reign of Akbar. The needs of the garrison stationed here gave Dhaka a new breath of life (Karim, 1964). It came into prominence when Mughal Subadar Islam Khan Chisti commissioned Dhaka as the capital of the 'Subah Bangalah' in 1610 (Chowdhury, 2012). This politico-economic status pulled many people from different professions, colours and creed from Asia and beyond which changed its demographic and socio-economic growth patterns over night. At the pinnacle of its heyday during the Mughal period, it was estimated to have a population between 8,00,000 to 10,00,000 according to some sources (Taifoor, 1965; Ali, 2001; Ahmed, 1986; Rizvi, 1975; Karim, 1964). Dhaka lost administrative importance due to the shifting of the capital to Murshidabad in 1704. But increased commercial and manufacturing activities by some European trading companies and being the headquarter of 'Dacca sub-province' almost sustained its growth (Karim, 1964; Ahmed, 1997). James Rennel estimated a population of 4,50,000 at the end of the Mughal rule in Dhaka in 1765 (Ahmed, 1986). Ancient origin Chittagong was another important town in the Nawabi period and its economic activities and urban characteristics had grown as a port city until the 17<sup>th</sup> century. Later its growth was hampered by repeated attacks by Maghs of Arakan and the Portuguese pirates. Merchants from the Arabs and Europe used to visit Chittagong for business related activities (Ahmed, 1997).

During the Mughal rule, the subcontinent had a fair degree of political unity because of centralized administration and a uniform revenue policy, all of which helped to stimulate an expansion of commerce and productive efforts (Raychaudhuri, 1983). There were two types of towns in India during Mughal time. The larger ones as thriving centers of manufacturing and marketing, banking and entrepreneurial activities with national and international

network; and smaller urban centers as performing modest role in local commerce, exploiting local resources and providing local consumer needs within regional or sub-regional scales (Hambly, 1982). Towards the end of the Mughal rule, Bengal virtually became independent (Raychaudhuri, 1983). During the end of the Mughal period, Bangladesh had some sparsely developed urban centers. Among 36 urban centers in Bengal, only 9 urban centers belonged to East Bengal which now comprised present day Bangladesh territory. The urban centers were Rangpur, Dinajpur, Boalia (Rajshahi), Kumarkhali (Kustia), Bakerganj (Barisal), Dacca, Sylhet, Lakshmipur (Noakhali) and Chittagong (Ahmed, 1997; Mohit, 1991).

### 3.1.2 Urbanization in Colonial Period

The beginning of colonial regime in this sub-continent was initiated by the defeat of Nawab Sirajud-Daulah in the battle of Plassey with the army of the British East India Company in 1757. These basic politico-administrative changes brought basic changes in the 'traditional modes of urbanization' process of the country (Ahmed, 1997). The colonial establishment destroyed the indigenous urbanization process of the country which was significantly based on trade and commerce. The land revenue policy and the industrial and commercial restrictions imposed by the colonial government led to economic decline and brought about profound changes in the urbanization as well as development process of the country. The economic decline resulted in de-industrialization and 'de-urbanization of Bengal' (Ahmed, 1997; Mohit, 1991). In 1800, an estimated 17.6 million people lived in urban centers that constitute about 11% of the total population of the sub-continent and it reduced to 8.7% in 1872 (Kidambi, 2013). Similarly, in 1750, India produced about 25% of world industrial output which reduced to 2% in 1900 (Clingsmith and Williamson, 2004).

The extent of decline and destruction was most vividly visible when we look at the plight of the city of Dhaka. Walter Hamilton estimated the population of Dhaka at 1,50,000 in 1815 which reduced to 66,989 in 1830 (Walters, 1980). In 1872, when the first census of the sub-continent was taken, Dhaka's population was 69,212 (Beverley, 1872). This very sharp decline of population in the first three decades and levelling off to a stationary state in the nineteenth century is clearly revealing the de-population and de-urbanization process of the main city of Bangladesh. Sharif uddin Ahmed (1997) mentioned the classic remarks of R. Palme Dutta in this regard: *The old populous manufacturing towns Dhaka, Murshidabad (which Clive had*

*described in 1759 to be as extensive, populous and rich as the city of London), Surat (in Gujerat) and the like were in a few years rendered desolate under 'The pax Britannica' with a completeness which no ravages of the most destructive war or foreign conquest could have accomplished.*

During the colonial period, a 'new kind of urbanization' was introduced and different urban centers were established in Bangladesh for administrative and trade purpose (Ahmed,1997). Communication system was also developed for the accumulation of raw materials and administrative purposes. Although many urban centers were developed during the colonial period - they were parasitic in nature. The intrinsic industrial and urban growth of the sub-continent was destroyed to serve the interests of the colonial power. Sharif uddin Ahmed (1997) and Mohammad A. Mohit (1991) quoted Moonis Raza and others' very related remark in this regard:

*The colonial process of spatial articulation, which was strongly embedded in the space economy, affected both the qualitative and quantitative attributes of urbanization. The dominance-dependence relationship destroyed the indigenous production activities of the urban centers and disrupted the geographic specialization they had achieved during the earlier periods. Consequently, the process of urban atrophy and deurbanization set in. These processes were characterized by the emergence of 'satellitic' primates and by the weakness of the formal urban systems. Most of the urban centers became economically sterile and performed very limited functions which were geared to economic development. The economic sterility of the colonial cities was reflected in a constricted industrial base, hinged to traditional handicraft production and to a proliferated tertiary sector which was non-productive.*

The de-population of the city of Dhaka as well as of the destruction of the Indian indigenous industrial and urban growth was delineated by Karl Marx (1975) in the following way:

*It was the British intruder who broke up the Indian hand-loom and destroyed the spinning wheel. England began with driving the Indian cottons from the European market; it then introduced twist into Hindustan and in the end inundated the very mother country of cotton with cottons. From 1818 to 1836 the export of tourist from Great Britain to India rose in the proportion of 1 to 5200. In 1824 the export of British Muslim to India hardly amounted to 1,000,000 yards, while in 1837 it surpassed 64,000,000 yards. But at the same time the population of Dacca decreased*

from 1,50,000 inhabitants to 20,000. This decline of Indian towns celebrated for their fabrics was by no means the worst consequence. British steam and science uprooted over the whole surface of Hindustan, the union between agriculture and manufacturing industry.

**Table 3.1: Trends of Urban Population Growth during Colonial Period, 1901-1941**

Census Year	Urban Population		Decadal Variation		Growth Rate(Exponential)	Number of Urban Centers
	Number	Percent	Number	Percent		
1901	702035	2.43	---	---	---	48
1911	807024	2.55	104989	14.95	1.39	48
1921	878480	2.64	71456	8.85	0.85	50
1931	1073489	3.02	195009	22.20	2.00	58
1941	1537244	3.66	463755	43.20	3.59	59

Source: Population and Housing Census 2011, National Volume 3, Urban Area Report

It can be seen from Table 3.1 that the level of urbanization (percentage of people living in urban areas) in the then Bangladesh remained virtually stagnant between 1901-1921 period and increased only slightly in 1931 and 1941. In the forty years (1901-1941) of British rule urban population growth rate was 1.39 per cent in 1901 and raised to 3.59 per cent in 1941 representing a low level of urbanization of the then Bangladesh during the British rule. However, the high rate of urban growth in 1941 was evaluated as ‘*inflated*’ because ‘*the communal excitement became so great that each community vied with the other to swell their respective number by fair means or foul and by multiple fictitious enumerations*’ (Rahim, 1969).

**Table 3.2: Distribution of Urban Population by Size of Towns during 1901-1941**

Census Year	Total Towns	Population Size						
		500000-4999999	100000-499999	50000-99999	25000-49999	10000-24999	5000-9999	Below 5000
1901	48	-	2	-	-	21	15	10
1911	48	-	2	-	-	23	13	10
1921	50	-	2	-	5	20	13	10
1931	58	-	2	-	7	21	17	11
1941	59	-	2	2	13	20	19	3

Source: Population and Housing Census 2011, National Volume 3, Urban Area Report

### 3.1.3 Urbanization during Pakistan Period

British rule in the subcontinent ended in 1947 and with it, the region now forming Bangladesh became the eastern province of Pakistan. The establishment of the provincial capital in Dhaka, the invigoration of the port town of Chittagong, the undertaking of public



investment in industrial development and establishment of industrial estates in district towns and subsidies in the form of tax concessions to attract private investors - all contributed to the urban development process in the present Bangladesh during Pakistan period.

It can be seen from Table 3.3 that the ratio of urban population received a moderate increase during 1951-61 representing an urban growth rate of 3.75 percent per annum. However, this rate of growth of urbanization was slow in the national context because of interregional disparities in development that cropped up during the Pakistan rule between East and West Pakistan as "all economic indices show that East Pakistan was relatively less developed than West Pakistan".

**Table 3.3: Trends of Urban Population Growth during Colonial Period, 1951-1961**

Census Year	Urban Population		Decadal Variation		Growth Rate(Exponential)	Number of Urban Centers
	Number	Percentage	Number	Percent		
1951	1819773	4.33	282529	18.38	1.69	63
1961	2640726	5.19	820953	45.11	3.75	78

Source: Population and Housing Census 2011, National Volume 3, Urban Area Report

The national government during Pakistan period favored large-scale industrial development of West Pakistan mostly at the cost of transferring resources from East Pakistan. This industrialization process also enhanced the urban development process as the percentage of urban population was 17.8 and 22.5 in West Pakistan during 1951-52 and 1959-60 as compared with the percentage of 4.4 and 5.2 in East Pakistan during the same periods. During these periods, the corresponding rates of large-scale industrialization were 41 and 72 per cent in West Pakistan as against 15 and 43 per cent in East Pakistan.

However, the slow urban development process during the Pakistan period was also associated with the growth of new urban centers. The number of urban centers increased from 63 in 1951 to 78 in 1961 representing an increase of slightly more than 24 per cent during the period as evident from Table 3.3.

The pattern of urban growth during the Pakistan period based on data of urban population and centers of 1951 and 1961 reveals that urban population had a modest increase in this period but its distribution showed signs of concentration in the large centers such as Dhaka and Chittagong. This period also witnessed increases in the number of urban centers in almost all size classes.

## 4. METHODOLOGY

### 4.1 Data

This research monograph used the data from the 1991, 2001, and 2011 censuses of Bangladesh. The monograph primarily used the Urban Area Reports(BBS, 2014; BBS, 2008; BBS, 1997) which have been published by the Bangladesh Bureau of Statistics (BBS) based on the population and housing census.

### 4.2 Data Analysis

The following discussion presents the data analysis techniques that have been adopted for this monograph. It should be mentioned here that different data analysis techniques have been adopted for different research objectives.

#### 4.2.1 Data Analysis Technique for Research Objective One

The research objective one aims to investigate the tempo of urbanization and urban growth in Bangladesh. Here, urbanization has been defined as the proportion of a nation's population living in the urban areas. The level of urbanization has been calculated for the district level and national level as well by using the following formula and has been compared across census.

$$\text{Level of Urbanization}(U^n) = \frac{U_p}{T_p} \times 100$$

Where,  
 $U^n$  = level of urbanization  
 $U_p$  = total urban population  
 $T_p$  = total population

On the other hand, urban growth has been defined as an increase in total urban population. The urban growth rate has been calculated for national and district levels as well and have been compared across the censuses. The following formula has been used to calculate urban growth:

$$\text{Urban Growth}(U^g) = \frac{P_{ut2} - P_{ut1}}{P_{ut1}} \times 100$$

Where,  
 $U^g$  = urban growth  
 $P_{ut1}$  = total urban population of time 1  
 $P_{ut2}$  = total urban population of time 2

#### 4.2.2 Data Analysis Technique for Research Objective Two

The research objective two aims to scrutinize the changing concentration pattern of urban areas/agglomerations in Bangladesh. In Bangladesh, different definitions of urban area have been used in different censuses. The definition of urban area used in 1981 was continued up to 2001; however, the definition was changed in 2011. Between 1981 and 2001, the urban area included city corporations, municipalities, Upazilaheadquarters, growth centers, cantonment and urban agglomerations adjacent to large cities (city corporations termed as Statistical Metropolitan Area (SMA)). However, in 2011, the concept of SMA, growth center and some other urban areas was abandoned and the areas covered only city corporations, Paurashavas, Upazilaheadquarters and cantonment area. This definitional change over time makes the comparison of urban growth difficult as the total number of urban areas varies across the censuses. However, this monograph calculated the urban growth rate for the available urban area in each of the censuses during 1981 to 2011 by using the formula mentioned in the data analysis technique mentioned in objective one and then the growth rates compared across censuses.

#### 4.2.3 Data Analysis Technique for Research Objective Three

The research objective three is to test the growth rate of urban centers in terms of 'rank-size rule' and 'law of the primate city'.

In 1949, George Zipf devised his theory of rank-size rule to explain the size of cities in a country. He explained that the second and subsequently smaller cities should represent a proportion of the largest city. The proportion of small towns to large cities is called the rank size rule. The rank size rule states that there is a specific relationship between relative abundance of settlements of different sizes, and that the smallest settlements should always be the most abundant. More specifically the rank size rules states that population of any given town should be inversely proportional to its rank in the country's hierarchy of cities. Thus, the second largest city should be half the population of the largest city within a certain country. The rank size rule has a real impact on the quality of life and the standard of living for a country's inhabitants in terms of the availability of civic facilities. The rank size rule justify that the society is sufficiently wealthy to justify the provisions of goods and services to consumers.

On the other hand, the 'law of the primate city' was first proposed by the geographer Mark Jefferson in 1939. A primate city is the leading city in its country or region,

disproportionately larger than any others in the urban hierarchy. A 'primate city distribution' has one very large city with many much smaller cities and towns, and no intermediate-sized urban centers, in contrast to the linear 'rank-size distribution'. Jefferson defined a primate city as being "at least twice as large as the next largest city and more than twice as significant." The size and dominance of a primate city acts as a pull factor and ensures its continuing dominance. A primate city is a city that dominates the entire urban system of a nation. The population of a primate city is usually at least three times the size of the second largest city. A primate city is not only large but also economically dominant and the cultural center for national identity. It controls media, creates jobs, circulates currency and sets trends. The influence of a primate city reverberates throughout the entire country.

