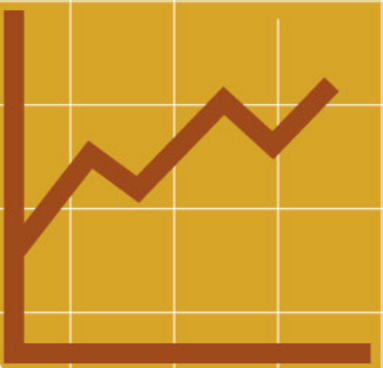
POPULATION MONOGRAPH OF BANGLADESH

POPULATION DISTRIBUTION AND INTERNAL MIGRATION IN BANGLADESH

Population Monograph: Volume-6



Bangladesh Bureau of Statistics
Statistics and Informatics Division
Ministry of Planning

COMPLIMENTARY

POPULATION MONOGRAPH OF BANGLADESH

POPULATION DISTRIBUTION AND INTERNAL MIGRATION IN BANGLADESH

November 2015

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

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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, Statistics and Informatics Division 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 'Population Distribution and Internal Migration in Bangladesh' 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 useful in national planning and policy making particularly in the field of population and development.

I would like to thank Secretary, Statistics and Informatics Division, Director General, BBS and 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 5th decennial census of Bangladesh and preparing the population monographs.

AHM Mustafa Kamal, FCA, MP

Dhaka
November, 2015

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 5th decennial census of Bangladesh and preparing the population monographs.

M.A. Mannan, MP

Dhaka
November, 2015

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 5th 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 'Population Distribution and Internal Migration in Bangladesh' 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 'Population Distribution and Internal Migration in Bangladesh' 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. Internal migration is an important demographic factor which influence the growth of population in a particularly area, particular in the urban areas.

In light of that, population monograph on 'Population Distribution and Internal Migration in Bangladesh' will be useful for proper planning for the growth centers of Bangladesh particularly in the urban areas. This monograph has covered detailed information on population distribution and internal migration in Bangladesh from censuses and surveys conducted by the BBS.

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.

Kaniz Fatema ndc

Dhaka
November, 2015

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 15th March to 19th 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 15th March to 19th March, 2011. In the Second Phase, quality and coverage of the main count were verified through a Post Enumeration Check (PEC) survey during 10th April to 14th 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 15th October to 25th 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 'Population Distribution and Internal Migration in Bangladesh' is one of the 14 monograph series which covered the population distribution and trends and patterns of internal migration in Bangladesh.

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 researchers of the Department of Statistics, University of Rajshahi 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.

Mohammad Abdul Wazed

Dhaka
November, 2015

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
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Acknowledgements

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

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 Rani Halder, Chief PPR, UNFPA and Mr. Mehboob-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.

Md. Mashud Alam

Dhaka
November, 2015

EXECUTIVE SUMMARY

Bangladesh inherited the long practice of conducting the population census on decennial basis since 1872. The last Population and Housing Census in Bangladesh was conducted during March 15-19, 2011. It is an attempt to provide a general scenario of internal migration and urbanization in Bangladesh using census 2011 and compared with previous censuses. This study would help in achieving Sustainable Development Goals (SDGs) in relation to internal migration, urbanization, and combat climate change and its impact.

The size of the population according to the census 2011 is 144.04 million among which male is 72.11 million and female is 71.93 million. Among the total population 76.7% live in rural and 23.3% live in urban. The change and pattern of population is observed from 1901 to 2011. The size of the population gradually increases. After independence population density in 1974 was 484 and in 2011 density are 976. At present the density is maximum in Dhaka and minimum in Barisal division.

Most of the migrants live in Dhaka division, 52.8% in 2004 and 38.7% in 2011. Next, migrants are higher in Khulna, Rajshahi and Chittagong divisions. Proportion of migration decreases from 2004 to 2011 in Dhaka and Chittagong divisions while it increases in other divisions. Migrants are minimum in Barisal division. Among rural migrants 30.9% in 2004 and 41% in 2011 live in Dhaka division and among urban migrants 59% in 2004 and 36.4% in 2011. The maximum migration took place within 5 years and which is 32.2%. The percentages are decreasing in the intervals 5-10 years, 10-15 years and so on. Migrants are mostly Muslims 86.6% followed by Hindus 12.4%, Buddhist 0.6%, Christian 0.4% and others 0.1%. It is revealed from the figure that migrants belong to mostly in the working age group. In 2004 74.9% migrants' belonged to age group 15 - 64 and 79.6% in 2011. More specifically, irrespective of time, the maximum number of migrants has age within 25 to 29 years. In rural, 76.6% married in 2004 and 73.6% in 2011. In urban, 69.0% married in 2004 and 66.3% in 2011. Unmarried migrants are higher in urban than rural in both 2004 and 2011. In 2011 most of the migration from rural to rural took place in Dhaka, Gazipur and Narayanganj districts. The next higher rural to rural migration was in Panchagarh, Rajbari, Jhenaidah, Magura, Jessore, Narail, Khagrachhari, Rangamati and Bandarban districts. Maximum migrants moved to Dhaka, Sylhet, Rajshahi, Khulna, Feni, Khagrachhari and Chittagong districts. Migrant's most favorite districts for urban to rural migration are Cox's Bazar, Bhola, Shariatpur, Naogaon and Gaibandha. Though 62.83% of migrants can read and write, 31.75% are totally illiterate and 5.41% can read only. Illiteracy is decreased noticeably in 2011 to 5.9% from 32.2% in 2004. In consequences, percentage of higher educated people increased from 2004 to 2011; in SSC and HSC level, from 11.4 to 21.3; in graduate level from 4.6 to 6.2; in masters level from 2.5 to 3.0; percentage of higher educated migrants in urban areas is naturally more than that in rural areas.

It is important to note that the characteristics of migrants are not sufficient to explain the selectivity of migration because the decision of a person to migrate is largely dependent on his family background. The individual characteristics can only give some idea about type of people involved in the process of migration. In 2011, 67.2% of the migrants have own land.

Wall material of 53.3% houses is brick-cement, 25.9% tin, 9.9% straw, 8.5% mud and only 1.5% wood. Most of their houses has sanitary toilet but 43.7% are sanitary with water seal and 35.4% are sanitary with no water seal 2.8% in open space. Though 38.6% of the houses of migrants have managed dustbin, 41.6% of their houses do not have good waste management, 19.5% bury/inside pit and only 0.4% burn.

Factor scores associated with all the indicators are large enough. However, the variable 'Has Mosaic or Cement Floor' gives the highest score followed by 'Has Brick Wall'. It is revealed that the first principal component solely can explain a major amount (45.47%) of the total variation. We, thus, select the first principal component to construct the desired wealth index. This wealth index is an indirect way of measuring household income though it is usually an assessment of standard of living. Standard of living is the poorest among the migrants who live in Dinajpur, Lalmonirhat, Panchagarh, Thakurgaon, Naogaon, Sherpur, Jamalpur, Netrakona, Habiganj, Sunamganj, Barguna, Chandpur, Noakhali, Khagrachhari and Rangamati districts.

To assess the correlation with socio-demographic variable, the wealth index of migrants is categorized into five quantiles. The major proportion of migrants, live in rural, is in the poorest quantile of wealth index. Conversely, the major proportion of migrants, live in urban, is in the richest quantile of wealth index. Among the divisions, Rajshahi has the highest percentage of richest migrants (32.13%) followed by Dhaka (23.78%), Barisal (22.38%) and Sylhet (21.10%). The maximum proportion of migrants in the poorest quantile of wealth index is in Rangpur division (42.75%). Comparatively, greater proportion of male migrants is in the richest quantile (25.5% male and 18.9% female). Muslims and Hindus are almost equally distributed in five quantiles of wealth index, but majority of Buddhists (48.0%), Christians (35.2%) and people from other religion (35.3%) are in poorest quantile. Migrants of all age groups are almost equally distributed in different wealth quantiles.

Comparatively, higher proportion 33% are in poorest quantile for divorced and 30.5% for widowed. Percentage of richest quantile increases as the age at marriage increases. It is highest 47.6% for age at first marriage in age group 30-34.

The trend of urban population for the period 1891-2011 has been divided in to four distinct periods: period of sluggish growth (1891 - 1921), period of moderate growth (1921-1951), period of rapid growth (1961-1991) and (2001-2011) is declining period.

Bangladesh's urban population has been growing at a yearly average rate of 6.0% since independence, at a time when the national population growth was 2.2%. Urban migration and population growth trend has been critically examined. Forces which work behind rapid urbanization in Bangladesh have been identified.

1. INTRODUCTION

1.1 Introduction

The demographic outcomes of size, structure and spatial distribution of the population are determined by the demographic processes of fertility, mortality and migration. The demographic outcomes, in turn, affect the operation of socio-economic processes - savings/investment, land and labor utilization, consumption of goods and services (e.g. food, housing, health and educational services), public expenditure, international trade and finance. These socio-economic processes help to determine the socio-economic outcomes - income level, employment, educational status, health/nutrition status, housing/sanitation and environmental quality.

Migration is defined as a purposeful geographical movement of workers towards divisions/ districts/ regions where industry and employment are available. This is an equilibrating adjustment mechanism that shifts underemployed and unemployed laborers from local labor market to areas where they could be fully employed. The work force migration is defined as a movement of population from a region to another region for permanent or semi-permanent engagement in a work or a job. It has an impact on creating social alienation. Every man and woman has the desire and the tendency to engage in some kinds of activities that promote their financial well-being. Many of the migrant workers, however, do not get a work family environment to give a full mental or physical effort on their duty and consequently, they feel themselves as underemployed. Their labors are not voluntary, but constrained, forced labor. Therefore, their labors do not meet a need; rather a means to meet some needs alien to it. Where wage is the product, the object of labor, for which labor sells itself, is the necessary consequence of the estrangement of labor, just as in wage labor work itself is not an end in itself, rather appears as a servant of the wage. In order to understand the experiences of social alienation among the migrant work forces, the nature and causes of their social isolation and separation from their society should be analyzed.

The work force did not place any restriction upon the distance of move or upon the voluntary or involuntary nature of work, nor did they make any distinction between the internal and external migration. In fact, growth of population in the urban sectors in Bangladesh, particularly in Dhaka city, considered as the center of all kinds of works, is predominantly occurred due to migration of work force from its peripheral rural as well as other urban areas. The migrants originate largely from the economically depressed areas of the country (Sarwar and Rahman, 2004). They move on their own, in groups or with siblings in search for job opportunities available in the city or to escape from unemployment and curse of poverty. The

poverty argument in Bangladesh is strong, where many poor and land less migrants are forced to migrate to support themselves or their families (Ahmad, 2004).

Migration from rural to urban areas has historically played a key role in the rapid growth of cities and, together with the reclassification of rural localities into urban centers; it continues to be an important component of city growth. However, natural increase, that is to say, the difference between births and deaths on site, can contribute significantly to urban growth, where fertility levels remain high. Today, natural increase makes a larger contribution to urban population growth than internal migration and reclassification in the majority of developing countries (United Nations, 2009). These transformations have been a major aspect. Cities are focal points of economic growth, innovation and paid employment. On average, urban residents have better access to education and health care as well as other basic services such as clean water, sanitation and transportation than rural population. If well managed, urbanization can continue to offer important opportunities for economic and social development. However, the speed and scale of urbanization in developing regions challenge the capacity of Government to adequately plan and meet the needs of the growing number of urban dwellers. As cities grow, managing them becomes more complex and their population becomes more diverse. Developing countries will need to adjust to this process much faster than developed countries did in the past.

Migration has resumed greater importance as a component of people's livelihood strategies and in shaping the national economy following improvements in markets, communications and transport and access to electricity. The countryside is no longer confined to food production but is now a source of labor for urban areas (Toufique and Turton, 2002). However, the linkages between migration and development are not straightforward. Rural-urban migration is one discernable force of change amidst growing diversity and complexity in the patterns of migration. In the light of the changes sweeping through rural Bangladesh, the links between migration and development need to be re-examined. There is, however, a dearth of knowledge about the migration-poverty interface in Bangladesh (Chaudhury, 1978; Chaudhury and Curlin, 1975; Islam and Begum, 1983; Krishnan, 1978; Rahman *et al* 1996; Hossain *et al* 1999; Afsar, 1999; Hossain *et al*; 2003a). Government policies can influence the impact of migration on development and poverty reduction.

Afsar (2000) described the main causes & consequences of rural urban migration in Bangladesh & explored their implication for poverty alleviation and spatial distribution policies, amongst the main factors affecting people's mobility are the impact of structural adjustment and privatization on the country's economy and the related changes in structure of employment.

Ahsan (2003) argued that in the recent literature in explaining internal (e.g. rural-urban) migration in developing countries has been one of insurance motives. According to this, rural

households, by placing working family members is geographically dispersed labor markets, potentially achieve diversifications of family income risks.

Kothari (2002) analyzed that an overview conceptual understandings of, and methodological research issues on, the relationship between chronic, or long-term, poverty and processes of migration. He explored the characteristics those who move and those who stay, the processes by which they are compelled or excluded from adopting migration as a livelihood strategy and the circumstances under which migration sustains chronic poverty or presents an opportunity to move out of poverty. Subsequently this study addresses some of the implications of current migration-related policies for chronic poverty.

The perspectives of internal migration and urbanization in Bangladesh are elaborately discussed through socio-economic and demographic viewpoints by Elahi (1985). He also observed that rural to urban migration is the main cause of rapid growth of urban population in the most countries. Population redistribution and development in South Asia edited by Kosinsky and Elahi (1985) has provided some basic information of internal migration.

Sharma (1984), Singh and Yadava (1981a) identified that migration decision of an individual has been influenced by marital status. They observed that distance moved by a migrant has been found closely associated with the marital status and depends on some extent his/her responsibilities towards the family. Singh (1988) reported that married persons usually migrate shorter distances in order to visit his family frequently.

Ajaero and Onkala (2013) estimated and categorized the effect of rural- urban migration due to remittance and community projects executed by the rural-urban migrants. They showed that rural-urban migration contributes significantly towards the development of their rural communities through momentary remittances and involvement of the rural urban migrants in community development projects. Farhana and Rahman (2012) analyzed that causes of migration are mainly economic and social factors, i. e. unemployment; poverty, political, ethnicity and religion.

Farhana and Rahman (2012) analyzed that causes of migration are mainly driven by economic and social factors i.e. unemployment; poverty, political and ethnic conflicts and religious.

Ahsanullah (2004) explored the factors that contribute to the migration process in Bangladesh. They pointed out that the flow of migration to the major cities in Bangladesh is due to the rural –urban differentials in income and employment opportunities.

Titumir and Rahman (April 2012) explored the impact of rural-urban migration in Bangladesh. They showed that rural-urban migration reduces the pressure of population in the rural area and therefore should improve economic conditions to reduce rural poverty. However disparities between the rural and urban areas in terms of income and employment as

well as the un-availability of basic infrastructure and services persist. It is evident that poverty is higher in the rural area than that of the urban area.

The majority of empirical studies on different aspects of migration in general and internal migration in particular have dealt with the typology and determinants of migration focusing on its consequences (Mehta, 1991, Wintle, 1992). Apart from social and economic impacts, migration of an individual produces demographic impacts as well. The physical separation between husband and wife as a result of migration gives the female partner less scope for conception which results in low fertility of the migrant households (Sharma, 1992).

Rural-urban migration reduces the pressure of population in the rural areas and, therefore, should improve economic conditions to reduce rural poverty. However, disparities between the urban and rural areas in terms of income and employment as well as the unavailability of basic infrastructure and services persist. Urban areas offer more and better opportunities for socio-economic mobility of the poor and rural-urban migration, therefore, will continue. It is evident that the incidence of poverty is higher in the rural areas than that of the urban area. Moreover, the rate of poverty reduction in the rural area is also higher in the rural area than the urban area. This might be occurred due to the accelerated pace of rural-urban migration.

The rapid growth of population and consequent landlessness along with other factors of population displacement in the rural area lead to rural unemployment which generates a growing flow of migration.

In Bangladesh, migration from rural to urban area has shown an increasing trend, first due to the work opportunity to the urban informal sector and more recently to garments manufacturing units (Hossain, 2011, Afsar, 2003). It is documented that nearly two-fifth of rural households of Bangladesh sent adult members to seek work in towns (Skeldon, 2005).

Seasonal migration is also a common feature for livelihood strategy in Bangladesh, especially in lean season. Based on a survey of 1600 households in Northwest Bangladesh, it is documented that 19% of households, across all wealth groups, migrate in the lean agricultural season. The study also reports that seasonal migration is an important livelihood strategy for about 25% of chronic poor households (Hossain et al., 2003).

The census is the major source of comprehensive population data for policy formulation and implementation. Census data are important to each and every community because they provide information about the population at every level, across a range of criterion i.e. size, growth, spatial pattern, age, sex, marital status, migration status, social phenomenon, educational level, employment status etc. This data about the composition and characteristics of the population and internal migration can be used at national, regional levels to identify the needs and requirements of each group in planning for the provision of services.

The available data allow us to classify migrants by administrative level and rural-urban flows.

As development policies are usually tied to administrative level, classification of migrants by administrative level is important for integration of migrants in development plans at different levels.

Internal migration has become both a major policy concern and a subject of a heated public debate in a positive light, seeing it as essential to economic transformation, and crucially, to the on-going reduction of poverty.

This monograph focuses on the pattern of Bangladesh population in district, division and country level. Internal migration, a key determinant of changes in population distribution and a major driving force in the process of urbanization analyze the impacts of climate change on migration, population distribution and urbanization. The second component of this monograph involves an analysis of the mobility patterns for recent migrants. It will highlight on trends and challenges of urban growth, internal migration and population distribution and the disparities between urban and rural.

1.2 Background

The fifth as well as the last Population and Housing Census in Bangladesh was conducted during March 15-19 in 2011 and the Sample Census, i.e., Socio-Economic and Demographic Survey was conducted during October 15-25 in 2011 the main objective of the Census was to collect basic data on population and housing in Bangladesh to serve research and analysis of population trends for the whole country as well as for each locality; to provide information for evaluating the implementation of socio-economic development plans for the period 2011 - 2021 and to monitor the implementation of the government's commitment to achieving the united Nations millennium development goals

This monograph provides findings from in-depth analysis of population distribution and internal migration in Bangladesh using both census and sample data. This monograph is an attempt to provide a general picture of internal migration and urbanization in Bangladesh over the last two decades using census data. The monograph also attempts to look at linkages between internal migration, urbanization and achievement of some of the MDGs, or from a broader perspective the linkages between internal migration, urbanization and development.

This monograph explores the nature, causes and dynamics of domestic migration, and specifically the role played by three distinct factors – livelihoods and economy, the quality of public services and the presence of challenging environmental conditions. It presents key findings, conclusion and a series of policy recommendations.

1.3 Basic Concepts and Definitions

Migration

Basically, migration is a critical concept to define specifically. To be simple, this is occurred due to moving of the people for different reasons across or within the country. A migrant could be a person who moves across or within the country to improve respective livelihood; a refuge who crosses the border due to political and religious suppression; or by a person who is displaced by natural disaster. Still, the demographer neither could nor reached to a consensus definition of migration. This is because migration does not occur under a common condition rather the causes of migration are related to specific context in which they take place. Sometimes, people migrate from one place to the other within the same region, continent or country. This is also known as regional migration or internal migration.

Economic migration is the movement of people from one country to another to benefit from greater economic opportunities. It is often assumed that such migration is primarily from less economically developed countries to the more economically developed countries and from former colonies to the country that was the imperial power. Environmental migrants are people who are forced to migrate from or flee their home region due to sudden or long-term changes to their local environment which adversely affects their well-being or livelihood.

Reunion another form of migration refers to members of a family coming to join one of their relatives who is resident in another locality. This commonly includes spouses, family members, dependent children and elderly relatives.

Rural-Urban Migration involves the movement of people from rural areas or country sides to urban areas of the same country in search of new opportunities and lifestyles.

Seasonal Migration: Sometimes people move during specific seasons such as crop-harvesting and climate to work and then go back when the season is over.

Return Migration involves the voluntary return of migrants to their original place after they outlive the reasons for which they left. Often, young people who move into the cities to work return home when they retire to spend the rest of their lives in the quiet of their towns and with old friends and family. Forced or involuntary Migration is when the government or authorities of a place force people to migrate for a reason.

Migrants are defined here as people whose place of residence 5 years prior to the time of census is different from their current place of residence. Non-migrants are defined as people whose place of residence 5 years prior to the time of census is same as their current place of residence.

*Migration Rate (MR)***:** The in or out migration rate is defined as the number of in or out migration per 1000 mid-year population of a particular area for a specified time interval.

Although, there are many other ways to define migrants, the current definition is the only one that can be used with the census data. A limitation of this definition is that certain types of migrant, such as temporary migrants, seasonal migrants and return migrants are not identifiable because they are mixed in with non-migrant or migrant populations.

Internal Migration

This refers to a change of residence within national boundaries, such as between states, provinces, cities, or municipalities. An internal migrant is someone who moves to a different administrative territory.

- *Regional migrants***:** include persons aged 5 or older whose region of residence 5 years prior to the time of the census was different from their current region of residence.
- *Inter-division migrants***:** include persons aged 5 or older whose division of residence 5 years prior to the time of Census was different from their current division of residence.
- *Inter-district migrants***:** include persons aged 5 or older whose district of residence 5 years prior to the time of Census is different from their current district of residence.

Each group of migrants has an associated group of non-migrants; in other words, non-migrants can be defined at each administrative level. For instance, divisional non-migrants include persons aged 5 or older whose division of residence 5 years prior to the time of Census is their current division of residence. In this monograph, the term 'divisional non-migrant' will represent all groups of non-migrant population and labeled as non-migrant because there are only very minor differences among different groups of non-migrant population.

Regarding migration flows between urban and rural areas, the following flows are identified based on the rural and urban characteristic of the place of residence 5 years prior to the time of the Census and current place of residence:

- *Rural to Rural (R-R) migration***:** Place of birth is in rural area and current residence is also in another rural area.
- *Rural to urban (R-U) migration***:** Place of birth is in rural area and current residence is in urban area.
- *Urban to urban (U-U) migration***:** Place of birth is in urban area and current residence is also in another urban area.
- *Urban to rural (U-R) migration:* Place of birth is in urban area and current residence is in rural area.

Population Distribution

Population distribution refers to where people live around the country. Population is not evenly distributed around the earth's surface because of several factors. The factors that influence population distribution are: natural resources, climate, economic development, government policy, rural/urban settlement, capital resources, and conflicts.

The way in which people are spread across a given area is known as population distribution. Geographers study population distribution patterns at different scales: local, regional, national, and global. Patterns of population distribution tend to be uneven. It follows that population is more or less sparse or dense in different locations, regions and countries.

Population density

Population density is the average number of people per square kilometre without water and forest. It is a way of measuring population distribution. It shows whether an area is sparsely or densely populated. Like population distribution, population density can be calculated at a local, regional, national or global scale.

1.4 Objectives of the Study

This monograph aims to describe, analyze, and provide explanations for patterns, trends and prospects of population distribution and internal migration in Bangladesh. The data of this monograph took from short and long form questionnaire of the census 2011 and 2001. The specific objectives of this study are:

a) to identify the nature and pattern of population distribution by different administrative units over time,

b) to determine the level and trend of internal migration,

c) measuring the key factors of internal migration and migration flows,

d) measuring the causes and effect of internal migration,

e) to investigate the socio-economic profile and demographic characteristics of migrations, and

f) to provide policy recommendations for future planning on the basis of key findings.

1.5 Methodology

The country's census data are specifically useful for the formulation of policies to improve the quality of life of the people. The data collected through census serve as a basis for

monitoring progress in achieving the Millennium Development Goals and are necessary to facilitate meaningful improvement through structural change and modernization in all socio-economic dimensions including education, employment and health.

The design of a census monograph depends in the first instance on what essential and additional tables have been produced or are expected to be produced. A census monograph is not normally a volume containing tables only. A publication containing only tables is intended to provide data that users will themselves analyze or interpret. A census monograph aims to provide analysis and interpretation that users cannot or do not wish to carry out themselves. A census "analytical report" also contains analysis and interpretation, but usually several topics (e.g., fertility, mortality, migration) are covered within the same report and often the geographical unit of analysis is national-level only.

Descriptive or univariate analysis is used to describe patterns of population distribution and internal migration. Bivariate analysis is used to captured similarities or dissimilarities of population distribution and internal migration considering demographic and socio-economic factors or variables including: region, division, district, age, living standards, schooling attainment and housing. Gender is considered as a cross-cutting issue and is covered in almost all the analysis. Trend analysis is used to capture level and trends of population distribution and internal migration over the decades. Comparisons are made not only among different groups of migrants but also between migrants and non-migrants. Visual aids, including graphs and maps, are used to help readers more easily understand results of analysis.

1.5.1 Growth Rate

The growth rate is the ratio of annual change to a number compared to the past expressed in percentage. This rate of change may be positive or negative in sense. In this report the growth is calculated using the following annual compounding formula:

$$P_n = P_0(1 + r)^t$$

Where,

P_n = Current population,

P_0 = Previous population,

r = Annual population growth rate,

t = Time period between the preceding and the subsequent.

The statistical analysis and Geographic Information Systems (GIS) approach is used to analyze population housing census, 2011 data to prepare this monograph.

1.5.2 Statistical data approach

In our study different types of tables, graphs and charts will be provided. Statistical tests of independence of attributes, proportions test, correlation coefficients test will be performed. Correlation, regression, composite indexing and multivariate techniques will be used by SPSS, Excel, STATA and R software.

1.5.3 GIS-based mapping approach

A geographic information system (GIS) is a computer system for capturing, storing, checking, and displaying data related to positions on Earth's surface. GIS can show many different kinds of data on one map. This enables people to more easily see, analyze, and understand patterns and relationships. A person can point to a spot on a computerized map to find other information stored in the GIS about that location.

A geographic information system (GIS) lets us visualize, question, analyze, and interpret data to understand relationships, patterns, and trends by ArcView software. Our aim is to show in GIS map the regional differences of population distribution, education, occupation and internal migration.

1.6 Structure of the Monograph

The monograph contains seven chapters which start with introduction. This chapter provides background, basic concepts & definitions, objectives of the study and methodology. The second chapter focuses on population size and distribution that provides the idea of population growth and distribution by different administrative units. The third chapter deliberated pattern, trend and differential of internal migration and the causes of migration. The spatial distribution of in-migration and out-migration are also discussed here. Housing characteristics and living standard of internal migrants are presented in chapter four. Factors of internal migration and its related socio-economic variables are analyzed in chapter five. Trends and patterns of urbanization in Bangladesh at different administrative units are analyzed in chapter six. Finally, the seventh chapter provides conclusion and recommendations.

2. POPULATION DISTRIBUTION

2.1 Introduction

The spatial distribution of the population of a country is influenced by environmental, historical, socio-cultural, demographic, economic, political and development factors. Environmental geographical factors, such as climate, natural resources, terrain, soils, etc. will account for economic activities in various regions of the country and can, therefore, indirectly affect the spatial distribution of the population. The population distribution in the country has been traditionally determined by the availability of land for cultivation, quality of soil, availability of water resources, favorable climatic conditions, topography and availability of transportation facilities. The main concentration of the population is in the plain region. The last Population and Housing census in Bangladesh was conducted during March 15-19 in 2011. Of the several methods of accounting for the spatial distribution of the population, the simplest way is the percentage distribution of the population over geographical areas. In this chapter, the method of percentage distribution and population composition of geographical areas is used to study the population distribution. Spatial distribution of the population of Bangladesh in this chapter is considered by Division, District and Residence. Changes in the population growth and patterns of population distribution are described and analyzed against census data over time.

2.2 Population Size

The total population according to the census 2011 is 144.04 million among which male is 72.11 million and female is 71.93 million; 76.7% of total population live in rural and 23.3% of them live in urban.