The following equation has been used to test the 'rank-size rule':

$$\log(P_x) = \alpha + \beta_1 \log(x)$$

Where,  $P_x$  = the population size of the city ranked x

x = the rank of the city's population

#### 4.2.4 Data Analysis Technique for Research Objective Four

The research objective four is to examine how urban the urban centers are in Bangladesh. The question what makes an urban centre urban is complex as there is no uniform definition is available in this regard. However, for this research monograph, we used the following indicators to define an urban area as urban: (1) density; (2) population size; (3) literacy rate; (4) dwelling has access to tap water for drinking; (5) dwelling have sanitary toilet facilities; and (6) dwelling has access to electricity.

A numerical score of '1' and '0' was assigned for the presence and absence of each of these indicators for each of the urban areas. A reliability analysis was then performed to assess the strength of selecting these indicators. Finally, for each of the urban area, the obtained numeric scores weresummed up to classify their level of urbaneness.

## 5. RESULTS

### 5.1 Urbanization in Bangladesh

Bangladesh emerged as an independent nation in 1971 and this political event brought about significant changes in the socio-economic life of the people and their living style. In the new socio-political context, the urbanization of the country received new spur and vigor. Dhaka assumed the importance of a national capital. Chittagong and Khulna became ports of an independent country, while other urban centers also responded to the new situation growing in size and scale.

Thus, this chapter has focused on the overall discussion on the different aspects of urbanization in Bangladesh predominantly by using the census data of 1991, 2001, and 2011 though in some contexts focus has been given to before 1991 census to follow the trend and pattern. The growth of urban population, growth of urban centers, distribution of urban centers by population size, rise and fall of the major urban centers with their population and rank has been discussed.

### 5.2 Growth of Urban Population in Bangladesh

Growth of urban population rate is higher in Bangladesh than the rate of natural increase of population. Growth of urban population is dependent on factors like (BBS, 2014; BBS, 2008; BBS, 2003; BBS, 1997; BBS, 1994)

- 1) Natural growth rate of urban population.
- 2) Emigration from rural areas due to various socio-economic reasons.
- 3) Changes in urban boundaries.
- 4) Changes in definition of urban areas.

The volume of change due to the definition of urban can easily be measured, while separation of the effect of two other factors natural growth of urban population and emigration from rural areas needs special survey. We have not attempted to estimate increase in urban population due to these two factors separately because of the absence of relevant information.

Table 5.1 represents census enumerated urban population, percent urban population, variations in urban population and average annual growth rate of urban population between census years for the period 1974 to 2011. The proportion of urban population of Bangladesh reached 8.78 percent in 1974, which increased to 15.54 percent in 1981. About 30 percent of

the total increase during 1974-1981 could be explained by the extended definition of urban in 1981. The inclusion of Thana Headquarters and small hats and bazars with electricity accounts for about 4 million urban population. The level of urbanization can be measured by the proportion of total population residing in urban areas. A comparative picture of the growth of the proportion of total population residing in urban areas for the period of 1901 to 2011 can be found in figure 5.1. On the other hand, figure 5.2 shows the average annual growth rate of urban population between census years for the period 1901 to 2011.

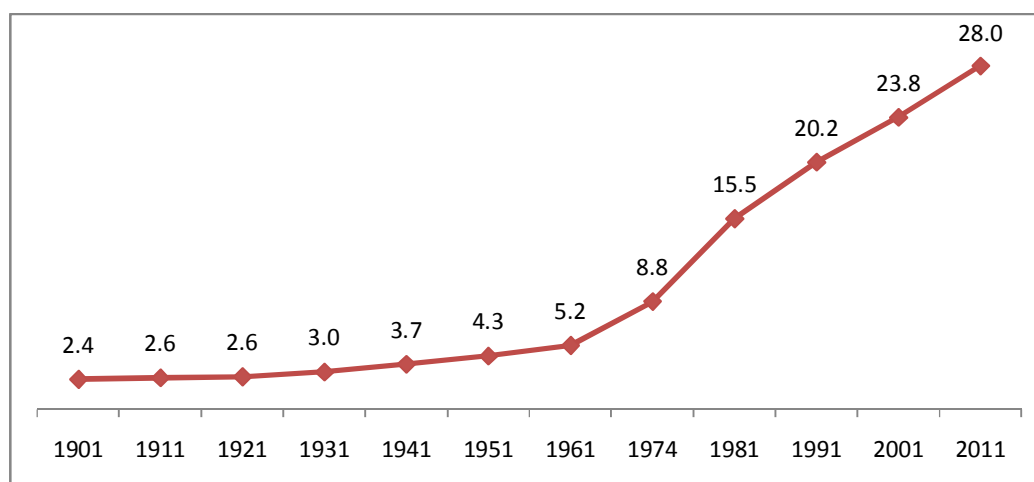
**Table 5.1: Inter-Censal Growth Rate of Urban Population, 1974-2011**

Census Year	Urban Population	Urban Percentage	Decadal Variation		Growth Rate (Exponential)
			Number	Percentage	
1974	6273602	8.78	3632876	137.57	6.62
1981	13535963	15.54	7262361	115.76	10.63
1991	22455174*	20.15	8919211	65.89	5.43
2001	31077952*	23.81	8622778	38.40	3.30
2011	35094684*	23.43	4016732	12.92	1.22
2011	41943532**	28.00	10865580	34.96	3.00

Source: Population and Housing Census 2011, National Volume 3, Urban Area Report

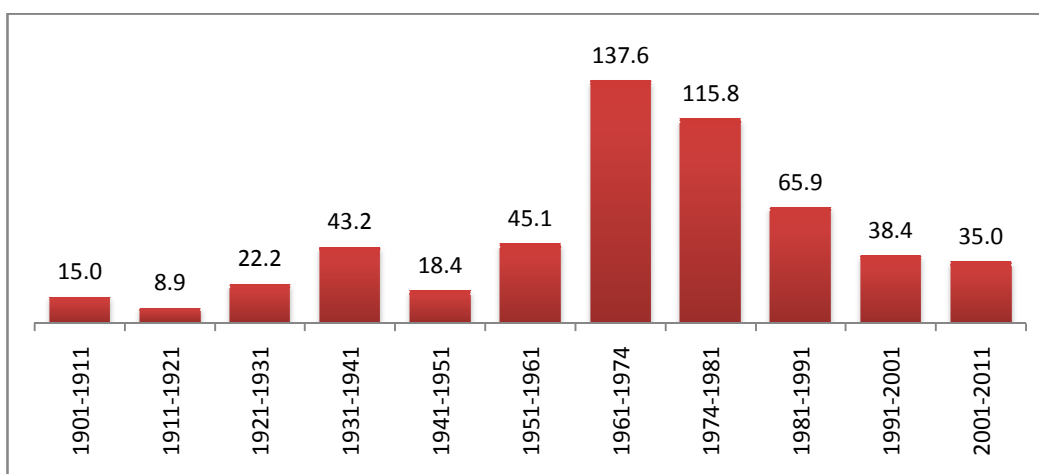
\* Adjusted Population; \*\* Including SMA Adjusted Population

**Figure 5.1-Growth of Urban Population in Bangladesh, 1901-2011**



Source: Population and Housing Census 2011, National Volume 3, Urban Area Report

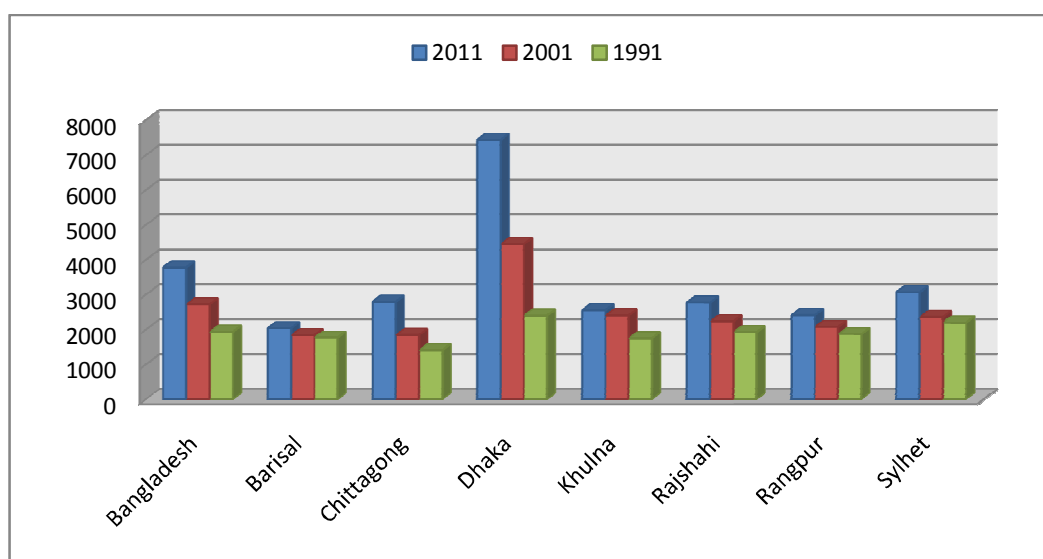
**Figure 5.2- Average Annual Growth Rate (%) of Urban Population, 1901-2011**



Source: Population and Housing Census 2011, National Volume 3, Urban Area Report

It has been observed that the urban population density (per sq. kilometer) has also been increased in line with the growth of the urban population. The figure 5.3 shows that urban population density has been almost doubled in 2011 compared to 1991. However, for Dhaka division the increment of urban population density is almost three times in 2011 compared to 1991.

**Figure 5.3- Urban Population Density (per Sq. Kilometer), 1991-2011**



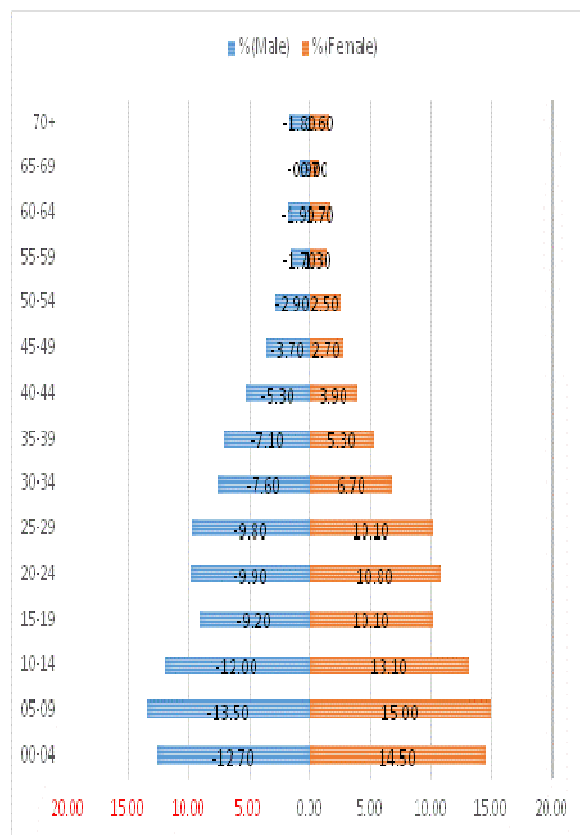
Sources: 1. Bangladesh Population Census 1991, Volume 3, Urban Area Report  
 2. Population Census 2001, National Series, Volume 3, Urban Area Report  
 3. Population and Housing Census 2011, National Volume 3, Urban Area Report

Over the censuses, it has been observed that the urban age-sex structure has been changed (figure: 5.4). In 1991 census, 13.5 percent of the urban male population and 15 percent urban female population were in 5-9 years age group. In the subsequent census in 2001, it has been observed that highest urban population for both male and female was in 10-14 years age group. However, this pattern has been changed in 2011 census. The highest percentage of urban female population is still in 10-14 years age group but for male 20-24 years age group has the highest population.