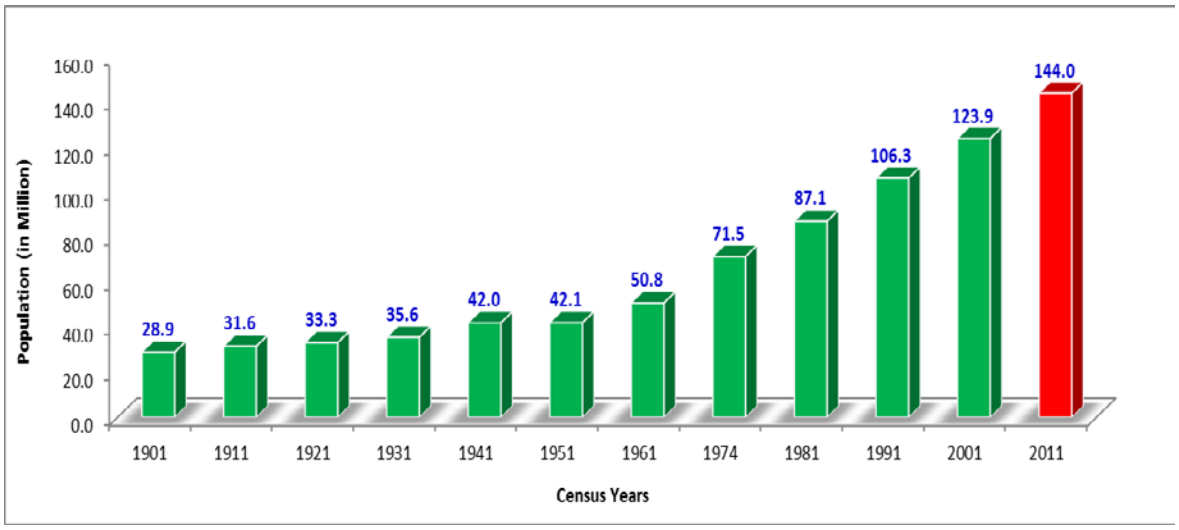


Fig.2.1: Population distribution, 1901 - 2011.

Bangladesh population distribution of census data from 1901 to 2011 is presented in Fig. 2.1. In 1901, the population size was only 28.9 million. Population size gradually increases and in 2011, it crossed 144 million.

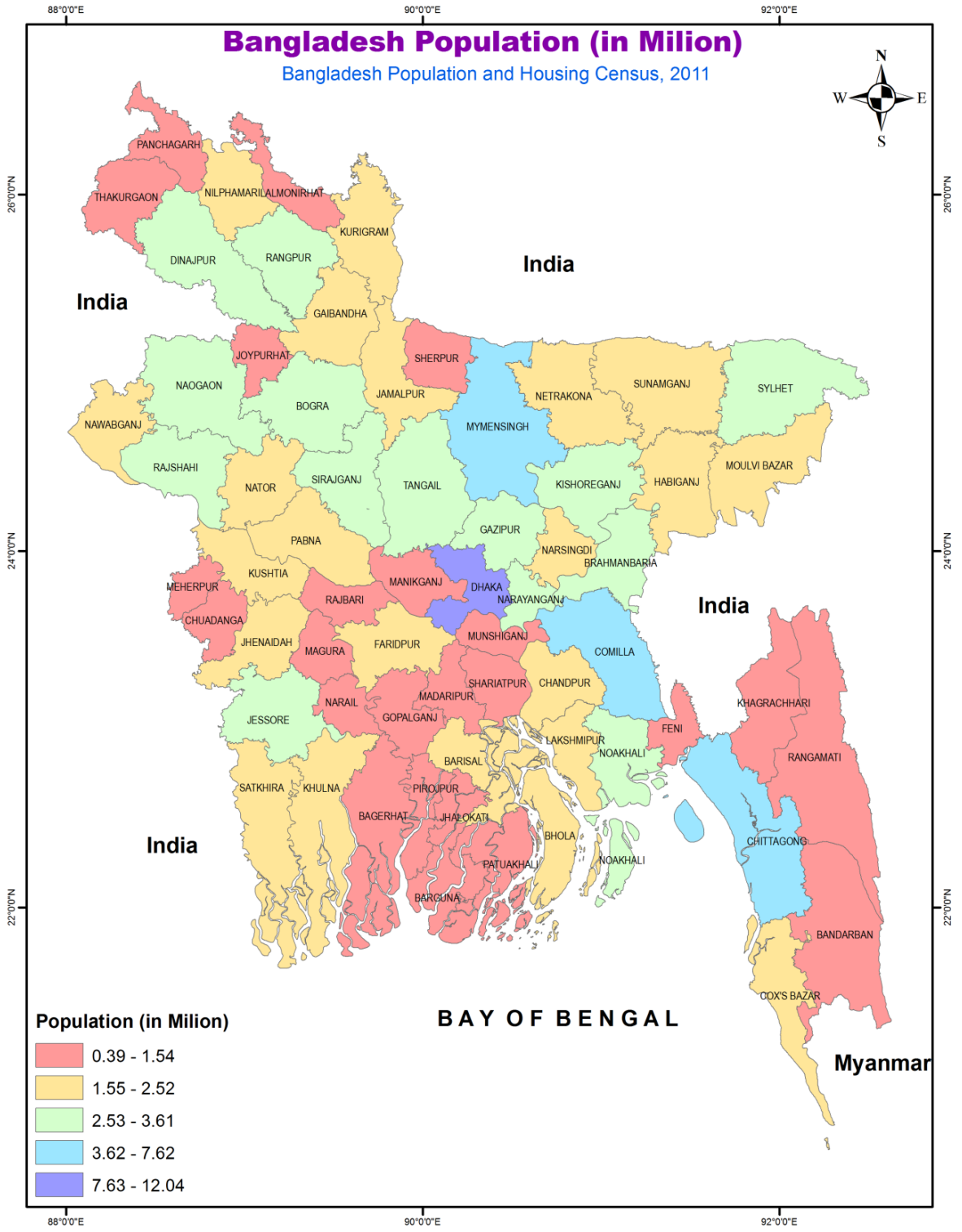
Table 2.1 indicates that Dhaka is the top most populated district as enumerated in 2011 and in 1991 and 2001 as well. During this period, 2nd to 5th positions are consistently occupied by Chittagong, Comilla, Mymensingh and Tangail respectively. The lowest populated district is Bandarban; Rangamati and Khagrachhari are respectively and 3rd lowest position in 2011 while in 2001 and 1991 Khagrachhari was in 2nd lowest and Rangamati was in 3rd lowest position.

Table 2.1: Population distribution with ranks, 1991, 2001 and 2011.

SL	District	Population (in million)			Ranks		
		1991	2001	2011	1991	2001	2011
1	Barguna	0.78	0.85	0.89	55	56	58
2	Barisal	2.21	2.35	2.32	11	17	23
3	Bhola	1.48	1.70	1.78	33	34	36
4	Jhalokati	0.67	0.69	0.68	59	60	60
5	Patuakhali	1.27	1.46	1.54	41	41	41
6	Pirojpur	1.06	1.10	1.11	48	51	53
7	Bandarban	0.23	0.30	0.39	64	64	64
8	Brahmanbaria	2.14	2.38	2.84	15	15	15
9	Chandpur	2.03	2.24	2.42	17	19	21
10	Chittagong	5.30	6.54	7.62	2	2	2
11	Comilla	4.03	4.59	5.39	3	3	3
12	Cox's Bazar	1.42	1.76	2.29	35	30	26
13	Feni	1.10	1.21	1.44	46	47	44
14	Khagrachhari	0.34	0.52	0.61	63	63	62
15	Lakshmipur	1.31	1.49	1.73	40	40	38
16	Noakhali	2.22	2.57	3.11	10	9	9
17	Rangamati	0.40	0.53	0.60	62	62	63
18	Dhaka	5.84	8.62	12.04	1	1	1
19	Faridpur	1.51	1.74	1.91	31	32	34
20	Gazipur	1.62	2.02	3.40	27	24	7
21	Gopalganj	1.06	1.15	1.17	49	48	49
22	Jamalpur	1.87	2.11	2.29	22	23	25
23	Kishoregonj	2.31	2.56	2.91	7	10	13
24	Madaripur	1.07	1.13	1.17	47	49	50
25	Manikganj	1.18	1.30	1.39	43	43	45
26	Munshiganj	1.19	1.29	1.45	42	44	43
27	Mymensingh	3.96	4.46	5.11	4	4	4

SL	District	Population (in million)			Ranks		
		1991	2001	2011	1991	2001	2011
28	Narayanganj	1.75	2.17	2.95	23	20	12
29	Narsingdi	1.65	1.90	2.22	26	27	28
30	Netrakona	1.73	1.97	2.23	24	26	27
31	Rajbari	0.84	0.95	1.05	53	54	54
32	Shariatpur	0.95	1.08	1.16	52	52	51
33	Sherpur	1.14	1.27	1.36	45	45	47
34	Tangail	3.00	3.26	3.61	5	5	5
35	Bagerhat	1.43	1.52	1.48	34	39	42
36	Chuadanga	0.81	1.01	1.13	54	53	52
37	Jessore	2.11	2.47	2.76	16	13	16
38	Jhenaidah	1.36	1.57	1.77	38	36	37
39	Khulna	2.01	2.36	2.32	18	16	24
40	Kushtia	1.50	1.74	1.95	32	33	32
41	Magura	0.72	0.82	0.92	57	58	56
42	Meherpur	0.49	0.59	0.66	61	61	61
43	Narail	0.66	0.69	0.72	60	59	59
44	Satkhira	1.60	1.85	1.99	29	28	31
45	Bogra	2.67	3.02	3.40	6	6	8
46	Joypurhat	0.77	0.86	0.91	56	55	57
47	Naogaon	2.15	2.39	2.60	14	14	17
48	Natore	1.39	1.52	1.71	36	38	39
49	Chapai Nawabganj	1.17	1.42	1.65	44	42	40
50	Pabna	1.92	2.16	2.52	20	21	19
51	Rajshahi	1.89	2.27	2.60	21	18	18
52	Sirajganj	2.26	2.67	3.10	8	7	10
53	Dinajpur	2.26	2.64	2.99	9	8	11
54	Gaibandha	1.95	2.13	2.38	19	22	22
55	Kurigram	1.60	1.76	2.07	28	29	30
56	Lalmonirhat	0.95	1.10	1.26	51	50	48
57	Nilphamari	1.35	1.56	1.83	39	37	35
58	Panchagarh	0.71	0.84	0.99	58	57	55
59	Rangpur	2.16	2.53	2.88	12	12	14
60	Thakurgaon	1.01	1.21	1.39	50	46	46
61	Habiganj	1.53	1.75	2.09	30	31	29
62	Maulvibazar	1.38	1.61	1.92	37	35	33
63	Sunamganj	1.71	1.99	2.47	25	25	20
64	Sylhet	2.15	2.55	3.43	13	11	6

Source: *Bangladesh population census and housing census 1991, 2001 and 2011*.



Map 2.1: Population distribution by district, 2011

From the map it is observed that the highest number of people live in Dhaka district and followed by Chittagong, Comilla and Mymensingh districts.

2.3 Population Distribution by Division

The population distribution by division and country is presented in Table 2.2 for the period 1901 – 2011. It is observed from the Table 2.2 that in Bangladesh, population increases sharply in recent decades; starting from 28.93 million the population of Bangladesh over 144 million in 2011. The high increasing pattern is grossly observed after seventies. According to census 2011, among divisions population of Dhaka division is the maximum (47.42 million) and that of Barisal is the minimum (8.33 million). It should be noted that the population of Dhaka division was always the maximum. The population of Dhaka division increased around one million per decades before 1961 census, but after 1961 census Dhaka division's population increased at a rate around six million per decades.

Table 2.2: Population distribution with ranks, 1901 - 2011.

Division /Country	Population (in Million)											
	1901	1911	1921	1931	1941	1951	1961	1974	1981	1991	2001	2011
Barisal	2.48	2.61	2.84	3.19	3.81	3.66	4.26	5.43	6.51	7.46	8.19	8.33
Chittagong	4.76	5.43	5.95	6.77	8.48	8.71	10.12	13.87	16.94	20.52	24.21	28.42
Dhaka	8.32	9.40	10.04	10.70	12.90	12.62	15.30	21.30	26.25	32.64	39.14	47.42
Khulna	3.80	3.82	3.85	3.99	4.57	4.67	5.80	8.79	10.64	12.65	14.66	15.69
Rajshahi	4.08	4.36	4.48	4.61	5.10	5.08	6.42	9.41	11.44	14.22	16.37	18.48
Rangpur	3.45	3.69	3.79	3.90	4.31	4.30	5.43	7.96	9.68	12.03	13.83	15.79
Sylhet	2.03	2.25	2.30	2.45	2.83	3.03	3.52	4.72	5.65	6.78	7.93	9.91
Bangladesh	28.93	31.56	33.25	35.60	42.00	42.06	50.84	71.48	87.12	106.31	124.33	144.04

Source: *Bangladesh population census and housing census 1901 to 2011*.

The ranks of the population size for the same period in ascending order, that is, the region with the largest population is assigned rank 1, the next is ranked 2, and so on is presented in Fig. 2.2. The ranks are constant for all seven divisions from 1901-2001. Little variations are observed in divisions Barisal, Sylhet, Khulna and Rangpur in 2011. Dhaka is consistently top ranked populated division, followed by Chittagong and Rajshahi.

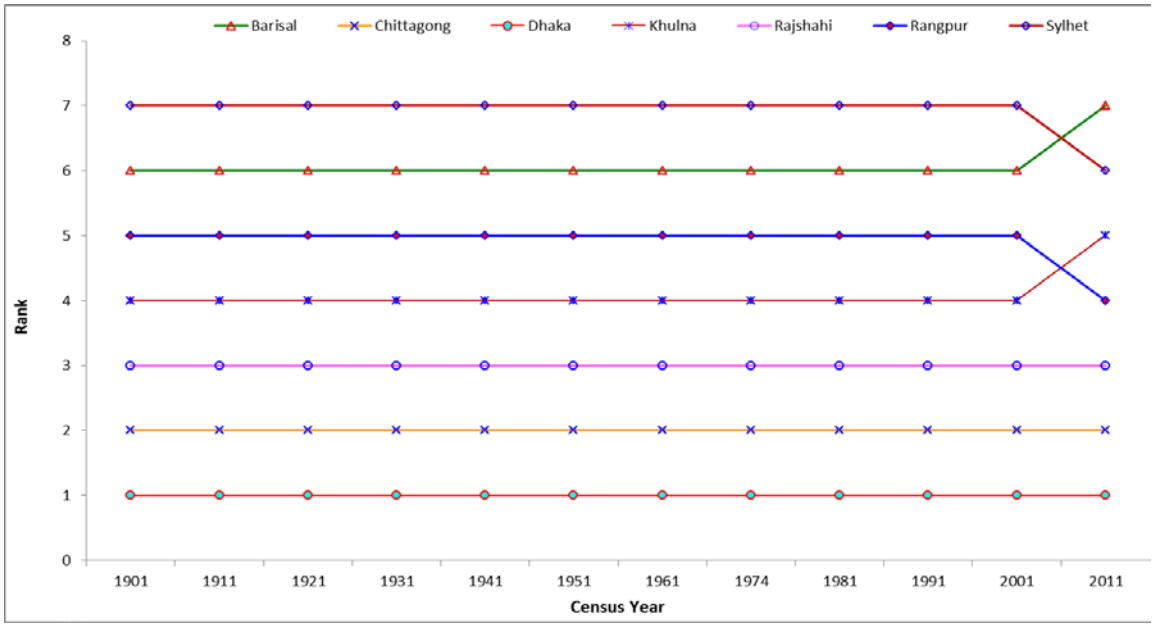


Fig. 2.2: Divisional position based on population size, 1901 – 2011.

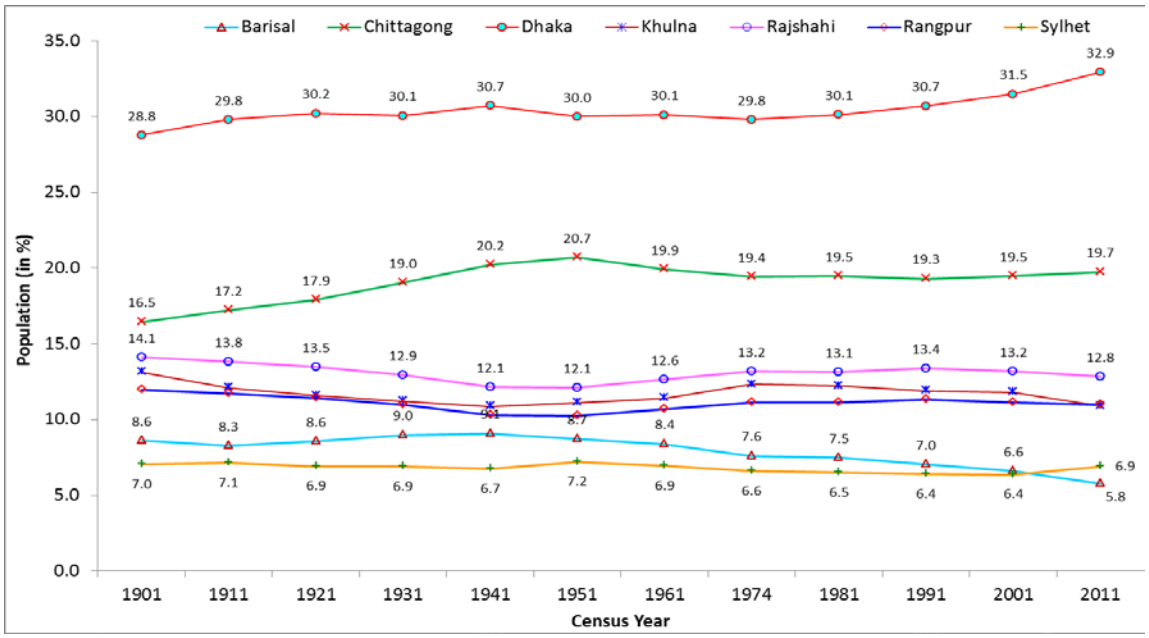


Fig. 2.3: Population distribution by division in percent, 1901 – 2011.

Population distribution by division from 1901 to 2011 is presented in Fig. 2.3. In 1901 population of Barisal division was 8.59%, in Chittagong division 16.45%, Dhaka division 28.77%, Khulna division 13.13%, Rajshahi division 14.11%, Rangpur division 11.93% and in Sylhet division it was 7.02%. In 2011, Barisal population is 5.78%, Chittagong 19.73%, Dhaka 32.92%, Khulna 10.89%, Rajshahi 12.83%, Rangpur 10.96% and in Sylhet division it is 6.88%. The top most share of population belongs to Dhaka division over the century; the lowest share of population belongs to Barisal (in 2011) or Sylhet (in 1901 to 2001) divisions.

Table 2.3: Population distribution by division, sex and residence, 2011

		Total		Male		Female	
Bangladesh		144043697		72109796		71933901	
	Rural	110480514	(76.7)	54580004	(49.4)	55900510	(50.6)
	Urban	33563183	(23.3)	17529792	(52.2)	16033391	(47.8)
Barisal		8325666		4089508		4236158	
	Rural	6963723	(83.6)	3401166	(48.8)	3562557	(51.2)
	Urban	1361943	(16.4)	688342	(50.5)	673601	(49.5)
Chittagong		28423019		13933314		14489705	
	Rural	21517539	(75.7)	10389913	(48.3)	11127626	(51.7)
	Urban	6905480	(24.3)	3543401	(51.3)	3362079	(48.7)
Dhaka		47424418		24172317		23252101	
	Rural	31839583	(67.1)	15825650	(49.7)	16013933	(50.3)
	Urban	15584835	(32.9)	8346667	(53.6)	7238168	(46.4)
Khulna		15687759		7842533		7845226	
	Rural	12865638	(82)	6404666	(49.8)	6460972	(50.2)
	Urban	2822121	(18.0)	1437867	(50.9)	1384254	(49.1)
Rajshahi		18484858		9256910		9227948	
	Rural	15167836	(82.1)	7569690	(49.9)	7598146	(50.1)
	Urban	3317022	(17.9)	1687220	(50.9)	1629802	(49.1)
Rangpur		15787758		7881824		7905934	
	Rural	13678687	(86.6)	6811805	(49.8)	6866882	(50.2)
	Urban	2109071	(13.4)	1070019	(50.7)	1039052	(49.3)
Sylhet		9910219		4933390		4976829	
	Rural	8447508	(85.2)	4177114	(49.4)	4270394	(50.6)
	Urban	1462711	(14.8)	756276	(51.7)	706435	(48.3)

Source: *Bangladesh population census and housing census 2011*.

Population distribution by division, sex and residence is shown in Table 2.3. 76.7% population of Bangladesh lives in rural area out of which 49.4% male and 50.6% female. Out of 23.3% urban population 52.2% are male and 47.8% are female.

Proportion of urban population is the maximum in Dhaka division 32.9%. In Dhaka, urban male population is 53.6% and female is 46.4% and rural male population is 49.7% and female is 50.3%. Proportion of urban population is the minimum in Rangpur division 13.4%. In Rangpur, urban male population is 50.7% and female is 49.3% and rural male population is 49.8% and female is 50.2%. In general the proportion of male is higher than female in urban area while the reverse is true in rural area.

2.4 Population Growth

Average annual growth rate is displayed in Fig. 2.4. At the beginning of 20th century, the annual average growth of Bangladesh was below 1.0. After a small decrease in the 2nd decade, the population growth rate gradually increases until 4th decade. We then observe a sharp decrease in 5th decade, which is the lowest growth rate of this century. In next two decades the annual average growth increases sharply and stood up to the highest growth in the 7th decade. Bangladesh experiences a slowly decreasing population growth rate in the last four decades and in beginning of 21st century. The annual average growth rate is 1.47 in 2011.

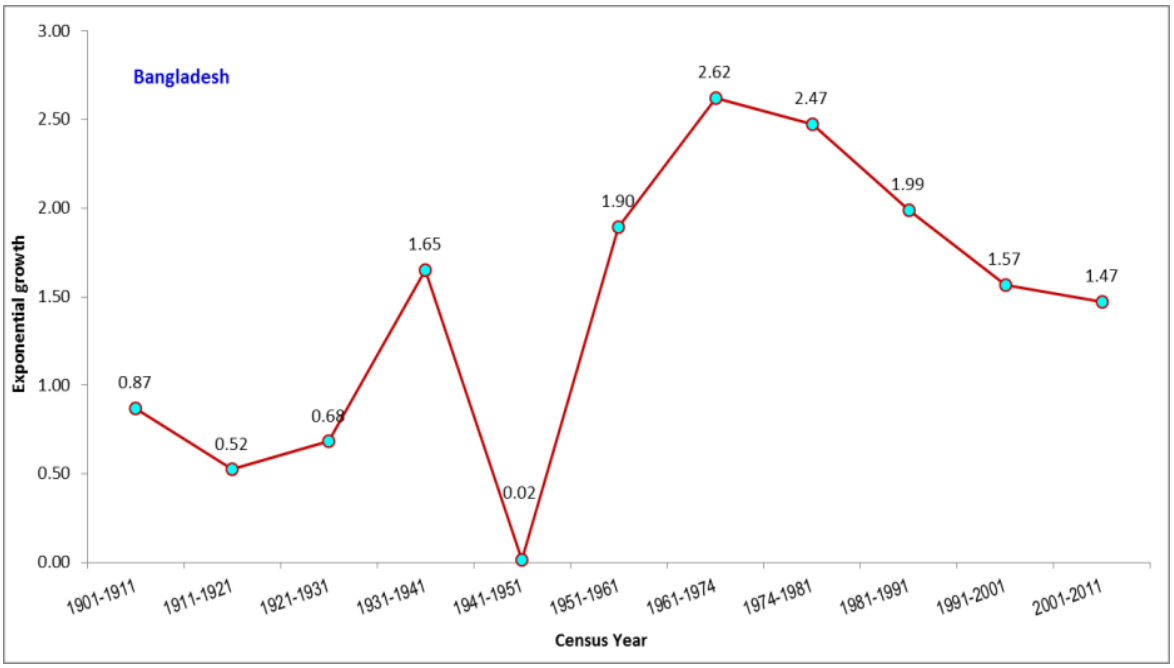


Fig. 2.4: Average annual population growth rate (Exponential), 1901 - 2011

Population Growth by Division

At the beginning of 20th century, the annual average growths of Barisal, Khulna, Rajshahi and Rangpur division are below 1.0, while the growth rates of Chittagong, Dhaka and Sylhet were above 1.0; the growth rate in this period was maximum in Chittagong division (1.32) and minimum in Khulna division (0.05) (Table 2.4). The trends of growth rate of all the divisions were similar to the national growth rate. However, in the 5th decade, the growth rate is negative in Barisal, Dhaka, Rajshahi and Rangpur divisions. In the 7th decade, the growth rate of Khulna division was highest (3.21).

In 2011, the annual average growths of Barisal and Khulna divisions are below 1.0, while it is above 1.0 in rest of the divisions. The current growth rate is maximum in Sylhet division (2.32) and minimum in Barisal division (0.17).

Table 2.4: Average annual population growth (Exponential), 1901 - 2011

Decades	Barisal	Chittagong	Dhaka	Khulna	Rajshahi	Rangpur	Sylhet
1901-1911	0.50	1.32	1.22	0.05	0.66	0.66	1.01
1911-1921	0.85	0.92	0.66	0.08	0.27	0.27	0.23
1921-1931	1.16	1.29	0.63	0.36	0.28	0.28	0.62
1931-1941	1.76	2.25	1.87	1.35	1.01	1.01	1.46
1941-1951	-0.41	0.27	-0.22	0.23	-0.03	-0.03	0.69
1951-1961	1.53	1.50	1.93	2.16	2.33	2.33	1.48
1961-1974	1.87	2.43	2.54	3.21	2.94	2.94	2.26
1974-1981	2.26	2.51	2.61	2.38	2.45	2.45	2.26
1981-1991	1.37	1.91	2.18	1.73	2.17	2.17	1.82
1991-2001	0.92	1.66	1.82	1.47	1.41	1.39	1.56
2001-2011	0.17	1.60	1.92	0.68	1.21	1.32	2.23

Source: *Bangladesh population census and housing census 1901 to 2011*.

2.5 Population Density

Population density is measured by the number of persons per square kilometer of land area, excluding area occupied by water and forest. It is an effective index to measure the pressure of population on land. While land areas remain constant, the population density increases with the growth of the population.

It is observed from the following table that at the national level, the density of population per square kilometer is 976 in 2011 which was 839 in 2001. It is seen from the same table that among divisions, the highest density is observed in Dhaka division (1521) followed by Rajshahi division (1018), Rangpur division (975), Chittagong division (838), Sylhet division (784), Khulna division (704) and Barisal division (630).

Table 2.5: Population density by division, 1901 to 2011

Census	Barisal	Chittagong	Dhaka	Khulna	Rajshahi	Rangpur	Sylhet	Bangladesh
1901	187	146	267	171	218	213	161	196
1911	197	165	303	171	233	228	177	214
1921	214	178	323	173	240	234	182	225
1931	165	199	345	179	244	241	195	241
1941	287	244	415	205	273	267	224	285
1951	274	253	404	209	271	266	243	284
1961	321	294	491	261	343	335	285	345
1974	408	411	685	394	502	492	378	484
1981	490	502	843	478	612	598	449	590
1991	561	608	1050	570	759	744	537	720
2001	613	714	1253	656	872	855	627	839
2011	630	838	1521	704	1018	975	784	976

Source: *Bangladesh population census and housing census 1901 to 2011*.

The density of Bangladesh at the beginning of the century was 196 and in 1974, it was 484. The highest population density in 1901 was 267 in Dhaka division and the lowest was 146 in Chittagong division.