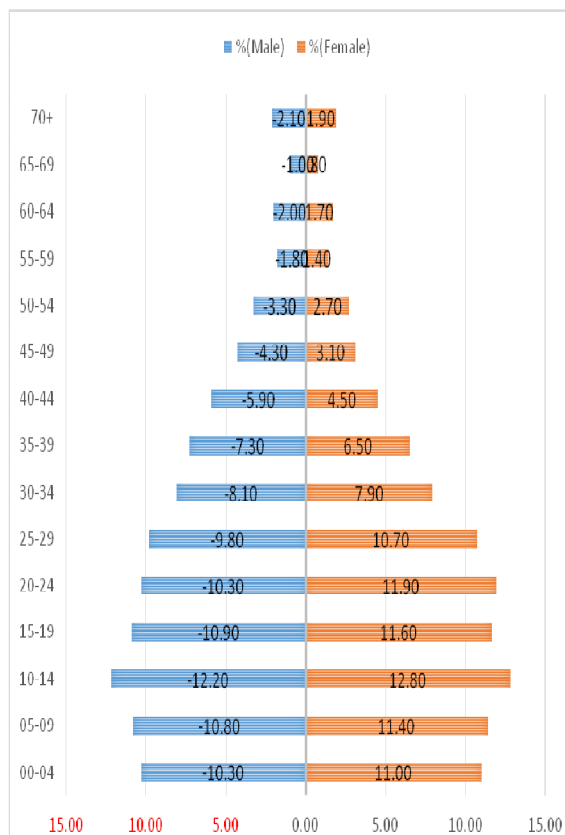


**Figure 5.4- Population Pyramid of Urban Population in Bangladesh, 1991-2011**

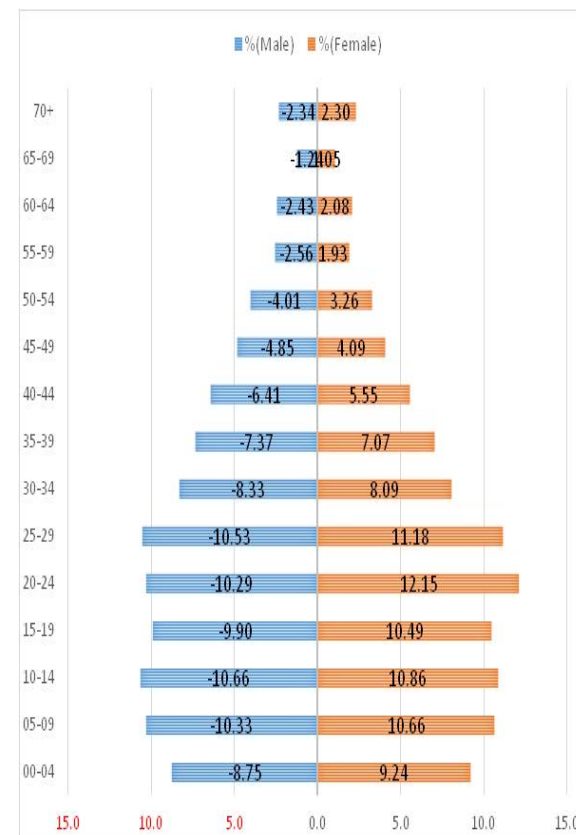
**Population Pyramid of Urban Population 1991**



**Population Pyramid of Urban Population 2001**



**Population Pyramid of Urban Population 2011**



Sources: (1) Bangladesh Population Census 1991, Volume 1, Analytical Report  
 (2) Population Census 2001, National Report  
 (3) Population and Housing Census 2011, National Volume 3, Urban Area Report

### 5.3 Growth of Urban Centers in Bangladesh

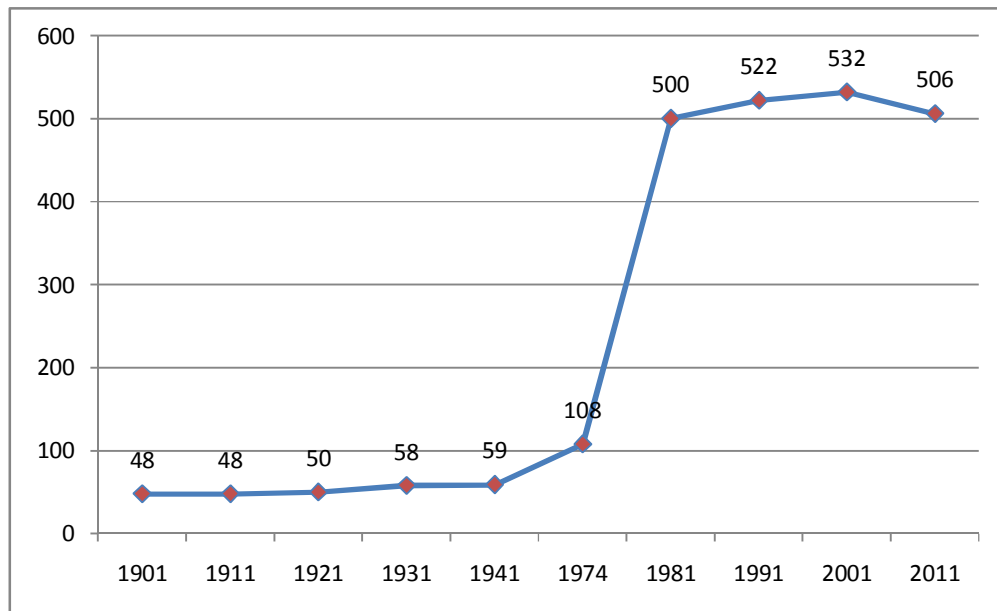
There were 108 urban centers in 1974, which increased to 500 in 1981 (table-5.2). This change happened due to the extended definition of urban in 1981. The inclusion of Thana Headquarters and small hats and bazars with electricity accounts for about 4 million urban population. The increasing trend of urban centers continued till 2001 however it has declined again in 2011 due to definitional change. A comparative scenario of the growth of urban centers has been provided in figure 5.5.

**Table 5.2: Growth of Urban Centers by Population Size in Bangladesh, 1974-2011**

Census Year	Total	Population Size						
		500000-4999999	100000-499999	50000-99999	25000-49999	10000-24999	5000-9999	Below 5000
1974	108	-	6	14	23	49	12	4
1981	500	3	10	23	45	122	129	168
1991	522	4	14	19	14	66	80	325
2001	532	4	22	50	118	188	90	60
2011	506	5	39	63	159	151	64	25

Source: Population and Housing Census 2011, National Volume 3, Urban Area Report

**Figure 5.5- Trends of Growth of Urban Centers in Bangladesh, 1901-2011**



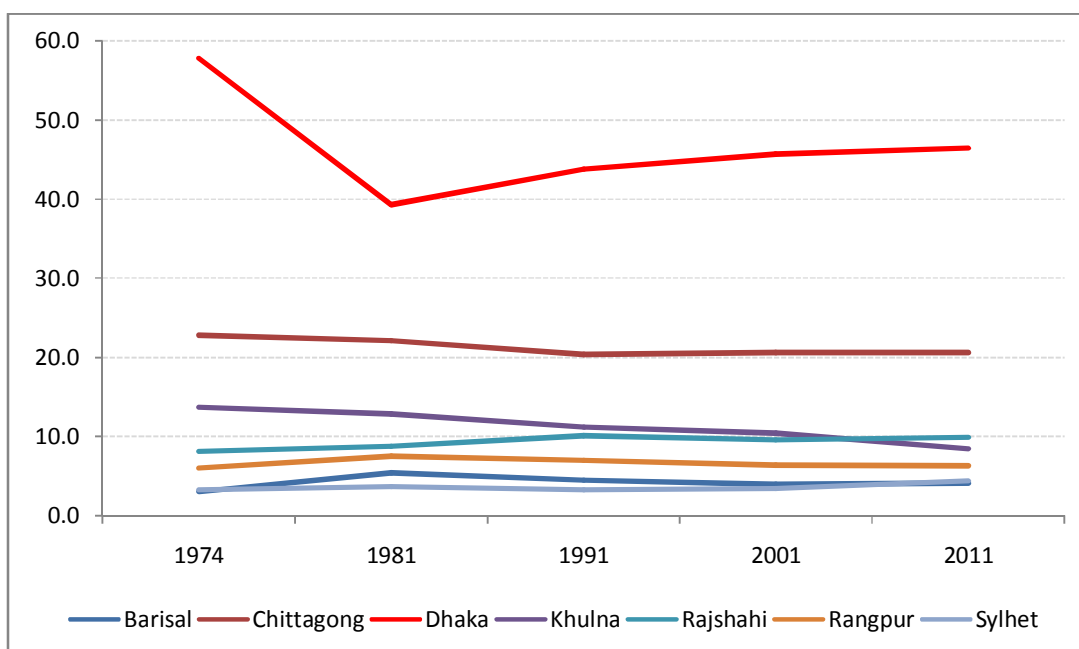
Source: Population and Housing Census 2011, National Volume 3, Urban Area Report

#### 5.4 Growth of Urban Population in Bangladesh: Divisional and District Level

Divisional level growth of urban population in Bangladesh for the period of 1974-2011 has been presented in the figure 5.6. The figure shows that in the last three decades urban population has increased in all divisions except Khulna. However, the share of urban population is predominantly concentrated in Dhaka followed by Chittagong. On the other hand, by district, it has been observed ups and down trends in many districts.

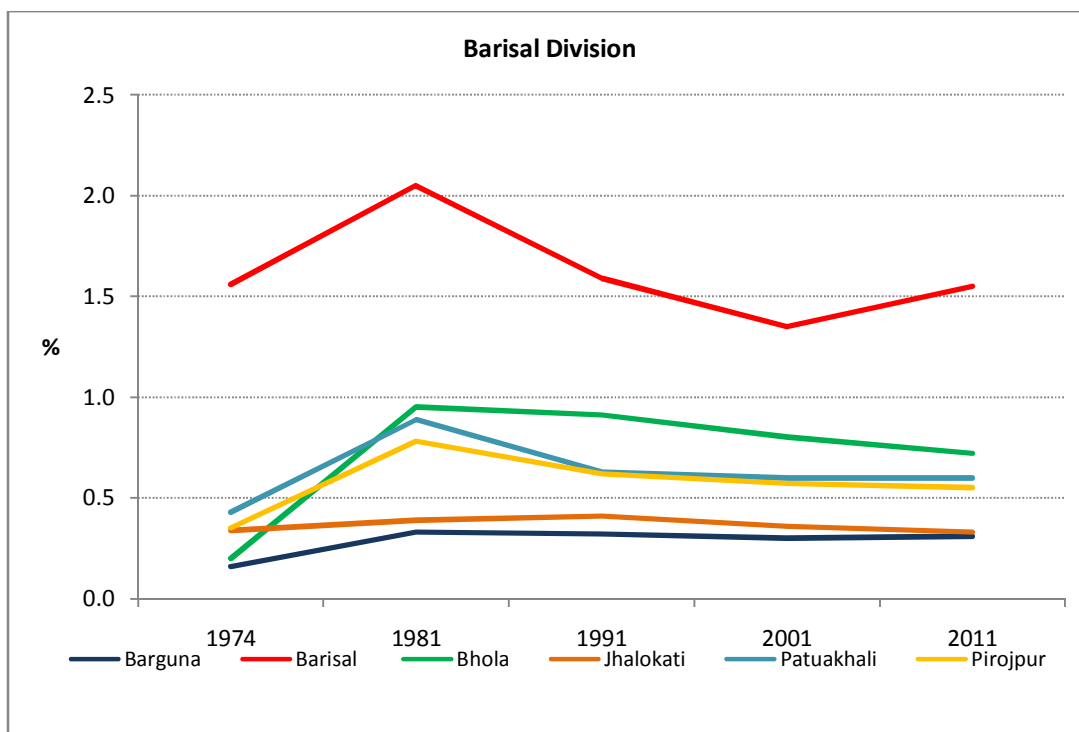
The figures 5.7 to 5.13 show the trends of urban population growth in Bangladesh during 1974 to 2011. Within Barisal division, only Barisal district has upward trend in urban population growth (figure 5.7). In Chittagong division, a declining trend has been observed for Chittagong district while Comilla has experienced an upward trend (figure 5.8). Urban population was 11.5 percent in Chittagong in 1991 which reached to 9.4 percent in 2011. On the other hand, the urban population in Comilla was 1.8 percent in 1991 which increased to 2.5 percent in 2011. In Dhaka division, the growth of urban population of Dhaka district is showing an upward trend since 1981. The percentage of urban population in Dhaka district was 21.9 percent in 1981 which has reached to 27.8 percent in 2011 (figure 5.9). Figure 5.10 shows that in Khulna district under Khulna division is experiencing a continuous declining trend in terms of proportion of urban population. In 1991, Khulna district was having 4.4 percent urban population which has reduced to 2.3 percent in 2011. On the other hand, all the districts except Pabna and Rajshahi under Rajshahi division are showing an upward trend in terms of urban population growth since 1991 (figure 5.11). Bogra district has observed a significant upward trend in 2011 (2.0 percent) compared to 1991 (1.2 percent). Rangpur, which is a newly established division, is experiencing a very slow growth in terms of urban population (figure 5.12). Finally, figure 5.13 shows an upward trend in all the districts of Sylhet division in terms of urban population growth though the growth rate is not high.

**Figure 5.6- Growth of Urban Population in Bangladesh, 1974-2011: Divisional Level**



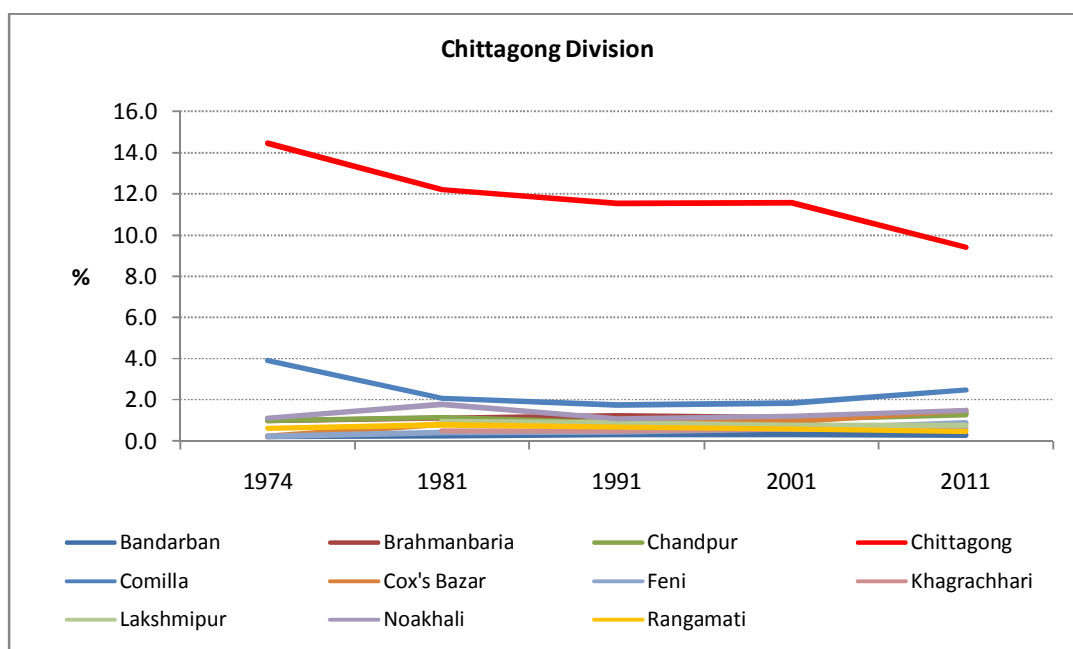
Source: Population and Housing Census 2011, National Volume 3, Urban Area Report