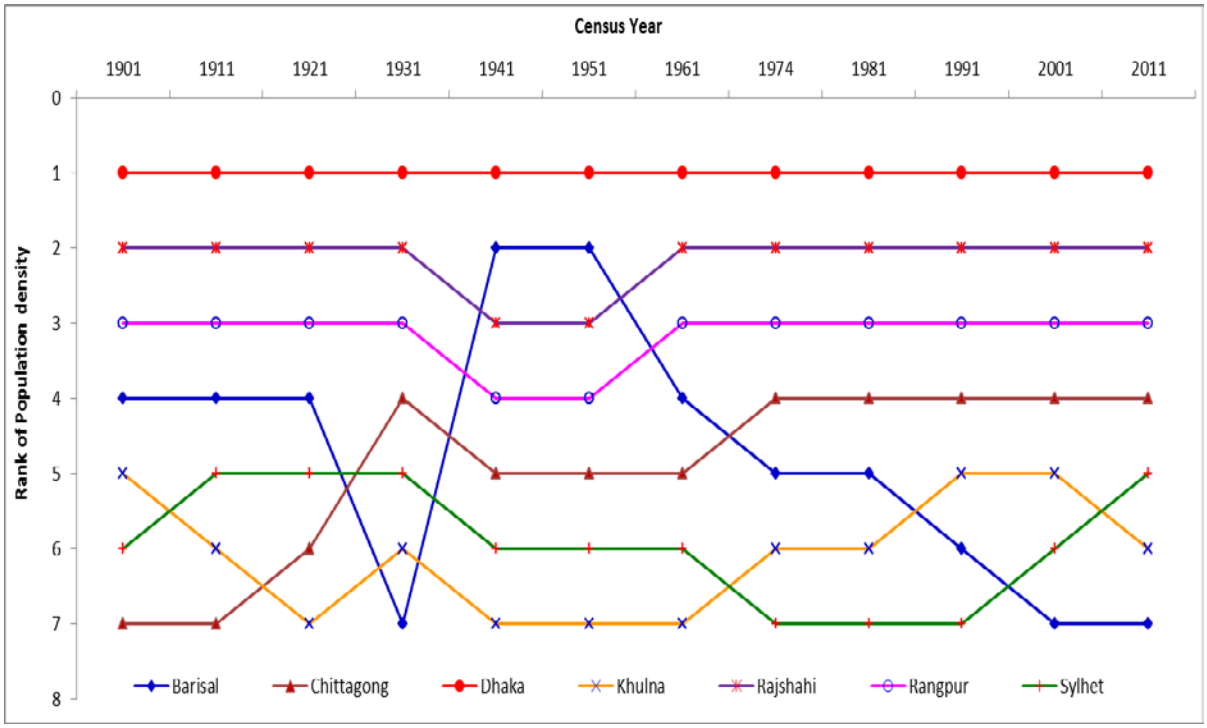
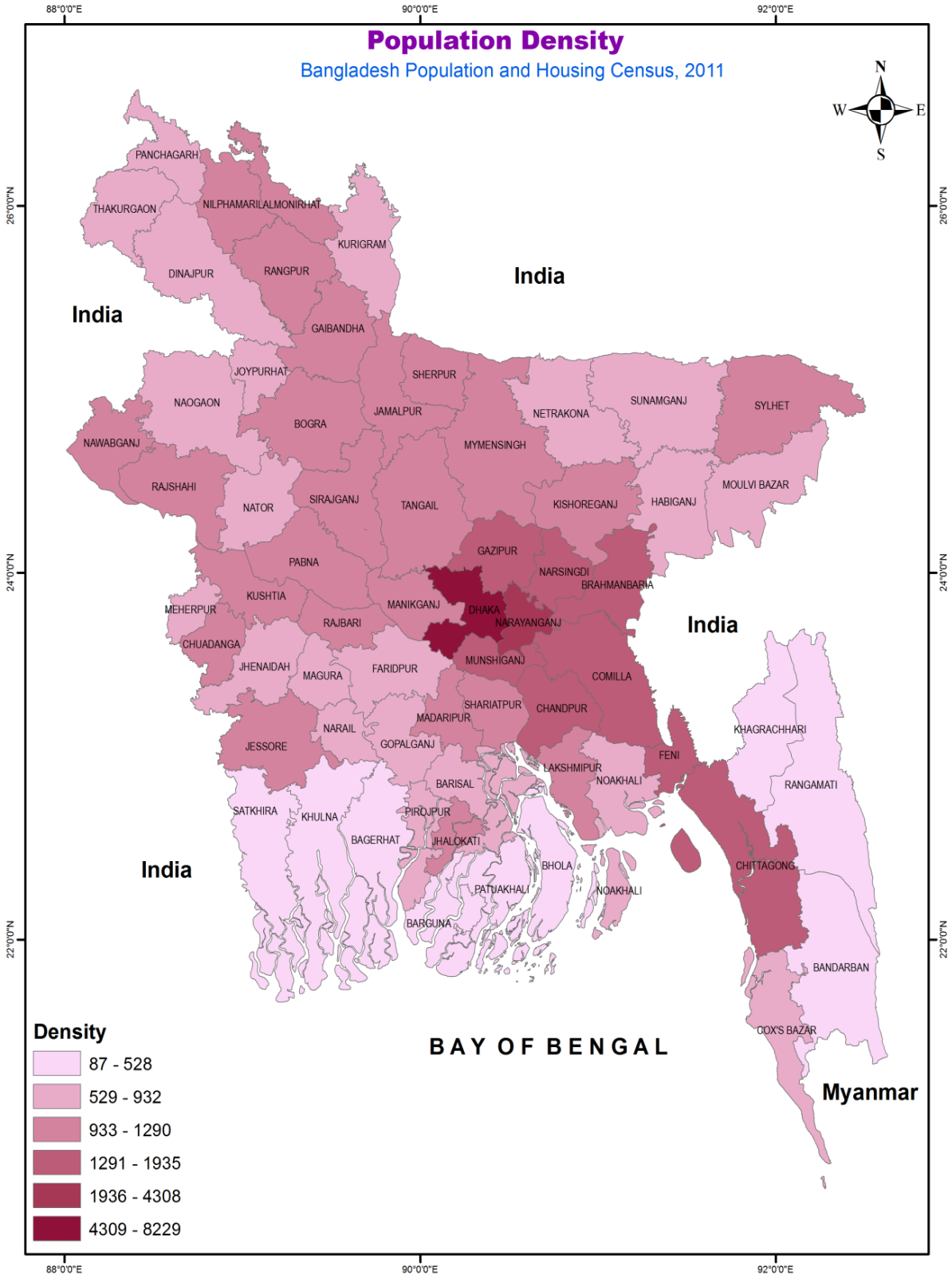


Fig. 2.5: Rank (descending order) of population density by Division, 1901-2011.

Fig. 2.5 shows the ranks of population density by division for all the censuses from 1901 to 2011. Dhaka emerged the top most rank in population density and it continues until 2011 census. The 2nd and 3rd ranks occupied by Rajshahi and Rangpur divisions during 1901-2011 except 5th and 6th decades. Rest of the divisions carry almost same pattern in this period. Maximum fluctuation is observed in Barisal division.

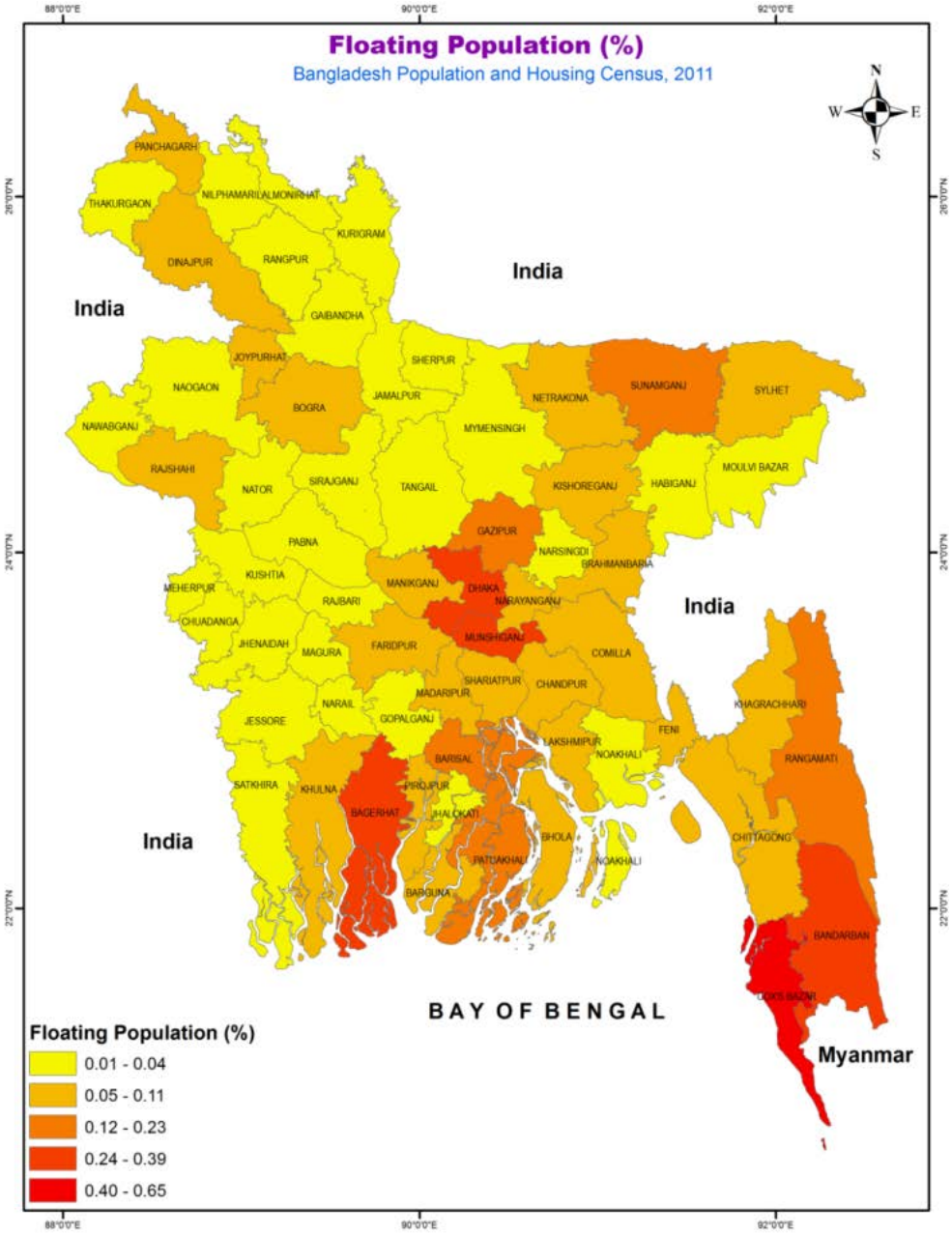
The population density of Bangladesh by district is presented in Map 2.2. Among the district of the country, the highest density was seen Dhaka district 8229 followed by Narayanganj 4308 and Narsingdi 1934. The lowest population density was observed in the hilly district Bandarban 87 followed by Rangamati 97 and Khagrachhari 223. It may be mentioned that the district of the country has been ranked according to their density per square kilometer.



Map 2.2: Population density by district, 2011

2.6 Distribution of Floating Population

A group of people who frequently move from place to place is considered as floating population. Floating population is a terminology used to describe a group of people who reside in a given population for a certain amount of time and for various reasons, but are not generally considered part of the official census count.



Map 2.3: Distribution of floating population by district, 2011

Distribution of floating population by district is shown in Map 2.3. It is evident from the map that the maximum floating population is in Cox's Bazar and next is in Dhaka, Munshigonj, Bagerhat and so on.

Table 2.6: Distribution of floating population by division, sex and residence, 2011

Country/Division	Residence	Floating Population					
		Total	Percent	Male	Percent	Female	Percent
Bangladesh		147674	0.10	125522	85.00	22152	15.00
	Rural	47202	32.0	40459	85.7	6743	14.3
	Urban	100472	68.0	85063	84.7	15409	15.3
Barisal		9779	0.12	8567	87.61	1212	12.39
	Rural	5530	56.5	4965	89.78	565	10.22
	Urban	4249	43.5	3602	84.77	647	15.23
Chittagong		31882	0.11	28114	88.18	3768	11.82
	Rural	7696	24.1	6446	83.76	1250	16.24
	Urban	24186	75.9	21668	89.59	2518	10.41
Dhaka		73454	0.15	62304	84.82	11150	15.18
	Rural	20201	27.5	17316	85.72	2885	14.28
	Urban	53253	72.5	44988	84.48	8265	15.52
Khulna		9236	0.06	7842	84.91	1394	15.09
	Rural	3825	41.4	3404	88.99	421	11.01
	Urban	5411	58.6	4438	82.02	973	17.98
Rajshahi		8719	0.05	6546	75.08	2173	24.92
	Rural	3560	40.8	2928	82.25	632	17.75
	Urban	5159	59.2	3618	70.13	1541	29.87
Rangpur		6315	0.04	5020	79.49	1295	20.51
	Rural	1921	30.4	1638	85.27	283	14.73
	Urban	4394	69.6	3382	76.97	1012	23.03
Sylhet		8289	0.08	7129	86.01	1160	13.99
	Rural	4469	53.9	3762	84.18	707	15.82
	Urban	3820	46.1	3367	88.14	453	11.86

Source: *Bangladesh population census and housing census 2011*.

Distribution of floating population by division, sex and residence is given in Table 2.6.The size of the floating population of Bangladesh is 147674 which is 0.1% of the total population. Urban floating population size is 100472 (68.0%) and rural floating 47202 (32.0%). Floating male population is 125522 (85.0%) and female population is 22152 (15.0%). Maximum floating people is in Dhaka division which is 73454 followed by Chittagong 31882 and minimum in Rangpur division 6315.

Table 2.7: Distribution of floating population and density with rank by district, 2011

SL	District	Population				Rank	
		Density	Floating	Percent (district)	Percent (national)	Density	Floating
1	Barguna	488	986	0.11	0.67	59	32
2	Barisal	835	3244	0.14	2.20	46	9
3	Bhola	522	1106	0.06	0.75	57	29
4	Jhalokati	966	223	0.03	0.15	32	61
5	Patuakhali	477	3553	0.23	2.41	60	8
6	Pirojpur	871	667	0.06	0.45	43	43
7	Bandarban	87	1206	0.31	0.82	64	28
8	Brahmanbaria	1510	1341	0.05	0.91	6	23
9	Chandpur	1468	1496	0.06	1.01	7	20
10	Chittagong	1442	4951	0.07	3.35	9	6
11	Comilla	1712	2591	0.05	1.75	5	11
12	Cox's Bazar	919	14906	0.65	10.09	37	2
13	Feni	1451	890	0.06	0.60	8	36
14	Khagrachhari	223	597	0.10	0.40	62	46
15	Lakshmipur	1200	1209	0.07	0.82	13	27
16	Noakhali	843	1343	0.04	0.91	45	22
17	Rangamati	97	1352	0.23	0.92	63	21
18	Dhaka	8229	47249	0.39	32.00	1	1
19	Faridpur	932	1818	0.10	1.23	35	14
20	Gazipur	1884	5606	0.16	3.80	4	4
21	Gopalganj	798	343	0.03	0.23	47	54
22	Jamalpur	1084	1026	0.04	0.69	19	31
23	Kishoregonj	1083	1589	0.05	1.08	20	18
24	Madaripur	1036	603	0.05	0.41	25	45
25	Manikganj	1007	967	0.07	0.65	27	33
26	Munshiganj	1439	5679	0.39	3.85	10	3
27	Mymensingh	1163	2137	0.04	1.45	17	13
28	Narayanganj	4308	1668	0.06	1.13	2	16
29	Narsingdi	1934	846	0.04	0.57	3	37
30	Netrakona	798	1044	0.05	0.71	48	30
31	Rajbari	961	306	0.03	0.21	34	57
32	Shariatpur	984	817	0.07	0.55	30	39

SL	District	Population				Rank	
		Density	Floating	Percent (district)	Percent (national)	Density	Floating
33	Sherpur	995	252	0.02	0.17	28	60
34	Tangail	1056	1504	0.04	1.02	24	19
35	Bagerhat	373	4420	0.30	2.99	61	7
36	Chuadanga	962	211	0.02	0.14	33	62
37	Jessore	1060	843	0.03	0.57	23	38
38	Jhenaidah	902	696	0.04	0.47	39	42
39	Khulna	528	1658	0.07	1.12	56	17
40	Kushtia	1210	389	0.02	0.26	12	52
41	Magura	884	276	0.03	0.19	41	59
42	Meherpur	872	172	0.03	0.12	42	64
43	Narail	746	178	0.02	0.12	52	63
44	Satkhira	520	393	0.02	0.27	58	51
45	Bogra	1173	2743	0.08	1.86	16	10
46	Joypurhat	903	892	0.10	0.60	38	35
47	Naogaon	757	965	0.04	0.65	51	34
48	Natore	898	759	0.04	0.51	40	40
49	Chapai Nawabganj	968	337	0.02	0.23	31	55
50	Pabna	1062	486	0.02	0.33	22	50
51	Rajshahi	1070	1307	0.05	0.89	21	24
52	Sirajganj	1290	1230	0.04	0.83	11	25
53	Dinajpur	868	2504	0.08	1.70	44	12
54	Gaibandha	1125	355	0.01	0.24	18	53
55	Kurigram	922	278	0.01	0.19	36	58
56	Lalmonirhat	1007	508	0.04	0.34	26	49
57	Nilphamari	1186	589	0.03	0.40	15	47
58	Panchagarh	703	531	0.05	0.36	53	48
59	Rangpur	1200	1228	0.04	0.83	14	26
60	Thakurgaon	780	322	0.02	0.22	50	56
61	Habiganj	792	727	0.03	0.49	49	41
62	Maulvibazar	686	636	0.03	0.43	54	44
63	Sunamganj	659	5204	0.21	3.52	55	5
64	Sylhet	995	1722	0.05	1.17	29	15

Source: *Bangladesh population census and housing census 1901 to 2011.*

Spearman Rank Correlation between rank of population density and floating population
$\rho = 0.203$, $t = 1.636$, p-value = 0.1049

From Table 2.7, percent of floating population respect to district total is highest in Cox's Bazar (0.65%) followed by Munshiganj and Dhaka (0.39%); while percent of floating population respect to national total is highest in Dhaka (32.0%) followed by Cox's Bazar (10.09%), Munshiganj (3.85%) and Gazipur (3.80%). It is interesting to note that among the

districts with higher proportion of floating population only densities of Dhaka and Gazipur are higher. The Spearman Rank Correlation between floating population and density is statistically insignificant (ρ = 0.203, t = 1.636, p-value = 0.1049) suggesting no relation between floating population and density.

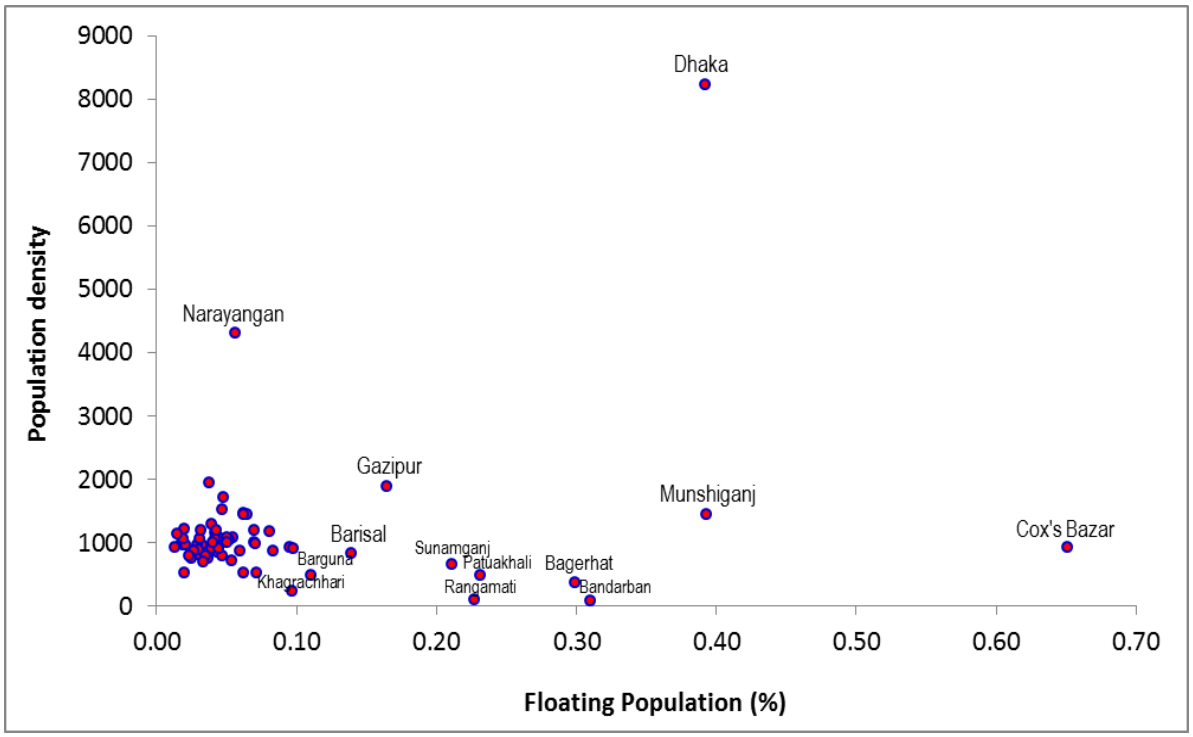


Fig 2.6: Scatter plot of floating population and density, 2011.

Fig. 2.6 shows that density of Cox's Bazar and Munshiganj districts are moderate but proportions of floating population in these districts are higher. Again Bandarban is the lowest densely populated district but its proportion of floating population is comparatively higher. On the other hand, Narayanganj is one of the highly densely populated districts but proportion of floating population is comparatively lower. However, both floating population and density of Dhaka are comparatively higher.

3. PATTERN, TREND AND DIFFERENTIAL OF INTERNAL MIGRATION

3.1 Introduction

The movement of people within a country for the purpose of establishing a new residence results urbanization. Migration, on the other hand, is a socioeconomic phenomenon affected by many complex mechanisms involving social, psychological, economic, political, institutional, and other determinants. Migration affects the size, structure and growth of populations. Migration also affects the size of the labor force, the distribution of labor force by skill, education, industry, and occupation, employment status, savings, investment, and productivity. In the process, migration leads to social and psychological effects on both origins and destinations. It involves movement from one residence to another. Migration can be internal (within national or territorial boundaries) or international (across international borders). A migrant who travels from an origin to a destination is an immigrant or in-migrant with respect to the area of destination, and an emigrant or out-migrant with respect to the place of origin; in each case researcher tend to use the former term for international migration and the latter for internal migration.

A study of migration is of key importance in social science, particularly in population studies. The importance emerges not only from the movement of people between places but also from its influence on the lives of individuals and urban growth. Broadly migration is a relocation of residence of various duration and various natures. However, generally, rural-urban movement dominates the domain of research and planning as its role in changing the lives of migrant families both at the place of origin and destination. In Bangladesh, adequate attention to migration aspects has not given which may be due to lack of national level data. This monograph utilizes census data of Bangladesh to focus on the differentials and determinants of internal migration, and hence identifies the factors influencing internal migration. The differentials limit to (1) selectivity of migrants, that is, what kind of persons tending to be disproportionately selected for migration in relation to age, marital status, education, and occupation of the migrants; (2) destination of migrants and (3) factors active for migration.

3.2 Internal Migration

In Bangladesh, an internal migrant is defined as someone who changes his or her region of usual residence, at least for the purpose to stay, so that the region of destination becomes the region of usual residence. On the basis of the responses to place-of-birth question in the 2011 census questionnaires, the streams of migration are put into categories such as:

- Migrants or persons who were enumerated in a place different from the place where they were born; and
- Non-migrants, defined as persons who were enumerated in a place same as the place where they were born

Inter-divisional migration

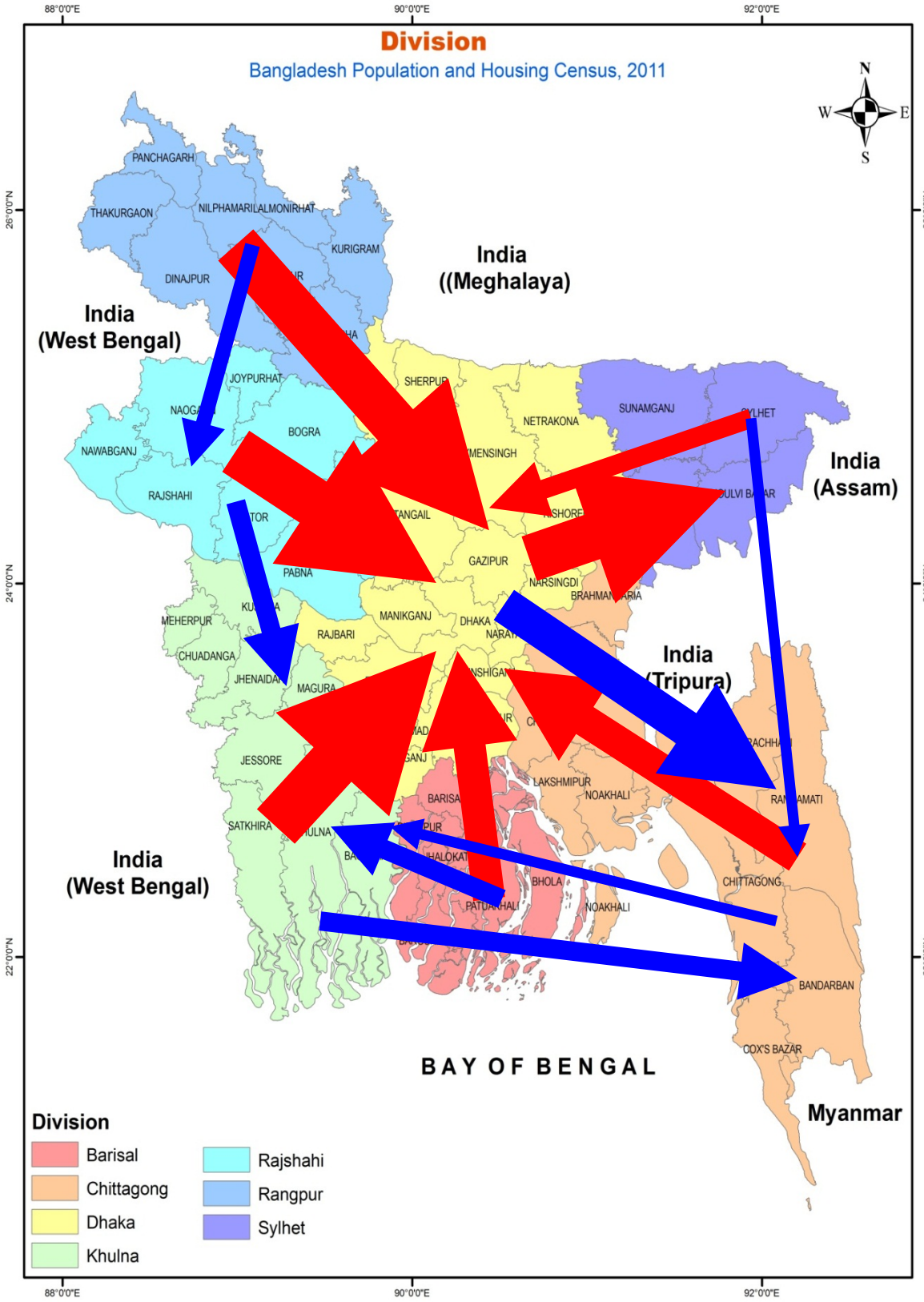
Bivariate distribution of birth place and current residence of lifetime migrants by division is presented in Table 3.1 and Map 3.1. First row of the table indicates that 7.62% of the total population of Bangladesh born in Barisal out of which 3.24 percent migrated to other divisions (largest 1.62% in Dhaka and second largest 1.09% in Khulna division). First column represents that 5.85% live in Barisal division of which 1.46% migrated in Barisal from other six divisions (0.67% from Khulna and 0.44% Dhaka division).

Out migration of Dhaka division is 9.0% and 16.42% is in migration. In Chittagong, Dhaka and Sylhet division in-migration is more than out-migration results rapid population growth. On the other hand remaining four division out-migration is more than in-migration results decrease of population. The highlighted figures in the diagonal cells of the table give the percentage of non- migrants for each division in 2011.

Table 3.1: Bivariate distribution of birth place and current residence of lifetime migrants by division, 2011.