**Figure 5.7- Growth of Urban Population in Barisal Division, 1974-2011**



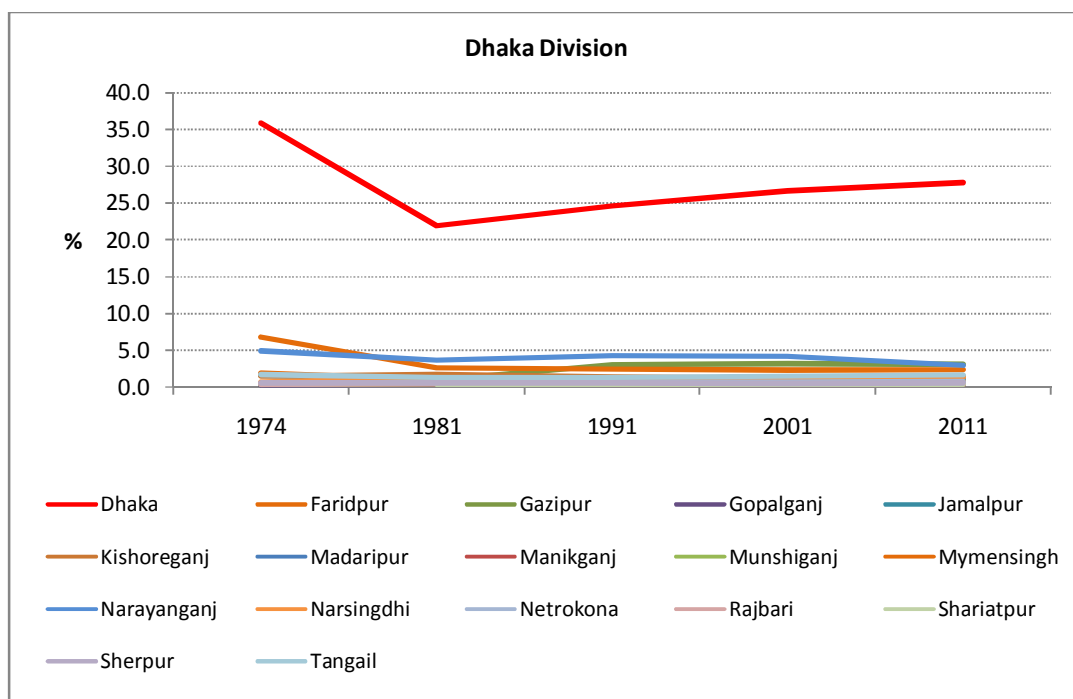
Source: Population and Housing Census 2011, National Volume 3, Urban Area Report

**Figure 5.8- Growth of Urban Population in Chittagong Division, 1974-2011**



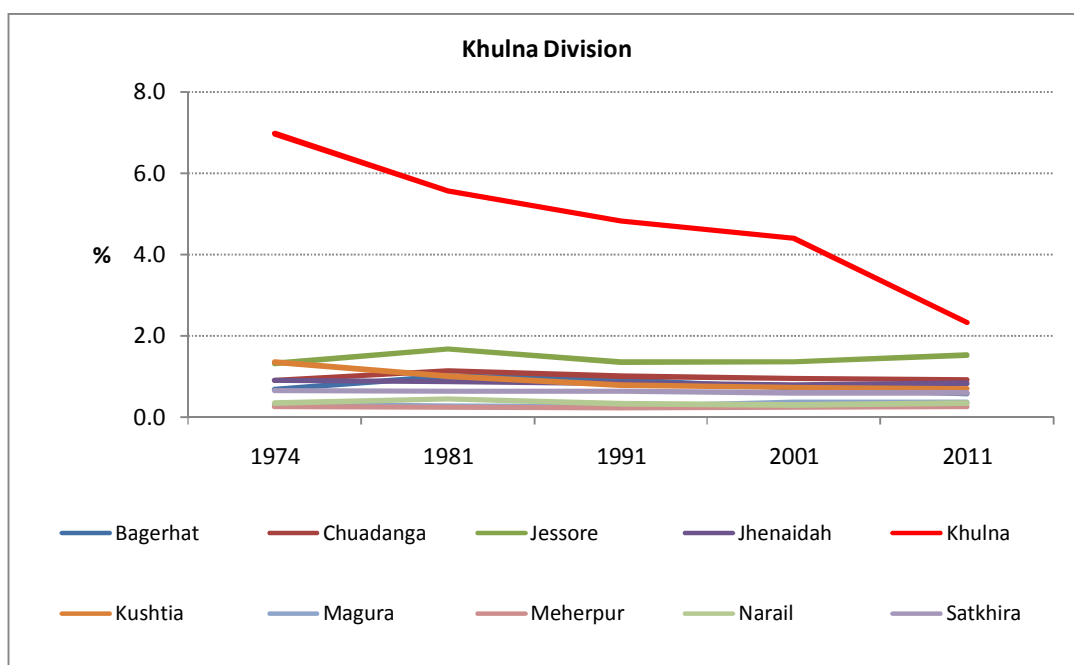
Source: Population and Housing Census 2011, National Volume 3, Urban Area Report

**Figure 5.9- Growth of Urban Population in Dhaka Division, 1974-2011**



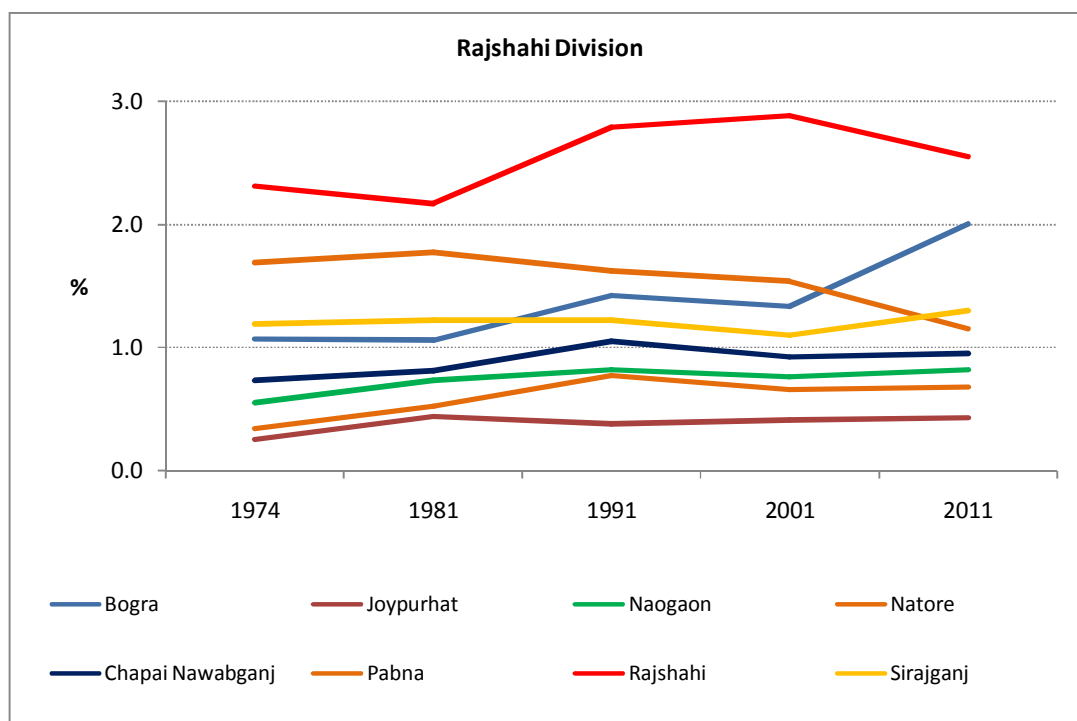
Source: Population and Housing Census 2011, National Volume 3, Urban Area Report

**Figure 5.10- Growth of Urban Population in Khulna Division, 1974-2011**



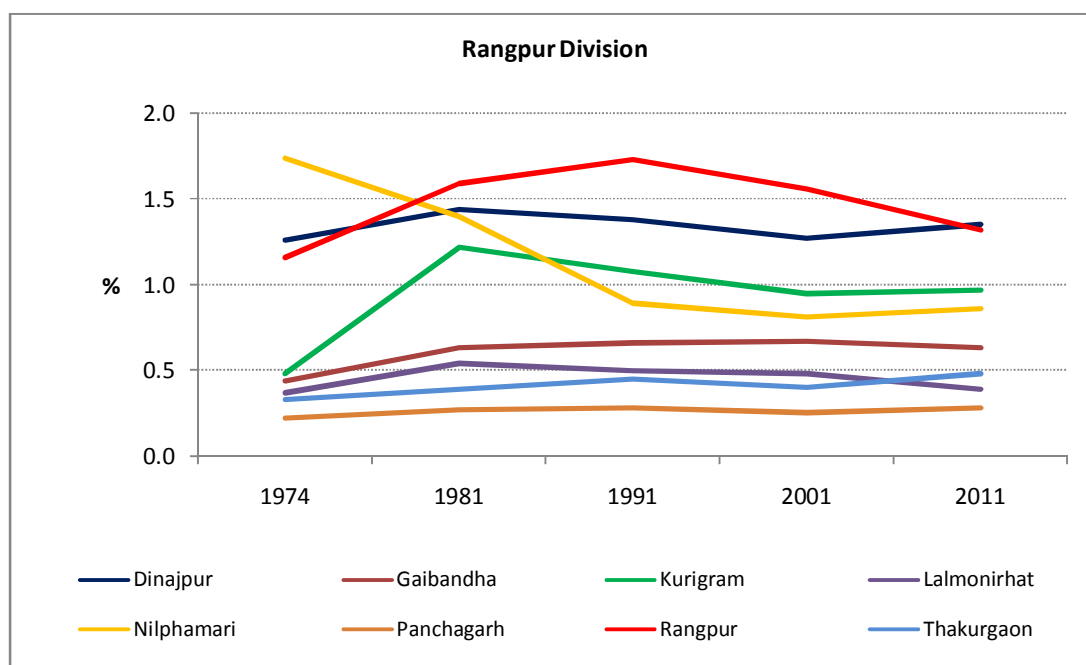
Source: Population and Housing Census 2011, National Volume 3, Urban Area Report

**Figure 5.11- Growth of Urban Population in Rajshahi Division, 1974-2011**



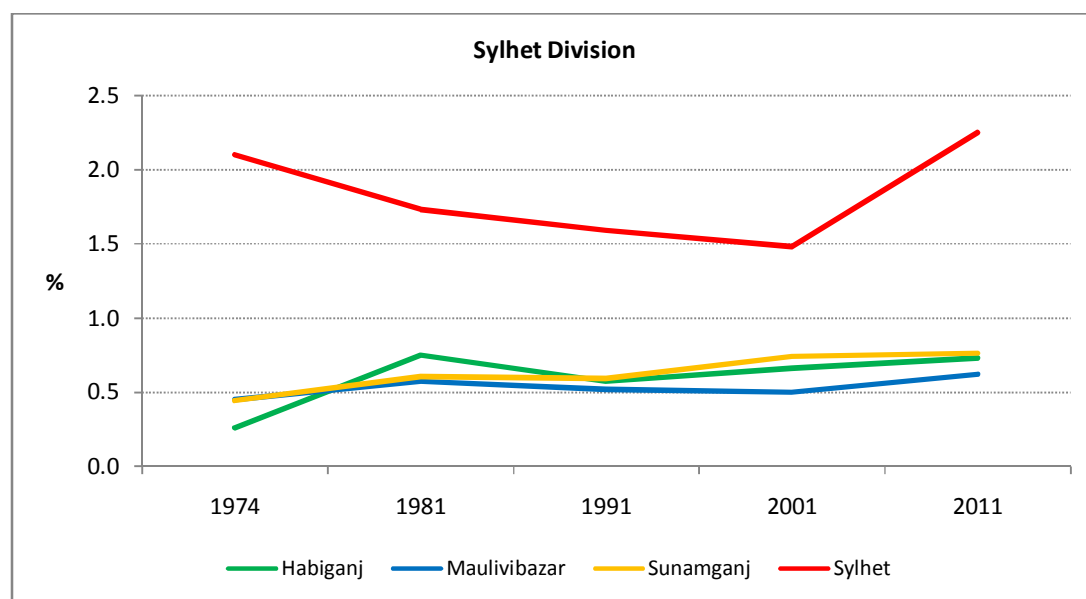
Source: Population and Housing Census 2011, National Volume 3, Urban Area Report

**Figure 5.12- Growth of Urban Population in Rangpur Division, 1974-2011**



Source: Population and Housing Census 2011, National Volume 3, Urban Area Report

**Figure 5.13- Growth of Urban Population in Sylhet Division, 1974-2011**

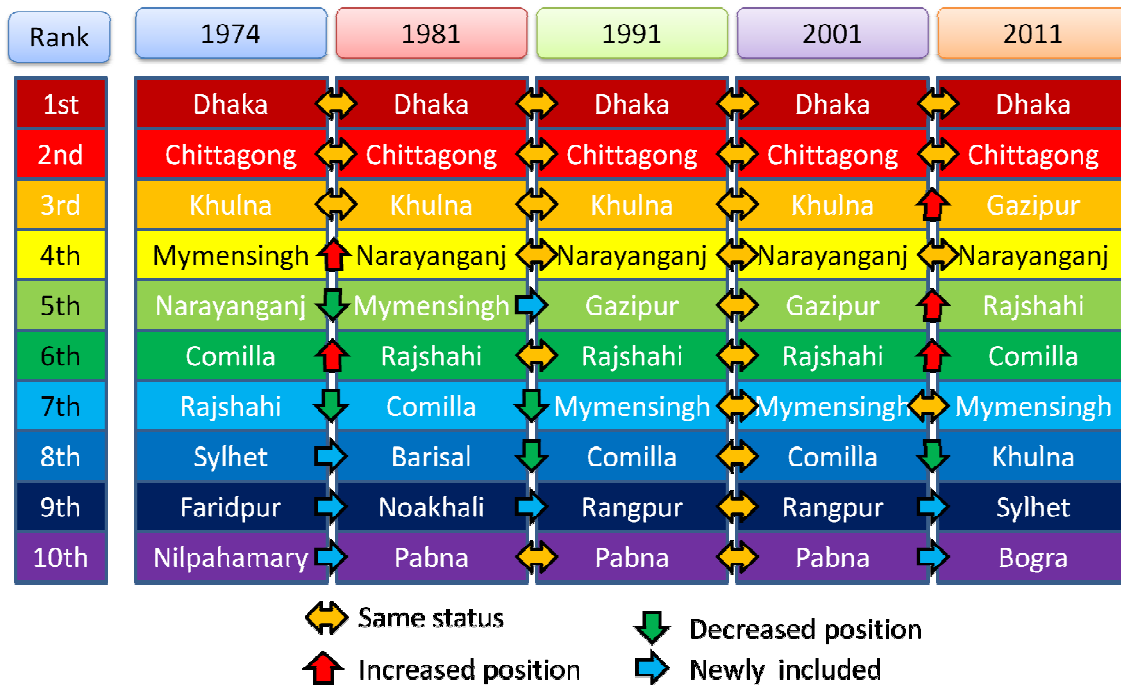


Source: Population and Housing Census 2011, National Volume 3, Urban Area Report

Figure 5.14 shows the ranking of top ten districts by their population size for the period of 1974 to 2011. The figure shows that there is no change in the ranking of Dhaka and Chittagong districts in terms of the population size and these two districts are ranked as 1<sup>st</sup> and 2<sup>nd</sup> respectively. Khulna was

ranked as 3<sup>rd</sup> until 2001 but moved down to 8<sup>th</sup> position in 2011 while Gazipur district move to 3<sup>rd</sup> position in 2011. Narayanganj district is remaining in the 4<sup>th</sup> position since 1981. Rajshahi, Comilla, Sylhet, and Bogra have gained their position in 2011 while the position of Mymensing is remaining the same.