Birth division	Current (enumeration) division							Total
	Barisal	Chittagong	Dhaka	Khulna	Rajshahi	Rangpur	Sylhet	
Barisal	4.39	0.48	1.62	1.09	0.03	0.00	0.02	7.62
Chittagong	0.12	4.25	1.95	0.55	0.09	0.07	0.27	7.30
Dhaka	0.44	2.27	22.24	0.82	0.92	1.34	3.20	31.24
Khulna	0.67	1.12	5.08	12.96	0.93	0.29	0.22	21.27
Rajshahi	0.12	0.46	3.59	1.12	9.40	0.82	0.26	15.76
Rangpur	0.04	0.76	3.13	0.17	0.79	4.08	0.20	9.17
Sylhet	0.07	0.64	1.07	0.05	0.03	0.04	5.75	7.65
Total	5.85	9.98	38.66	16.75	12.18	6.63	9.94	100.00

Source: *Bangladesh population census and housing census 2011*.



Map 3.1: Inter-divisional migration flow

The percentage distribution of figures in Table 3.1 is further categorized into two, namely:

- percentage distribution of in-migration by division, and
- percentage distribution of out-migration by division

Percentage distribution of in-migration by division: Distribution of in-migrants by division is presented in Table 3.2. First column of the table indicates that 75.06% of those people who live in Barisal division (5.85%, see Table 3.1) is native born and the remaining people migrated from other divisions (11.41% from Khulna and 7.58% from Dhaka). Third column of the table indicates that 57.51% people of Dhaka native born and the remaining people migrated from other divisions (13.13% from Khulna, 9.29% from Rajshahi, 8.09% from Rangpur and 5.04% from Chittagong). In-migration of Chittagong division is maximum and minimum in Khulna division and the proportion of migrants is less than 50.0% in the remaining divisions.

Table 3.2: Distribution of in-migration by division, 2011 (lifetime migration)

Birth division	Current (enumeration) division						
	Barisal	Chittagong	Dhaka	Khulna	Rajshahi	Rangpur	Sylhet
Barisal	75.06	4.76	4.18	6.50	0.21	0.00	0.20
Chittagong	2.07	42.60	5.04	3.27	0.76	1.00	2.72
Dhaka	7.58	22.76	57.51	4.91	7.57	20.23	32.25
Khulna	11.41	11.25	13.13	77.35	7.64	4.30	2.26
Rajshahi	1.97	4.61	9.29	6.68	77.16	12.33	2.61
Rangpur	0.64	7.61	8.09	1.01	6.45	61.55	2.06
Sylhet	1.28	6.40	2.76	0.27	0.21	0.61	57.90
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: *Bangladesh population census and housing census 2011*.

Table 3.3: Percent distribution of migrants by birth division, 2011 (lifetime migration)

Birth division	Current division							Total
	Barisal	Chittagong	Dhaka	Khulna	Rajshahi	Rangpur	Sylhet	
Barisal	57.67	6.24	21.20	14.29	0.34	0.00	0.26	100
Chittagong	1.66	58.26	26.71	7.50	1.26	0.91	3.71	100
Dhaka	1.42	7.27	71.17	2.64	2.95	4.29	10.26	100
Khulna	3.14	5.28	23.87	60.94	4.37	1.34	1.06	100
Rajshahi	0.73	2.92	22.78	7.11	59.63	5.19	1.64	100
Rangpur	0.41	8.29	34.13	1.85	8.57	44.52	2.23	100
Sylhet	0.98	8.36	13.97	0.60	0.34	0.53	75.23	100

Source: *Bangladesh population census and housing census 2011*.

Percentage distribution of out-migration by division: Distribution of out-migrants by division is presented in Table 3.3. First row of the table indicates that 57.67% of those people who born in Barisal division (7.62%, see Table 3.1) is currently living in Barisal and the remaining people migrated to other divisions from Barisal (21.2% in Dhaka and 14.29% in Khulna, and 6.24% in Chittagong division) from Dhaka). Third row of the table indicates that 71.17% people of Dhaka native born and the remaining people migrated to other divisions (10.26% in Sylhet, 7.27% in Chittagong and 4.29% in Rangpur). Out-migration of Rangpur division is maximum and minimum in Dhaka division and the proportion of migrants is less than 50.0% in the remaining divisions.

More citizens from Rangpur, Barisal, Chittagong and Rajshahi divisions were enumerated outside of their areas. Non-migrants in those divisions comprise 44.52, 57.67, 58.26 and 59.53% respectively compared to 75.23% in Sylhet, 71.17% in Dhaka and 60.947% in Khulna division.

As expected, Dhaka division, being the capital city, seems to be the more favorite area and has become migration destination area in the country. For instance, 34.13% of Rangpur and 26.71% of Chittagong divisions migrated to Dhaka followed by Khulna 23.87%, Rajshahi 22.78% and Barisal 21.20%. Only Sylhet division seems to have a small proportion of their citizens residing in Dhaka division. The migration to Dhaka division is not a strange phenomenon because the concentration of economic and political institutions in Dhaka attracted migrants from other regions. It is interesting to note that people born in Sylhet division are less likely to migrate compared to others.

Migration: less than 5 years

Bivariate distribution of birth place and current residence of less than 5 years migrants by division is given in Table 3.4. First row of the table indicates that 7.01% of the total population of Bangladesh born in Barisal out of which 3.10% migrated to other divisions (largest 1.93 % in Dhaka and second largest 0.77% percent in Chittagong division).

Table 3.4: Bivariate distribution of birth place and current residence by division, 2011 (migration less than 5 years).

Birth division	Current division							Total
	Barisal	Chittagong	Dhaka	Khulna	Rajshahi	Rangpur	Sylhet	
Barisal	3.91	0.30	1.93	0.77	0.04	0.00	0.05	7.01
Chittagong	0.13	3.84	2.39	0.27	0.05	0.06	0.21	6.96
Dhaka	0.43	1.78	25.80	0.90	0.85	0.40	2.93	33.09
Khulna	0.80	1.57	6.00	9.27	1.05	0.29	0.18	19.15
Rajshahi	0.19	0.46	5.37	1.06	8.17	0.63	0.43	16.32
Rangpur	0.03	0.48	5.04	0.31	0.89	3.12	0.38	10.25
Sylhet	0.08	0.49	1.43	0.08	0.04	0.04	5.05	7.22
Total	5.55	8.94	47.96	12.66	11.10	4.55	9.24	100.00

Source: *Bangladesh population census and housing census 2011*.

First column represents that 5.55% live in Barisal division of which in migration to 1.66% migrated to Barisal from other six divisions (0.80% from Khulna and 0.43 percent Dhaka division). Out migration of Dhaka division is 7.30% and 22.17% is in migration. In Chittagong, Dhaka and Sylhet division in-migration is more than out-migration results rapid population growth. On the other hand remaining four division out-migration is more than in-migration results decrease of population. The highlighted figures in the diagonal cells of the table give the percentage of non- migrants for each division in 2011.

Table 3.5: Distribution of in-migration by division, 2011 (migration less than 5 years)

Birth division	Current (enumeration) division						
	Barisal	Chittagong	Dhaka	Khulna	Rajshahi	Rangpur	Sylhet
Barisal	70.37	3.40	4.03	6.07	0.40	0.00	0.58
Chittagong	2.25	43.00	4.98	2.12	0.48	1.38	2.32
Dhaka	7.73	19.90	53.78	7.13	7.66	8.84	31.75
Khulna	14.33	17.60	12.51	73.23	9.43	6.29	1.94
Rajshahi	3.38	5.20	11.20	8.33	73.65	13.95	4.65
Rangpur	0.48	5.40	10.51	2.47	7.98	68.57	4.07
Sylhet	1.45	5.50	2.98	0.64	0.40	0.98	54.70
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: *Bangladesh population census and housing census 2011*.

Percentage distribution of in-migration by division: Distribution of in-migrants by division is presented in Table 3.5. First column of the table indicates that 70.37% people of Barisal division is native born and the remaining people migrated from other divisions (14.03% from Khulna and 7.73% from Dhaka). Third column of the table indicates that 53.78% people of Dhaka native born and the remaining people migrated from other divisions (12.51% from Khulna, 11.20% from Rajshahi, 10.51% from Rangpur and 4.98% from Chittagong). In-migration of Chittagong division is maximum and minimum in Rajshahi division and the proportion of non-migrants was more than 50.0% in the remaining divisions.

Table 3.6: Percent distribution of migrants by birth division, 2011 (migration less than 5 years)

Birth division	Current division							Total
	Barisal	Chittagong	Dhaka	Khulna	Rajshahi	Rangpur	Sylhet	
Barisal	55.74	4.34	27.55	10.97	0.64	0.00	0.77	100
Chittagong	1.80	55.27	34.32	3.86	0.77	0.90	3.08	100
Dhaka	1.30	5.38	77.95	2.73	2.57	1.22	8.86	100
Khulna	4.15	8.22	31.33	48.41	5.46	1.49	0.93	100
Rajshahi	1.15	2.85	32.93	6.47	50.08	3.89	2.63	100
Rangpur	0.26	4.71	49.21	3.05	8.64	30.45	3.66	100
Sylhet	1.11	6.81	19.80	1.11	0.62	0.62	69.93	100

Source: *Bangladesh population census and housing census 2011*.

Percentage distribution of out-migration by division: Distribution of out-migrants by division is presented in Table 3.3. First row of the table indicates that 55.74% people of Barisal division is native born and the remaining people migrated from Barisal to other divisions (27.55% in Dhaka and 10.97% in Khulna, and 4.34% in Chittagong division) from Dhaka). Third row of the table indicates that 77.95% people of Dhaka native born and the remaining people migrated to other divisions (8.66% in Sylhet, 5.38% in Chittagong and 2.73% in Khulna). In-migration of Chittagong division is maximum and minimum in Khulna division and the proportion of non-migrants was more than 50.0% in the remaining divisions.

More citizens from Rangpur, Barisal, Chittagong and Rajshahi divisions were enumerated outside of their areas. Non-migrants in those divisions comprise 30.45%, 48.41%, 50.08% and 55.27% respectively compared to 77.95% in Dhaka.

As expected, Dhaka division, being the capital city, seems to be the more favorite area and has become migration destination area in the country. For instance, about 49.21% and 34.32%, of those born in Rangpur and Chittagong divisions are there respectively, and followed by Rajshahi 32.93%, Khulna 31.33% and Barisal 27.55%. Only Dhaka division seems to have a small proportion of their citizens residing in Dhaka division. The migration to Dhaka division is not a strange phenomenon because the concentration of economic and political institutions in Dhaka attracted migrants from other regions.

3.3 Transition Probability Matrix

Lifetime migrants

Table 3.7: Transition probability matrix for lifetime migration

Mx1 =

Division	Barisal	Chittagong	Dhaka	Khulna	Rajshahi	Rangpur	Sylhet
Barisal	0.577	0.062	0.210	0.143	0.003	0.000	0.003
Chittagong	0.017	0.583	0.270	0.075	0.013	0.009	0.037
Dhaka	0.014	0.073	0.710	0.026	0.030	0.043	0.103
Khulna	0.031	0.053	0.240	0.609	0.044	0.013	0.011
Rajshahi	0.007	0.029	0.230	0.071	0.596	0.052	0.016
Rangpur	0.004	0.083	0.340	0.019	0.086	0.445	0.022
Sylhet	0.010	0.084	0.140	0.006	0.003	0.005	0.752

Matrix of lifetime migration Mx1 of table 3.7 is the one step transition matrix probability matrix of migration where migration took place more than five years ago. First row represents the probabilities of migration from Barisal division to other divisions (to Dhaka 0.210, Khulna 0.143 and Chittagong 0.062). First column represents the probabilities of

migration to Barisal division from other divisions (from Khulna 0.031, Chittagong 0.017). Probabilities of migration to Dhaka division from all other divisions are much higher compare to any other divisions (from Rangpur 0.340, Chittagong 0.270, Khulna 0.240). Principal diagonal elements are the probabilities of no-migrants of respective divisions.

Migration: Less than 5 years

Table 3.8: Transition probability matrix of migration: less than 5 years

Mx1 =

Division	Barisal	Chittagong	Dhaka	Khulna	Rajshahi	Rangpur	Sylhet
Barisal	0.5574	0.0430	0.2800	0.1100	0.0064	0.0000	0.0077
Chittagong	0.0180	0.5530	0.3400	0.0390	0.0077	0.0090	0.0308
Dhaka	0.0130	0.0540	0.7800	0.0270	0.0257	0.0122	0.0886
Khulna	0.0415	0.0820	0.3100	0.4840	0.0546	0.0149	0.0093
Rajshahi	0.0115	0.0280	0.3300	0.0650	0.5008	0.0389	0.0263
Rangpur	0.0026	0.0470	0.4900	0.0310	0.0864	0.3045	0.0366
Sylhet	0.0111	0.0680	0.2000	0.0110	0.0062	0.0062	0.6993

Source: *Bangladesh population census and housing census 2011*.

Matrix Mx1 of table 3.8 is 1-step transition probability matrix of migration where migration took place within last five years. First row represents the probabilities of migration from Barisal division to other divisions (to Dhaka 0.28, Khulna 0.11 and Chittagong 0.043). First column represents the probabilities of migration to Barisal division from other divisions (from Khulna 0.0415, Chittagong 0.018). Probabilities of migration to Dhaka division from all other divisions are much higher compare to any other divisions (from Rangpur 0.49, Chittagong 0.34, Rajshahi 0.33). Principal diagonal elements are the probabilities of no-migrants of respective divisions.

Table 3.9: 2-step and 15-step-transition matrices of migrants

Mx2 =

	Barisal	Chittagong	Dhaka	Khulna	Rajshahi	Rangpur	Sylhet
Barisal	0.3200	0.0730	0.4200	0.1240	0.0200	0.0057	0.0370
Chittagong	0.0260	0.3310	0.4900	0.0520	0.0200	0.0130	0.0700
Dhaka	0.0210	0.0820	0.6700	0.0410	0.0360	0.0156	0.1340
Khulna	0.0500	0.1070	0.4600	0.2550	0.0640	0.0185	0.0440
Rajshahi	0.0200	0.0570	0.4800	0.0770	0.2670	0.0367	0.0640
Rangpur	0.0120	0.0740	0.6000	0.0460	0.0840	0.1032	0.0840
Sylhet	0.0180	0.0980	0.3300	0.0230	0.0140	0.0096	0.5090

Contd.

Contd.

Mx15 =

	Barisal	Chittagong	Dhaka	Khulna	Rajshahi	Rangpur	Sylhet
Barisal	0.0320	0.1100	0.5600	0.0550	0.0420	0.0160	0.1800
Chittagong	0.0320	0.1100	0.5600	0.0550	0.0420	0.0160	0.1800
Dhaka	0.0320	0.1100	0.5600	0.0550	0.0420	0.0160	0.1800
Khulna	0.0320	0.1100	0.5600	0.0550	0.0420	0.0160	0.1800
Rajshahi	0.0320	0.1100	0.5600	0.0550	0.0420	0.0160	0.1800
Rangpur	0.0320	0.1100	0.5600	0.0550	0.0420	0.0160	0.1800
Sylhet	0.0320	0.1100	0.5600	0.0550	0.0420	0.0160	0.1800

Source: *Bangladesh population census and housing census 2011*.

If we multiply the transition matrix Mx1 by itself and continue the multiplication, we will get 2-step, 3-step, …, n-step transition matrices. 1-step to 15-step transition matrices are given in Appendix. The rows of the matrix Mx15 is 15-step transition probability of migration. Thus, the elements of Mx15 matrix are the probabilities of migration after 75 (15×5) years. This matrix, whose rows become identical, is called as the equilibrium matrix. It indicates that the probabilities of migration to a particular division from all other divisions are same and these probabilities will remain constant for next occurrence of migration. After 75 years, probabilities of migration to Dhaka from any other division will reach 0.56 which is more than the total probabilities of all other division.

3.4 Duration of Residence

Another approach to the measurement of internal migration is duration of migrants or the length of time elapsed since the migrants left their places of origin. Persons who have lived in the place at the time of enumeration all their lives are treated as non-migrants and others as in-migrants. Also, persons who were born in a given area but subsequently moved out and then returned to birth place are treated as in-migrants or returned migrants.

The importance of this type of analysis is that it furnishes useful information about recent migration history of the area which may be needed by policy-makers in formulating strategies to curtail high influx of rural-urban migration which is deemed to create the problems of overcrowding in the urban area.

Migrants are distributed by division, duration and sex are presented in Table 3.10 and Table 3.11 if two forms: percentage of total by duration and percentage of total by division.

Percentage of Total by Duration: In Bangladesh, as a whole, 74.57% of migrants moved to their destinations more than ten years ago. 14.04% moved between 5 to 9 years ago,

8.52% between 1 to 4 years ago and about 2.88% less than one year ago.

Accordingly, the proportion of recent migrants, that is, those who moved less than one year to the census, was higher in Chittagong division 4.47%, Sylhet division 4.2% and Dhaka 3.06%. The pattern was nearly identical or small variations for the remaining divisions, i.e., less than three percent.

Table 3.10: Migrants' distribution by current division, duration and sex, 2011: percentage within division.

Sex	Current division	Duration of residence				
		Less than 1	1 - 4	5 - 9	10 +	All
Both	Barisal	1.92	7.65	12.96	77.46	100.00
	Chittagong	4.47	9.44	15.61	70.47	100.00
	Dhaka	3.06	9.56	15.06	72.31	100.00
	Khulna	1.96	6.92	11.93	79.19	100.00
	Rajshahi	1.98	7.07	11.98	78.96	100.00
	Rangpur	1.83	7.65	13.18	77.34	100.00
	Sylhet	4.22	10.35	16.43	69.00	100.00
	All regions	2.88	8.52	14.03	74.57	100.00
Male	Barisal	1.88	7.45	12.67	78.00	100.00
	Chittagong	4.44	9.50	15.85	70.20	100.00
	Dhaka	2.90	9.27	14.92	72.91	100.00
	Khulna	1.82	6.69	11.39	80.10	100.00
	Rajshahi	1.87	6.84	11.38	79.91	100.00
	Rangpur	1.77	7.55	13.03	77.64	100.00
	Sylhet	4.41	10.46	16.70	68.43	100.00
	All regions	2.80	8.37	13.86	74.98	100.00
Female	Barisal	1.96	7.87	13.26	76.92	100.00
	Chittagong	4.50	9.38	15.38	70.73	100.00
	Dhaka	3.23	9.86	15.20	71.72	100.00
	Khulna	2.10	7.15	12.46	78.29	100.00
	Rajshahi	2.10	7.30	12.59	78.02	100.00
	Rangpur	1.90	7.75	13.32	77.03	100.00
	Sylhet	4.03	10.24	16.17	69.56	100.00
	All regions	2.96	8.67	14.20	74.16	100.00

Source: *Bangladesh population census and housing census 2011*.

Table 3.11: Migrants' distribution by current division, duration and sex, 2011: percentage between division.

Sex	Current division	Duration of residence				
		Less than 1	1 - 4	5 - 9	10 +	All
Both	Barisal	6.85	9.24	9.50	10.68	10.28
	Chittagong	28.96	20.68	20.76	17.63	18.65
	Dhaka	27.03	28.54	27.28	24.64	25.41
	Khulna	10.11	12.07	12.63	15.78	14.86
	Rajshahi	8.14	9.82	10.10	12.53	11.83
	Rangpur	6.80	9.60	10.04	11.09	10.69
	Sylhet	12.10	10.05	9.68	7.65	8.27
	All regions	100.00	100.00	100.00	100.00	100.00
Male	Barisal	6.94	9.18	9.43	10.74	10.32
	Chittagong	29.39	21.04	21.18	17.34	18.52
	Dhaka	26.31	28.14	27.35	24.70	25.40
	Khulna	9.66	11.90	12.23	15.89	14.87
	Rajshahi	7.90	9.68	9.71	12.61	11.83
	Rangpur	6.87	9.80	10.21	11.24	10.86
	Sylhet	12.94	10.26	9.89	7.49	8.21
	All regions	100.00	100.00	100.00	100.00	100.00
Female	Barisal	6.76	9.29	9.56	10.62	10.24
	Chittagong	28.56	20.33	20.35	17.92	18.79
	Dhaka	27.71	28.91	27.21	24.59	25.43
	Khulna	10.54	12.24	13.03	15.67	14.84
	Rajshahi	8.37	9.97	10.49	12.45	11.83
	Rangpur	6.74	9.42	9.88	10.94	10.53
	Sylhet	11.32	9.84	9.48	7.81	8.33
	All regions	100.00	100.00	100.00	100.00	100.00

Source: *Bangladesh population census and housing census 2011*.

The proportion of migration varies among divisions. Higher proportion of migrations take place in Dhaka division 25.41% and in Chittagong division 18.65% (see Table 3.11).

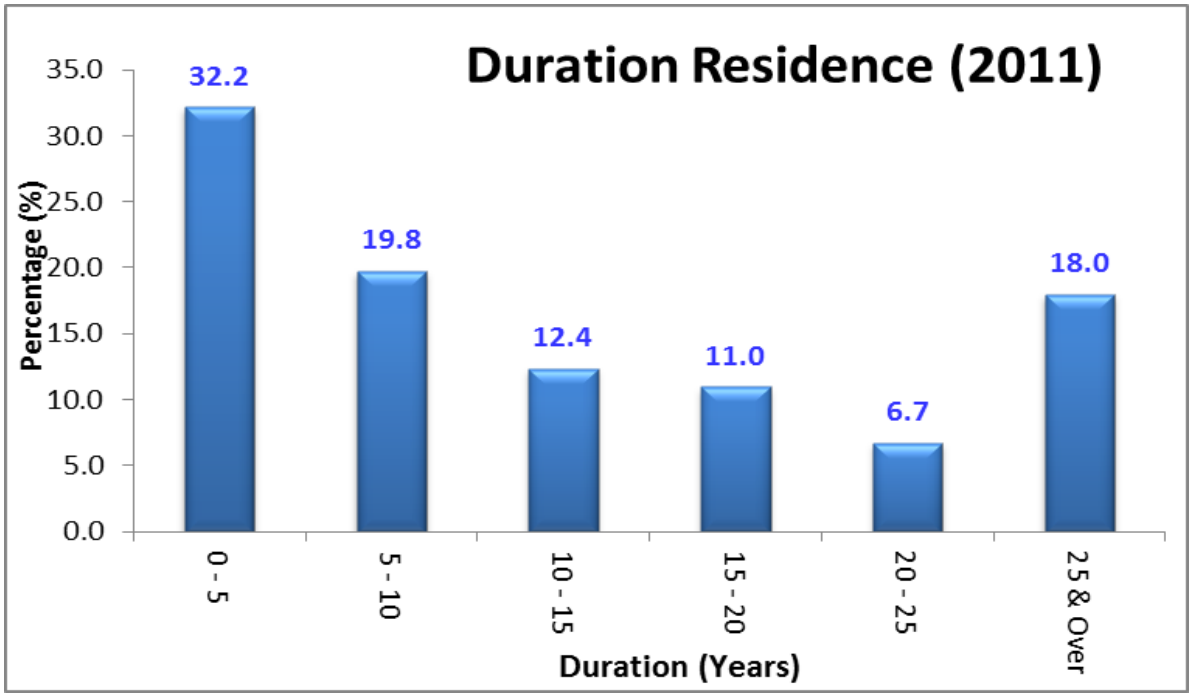


Fig 3.1: Duration of current residence of Migrants, 2011

Duration of current residence of migrants for 2011 survey data in percentage is given in Fig 3.1. The maximum migration took place within 5 years and which is 32.2%. This percentage is decreasing as the duration of residence is increasing referring that the rate of migration is increasing with time.

3.5 Sex Selectivity of Migration

Migration is selective on the basis of sex, age and other social and economic characteristics. This section examines sex differentials in the migratory process of Bangladesh in 2011. In the past when males dominated the livelihoods of the households, the male adult considered as head of the household moved first; and then followed by the wife and children, and other ageing members of the family.

The percent of in-and out-migrants, the amount of net migration, the origin and destination of each stream for males and females are presented in Table 3.12. It reveals that the female lifetime migrants were 56.87% compared to 53.19% males, and inter-divisional migration rates, derived separately, are 60.39% and 58.16% of the total female and male populations in Barisal, that is maximum.

Table 3.12: Migrants classified by birth division and duration of residence, 2011: percentage of total in each duration.

Sex	Birth division	Duration of residence				
		Less than 1	1 - 4	5 - 9	10 +	All
Both	Barisal	7.34	16.19	16.93	59.54	100.00
	Chittagong	7.35	16.69	18.55	57.41	100.00
	Dhaka	8.04	18.16	20.66	53.13	100.00
	Khulna	6.37	15.09	19.34	59.20	100.00
	Rajshahi	6.73	18.83	19.23	55.21	100.00
	Rangpur	9.07	18.59	21.03	51.32	100.00
	Sylhet	7.26	16.67	21.95	54.12	100.00
	All regions	7.41	17.28	19.85	55.46	100.00
Male	Barisal	8.37	17.55	15.92	58.16	100.00
	Chittagong	6.62	16.10	18.86	58.42	100.00
	Dhaka	8.14	18.49	20.49	52.88	100.00
	Khulna	7.70	17.67	21.77	52.86	100.00
	Rajshahi	7.10	20.52	19.64	52.74	100.00
	Rangpur	10.94	18.84	22.74	47.48	100.00
	Sylhet	7.87	16.83	23.13	52.17	100.00
	All regions	8.02	18.30	20.49	53.19	100.00
Female	Barisal	6.70	15.35	17.56	60.39	100.00
	Chittagong	7.92	17.15	18.31	56.61	100.00
	Dhaka	7.96	17.93	20.79	53.31	100.00
	Khulna	5.79	13.96	18.27	61.99	100.00
	Rajshahi	6.50	17.75	18.97	56.78	100.00
	Rangpur	7.95	18.44	20.00	53.61	100.00
	Sylhet	6.87	16.56	21.18	55.39	100.00
	All regions	7.03	16.65	19.45	56.87	100.00

Source: *Bangladesh population census and housing census 2011*.

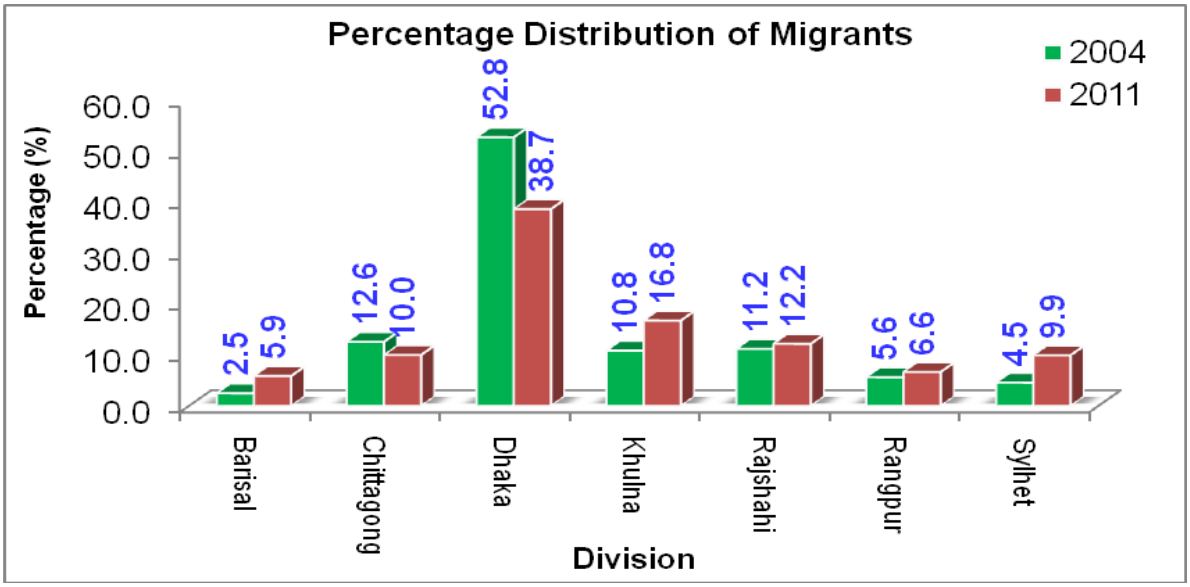
Table 3.13: Migrants classified by birth division and duration of residence, 2011: percentage of total in each division.