**Figure 5.14- Top 10 Districts by Population Size, 1974-2011**







Source: Population and Housing Census 2011, National Volume 3, Urban Area Report

On the other hand, figure 5.15 shows the ranking of bottom ten districts by their population size for the period of 1974 to 2011. It shows that Meherpur is continuously ranked as 64<sup>th</sup> since 1981. Panchagarh is experiencing continuously a declining ranking; its rank was 61<sup>st</sup> in 1974 which decreased to 62 in 1981 and 1991 and then further moved down to 63<sup>rd</sup> position in 2001 and 2011. Bandarban, Jhalokathi, Magura, and Gopalganj have observed a declining trend in their ranking in 2011 while Barguna is remaining in the same ranking as in 2001. On the other hand, Manikganj has gained its ranking and Lalmonirhat has lost its ranking and placed 55<sup>th</sup> position for the first time.



**Figure 5.15- Bottom 10 Districts by Population Size, 1974-2011**

Rank	1974	1981	1991	2001	2011
64th	Barguna	↓ Meherpur	↔ Meherpur	↔ Meherpur	↔ Meherpur
63rd	Bhola	↔ Magura	↔ Magura	↓ Panchagarh	↔ Panchagarh
62nd	Bandarban	↓ Panchagarh	↔ Panchagarh	↓ Narail	↓ Bandarban
61st	Panchagarh	↑ Bandarban	↔ Narail	↓ Barguna	↔ Barguna
60th	Gopalganj	↑ Barguna	↔ Barguna	↓ Bandarban	↓ Jhalokati
59th	Feni	↔ Jhalokati	↑ Bandarban	↔ Manikganj	↑ Narail
58th	Joypurhat	↔ Thakurgaon	↓ Shariatpur	↔ Jhalokati	↓ Magura
57th	Cox's Bazar	↔ Shariatpur	↓ Gopalganj	↑ Magura	↓ Gopalganj
56th	Meherpur	↔ Feni	↔ Joypurhat	↑ Gopalganj	↑ Manikganj
55th	Habiganj	↔ Gopalganj	↔ Madaripur	↑ Shariatpur	↔ Lalmonirhat

 Same status       Decreased position  
 Increased position       Newly included

Source: Population and Housing Census 2011, National Volume 3, Urban Area Report

### 5.5 Growth of Urban Centers: Examining 'Rank-Size Rule' and 'Law of the Primate City'

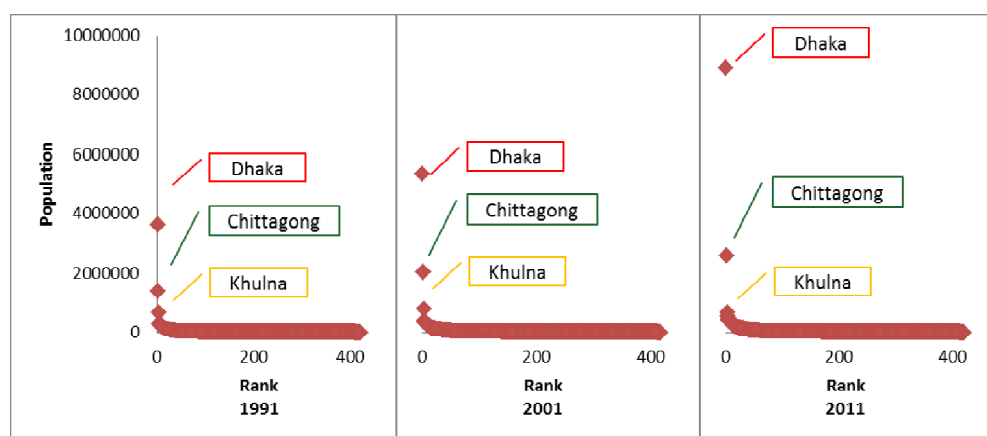
It was discussed in the methodology section that is essential to have the information on the available number of urban centers and their corresponding population size to analyze the growth of urban centre through 'rank-size rule'. It has been observed in section 5.3 that the total number of urban centers in Bangladesh was 522, 532, and 506 in 1991, 2001, and 2011 census respectively. However, due to changes in definition, a rise and fall is clearly observed in the total number of urban centers in each census; that means some urban centers were consistently came up as urban centre. Thus, to make the process simple and comparable, we focused our analysis to only those urban centers which were remaining consistently common across the three censuses. This process resulted 424 urban centers altogether which were consistently common across the three censuses.

George Zipf's theory of rank-size rule explained that the second and subsequently smaller cities should represent a proportion of the largest city of a country. The proportion of small towns to large cities is called the rank size rule. More specifically the 'rank size rule' states that population of any given town should be inversely proportional to its rank in the country's hierarchy of cities (Zipf, 1949). Thus, the second largest city should be half the population of

the largest city within a certain country. However, the figure 5.16 which demonstrates the urban population of 424 urban centers in different censuses does not reflect what was said by Zipf. It shows clearly that the cities and towns in Bangladesh are not at all inversely proportional to its rank. The situation does not make any difference when 64 districts were considered instead of 424 urban centers (Figure 5.17).

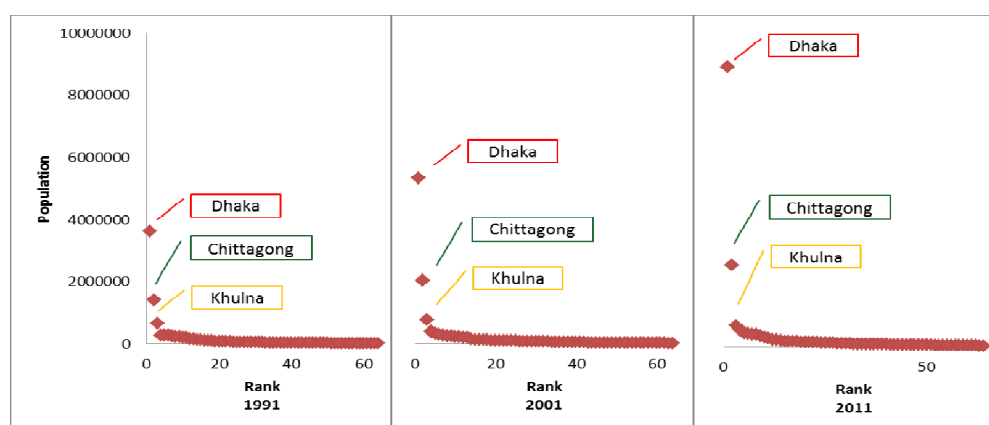
The rank size rule states that there is a specific relationship between relative abundance of settlements of different sizes, and that the smallest settlements should always be the most abundant. The rank size rule has a real impact on the quality of life and the standard of living for a country's inhabitants in terms of the availability of civic facilities. The rank size rule justify that the society is sufficiently wealthy to justify the provisions of goods and services to consumers. But this is not the case in Bangladesh. It has been observed in the next section that many of the smallest urban centers have no civic facilities let alone abundant.

**Figure 5.16- Ranking of 424 Urban Centers by Size of Population, 1991-2011**



Source: Authors' calculation based on Urban Area Reports 1997, 2008 and 2014

**Figure 5.17- Ranking of 64 Districts by Size of Population, 1991-2011**



Source: Authors' calculation based on Urban Area Reports 1997, 2008 and 2014

Mark Jefferson's 'law of the primate city' defined primate city as the leading city in its country or region, disproportionately larger than any others in the urban hierarchy. A 'primate city distribution' has one very large city with many much smaller cities and towns, and no intermediate-sized urban centers, in contrast to the linear 'rank-size distribution'. Jefferson defined a primate city as being "at least twice as large as the next largest city and more than twice as significant (Jefferson, 1939)." The figures 5.16 and 5.17 show that Dhaka is a primate city as Chittagong which is the second largest city has population size less than half compared to Dhaka. The size and dominance of a primate city acts as a pull factor and ensures its continuing dominance. A primate city is a city that dominates the entire urban system of a nation. A primate city is not only large but also economically dominant and the cultural center for national identity. It controls media, creates jobs, circulates currency and sets trends. The influence of a primate city reverberates throughout the entire country.

## 5.6 Level of Urbaneness of Urban Centers in Bangladesh

### 5.6.1 Methodological Note on the Measurement of Urbaneness of Urban Centers

Measuring the concept urbaneness is highly complex as there is no uniform definition available in this regard. For this research monograph, we used the following (Table-5.3) indicators to define the level of urbaneness of an urban area based on the combination of different UN indicators to define ‘urban’. We have used the national average for each of the indicators as benchmark value and thus the values of the indicators are different for each census.

**Table-5.3: Indicators Used to Measure Urbaneness and Its Benchmark Value**

Attributes	Census Years		
	1991	2001	2011
Density (population per SqKM)	2179	2731	3785
Population size	5000	5000	5000
Literacy rate (%)	49.8	60.7	66.4
Access to tap water (%)	22.5	24.9	37.4
Access to sanitary toilet (%)	40.2	67.0	81.7
Have electricity connection (%)	58.1	70.3	86.4
Cronbach's Alpha for 64 districts	0.659	0.576	0.586
Cronbach's Alpha for 424 urban centers	0.635	0.621	0.631

Source: Population and Housing Census 2011, National Volume 3, Urban Area Report

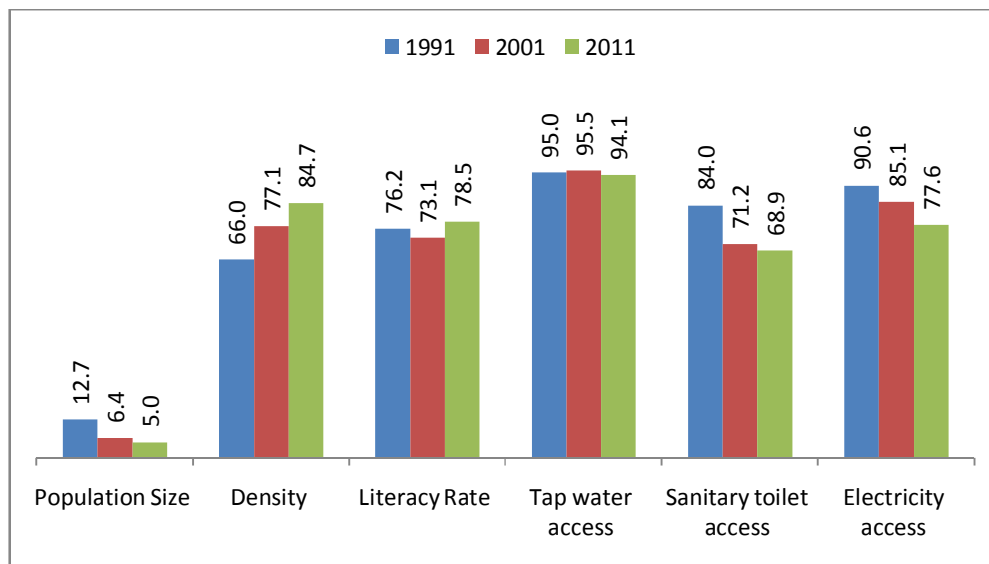
Data were extracted on each of these indicators from the published urban area reports. A numerical score of ‘1’ was assigned if a particular indicator in a particular urban centre had the value above or equal to benchmark value and ‘0’ was assigned if the indicator had a value less than the benchmark value. A reliability analysis was then performed to assess the strength of selecting these indicators. Table 5.3 shows that the value of Cronbach's Alpha ranged from 0.576 to 0.659. Finally, for each of the urban area, the obtained numeric scores were summed up to classify their level of urbaneness. On the other hand, it has been observed in section 5.3 that the total number of urban centers in Bangladesh was 522, 532, and 506 in 1991, 2001, and 2011 census respectively. However, due to changes in definition, a rise and fall is clearly observed in the total number of urban centers in each census; that means some urban centers were consistently came up as urban centre. Thus, to make the process simple and comparable, we focused our analysis to only those urban centers which were remaining consistently common across the three censuses. This process resulted 424 urban centers altogether which were consistently common across the three censuses.