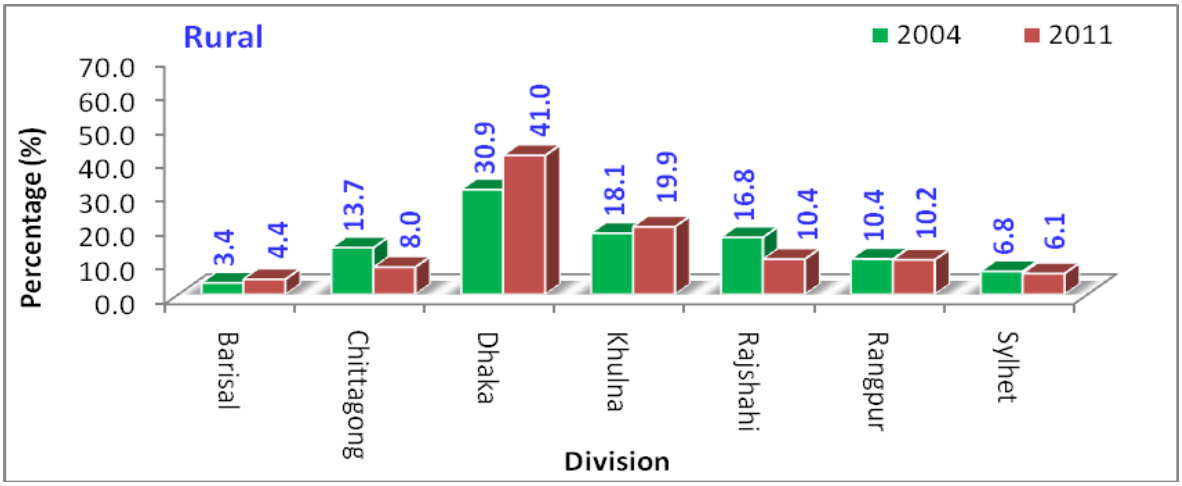
Sex	Birth division	Duration of residence				
		Less than 1	1 - 4	5 - 9	10 +	All
Both	Barisal	7.58	7.17	6.53	8.22	7.65
	Chittagong	7.30	7.10	6.88	7.61	7.36
	Dhaka	33.82	32.77	32.46	29.86	31.17
	Khulna	18.26	18.54	20.69	22.67	21.24
	Rajshahi	14.27	17.11	15.21	15.63	15.70
	Rangpur	11.25	9.89	9.74	8.50	9.19
	Sylhet	7.54	7.41	8.50	7.50	7.69
	All regions	100.00	100.00	100.00	100.00	100.00
Male	Barisal	7.98	7.34	5.95	8.37	7.65
	Chittagong	7.01	7.47	7.81	9.32	8.49
	Dhaka	34.57	34.40	34.03	33.85	34.04
	Khulna	16.26	16.35	17.99	16.83	16.93
	Rajshahi	14.12	17.88	15.28	15.81	15.95
	Rangpur	12.27	9.26	9.98	8.03	9.00
	Sylhet	7.79	7.30	8.96	7.78	7.94
	All regions	100.00	100.00	100.00	100.00	100.00
Female	Barisal	7.29	7.06	6.91	8.13	7.65
	Chittagong	7.50	6.85	6.27	6.62	6.65
	Dhaka	33.29	31.66	31.43	27.56	29.40
	Khulna	19.67	20.04	22.45	26.05	23.90
	Rajshahi	14.37	16.58	15.17	15.53	15.55
	Rangpur	10.52	10.31	9.57	8.77	9.31
	Sylhet	7.36	7.49	8.20	7.34	7.53
	All regions	100.00	100.00	100.00	100.00	100.00

Source: *Bangladesh population census and housing census 2011*.

3.6 Distribution of Migrants and Differentials

Migration differentials have significant role in identifying the nature and strength of the socio-economic and demographic impacts of the population concerned. Generally, the differentials in migration (selectivity of certain person or group to be more mobile than others) have been studied mainly by age, sex, marital status, education and occupation.





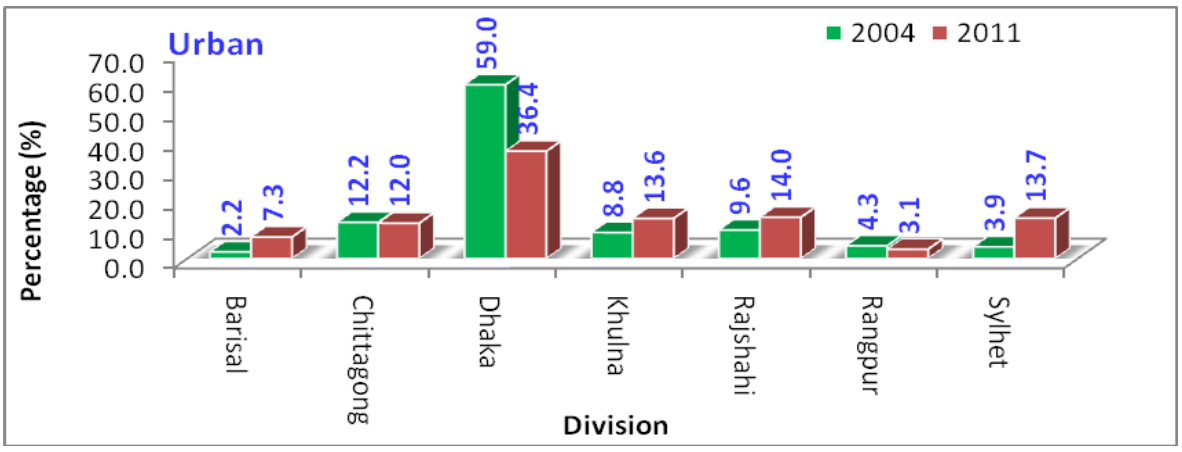


Fig 3.2: Distribution of migrants by division and residence, 2004, 2011

Distribution of migrant population in percentage by division and residence is given in Fig 3.2. Most of the migrants live in Dhaka division, 52.8% in 2004 and 38.7% in 2011. Next, migrants are higher in Khulna, Rajshahi and Chittagong divisions. Proportion of migration

decreases from 2004 to 2011 in Dhaka and Chittagong divisions while it increases in other divisions. Migrants are minimum in Barisal division. In Dhaka division for rural migrants 30.9% in 2004 and 41% in 2011 and for urban migrants 59% in 2004 and 36.4% in 2011.

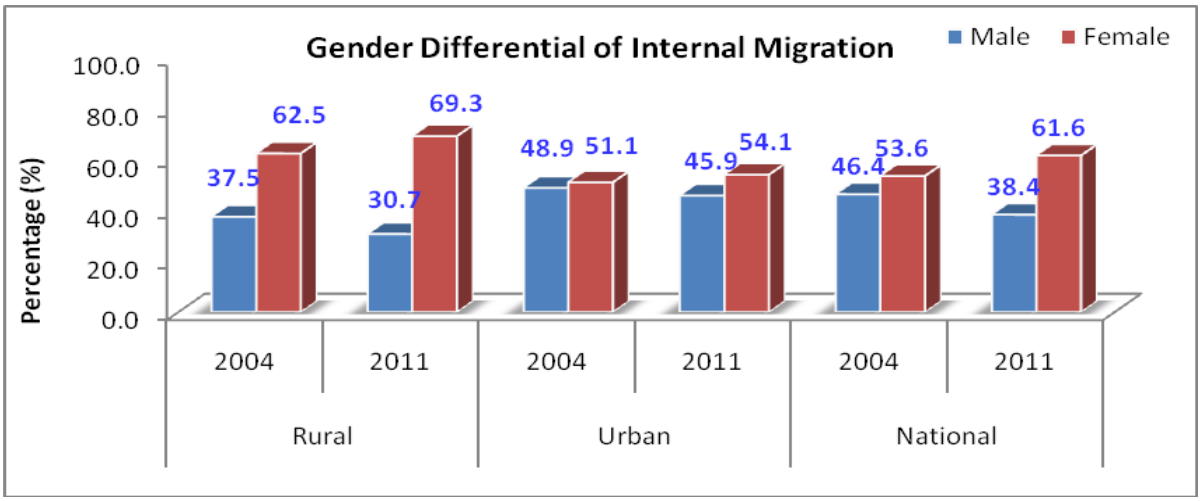


Fig 3.3: Distribution of internal migrants by sex, 2004, 2011

Distribution of internal migrants for 2004 and 2011 sample data is given in Fig 3.3.

Migration rate is higher for females (53.6% in 2004 and 61.6% in 2011) compared to males both in urban and rural, also in 2004 and 2011. In 2004 female migrants were 53.6% where rural were 62.5% and urban 51.1%%. In 2011 female migrants are increased to 61.6% of which 69.6% in rural and 54.1% in urban. Female migrants are more in rural than urban.

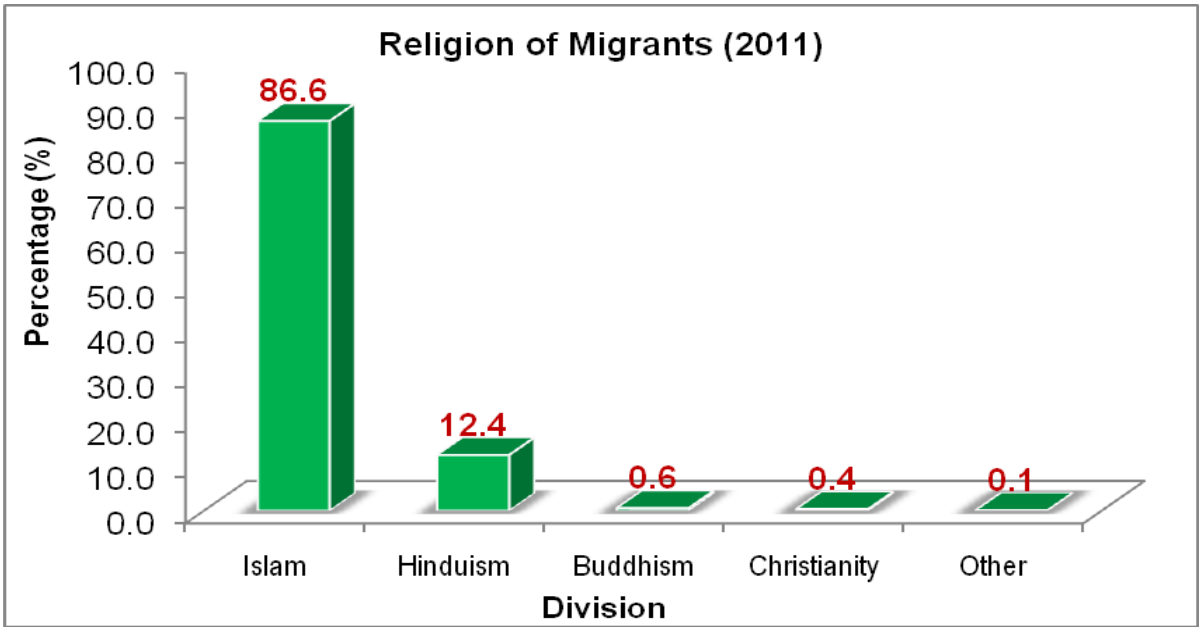


Fig 3.4: Distribution of internal migrants by religion, 2011

The distribution of internal migrants by religion for 2011 is displayed in Figure 3.4. Migrants are mostly Muslims 86.6% followed by Hindus 12.4%, Buddhist 0.6%, Christian 0.4% and others .1%.

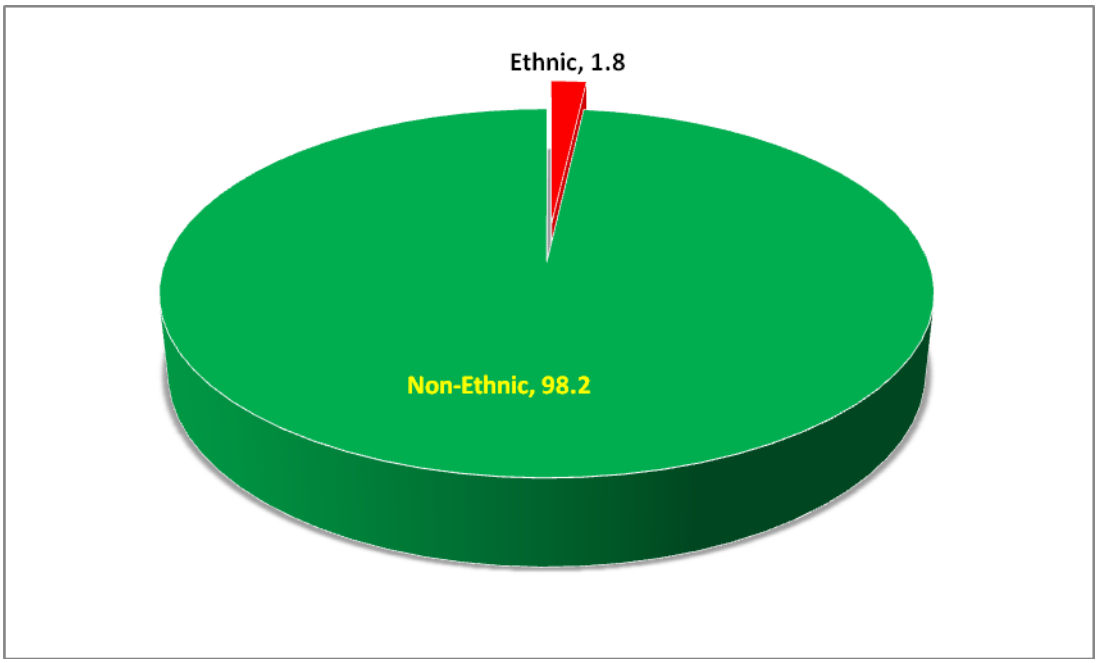
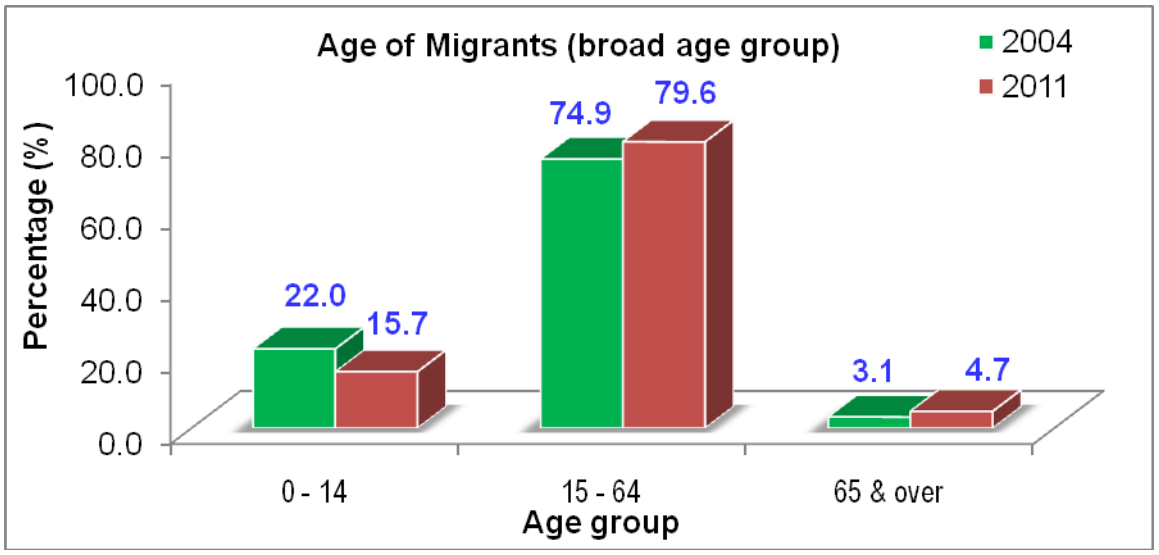


Fig 3.5: Ethnicity of internal migrants, 2011

Among the internal migrant population only 1.8% are ethnic and the rest 98.2% are non-ethnic population.



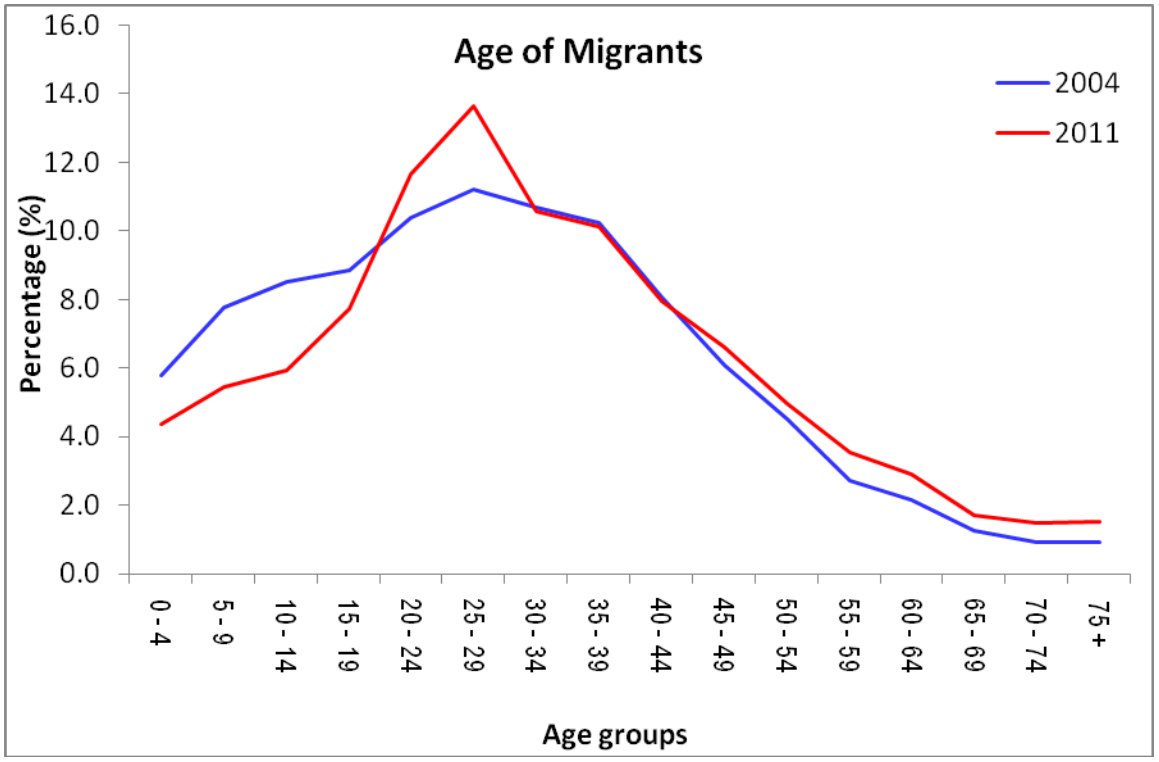
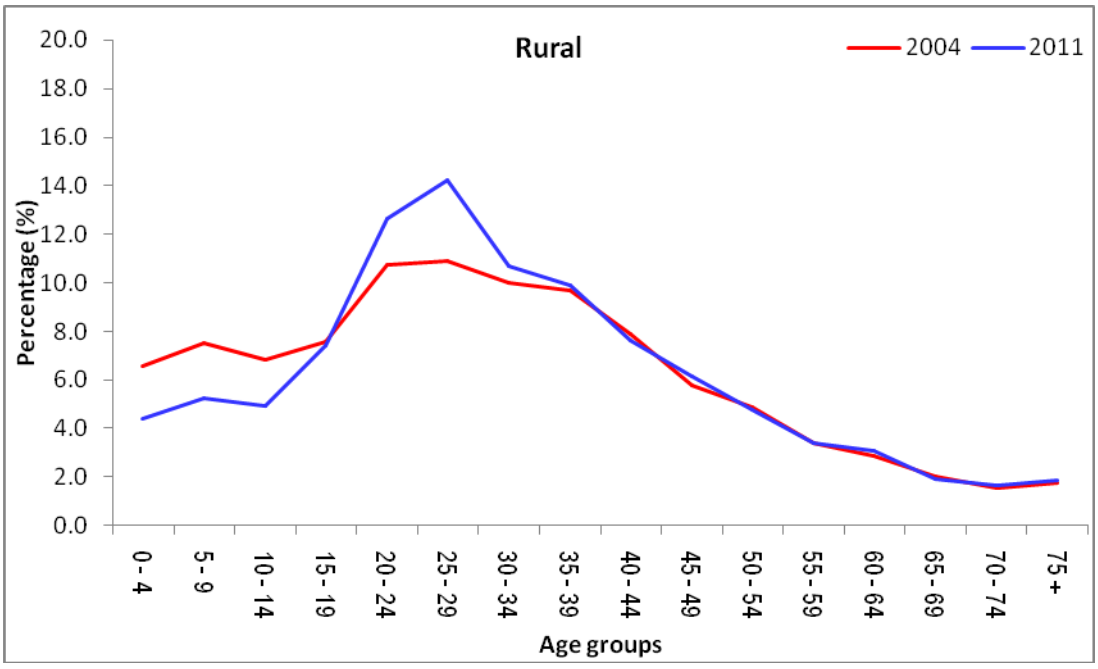


Fig 3.6: Distribution of Internal Migrants by age groups, 2004, 2011

Distribution of internal migrants by broad and general age groups are shown in Fig 3.6. It is revealed from the figure that migrants belong to mostly in the working age group. In 2004 74.9% migrants' belonged to age group 15 - 64 and 79.6% in 2011. More specifically, irrespective of time, the maximum number of migrants has age within 25 to 29 years.



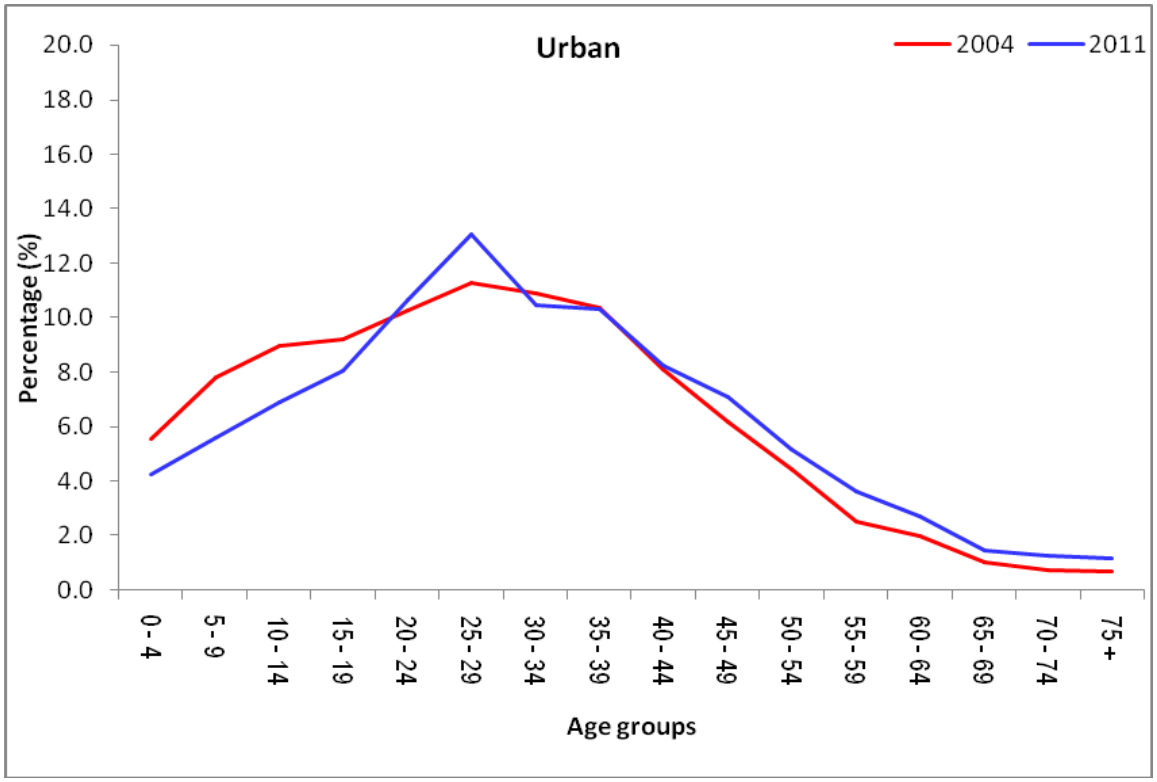
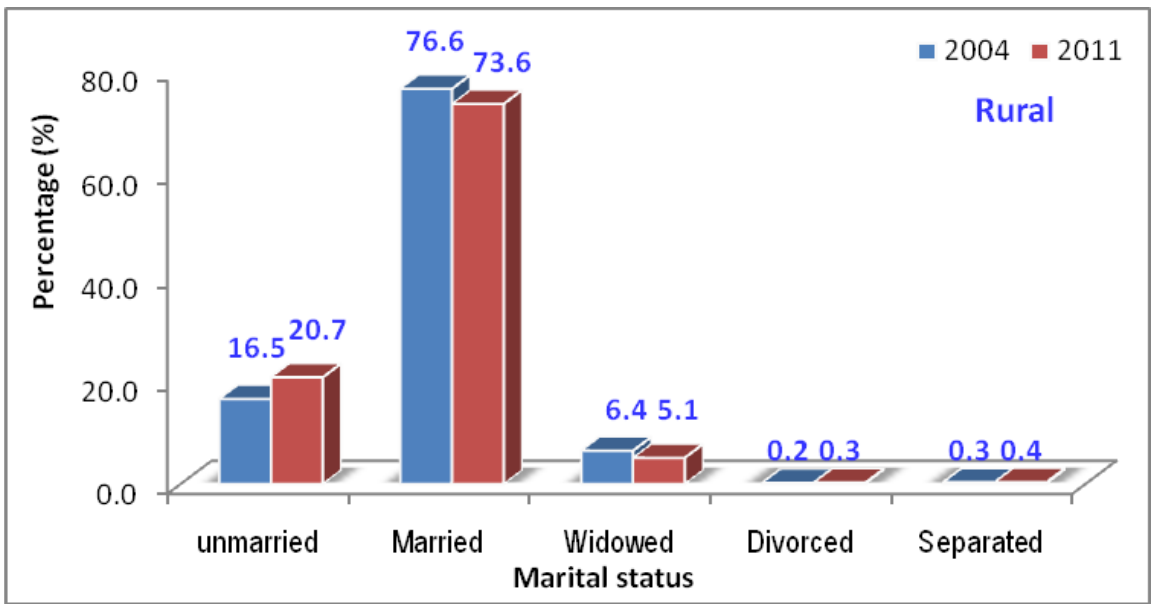


Fig 3.7: Age of Internal Migrants

More specifically, irrespective of residence and time, the maximum number of migrants' ages are in 25 - 29.



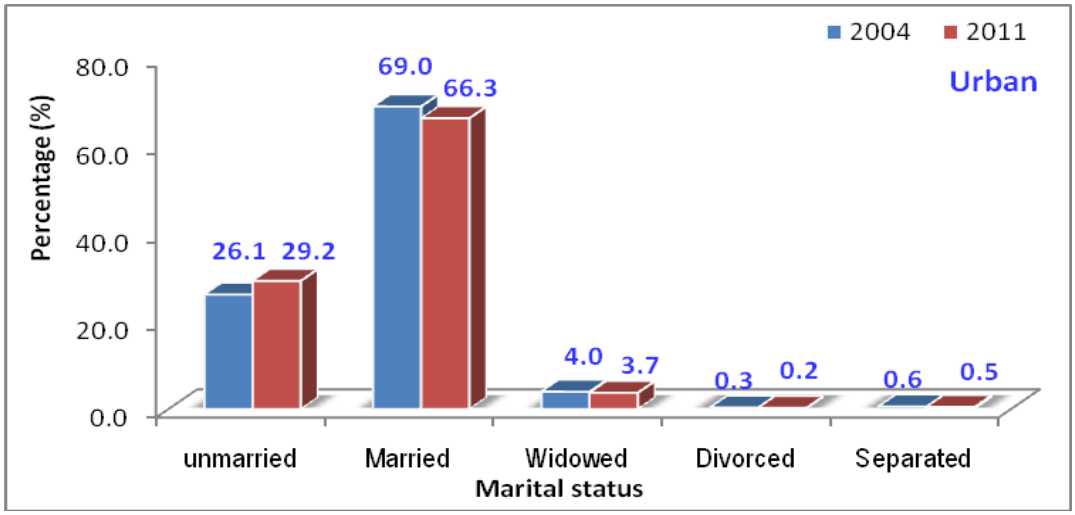
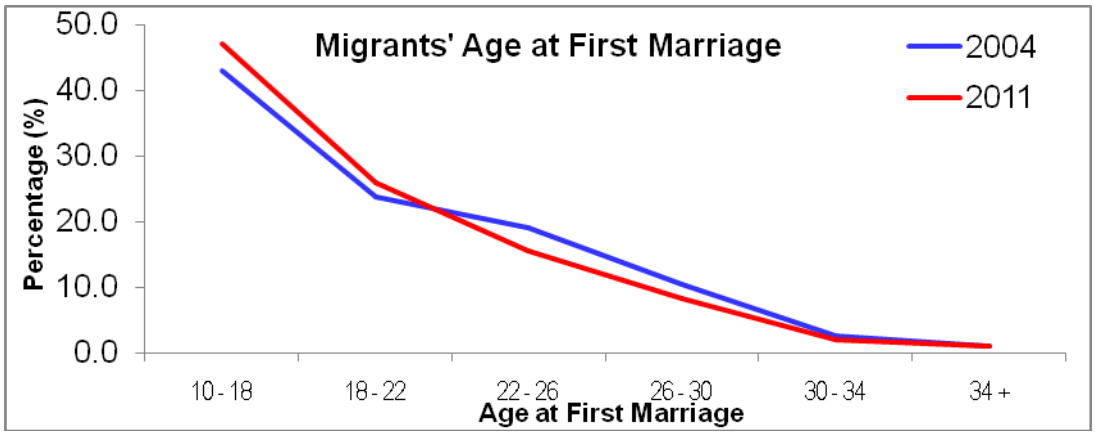
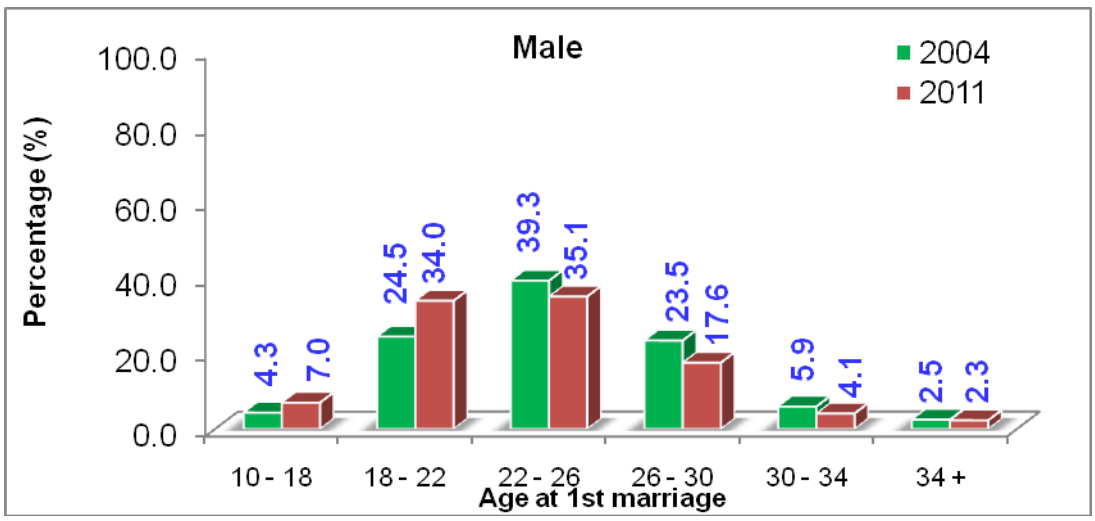


Fig 3.8: Distribution of marital Status of Internal Migrants, 2004, 2011

Distribution of marital status of internal migrants is given in Fig 3.8. Regardless of residence and time, most of the migrants are married. In rural, 76.6% were married in 2004 and 73.6% in 2011. In urban, 69.0% were married in 2004 and 66.3% in 2011. Unmarried migrants are higher in urban than rural in both 2004 and 2011.





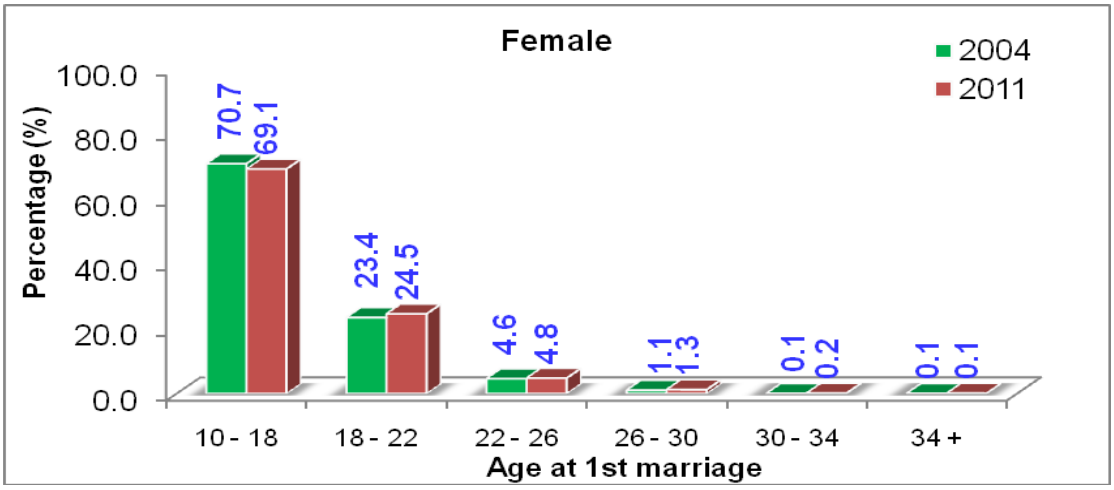


Fig 3.9: Distribution of age at first Marriage of Internal Migrants by sex, 2004, 2011

Overall 'age at first marriage' of maximum number of migrants is less than 18 years. However, the above figure shows that the age of first marriage differs between males and females. The maximum number of males' ages at first marriage are between 22 to 26 years (39.3% in 2004 and 35.1% in 2011) while the maximum number of females' ages at first marriage are between 10 to 18 years (70.7% in 2004 and 69.1% in 2011).

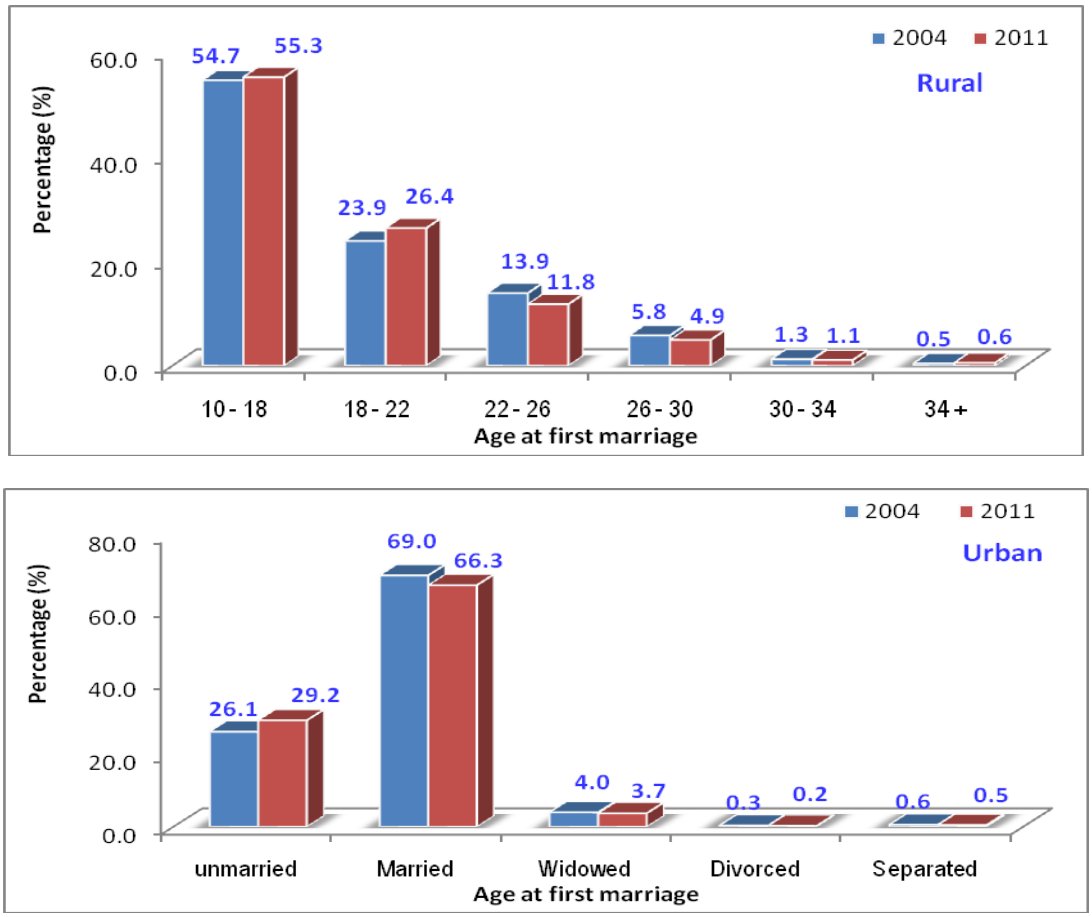
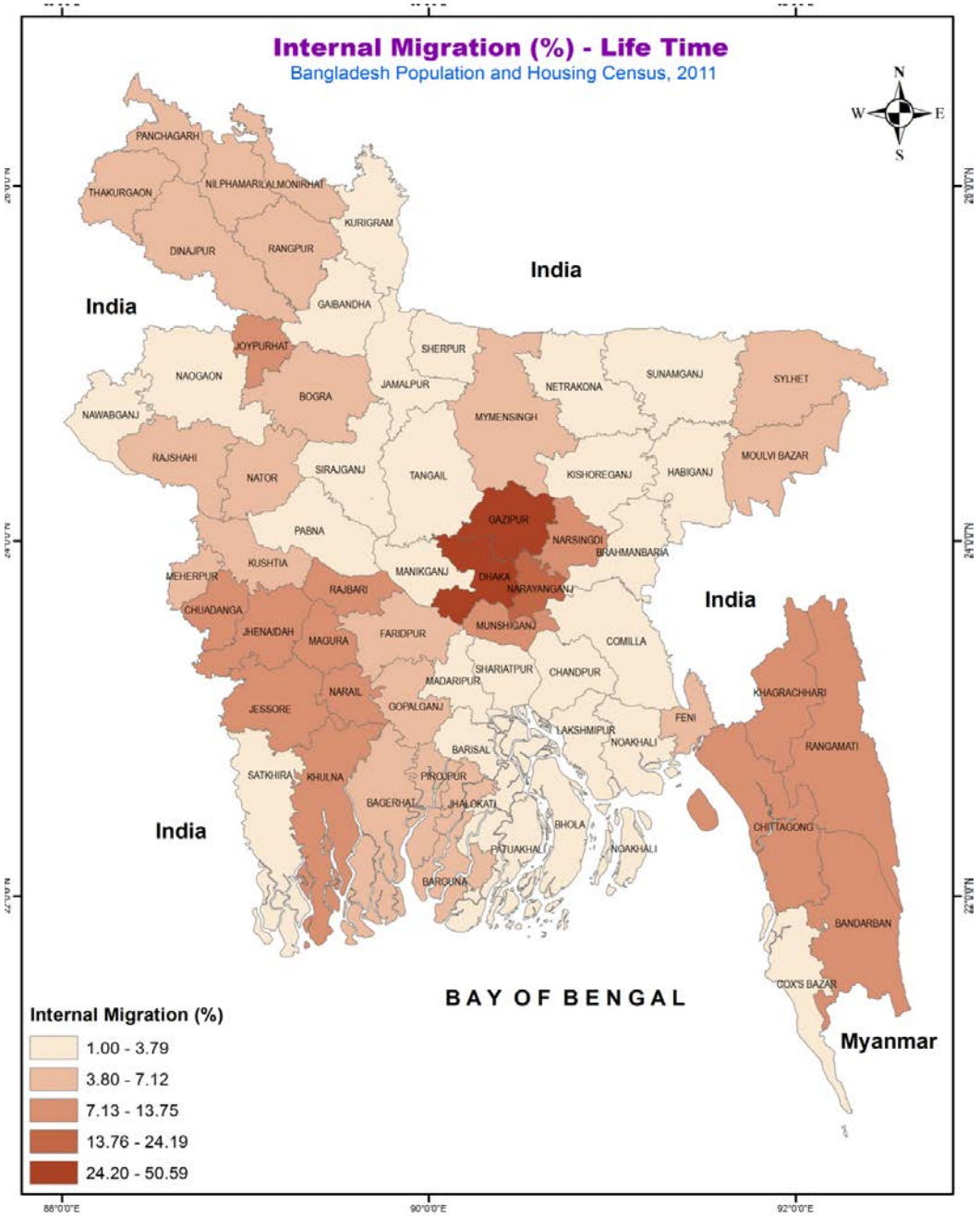


Fig 3.10: Distribution of age at first Marriage of Internal Migrants by residence, 2004, 2011

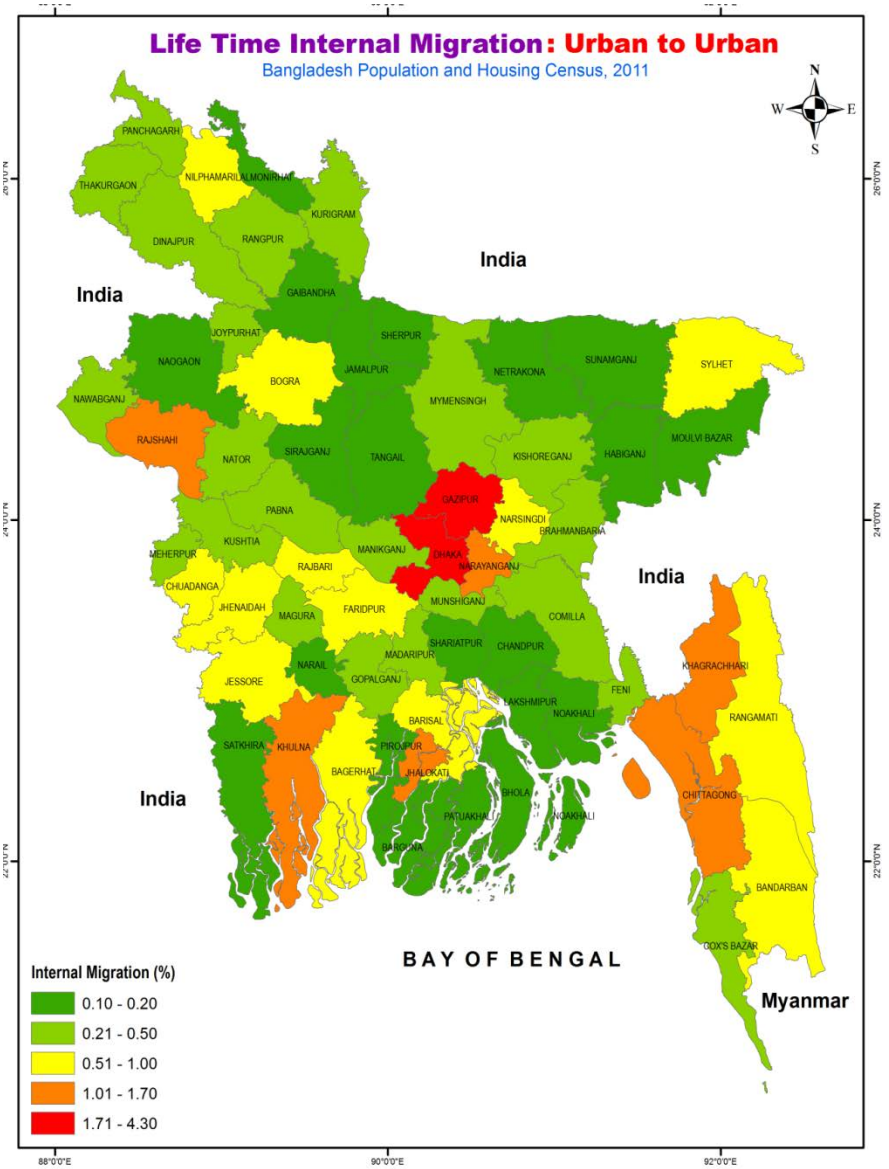
3.7 Regional Variation of Internal Migration: Spatial Distribution



Map 3.2: Distribution of life time internal migration by district, 2011

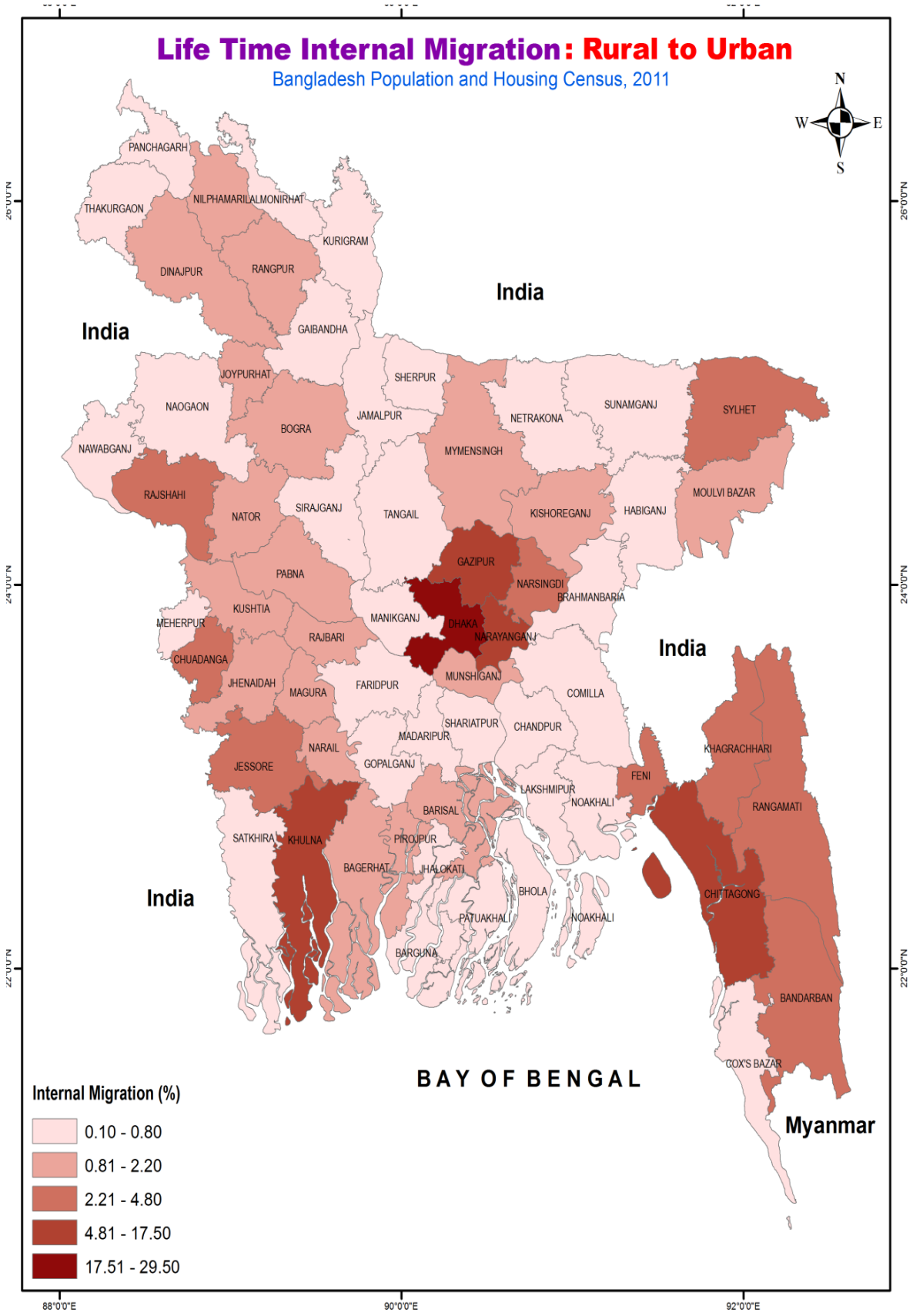
Map 3.2 shows that Dhaka and Gazipur are most popular districts for internal migration. This is not unusual. Being the capital of the country, Dhaka has the top most scope of education and business accompanying all other urban facilities. More importantly, people usually want to, and sometimes have to, live in Dhaka for job searching and for their current employment as well. After Dhaka, peoples mostly prefer migrate to districts nearby Dhaka like Gazipur and then Narayanganj. This is possibly their inability of staying in Dhaka but to keep close

communication with it. A good proportion of migrants settled in districts of Chittagong division: Chittagong, Rangamati, Bandarban, Khagrachari and Coxes' Bazar. In northern area of the country, the Joypurhat district is the most favorite to migrants. In the south-west part, migration rate is higher in Chuadanga, Rajbari, Jhenaidah, Magura, Narail, Jessore and Khulna districts. Comparatively, lower rate of migration is observed in Sylhet division, higher proportion of migration in this area took place in Sylhet and Moulovibazar districts.



Map 3.3: Distribution of urban to urban life time internal migration by district, 2011

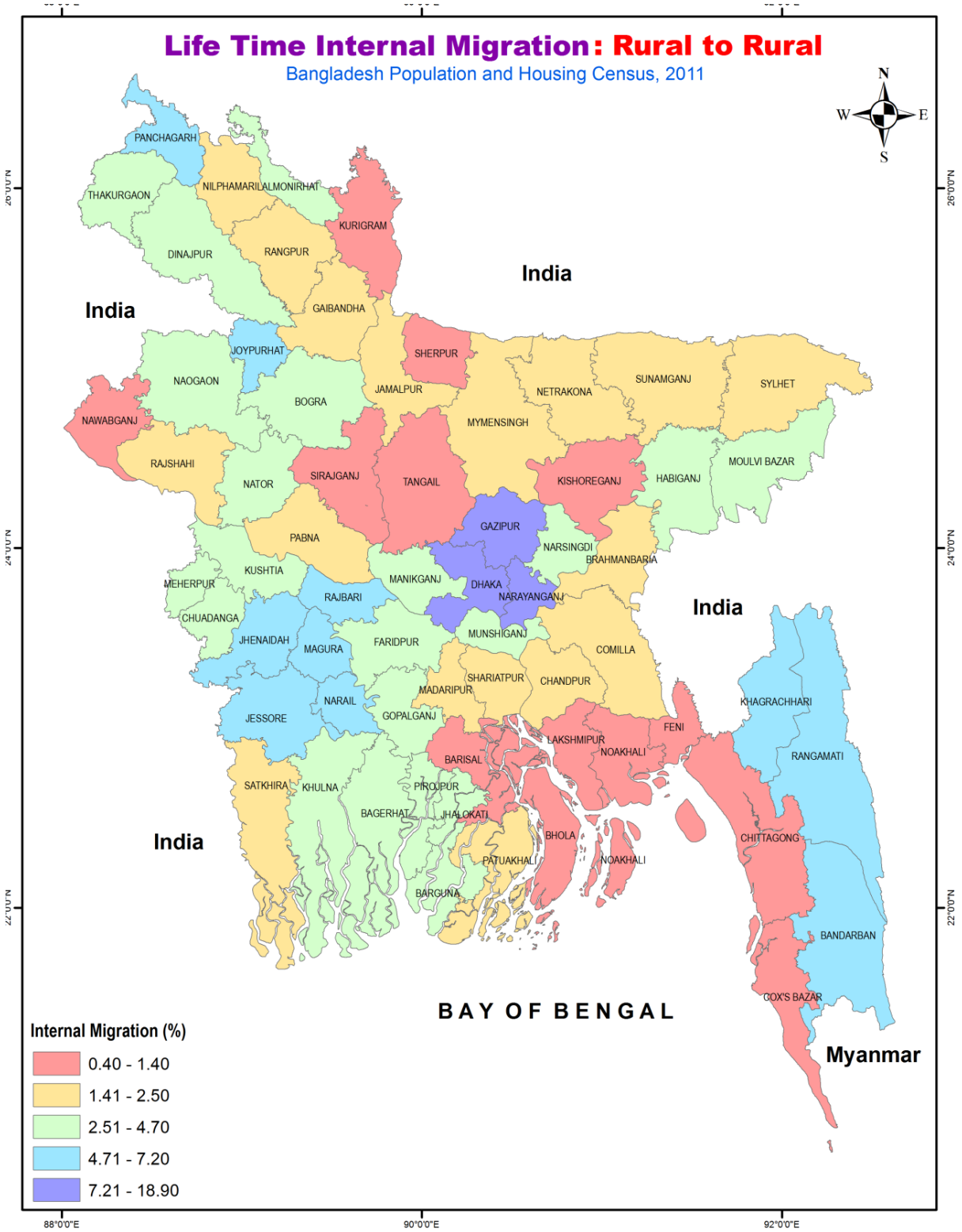
Distribution of urban to urban life time internal migration by district is given in Map 3.3. Most of the migrants whose origin of residence were urban also prefer Dhaka and Gazipur districts to settle. Their second most preferable districts are Narayanganj, Rajshahi, Khulna, Jhalokati, Chittagong and Khagrachari.



Map 3.4: Distribution of rural to urban life time internal migration by district, 2011

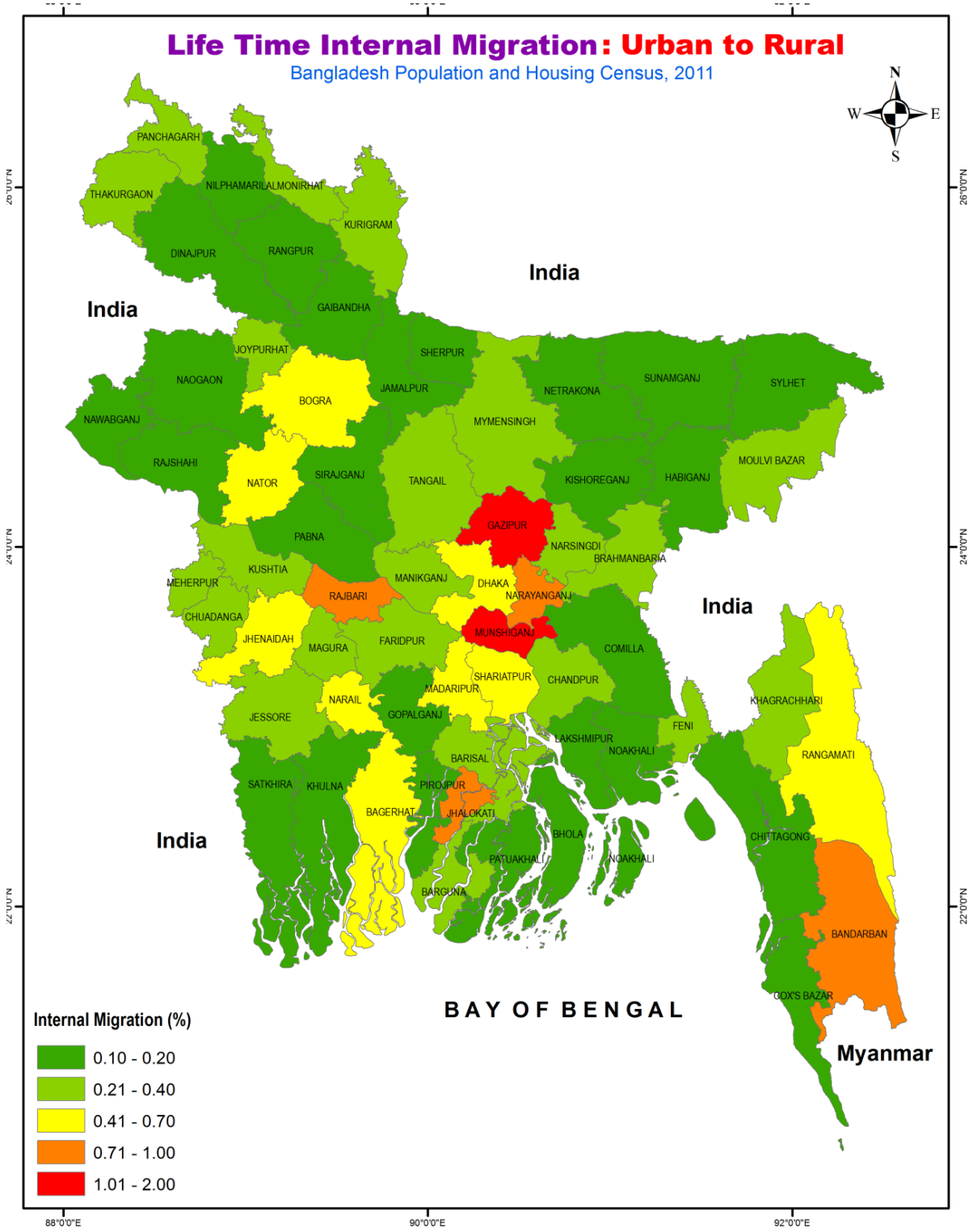
Distribution of rural to urban life time internal migration by district is shown in Map 3.4.