### 5.6.2 Availability of the Indicators Used to Measure Urbaneness of Urban Centers in Bangladesh

The figure 5.18 shows an overall improvement in the indicators used to measure the urbaneness despite increasing benchmark value over the censuses. In 1991, 12.7 percent urban centers were below the benchmark value for the indicator ‘population size’ which has reduced to 5.0 percent 2011. On the other hand, percentage of urban centers falls below the benchmark value regarding density has increased over time. Sixty six (66) percent urban centers were below the benchmark value in 1991 which has increased to 84.7. The reason of this increment can be explained by the fact that the number of urban centers has decreased in 2011 due to definitional change though population size has increased in selected big urban centers. Thus, the benchmark value has increased in 2011 at least 1.5 times. Similarly, percentage of urban centers falls below the benchmark value regarding literacy rate has also increased over time.

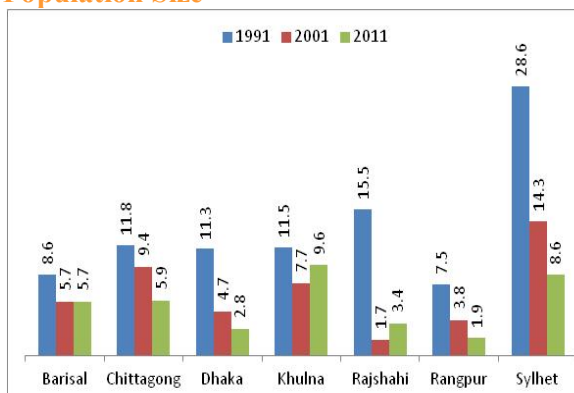
However, the figure shows that the situation of access to tap water, sanitary toilet, and electricity has improved over the period. While 95 percent urban centers were fall below the benchmark value for access to tap water in 1991, this has reduced to 94.1 percent 2011. Similarly, the percentage of urban centers falls below regarding sanitary toilet and electricity was 84 and 90.6 percent respectively which has fall down to 68.9 and 77.6 percent. Figures 5.19 to 5.24 depict the situation of individual indicators by division and census year.

**Figure 5.18- Percentage of Urban Centers below the Benchmark Value by Year**

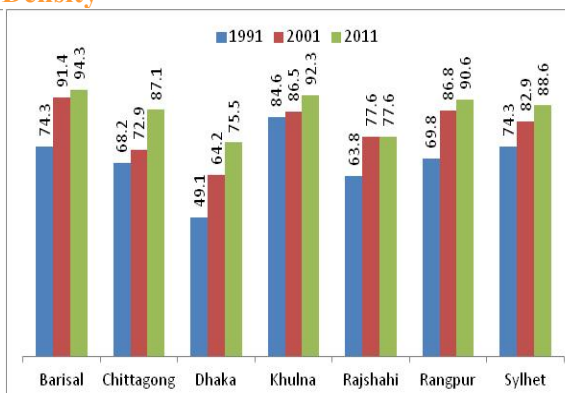


Source: Authors' calculation based on Urban Area Reports 1997, 2008 and 2014

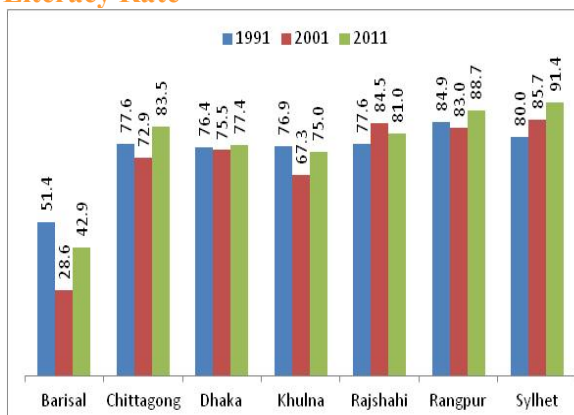
**Figure 5.19- Percentage of Urban Centers below the Benchmark Value by Year: Population Size**



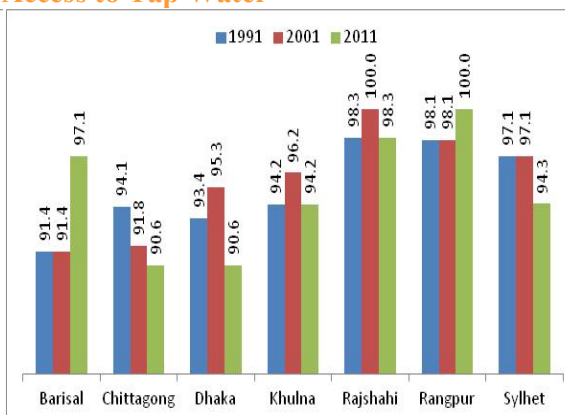
**Figure 5.20- Percentage of Urban Centers below the Benchmark Value by Year: Density**



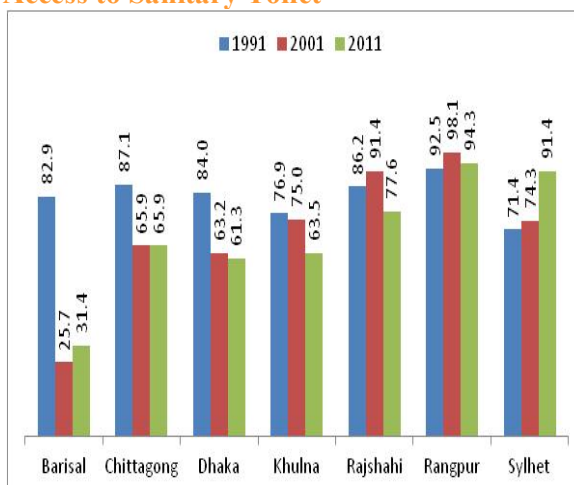
**Figure 5.21- Percentage of Urban Centers below the Benchmark Value by Year: Literacy Rate**



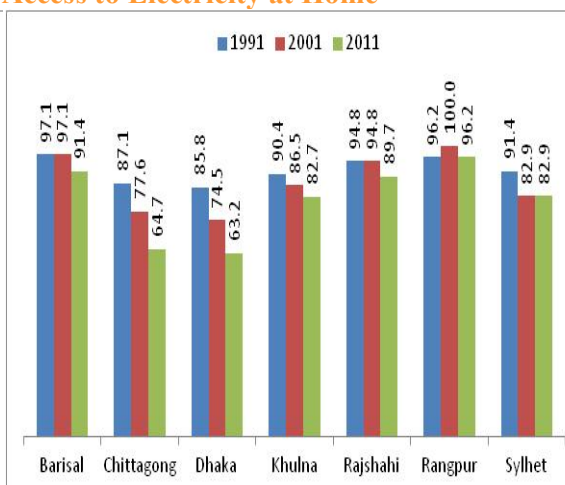
**Figure 5.22 Percentage of Urban Centers below the Benchmark Value by Year: Access to Tap Water**



**Figure 5.23- Percentage of Urban Centers below the Benchmark Value by Year: Access to Sanitary Toilet**



**Figure 5.24- Percentage of Urban Centers below the Benchmark Value by Year: Access to Electricity at Home**



Source: (Fig. 19-24) Authors' calculation based on Urban Area Reports 1997, 2008 and 2014

### 5.6.3 Level of Urbaneness of Urban Centers in Bangladesh

The level of urbaneness in 424 urban centers and 64 district level towns has been presented in the table 5.4. It can be observed from these tables that overall the level of urbaneness is increasing. Out of 424 urban centers in Bangladesh, 7.3 percent had no urban facility in 1991 which has reduced to 2.14 percent urban centers while 49.3 percent had only one facility in 1991 which has increased to 50.46 percent. On the other hand, 33 percent urban centers had two to three facilities in 1991 which has increased to 35.37 percent while 8.5 percent urban centers had four to five facilities in 1991 which has increased to 10.37 percent in 2011. However, the percentage of urban centers with all facilities has reduced over the time; 1.9 percent urban centers had all facilities in 1991 which has reduced to 1.66 percent.

On the other hand, there is no district headquarters out of 64 districts which has no facility at all. Nearly fourteen percent (14.1) districts had only one facility in 1991 which had reduced to 10.9 percent in 2011 while 37.5 percent districts had two to three facilities in 1991 which had reduced in 2011. The positive side is that 39.1 percent districts had four to five facilities which have increased to 48.4 percent in 2011. Finally districts with all facilities have decreased to 7.8 percent 2011 from 9.4 percent in 1999.

**Table-5.4: Level of Urbaneness in 424 Urban Centers and 64 District Urban Areas in Bangladesh, 1991-2011**

Level of Urbaneness	424 Urban Centers			64 Districts		
	1991	2001	2011	1991	2001	2011
No facility	7.30	3.33	2.14	0.0	0.0	0.0
Only one facility	49.30	48.81	50.46	14.1	7.8	10.9
Two to three facilities	33.00	36.31	35.37	37.5	46.8	32.8
Four to Five facilities	8.50	9.65	10.37	39.1	34.4	48.4
All Facilities	1.90	1.90	1.66	9.4	11.0	7.8
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Authors' calculation based on Urban Area Reports 1997, 2008 and 2014

The level of urbaneness in 424 urban centers and 64 district level towns by division across the censuses has been presented in the table 5.5 and 5.6. It is observed that the findings are similar with table 5.4.

**Table-5.5: Level of Urbaneness of 424 Urban Centers in Bangladesh by Division, 1991-2011**

Level of Urbaneness	Sylhet			Rangpur			Rajshahi			Khulna			Dhaka			Chittagong			Barisal		
	1991	2001	2011	1991	2001	2011	1991	2001	2011	1991	2001	2011	1991	2001	2011	1991	2001	2011	1991	2001	2011
	n=35			n=53			n=58			n=52			n=106			n=85			n=35		
No facility	20.0	8.6	8.6	5.7	3.8	1.9	5.2	0.0	1.7	3.8	1.9	0.0	5.7	1.9	0.9	9.4	5.9	2.4	5.7	2.9	2.9
Only one facility	42.9	54.3	74.3	58.5	73.6	79.2	51.7	67.2	53.4	65.4	53.8	53.8	40.6	41.5	40.6	48.2	38.8	43.5	42.9	14.3	20.0
Two to three facilities	25.7	25.7	5.7	30.2	20.8	15.1	36.2	29.3	37.9	21.2	34.6	38.5	41.5	37.7	37.7	30.6	38.8	41.2	37.1	74.3	65.7
Four to Five facilities	8.6	8.6	8.6	5.7	1.9	3.8	6.9	3.4	6.9	5.8	7.7	5.8	8.5	16.0	16.0	10.6	14.1	12.9	14.3	5.7	11.4
All Facilities	2.9	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0	3.8	1.9	1.9	3.8	2.8	4.7	1.2	2.4	0.0	0.0	2.9	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Authors' calculation based on Urban Area Reports 1997, 2008 and 2014

**Table-5.6: Level of Urbaneness of 64 District Level Urban Centres in Bangladesh by Division, 1991-2011**

Level of Urbaneness	Sylhet			Rangpur			Rajshahi			Khulna			Dhaka			Chittagong			Barisal		
	1991	2001	2011	1991	2001	2011	1991	2001	2011	1991	2001	2011	1991	2001	2011	1991	2001	2011	1991	2001	2011
	n=4			n=8			n=8			n=10			n=17			n=11			n=6		
No facility	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Only one facility	25.0	0.0	0.0	12.5	12.5	50.0	0.0	0.0	0.0	40.0	20.0	10.0	11.8	5.9	0.0	9.1	9.1	9.1	0.0	0.0	16.7
Two to three facilities	0.0	25.0	25.0	50.0	75.0	37.5	50.0	75.0	62.5	20.0	30.0	50.0	35.3	41.2	29.4	45.5	27.3	9.1	50.0	66.7	16.7
Four to Five facilities	75.0	50.0	50.0	37.5	12.5	12.5	50.0	25.0	37.5	20.0	40.0	30.0	35.3	41.2	52.9	36.4	45.5	81.8	50.0	16.7	66.7
All Facilities	0.0	25.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	10.0	10.0	17.6	11.8	17.6	9.1	18.2	0.0	0.0	16.7	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Authors' calculation based on Urban Area Reports 1997, 2008 and 2014



## 6. DISCUSSIONS, CONCLUSION AND POLICY IMPLICATIONS

### 6.1 Discussions and Conclusion

This monograph broadly focused on the tempo pattern of the level of urbanity in different urban centers since 1991 by using census data. The specific objectives of this research monograph were to: (1) investigate the tempo of urbanization and urban growth in Bangladesh; (2) scrutinize the changing concentration pattern of urban areas/agglomerations in Bangladesh; (3) examine the growth rate of urban centers in terms of ‘rank-size rule’ and ‘law of the primate city’; and (4) examine how urban the urban centers are in Bangladesh.

In response to the research objective one, the findings of this monograph show that over the decades, Bangladesh has experienced a significant level of urbanization in terms of the proportion population living in the urban area and the growth of urban centers. Only 8.78 percent of the total population were living in urban area in 1974 which has increased to 28 percent in 2011. Over the period, the number of urban centers have increased as well. There were 108 urban centers in 1974, which increased to 506 in 2011. The rapid growth has been observed in 1981. The total number of urban centers reached to 500 in 1981, which further increased to 532 in 2001 but due to definitional change the number reduced to 506 in 2011. The growth of urban population rate is higher in Bangladesh than the rate of natural increase of country’s population. The growth of urban population can be explained by the following factors: (1) natural growth rate of urban population; (2) rural to urban migration due to various socio-economic reasons; (3) changes in urban boundaries; and (4) changes in definition of urban areas. However, the change in definition of urban area has become more prominent than any other factors in explaining the growth of urbanization.