Migrants from rural to urban mostly migrated in Dhaka and then in Gazipur, Narayangang, Rajshahi, Khulna, Chittagong and Sylhet districts.



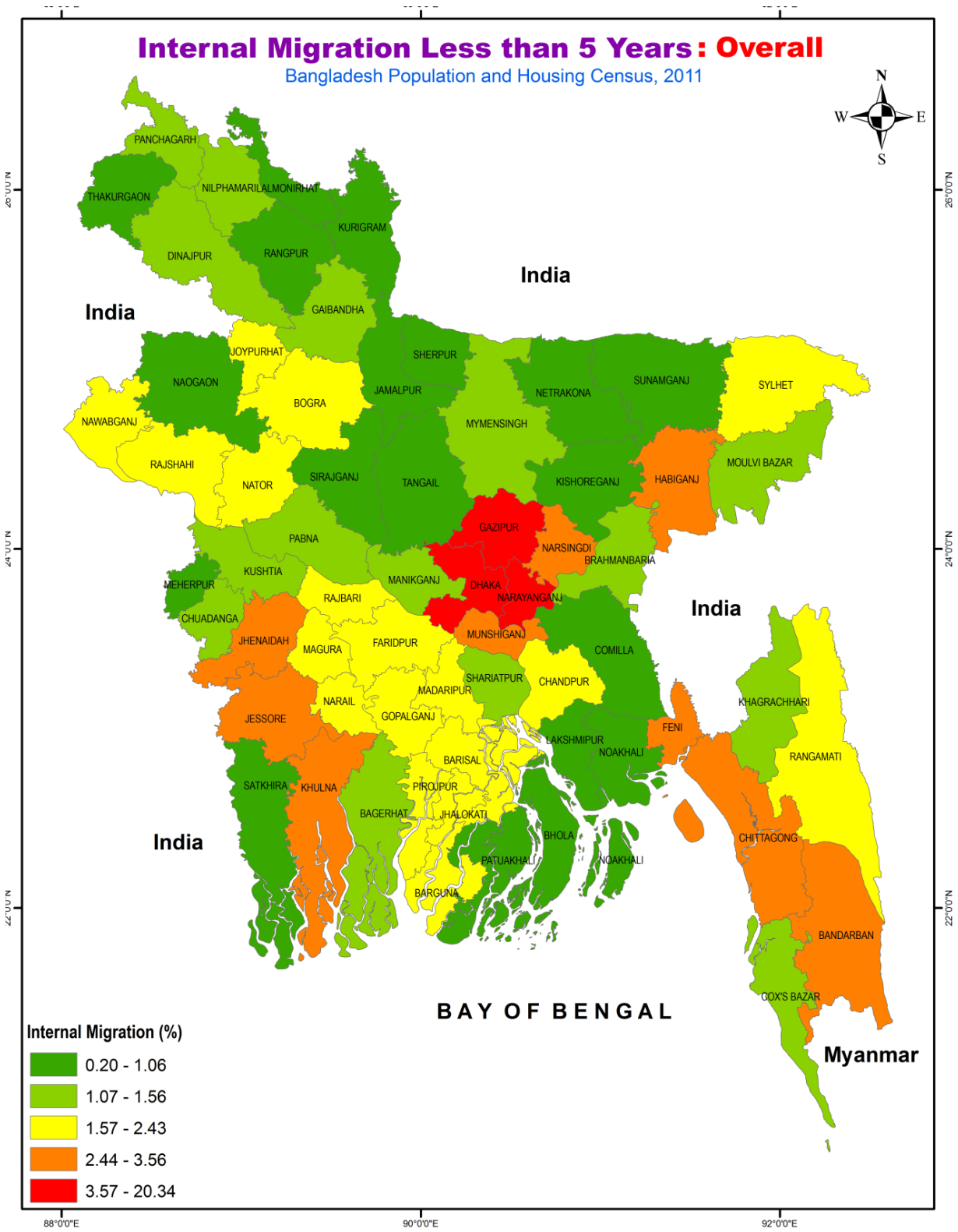
Map 3.5: Distribution of rural to rural life time internal migration by district, 2011

In 2011 most of the migration from rural to rural took place in Dhaka, Gazipur and Narayanganj districts. The next higher rural to rural migration were in Panchagarh, Rajbari, Jhenaidah, Magura, Jessore, Narail, Khagrachari, Rangamati and Bandarban districts.



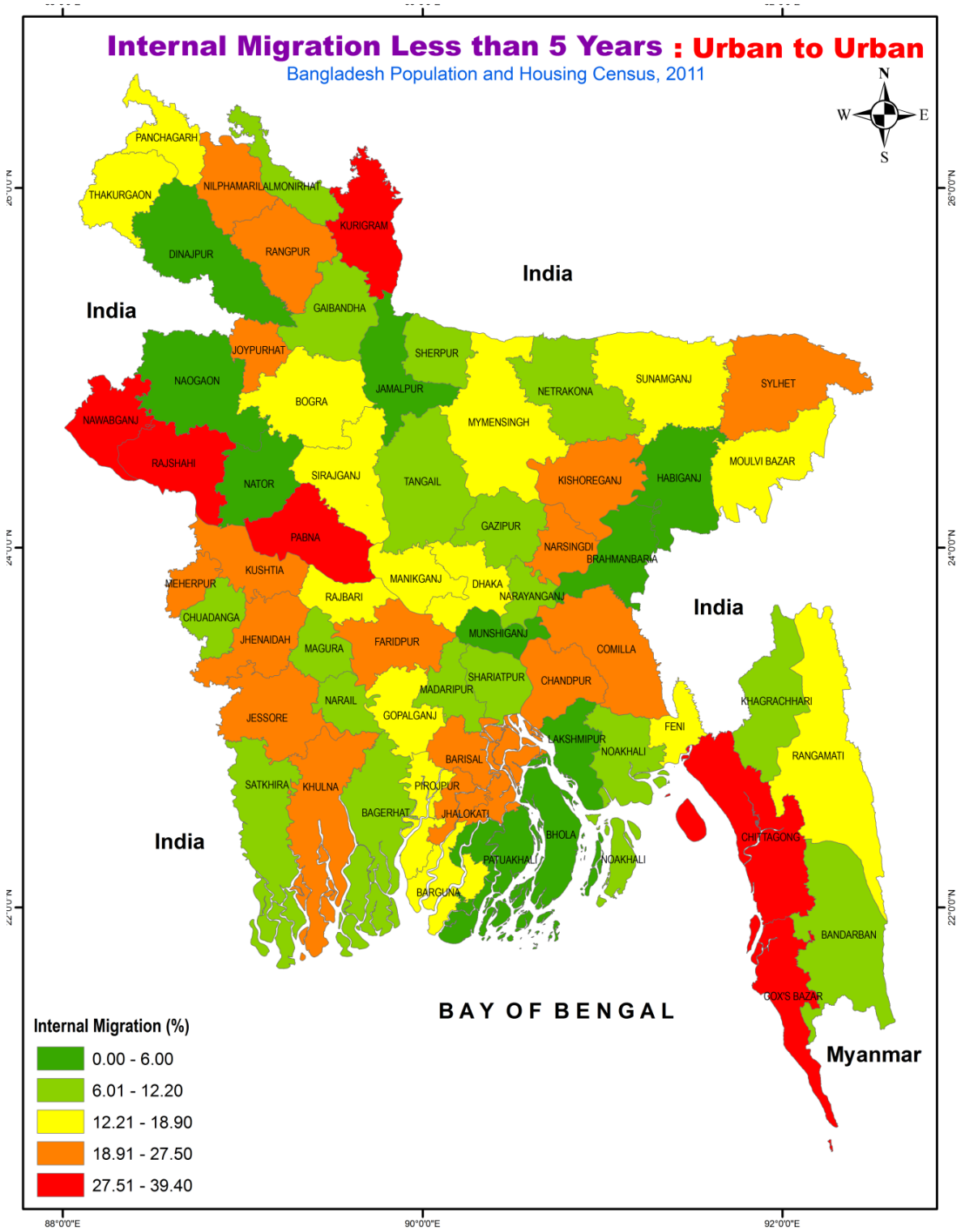
Map 3.6: Distribution of urban to rural life time internal migration by district, 2011

Distribution of urban to rural internal migration by district is given in Map 3.6. Life time urban to rural maximum migration took place in Gazipur and Narayanganj districts. Next higher migration districts are Bandarban, Jhalokati and Rajbari.



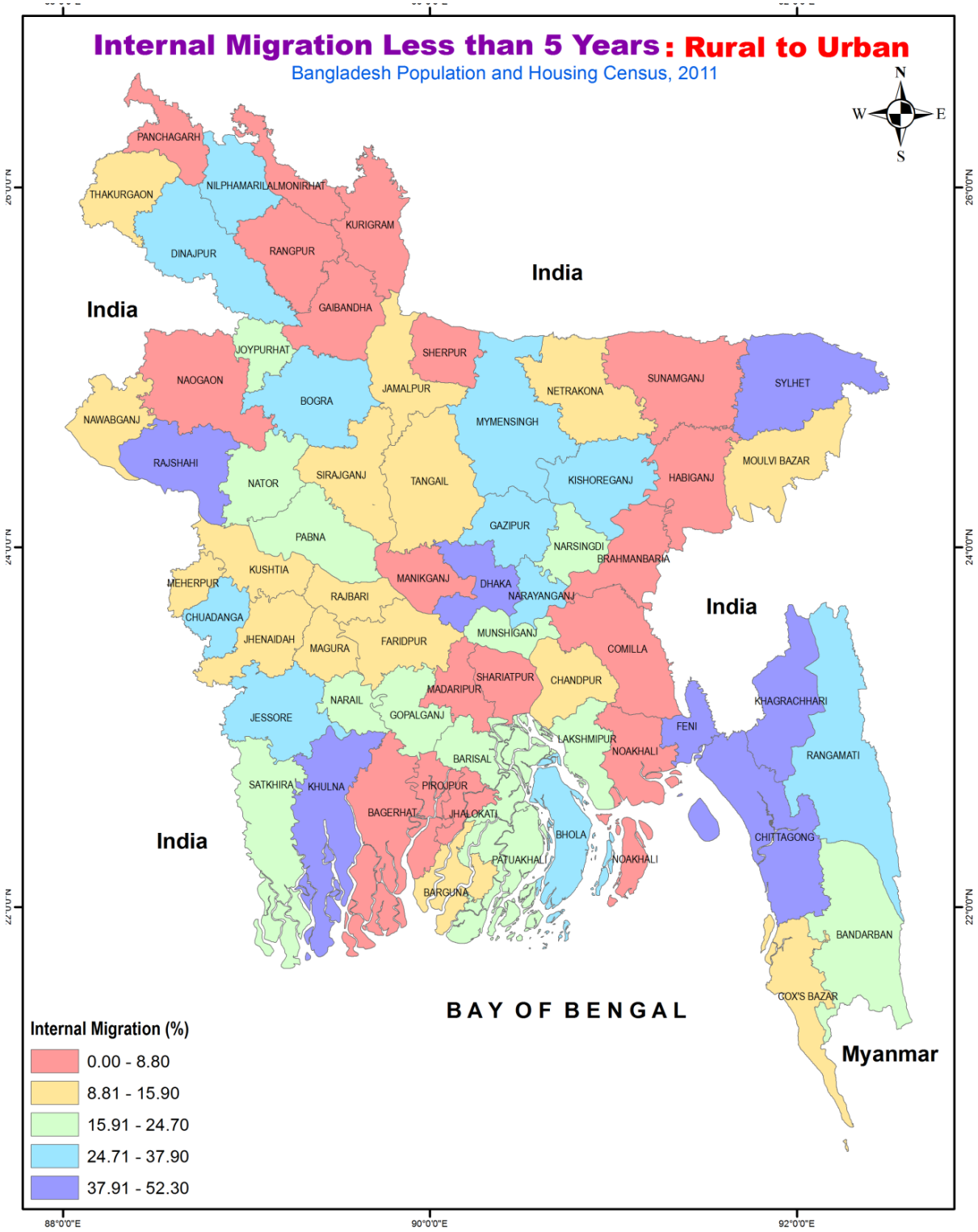
Map 3.7: Distribution of internal migration less than 5 years by district, 2011

Distribution of internal migration those who were migrated less than 5 years ago is shown in Map 3.7. This type of migration took place mostly in Dhaka, Gazipur and Narayanganj districts. Next higher migration districts are Habiganj, Narsingdi, Munshiganj, Jhenaidah, Jessore, Khulna, Feni, Chittagong and Bandarban.



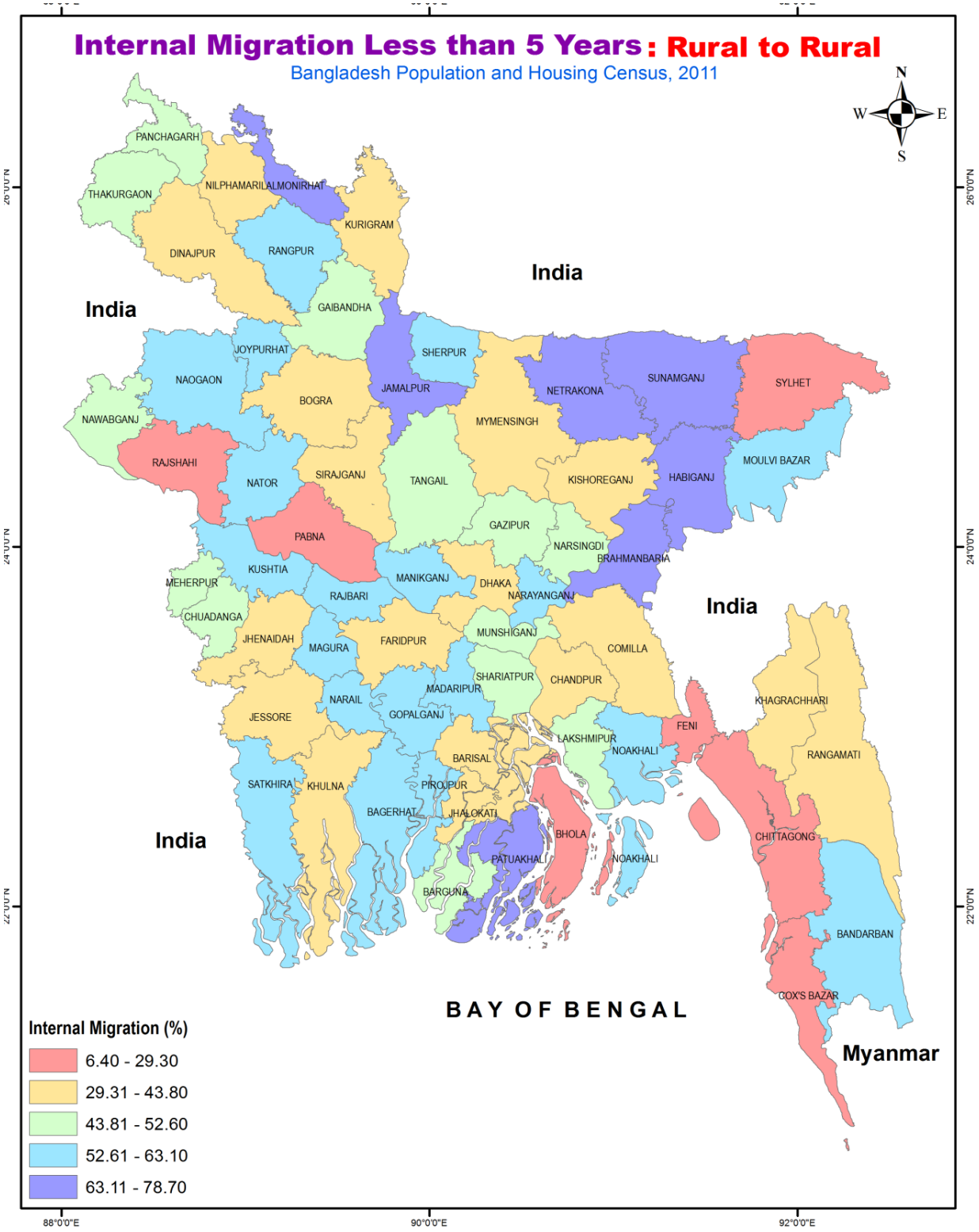
Map 3.8: Distribution of urban to urban internal migration less than 5 years by district, 2011

Distribution of internal migration from urban to urban who migrated less than 5 years ago is shown in Map 3.8. Highest migrated districts are Kurigram, Nawabganj, Rajshahi, Pabna, Chittagong and Cox's Bazar.



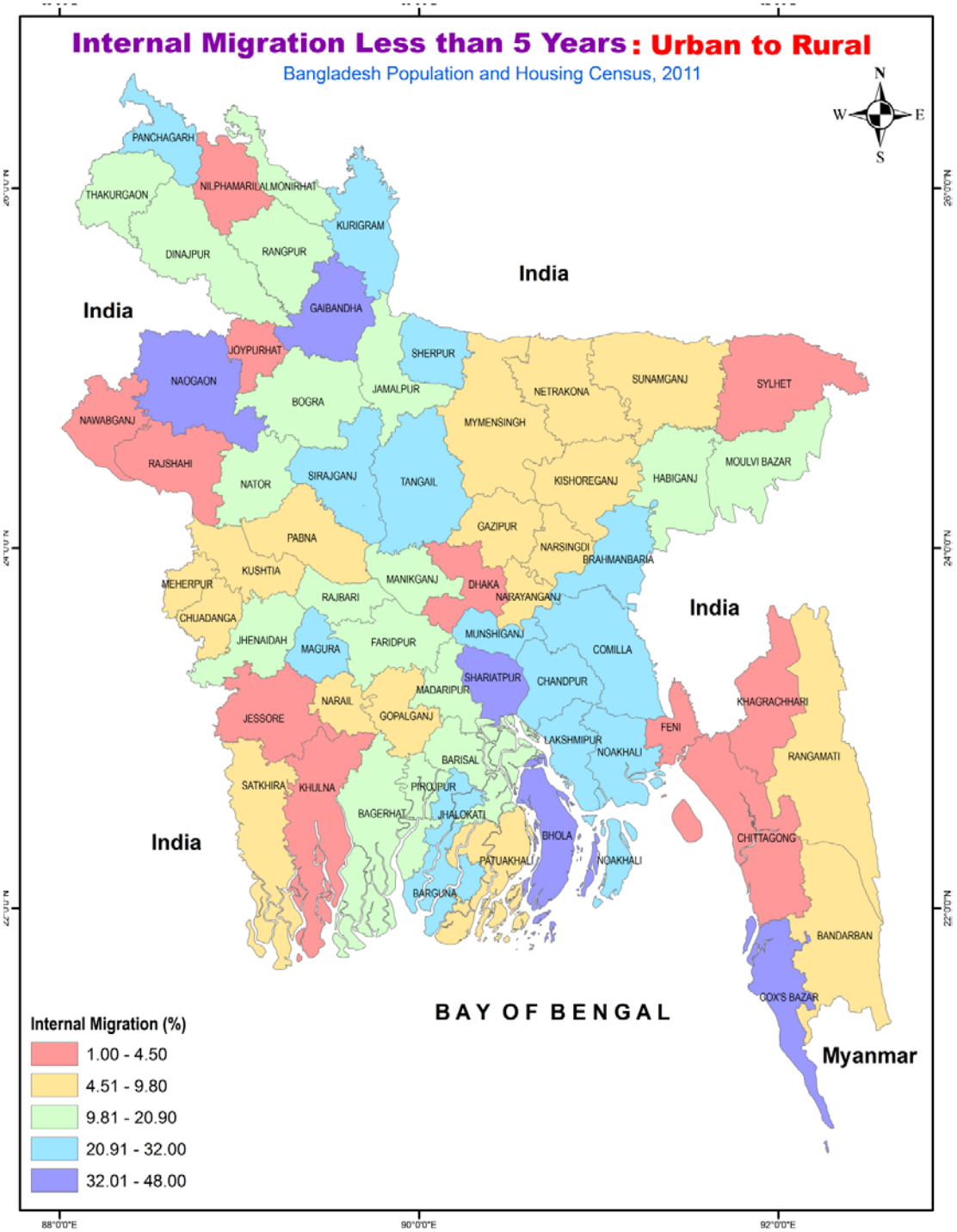
Map 3.9: Distribution of rural to urban internal migration less than 5 years by district, 2011

Distribution of internal migration from rural to urban those who were migrated less than 5 years ago is shown in Map 3.9. Maximum migrants moved to Dhaka, Sylhet, Rajshahi, Khulna, Feni, Khagrachari and Chittagong districts.



Map 3.10: Distribution of rural to rural internal migration less than 5 years by district, 2011

Distribution of internal migration from rural to rural those who were migrated less than 5 years ago is shown in Map 3.10. In this type of migration migrants most favorite districts are Lalmonirhat, Jamalpur, Netrakona, Sunamganj, Habiganj, Brahmanbaria and Patuakhali.



Map 3.11: Distribution of urban to rural internal migration less than 5 years by district, 2011

Distribution of internal migration from urban to rural those who were migrated less than 5 years ago is shown in Map 3.11. Migrants' most favorite districts for urban to rural migration are Cox's Bazar, Bhola, Shariatpur, Naogaon and Gaibandha.

3.8 Internal Migration and Human Capital

Selectivity of migration varies according to education of the migrants too. Migration may have both negative and positive effect on education. For many families, migration was needed for higher and better education, especially for their children. For many others, disruptions, including education disruptions accompanying migration may have significant negative impacts on migrants and their family members.

Availability of job opportunities at the place of destination, whatsoever be the quality, play a very important role in regard to the process of migration decision.

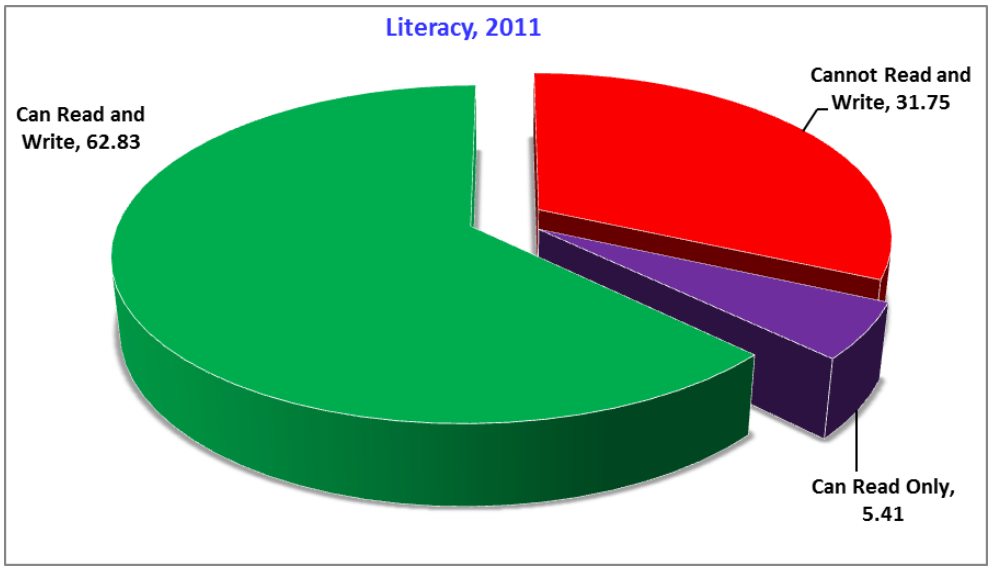


Fig 3.11: Distribution of literacy of Internal Migrants, 2011

Distribution of literacy of internal migrants is given in Fig 3.11. Though 62.83% of migrants can read and write, 31.75% are totally illiterate and 5.41% can read only.

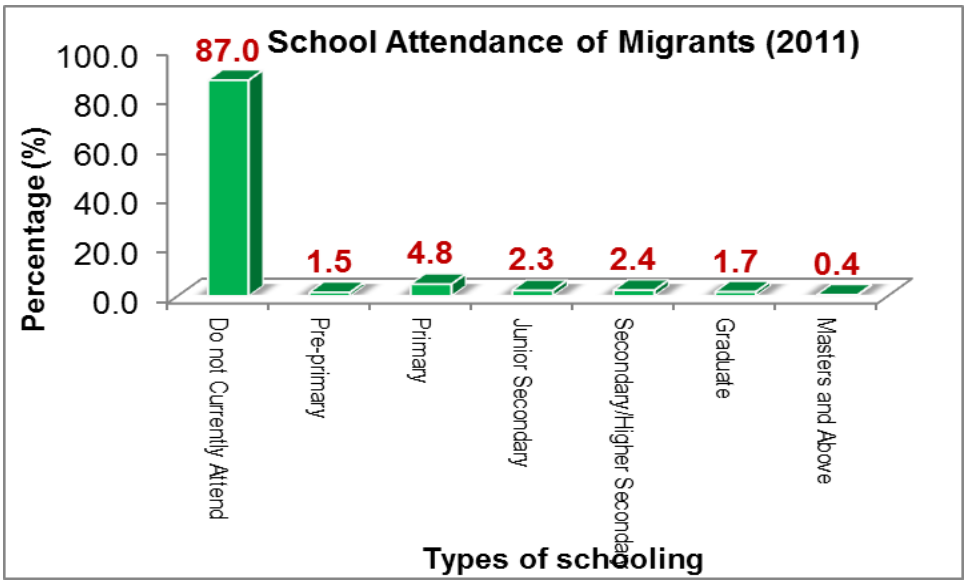


Fig 3.12: School Attendance of Internal Migrants, 2011

In 2011, only 13% of the migrants are attending school of that 1.7% and 0.4% are graduates and masters student, respectively.