Our second research objective was to scrutinize the changing concentration pattern of urban areas/agglomerations in Bangladesh. The findings show that Dhaka, Chittagong, and Narayanganj are continuously remaining in the first, second, and fourth position over the time period. Interestingly, though Chittagong is remaining in the second position in 2011 but the percentage of population living in this city has declined in 2011 compared to 2001. Narayanganj has also experienced the trend like Chittagong. Khulna has lost its third position in 2011 and replaced by Gazipur. The position of Rajshahi district has increased to fifth in 2011 but the percentage of population living in this city has decline in 2011 compared to 2001. The percentage of population living in the urban centers has increased in some small and medium type urban centers. For example, Comilla, all the districts under Sylhet division,

and Dinajpur district have gained population in 2011 census. It can be argued that economic activities such as employment opportunity, and industrialization, etc., are related to the urban growth in Bangladesh though this research did not focus on the economic aspects in the urban area.

Our third objective was to examine the growth rate of urban centers in terms of 'rank-size rule' and 'law of the primate city'; The number of urban centers increased over time but the pressure on the primate city which is Dhaka has not reduced; rather increased steadily. This increased dependency on the primate city has been tested by using the 'rank-size rule' and 'law of the primate city'. The findings show that this dependency on Dhaka city is increasing. It shows that gap between primate city and other cities in terms of the population size are increasing over time. We need to conduct further study to explore the causes of this increased dependency on Dhaka.

Our fourth objective was to measure the level of urbaneness in urban centers in Bangladesh. We used the following indicators to consider an urban area as urban: density (population per Sq. Km); population size; literacy rate; access to tap water; access to sanitary toilet; and have electricity connection. The findings show that overall the level of urbaneness is increasing. Out of 424 urban centers in Bangladesh, 7.3 percent had no urban facility in 1991 which has reduced to 2.14 percent urban centers while 49.3 percent had only one facility in 1991 which has increased to 50.46 percent. On the other hand, 33 percent urban centers had two to three facilities in 1991 which has increased to 35.37 percent while 8.5 percent urban centers had four to five facilities in 1991 which has increased to 10.37 percent in 2011. However, the percentage of urban centers with all facilities has reduced over the time; 1.9 percent urban centers had all facilities in 1991 which has reduced to 1.66.

The findings of this monograph suggest that 'urban' definitional consistency should be maintained in such a way that comparison and analytical consistency can be achieved for policy formulation. The monograph clearly shows that the growth of urban centers and urbaneness are not in line. It has been observed that different urban services (provision of safe drinking water, sanitary latrine, access to electricity) are highly unequally distributed across the urban centers.

In conclusion, this monograph suggests that initiatives should be taken to equalize urban services which will eventually help us to reduce Dhaka city's primacy. In this connection regional development should be prioritized to lessen present pressure on the existing primate city. This monograph suggests to explore the causes of unequal urbanization by linking up the economic and industrialization related variables (internal and international migration, per capita GDP, industrialization, etc.).

## 6.2 Policy Implications

- 'Urban' definitional consistency should be maintained in such a way that comparison and analytical consistency can be achieved for policy formulation.
- Only eight urban centers fulfilled all the conditions of urbaneness considered in this research monograph.
- 206 urban centers out of 424 urban centers across the country don't fulfill the conditions of urbaneness except the population size. This reflects the unequal distributions of different urban services (provision of safe drinking water (tap water), sanitary latrine, access to electricity). Thus, initiatives should be taken to equalize urban services.
- Primacy of Dhaka is clearly visible and it has increased over the censuses. Initiative should be taken to reduce this primacy.
- Regional development should be prioritized to lessen present pressure on the existing primate cities.



Table-1: Changing Pattern of Urban Population by Districts, 1974-2011

District	1974		1981		1991		2001		2011	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>Bangladesh</b>	6273603	100.00	13535963	100.00	20872204	100.00	29255627	100.00	33563183	100.00
<b>Barisal Division</b>	191803	3.04	730086	5.39	935352	4.48	1162775	3.97	1361943	4.06
Barguna	10245	0.16	44553	0.33	67146	0.32	87582	0.30	103094	0.31
Barisal	98127	1.56	277899	2.05	330975	1.59	394567	1.35	519016	1.55
Bhola	12774	0.20	128217	0.95	189574	0.91	234302	0.80	243317	0.72
Jhalokati	21272	0.34	53013	0.39	85527	0.41	104070	0.36	112003	0.33
Patuakhali	27167	0.43	120693	0.89	132472	0.63	175284	0.60	201882	0.60
Pirojpur	22218	0.35	105711	0.78	129658	0.62	166970	0.57	182631	0.55
<b>Chittagong Division</b>	1430718	22.81	2993885	22.14	4245656	20.34	6022650	20.59	6905480	20.57
Bandarban	13381	0.21	36963	0.27	68522	0.33	92766	0.32	100423	0.30
Brahmanbaria	62467	1.00	151581	1.12	259103	1.24	336184	1.15	448493	1.34
Chandpur	63787	1.02	155554	1.15	188476	0.90	314102	1.07	435724	1.30
Chittagong	905480	14.43	1651021	12.20	2407117	11.53	3381723	11.56	3152629	9.39
Comilla	246774	3.93	278568	2.06	364289	1.75	535289	1.83	840326	2.50
Cox's Bazar	15720	0.25	110758	0.82	192814	0.92	272395	0.93	499011	1.49
Feni	15428	0.25	57114	0.43	95878	0.46	170200	0.58	293742	0.88
Khagrachhari	na	na	70566	0.52	109710	0.53	171035	0.58	215808	0.64
Lakshmipur	na	na	132143	0.98	185446	0.89	225426	0.77	262997	0.78
Noakhali	69378	1.11	240634	1.78	228218	1.09	353342	1.21	496700	1.48
Rangamati	38303	0.61	108983	0.81	146083	0.70	170188	0.58	159627	0.47
<b>Dhaka Division</b>	3624405	57.76	5383271	39.27	9137813	43.80	13364520	45.68	15584835	46.44
Dhaka	2250505	35.87	2966026	21.91	5142555	24.64	7794086	26.64	9317043	27.76
Faridpur	116601	1.86	142201	1.05	154671	0.74	227471	0.78	271100	0.81

**Table-1: Changing Pattern of Urban Population by Districts, 1974-2011**

District	1974		1981		1991		2001		2011	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Gazipur	na	na	122204	0.90	631734	3.03	929770	3.18	1037574	3.09
Gopalganj	13861	0.22	58620	0.43	74174	0.36	113133	0.39	128705	0.38
Jamalpur	95839	1.53	148824	1.09	212226	1.02	331264	1.13	387869	1.15
Kishoreganj	93579	1.49	233161	1.72	283693	1.36	356941	1.22	489030	1.46
Madaripur	32488	0.52	88262	0.65	85025	0.41	140365	0.48	157810	0.47
Manikganj	26649	0.42	71415	0.53	91967	0.44	95579	0.33	128710	0.38
Munshiganj	27546	0.44	64222	0.47	109771	0.53	148352	0.51	186106	0.55
Mymensingh	423472	6.75	346825	2.56	510198	2.44	660331	2.26	798127	2.38
Narayanganj	309820	4.94	498330	3.68	896856	4.30	1221955	4.18	988956	2.95
Narsingdhi	39140	0.62	177505	1.31	264635	1.27	349585	1.19	447645	1.34
Netrokona	26460	0.42	87058	0.64	135636	0.65	187839	0.64	247183	0.74
Rajbari	24020	0.38	62739	0.46	85791	0.41	118891	0.41	136042	0.41
Shariatpur	na	na	56762	0.42	68975	0.33	114776	0.39	131044	0.39
Sherpur	35578	0.57	74336	0.55	108364	0.52	136171	0.47	188106	0.56
Tangail	108847	1.73	184781	1.37	281542	1.35	438011	1.50	543785	1.62
<b>Khulna Division</b>	<b>857409</b>	<b>13.67</b>	<b>1737369</b>	<b>12.83</b>	<b>2323790</b>	<b>11.13</b>	<b>3041699</b>	<b>10.40</b>	<b>2822121</b>	<b>8.41</b>
Bagerhat	42502	0.68	134968	1.00	189415	0.91	206554	0.71	195331	0.58
Chuadanga	56492	0.90	154957	1.14	209612	1.00	274519	0.94	306157	0.91
Jessore	82817	1.32	226526	1.67	282480	1.35	400851	1.37	513552	1.53
Jhenaidah	56563	0.90	117942	0.87	173836	0.83	230392	0.79	280192	0.83
Khulna	437304	6.97	752825	5.56	1007255	4.83	1284208	4.39	777588	2.32
Kushtia	84025	1.34	135164	1.00	164431	0.79	214275	0.73	235526	0.70
Magura	20240	0.32	34739	0.26	52169	0.25	105323	0.36	120414	0.36
Meherpur	15936	0.25	32205	0.24	45839	0.22	68154	0.23	83393	0.25
Narail	21023	0.34	61522	0.45	66769	0.32	85809	0.29	112352	0.34

**Table-1: Changing Pattern of Urban Population by Districts, 1974-2011**

District	1974		1981		1991		2001		2011	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Satkhira	40507	0.65	86521	0.64	131984	0.63	171614	0.59	197616	0.59
<b>Rajshahi Division</b>	509630	8.13	1179105	8.72	2092354	10.07	2808131	9.60	3317022	9.88
Bogra	66974	1.07	143247	1.06	295607	1.42	389069	1.33	670388	2.00
Joypurhat	15687	0.25	59672	0.44	78562	0.38	121305	0.41	143910	0.43
Naogaon	34395	0.55	98958	0.73	170321	0.82	222576	0.76	275567	0.82
Natore	21053	0.34	69948	0.52	159798	0.77	191826	0.66	228008	0.68
ChapaiNawabganj	46059	0.73	109261	0.81	218602	1.05	269087	0.92	320278	0.95
Pabna	105846	1.69	239914	1.77	337272	1.62	449390	1.54	387675	1.15
Rajshahi	145159	2.31	293499	2.17	577292	2.79	843625	2.88	854619	2.55
Sirajganj	74457	1.19	164606	1.22	254900	1.22	321253	1.10	436577	1.30
<b>Rangpur Division</b>	375886	6.00	1019187	7.48	1455447	6.97	1868314	6.39	2109071	6.28
Dinajpur	79098	1.26	194278	1.44	288367	1.38	370864	1.27	453699	1.35
Gaibandha	27401	0.44	92668	0.63	137497	0.66	195107	0.67	210524	0.63
Kurigram	30129	0.48	164821	1.22	225366	1.08	278071	0.95	326494	0.97
Lalmonirhat	23047	0.37	73390	0.54	104871	0.50	141361	0.48	129209	0.39
Nilphamari	109087	1.74	189691	1.40	185552	0.89	235839	0.81	289974	0.86
Panchagarh	13643	0.22	36152	0.27	58467	0.28	72015	0.25	95149	0.28
Rangpur	72829	1.16	214885	1.59	360821	1.73	457234	1.56	442713	1.32
Thakurgaon	20652	0.33	53302	0.39	94506	0.45	117823	0.40	161309	0.48
<b>Sylhet Division</b>	204290	3.25	493060	3.65	681789	3.27	987538	3.38	1462711	4.36
Habiganj	16281	0.26	101831	0.75	118790	0.57	191633	0.66	244966	0.73
Maulivibazar	28327	0.45	76591	0.57	108262	0.52	145301	0.50	208079	0.62
Sunamganj	27764	0.44	81079	0.60	122245	0.59	217006	0.74	256117	0.76
Sylhet	131918	2.10	233559	1.73	332492	1.59	433598	1.48	753549	2.25

na= not available

**Table-2: Changing Rank Order of Districts by Urban Population, 1974-2011**

District	1974		1981		1991		2001		2011	
	Number	Rank	Number	Rank	Number	Rank	Number	Rank	Number	Rank
<b>Barisal Division</b>										
Barguna	10245	60	44553	60	67146	60	87582	61	103094	61
Barisal	98127	13	277899	8	330975	12	394567	14	519016	12
Bhola	12774	59	128217	30	189574	27	234302	29	243317	37
Jhalokati	21272	46	53013	59	85527	54	104070	58	112003	60
Patuakhali	27167	40	120693	32	132472	40	175284	41	201882	43
Pirojpur	22218	45	105711	37	129658	42	166970	46	182631	48
<b>Chittagong Division</b>										
Bandarban	13381	58	36963	61	68522	59	92766	60	100423	62
Brahmanbaria	62467	24	151581	23	259103	19	336184	20	448493	18
Chandpur	63787	23	155554	21	188476	29	314102	23	435724	22
Chittagong	905480	2	1651021	2	2407117	2	3381723	2	3152629	2
Comilla	246774	6	278568	7	364289	8	535289	8	840326	6
Cox's Bazar	15720	53	110758	34	192814	26	272395	26	499011	14
Feni	15428	55	57114	56	95878	50	170200	44	293742	28
Khagrachhari	na		70566	49	109710	46	171035	43	215808	40
Lakshmipur	na		132143	29	185446	31	225426	32	262997	33
Noakhali	69378	21	240634	9	228218	21	353342	18	496700	15
Rangamati	38303	31	108983	36	146083	37	170188	45	159627	50
<b>Dhaka Division</b>										
Dhaka	2250505	1	2966026	1	5142555	1	7794086	1	9317043	1
Faridpur	116601	9	142201	26	154671	36	227471	31	271100	32
Gazipur	na		122204	31	631734	5	929770	5	1037574	3
Gopalganj	13861	56	58620	55	74174	57	113133	56	128705	57
Jamalpur	95839	14	148824	24	212226	24	331264	21	387869	23



**Table-2: Changing Rank Order of Districts by Urban Population, 1974-2011**

District	1974		1981		1991		2001		2011	
	Number	Rank	Number	Rank	Number	Rank	Number	Rank	Number	Rank
Kishoreganj	93579	15	233161	12	283693	15	356941	17	489030	16
Madaripur	32488	34	88262	41	85025	55	140365	50	157810	51
Manikganj	26649	41	71415	48	91967	52	95579	59	128710	56
Munshiganj	27546	38	64222	51	109771	45	148352	47	186106	47
Mymensingh	423472	4	346825	5	510198	7	660331	7	798127	7
Narayanganj	309820	5	498330	4	896856	4	1221955	4	988956	4
Narsingdhi	39140	30	177505	18	264635	18	349585	19	447645	19
Netrokona	26460	42	87058	42	135636	39	187839	40	247183	35
Rajbari	24020	43	62739	52	85791	53	118891	53	136042	53
Shariatpur	na		56762	57	68975	58	114776	55	131044	54
Sherpur	35578	32	74336	46	108364	47	136171	51	188106	46
Tangail	108847	11	184781	17	281542	17	438011	11	543785	11
<b>Khulna Division</b>										
Bagerhat	42502	28	134968	28	189415	28	206554	36	195331	45
Chuadanga	56492	26	154957	22	209612	25	274519	25	306157	27
Jessore	82817	17	226526	13	282480	16	400851	13	513552	13
Jhenaidah	56563	25	117942	33	173836	32	230392	30	280192	30
Khulna	437304	3	752825	3	1007255	3	1284208	3	777588	8
Kushtia	84025	16	135164	27	164431	34	214275	35	235526	38
Magura	20240	50	34739	63	52169	63	105323	57	120414	58
Meherpur	15936	52	32205	64	45839	64	68154	64	83393	64
Narail	21023	48	61522	53	66769	61	85809	62	112352	59
Satkhira	40507	29	86521	43	131984	41	171614	42	197616	44
<b>Rajshahi Division</b>										
Bogra	66974	22	143247	25	295607	13	389069	15	670388	10

**Table-2: Changing Rank Order of Districts by Urban Population, 1974-2011**

District	1974		1981		1991		2001		2011	
	Number	Rank	Number	Rank	Number	Rank	Number	Rank	Number	Rank
Joypurhat	15687	54	59672	54	78562	56	121305	52	143910	52
Naogaon	34395	33	98958	39	170321	33	222576	33	275567	31
Natore	21053	47	69948	50	159798	35	191826	38	228008	39
ChapaiNawabganj	46059	27	109261	35	218602	23	269087	27	320278	26
Pabna	105846	12	239914	10	337272	10	449390	10	387675	24
Rajshahi	145159	7	293499	6	577292	6	843625	6	854619	5
Sirajganj	74457	19	164606	20	254900	20	321253	22	436577	21
<b>Rangpur Division</b>										
Dinajpur	79098	18	194278	15	288367	14	370864	16	453699	17
Gaibandha	27401	39	92668	40	137497	38	195107	37	210524	41
Kurigram	30129	35	164821	19	225366	22	278071	24	326494	25
Lalmonirhat	23047	44	73390	47	104871	49	141361	49	129209	55
Nilphamari	109087	10	189691	16	185552	30	235839	28	289974	29
Panchagarh	13643	57	36152	62	58467	62	72015	63	95149	63
Rangpur	72829	20	214885	14	360821	9	457234	9	442713	20
Thakurgaon	20652	49	53302	58	94506	51	117823	54	161309	49
<b>Sylhet Division</b>										
Habiganj	16281	51	101831	38	118790	44	191633	39	244966	36
Maulivibazar	28327	36	76591	45	108262	48	145301	48	208079	42
Sunamganj	27764	37	81079	44	122245	43	217006	34	256117	34
Sylhet	131918	8	233559	11	332492	11	433598	12	753549	9

na= not available

Table 3: Changing Level of Urbaneness in 424 Urban Centers by Division, 1991-2011

Level of Urbaneness	Sylhet			Rangpur			Rajshahi			Khulna			Dhaka			Chittagong			Barisal		
	1991	2001	2011	1991	2001	2011	1991	2001	2011	1991	2001	2011	1991	2001	2011	1991	2001	2011	1991	2001	2011
PDLWSE	1	1	1							2	1	1	4	3	5	1	2			1	
PDLWSe													1					1	1		
PDLWsE				1														1			
PDLWse					1					1			1						1		
PDLwSE	2		1				1	1	3	2	3	3	2	7	5	4	6	3	1		1
PDLwSe	1			2			2	1					1		1	1	3		2		
PDLwsE			1			1								2	3						
PDLwse				2	3	1	3	3	1	1	2		9	6		5	1		2	1	
PDIWSE			1												1	1		1			
PDIWSe																					
PDIWsE													1								
PDIWse																					
PDIwSE		2				1	1						2	4	3	1		1			
PDIwSe	1			1				1	3	2			1	4	1	1	4				
PDIwsE									1				3	1	2			3			
PDIwse	4	3		9	3	2	10	7	5		1		24	9	4	13	7	1	2	1	1
PdLWSE		1												1	2						
PdLWSe											1			1						2	
PdLWsE																1		2			
PdLWse									1			1				1			1		1
PdLwSE	1			1					1					2	2		1	1			2
PdLwSe	1	1			1	1		1			1	2	2	3	4		2	2	2	19	13
PdLwsE												1	1		1	1	2				
PdLwse	1	1		3	4	3	3	2	4	2	7	2	1		1	3	2	2	6	2	2
PdIWSE																1		1			

Table 3: Changing Level of Urbaneness in 424 Urban Centers by Division, 1991-2011

Level of Urbaneness	Sylhet			Rangpur			Rajshahi			Khulna			Dhaka			Chittagong			Barisal		
	1991	2001	2011	1991	2001	2011	1991	2001	2011	1991	2001	2011	1991	2001	2011	1991	2001	2011	1991	2001	2011
PdIWSe															1		1				
PdIWSE												1			1						
PdIWse																	1	1			
PdlwSE		1									1	1		3	4		3	10			
PdlwSe	2	3				1	1	1	6	3	4	9	1	10	11	1	6	9		3	6
PdlwsE			2					1	1			2		3	8	1	2	7			
Pdlwse	12	17	26	30	39	42	28	39	30	33	27	24	40	42	43	39	32	34	14	4	7
pDLWSE																					
pDLWSe																					
pDLWsE																					
pDLWse																					
pDLwSE													1								
pDLwSe							2						2								
pDLwsE													1	1							
pDLwse							1														
pDIWSE																					
pDIWSe																					
pDIWsE																					
pDIWse																					
pDIwSE																					
pDIwSe																					
pDIwsE															1						
pDIwse				1			1						2	1							
pdLWSE																					
pdLWSe																					

**Table 3: Changing Level of Urbaneness in 424 Urban Centers by Division, 1991-2011**

Level of Urbaneness	Sylhet			Rangpur			Rajshahi			Khulna			Dhaka			Chittagong			Barisal		
	1991	2001	2011	1991	2001	2011	1991	2001	2011	1991	2001	2011	1991	2001	2011	1991	2001	2011	1991	2001	2011
pdLWsE																					
pdLWse																	1				
pdLwSE										1	1										
pdLwSe										2		1									1
pdLwsE								1			1										
pdLwse	1	1					1		1	1		2				2	1	2	1		
pdlWSE							1														
pdlWSe																					
pdlWsE																					
pdlWse																		1			
pdlwSE															1		1				
pdlwSe	2										1	2	1	1						1	
pdlwsE		1																			
pdlwse	7	3	3	3	2	1	3		1	2	1		6	2	1	8	5	2	2	1	1

Note: P=Population size is above benchmark value; p= Below benchmark value;  
D= Population density is above benchmark value; d= Below benchmark value;  
L= Literacy rate is above benchmark value; l= Below benchmark value;  
W=Proportion of tap water accessibility is above benchmark value; w= Below benchmark value;  
S= Proportion of Sanitary toilet accessibility is above benchmark value; s= Below benchmark value;  
E= Proportion of electricity connection is above benchmark value; e= Below benchmark value;

**Table 4: Changing Level of Urbaneness in 64 District Level Urban Centers by Division, 1991-2011**

Level of Urbaneness	Sylhet			Rangpur			Rajshahi			Khulna			Dhaka			Chittagong			Barisal		
	1991	2001	2011	1991	2001	2011	1991	2001	2011	1991	2001	2011	1991	2001	2011	1991	2001	2011	1991	2001	2011
PDLWSE		1	1							2	1	1	3	2	3	1	2			1	
PDLWSe													1					1	1		
PDLWsE				1														1			
PDLWse					1								1						1		
PDLwSE	2		1				1	1	2	2	3	3	1	3	3	2	3	3	1		1
PDLwSe	1			2			2	1					1		1		1				
PDLwsE						1									2						
PDLwse				2	3	1		3	1				3	4		2			1		
PDIWSE			1													1		1			
PDIWSe																					
PDIWsE													1								
PDIWse																					
PDIwSE		2					1						1	1	1			1			
PDIwSe										1				1	1		1				
PDIwsE									1												
PDIwse		1		2			3	3	2				2		1	2	1	1			
PdLWSE														1	2						
PdLWSe											1			1						1	1
PdLWsE																1	1	1			
PdLWse												1				1			1		
PdLwSE									1					1				1			2
PdLwSe					1	1													1	4	1
PdLwsE												1	1		1						
PdLwse					2	1	1		1		3	1									1
PdIWSE																					

**Table 4: Changing Level of Urbaneness in 64 District Level Urban Centers by Division, 1991-2011**

Level of Urbaneness	Sylhet			Rangpur			Rajshahi			Khulna			Dhaka			Chittagong			Barisal		
	1991	2001	2011	1991	2001	2011	1991	2001	2011	1991	2001	2011	1991	2001	2011	1991	2001	2011	1991	2001	2011
PdlWSe																					
PdlWsE												1			1						
PdlWse																	1				
PdlwSE													1	1							
PdlwSe										1		1		1							
PdlwsE			1																		
Pdlwse	1			1	1	4				4	2	1	2	1		1	1	1			
pDLWSE																					
pDLWSe																					
pDLWsE																					
pDLWse																					
pDLwSE																					
pDLwsE																					
pDLwse																					
pDIWSE																					
pDIWSe																					
pDIWsE																					
pDIWse																					
pDlwSE																					
pDlwSe																					
pDlwsE																					
pDlwse																					
pdLWSE																					
pdLWSe																					

**Table 4: Changing Level of Urbaneness in 64 District Level Urban Centers by Division, 1991-2011**

Level of Urbaneness	Sylhet			Rangpur			Rajshahi			Khulna			Dhaka			Chittagong			Barisal		
	1991	2001	2011	1991	2001	2011	1991	2001	2011	1991	2001	2011	1991	2001	2011	1991	2001	2011	1991	2001	2011
pdLWsE																					
pdLWse																					
pdLwSE																					
pdLwSe																					
pdLwsE																					
pdLwse																					
pdlWSE																					
pdlWSe																					
pdlWsE																					
pdlWse																					
pdlwSE																					
pdlwSe																					
pdlwsE																					
pdlwse																					

Note: P=Population size is above benchmark value; p= Below benchmark value;  
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S= Proportion of Sanitary toilet accessibility is above benchmark value; s= Below benchmark value;  
E= Proportion of electricity connection is above benchmark value; e= Below benchmark value;



***List of Abbreviations***

BBS	Bangladesh Bureau of Statistics
GDP	Gross Domestic Product
OUA	Other Urban Area
PSA	Paurashava/Municipality Area
SMA	Statistical Metropolitan Area
UN	United Nations
UNICEF	United Nations Children's Fund



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## Expert Panel for Population Monographs

Government of the People's Republic of Bangladesh  
Bangladesh Bureau of Statistics  
Population and Housing Census-2011 Project  
Parishankhyan Bhaban  
E-17/A, Agargaon, Dhaka-1207

No: 52.01.0000.401.29.315.15-347

Date: 12-05-2015

**Subject: Selection of Expert Panel to Review Population Monographs**


The following distinguished persons have been nominated as experts to review the Population Monographs being prepared under Population and housing census-2011 Project of Bangladesh Bureau of Statistics:

### Expert Panel for Population Monographs

No	Broad Area	Monographs	Expert Pannel
01	Reproductive Behavior of Population	1. Population Composition: age and sex. 2. Fertility 3. Marriage & Family	Prof.M. Nurul Islam Ex. Professor ,DU Syeda Shahanara Huq, Prof.JNU Dr. Ahmed-Al-Sabbir,USAID Dr.Obidur Rob, Country Director, Population Council, Bangladesh
02	Special Protection Groups	1. Elderly Population 2. Disabled Population 3. Children and Youth 4. Population Density and Vulnerability	Dr.Nazma Ahmed Social Protection Specialist Dr.Sharifa Begum, SRF BIDS Prof. Mahmuda, Khatoon,DU Dr. A.J Faisal Country Representative Engender Health Dr.Eshani Ruwan Pura Programme Specialist UNFPA
03	Household and Housing Characteristics, Education & Literacy	1. Housing Condition 2. Household Facilities 3. Education & Literacy	Prof. Kazi Saleh Ahmed Ex.VC JNU Mr. Abdur Rashid Sikder Former DDG ,BBS Dr. Anwara Begum SRF BIDS
04	Economic and Social Aspects of Population	1. Urbanization 2. Labour Force Participation 3. Characteristics of International Migrant Households 4. Population Distribution and Internal Migration	Mr.Nichole MALPAS, Programme Manager Human and Social Development, Delegation to the European Union to Bangladesh. Prof. Kazi Saleh Ahmed Ex.VC JNU Dr.Sarwar Jahan Prof. Department of URP,BUET Prof. Nurul Islam Najem Dept. of Geography, DU

#### Terms of Reference:

- i) The members of the panel will remain present in the presentation of the monographs and will act as a co-opt member of the Technical Committee;
- ii) They will review the draft of the Monographs;
- iii) They will provide guidance in improving the draft;
- iv) They will get financial benefit as per provision in the AWP of the Population and Housing Census -2011 Project.

  
Mohammad Abdul Wazed  
(Additional Secretary)  
Director General

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This report has been published by Bangladesh Bureau of Statistics (BBS) with support from the delegation of the European Union (EU) and United Nations Population Fund (UNFPA) in Bangladesh.