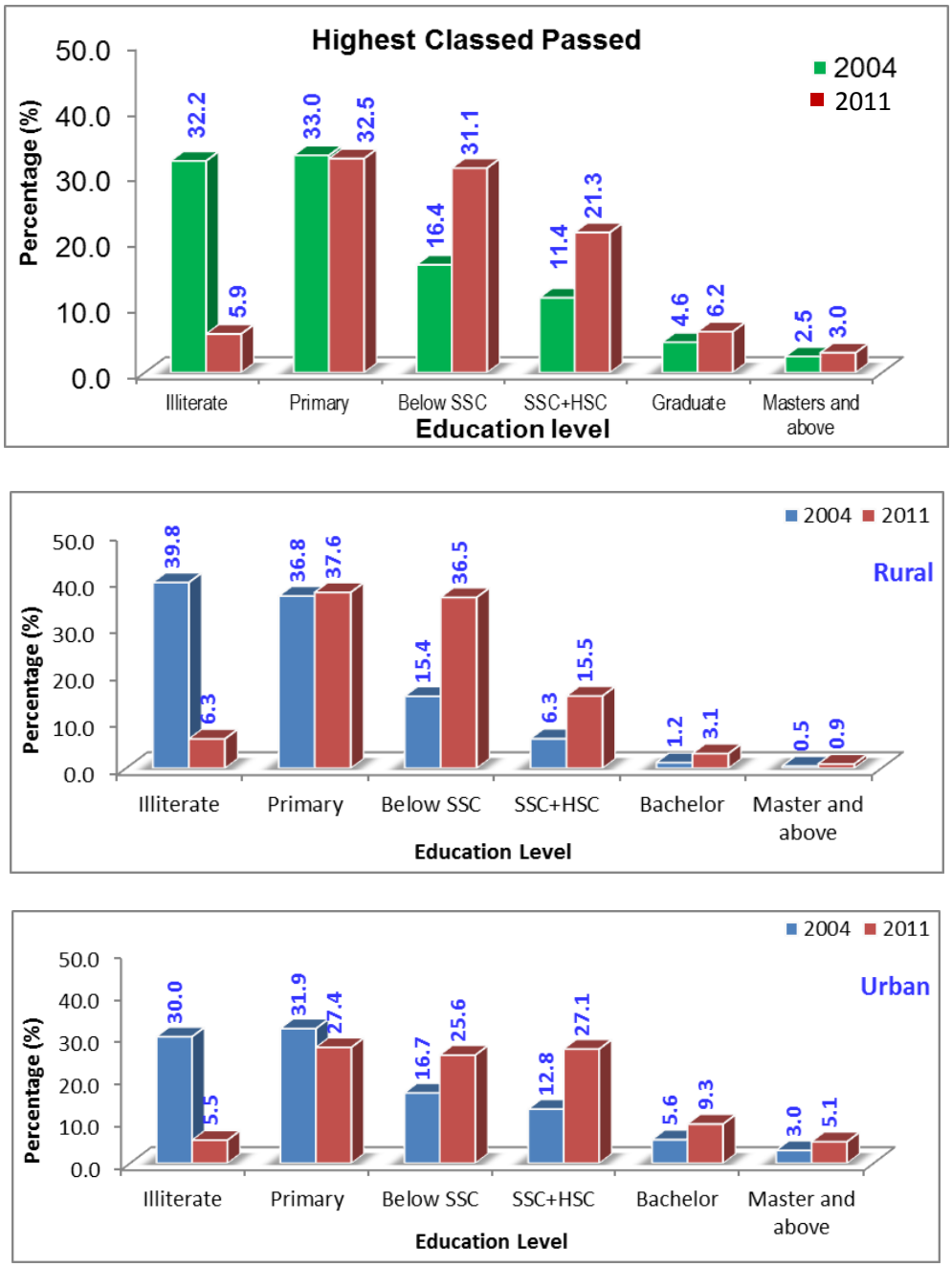
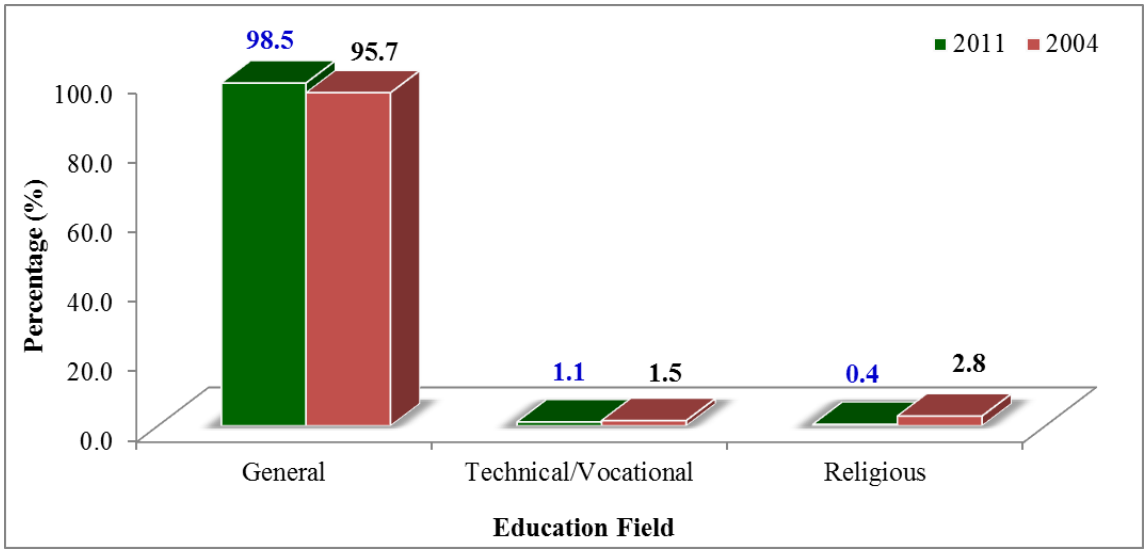
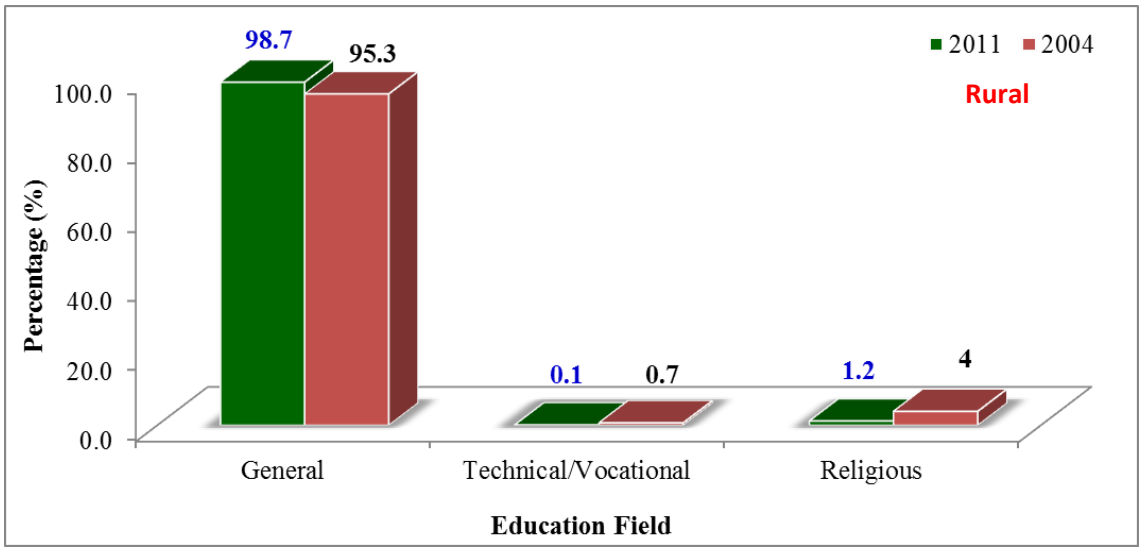


Fig 3.13: Highest Class Passed by Internal Migrants, 2004, 2011

Illiteracy is decreased noticeably in 2011 to 5.9% from 32.2% in 2004. In consequences, percentage of higher educated people increased from 2004 to 2011; in SSC and HSC level, from 11.4 to 21.3; in graduate level from 4.6 to 6.2; in masters level from 2.5 to 3.0; percentage of higher educated migrants in urban areas is naturally more than that in rural areas.





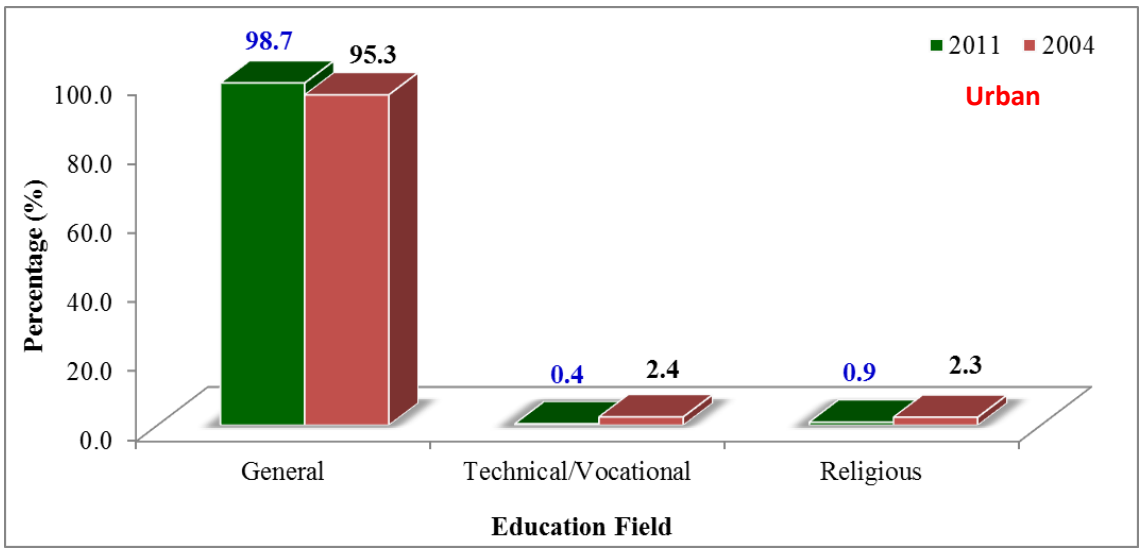


Fig 3.14: Education Fields of Internal Migrants, 2004, 2011

Most of the migrants are having general education 98.5% in 2004 and 95.7% in 2011.Same pattern is observed both in rural and urban migrants.

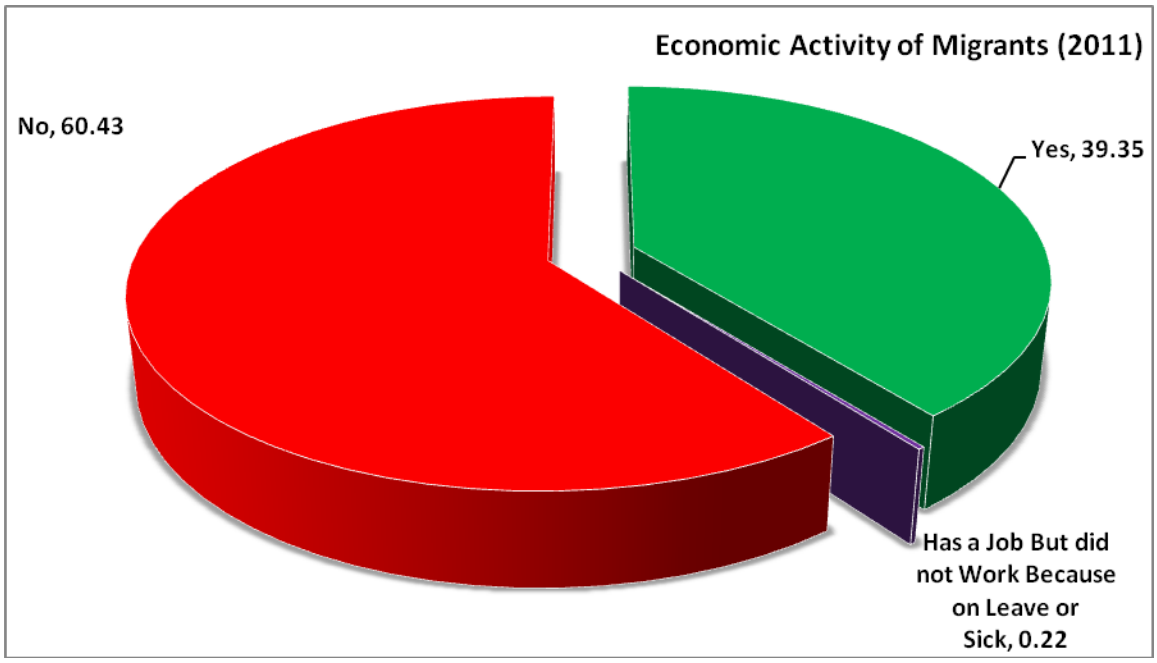


Fig 3.15: Economic Activity of Internal Migrants, 2011

From the above figure it is seen that a large proportion 60.43% of internal migrated population is not economically active.

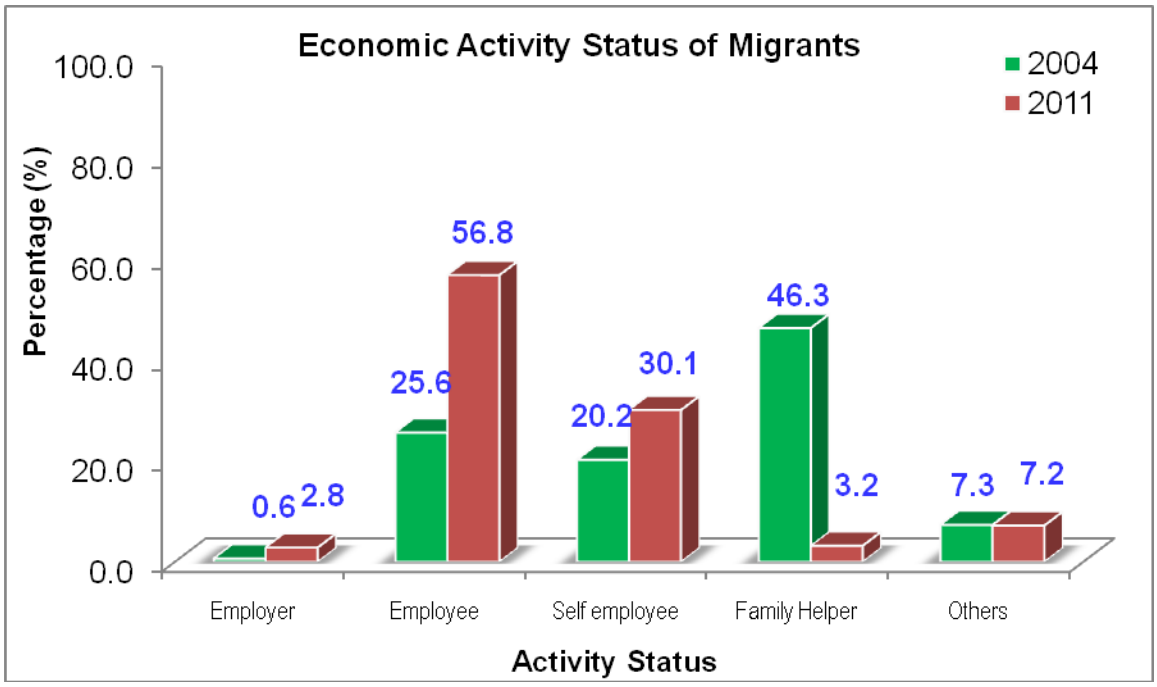


Fig 3.16: Activity Status of Internal Migrants, 2004, 2011

In 2004, the maximum proportion of economically active migrants were family helper 46.3%, employee 25.6% and self employee 20.2%. While in 2011, the maximum proportion of economically active migrants are employee 56.8%, self employee 30.1% and employer 2.8%.

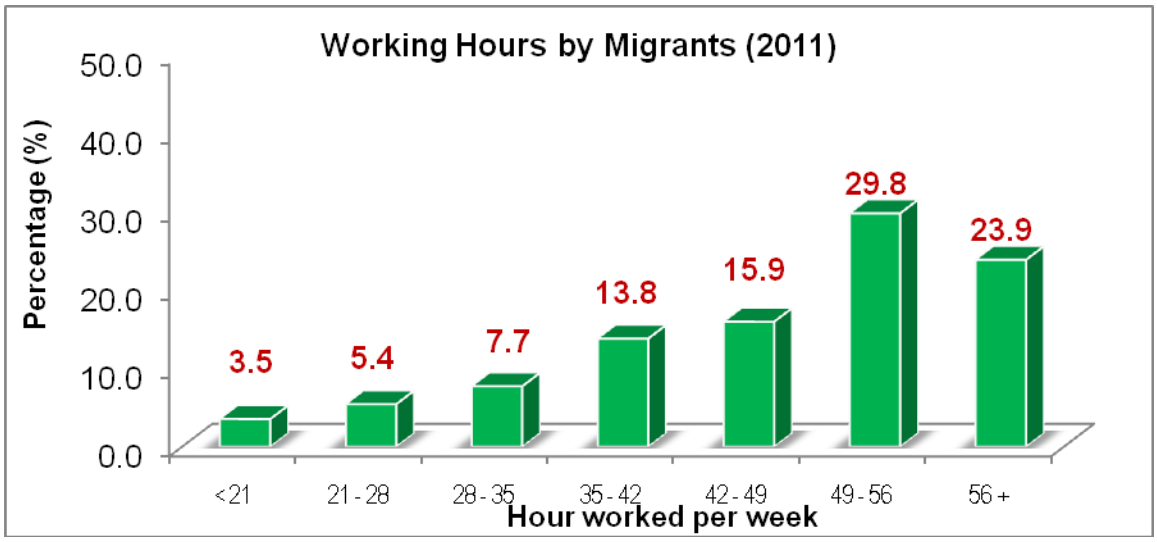


Fig 3.17: Working Hours of Internal Migrants, 2011

Weekly working hours of most of the migrants is more than 49 hours. 29.8% workers work 49-56 hours and 23.9% work more than 56 hours.

4. Housing Characteristics and Living Standard of Internal Migrants

4.1 Housing Characteristics of Internal Migrants

It is important to note that the characteristics of migrants are not sufficient to explain the selectivity of migration because the decision of a person to migrate is largely dependent on his family background. The individual characteristics can only give some idea about type of people involved in the process of migration. Thus, it is important to study the characteristics of migrant households to get an idea about the selectivity of migration process. This will provide a better understanding as to why some families participate in migration process while others not.

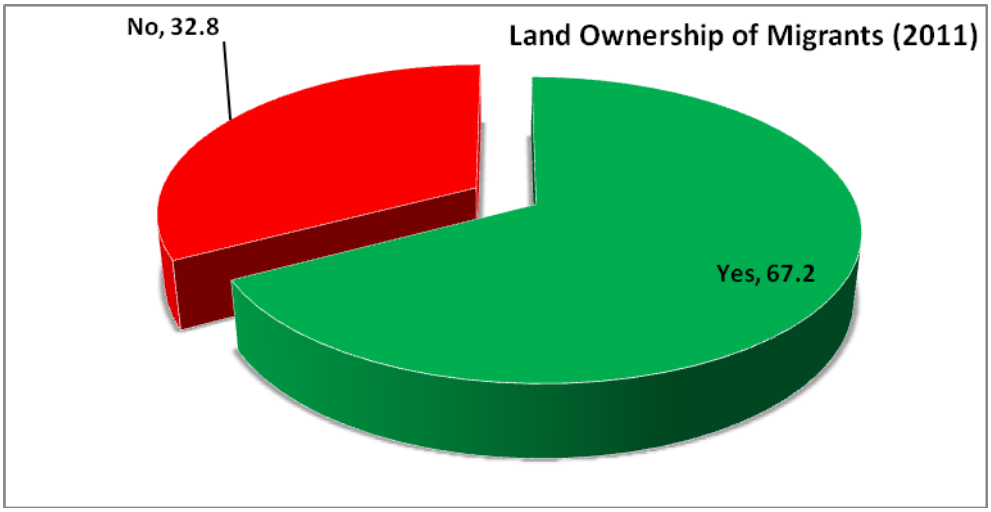


Fig 4.1: Distribution of Land Ownership of Internal Migrants, 2011

Distribution of land ownership of internal migrants is given in Fig 4.1. In 2011, 67.2% of the migrants have own land.

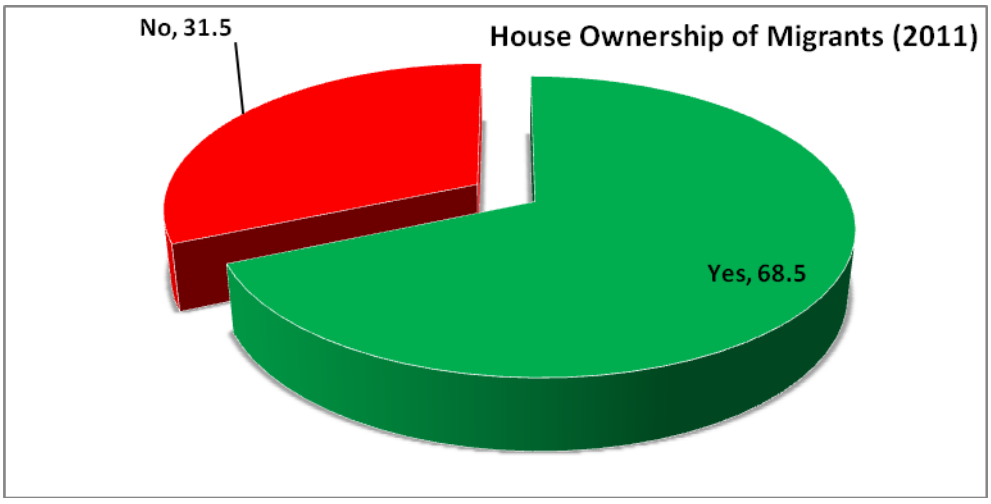


Fig 4.2: Distribution of House Ownership of Internal Migrants, 2011

Distribution of house ownership of internal migrants is shown in Fig 4.2. Among the migrants 68.5% have own house.

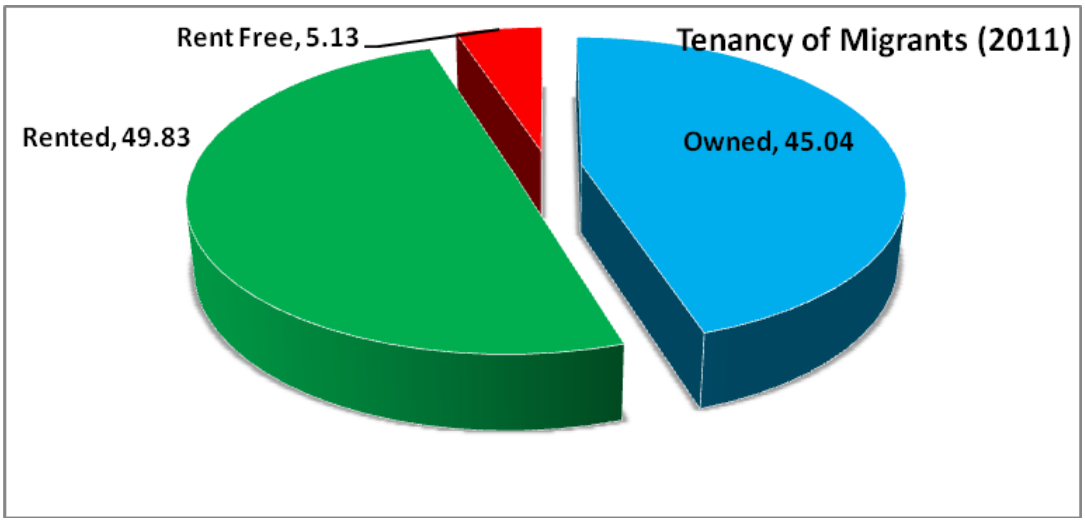


Figure 4.3: Tenancy of Internal Migrants

However, majority 54.96% of migrants live in a rented house (49.83% with pay and 5.13% rent free) and 45.04% live in their own houses.

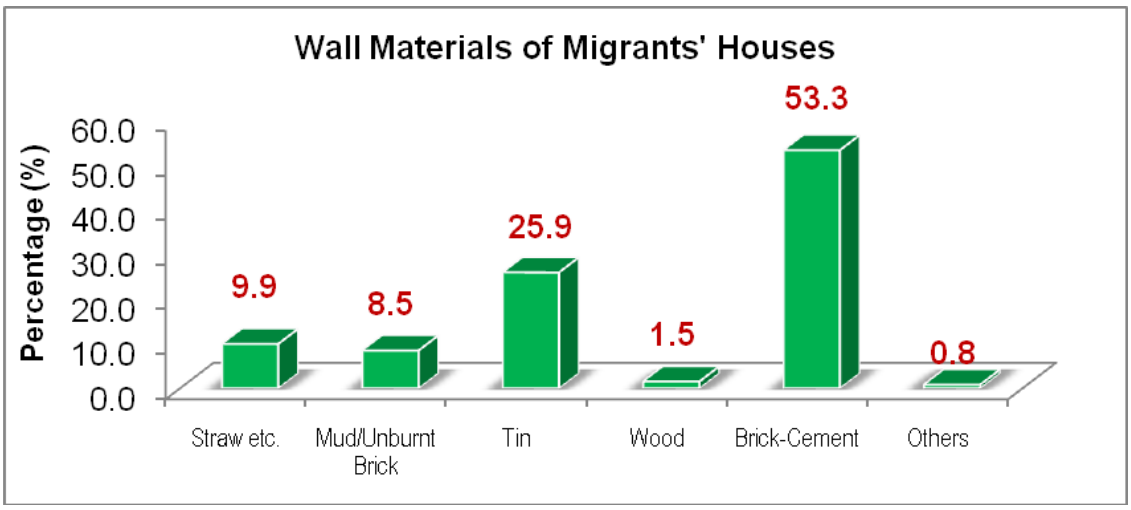


Fig 4.4: Distribution of Wall Materials of House of Internal Migrants, 2011

Distribution of wall materials of house of internal migrants is given in Fig 4.4. Wall material of 53.3% houses is brick-cement, 25.9% tin, 9.9% straw, 8.5% mud and only 1.5% wood.

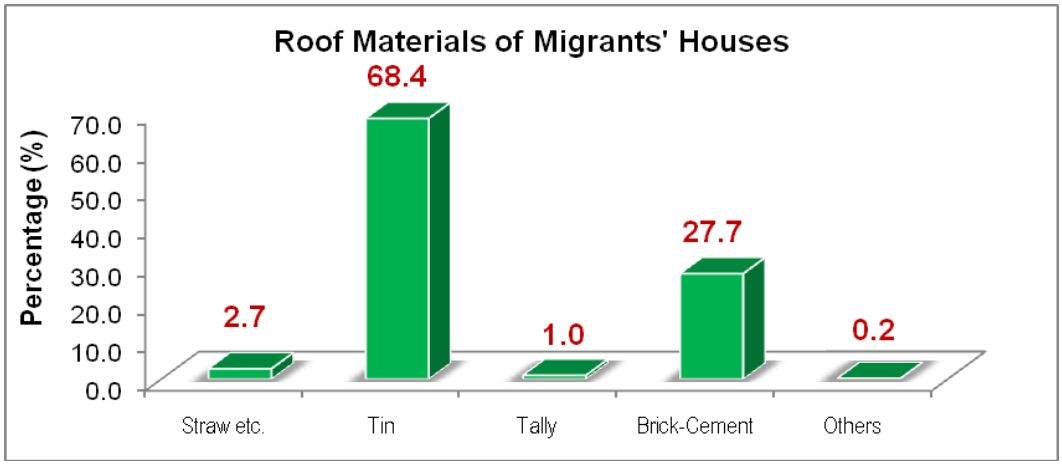


Fig 4.5: Distribution of Roof Materials of House of Internal Migrants, 2011

Distribution of roof materials of house of internal migrants is shown in Fig 4.5. Roof material of 68.4% houses of migrants is tin, 27.7% brick-cement, 2.7% straw and 1% tally.

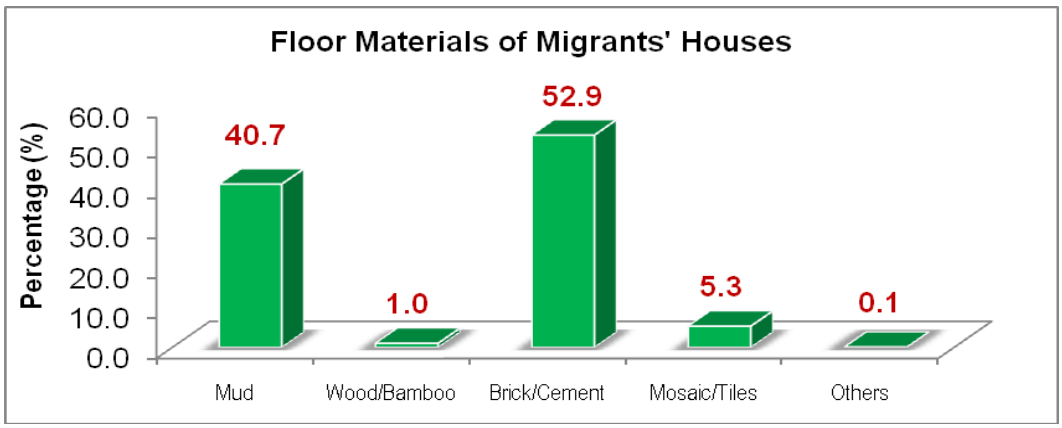


Fig 4.6: Distribution of floor materials of internal migrants, 2011

Distribution of floor materials of internal migrants is given in Fig 4.6. The floor materials of majority 52.9% of their houses is brick-cement, 40.7% mud, 5.3% mosaic/tiles and 1% wood/bamboo.

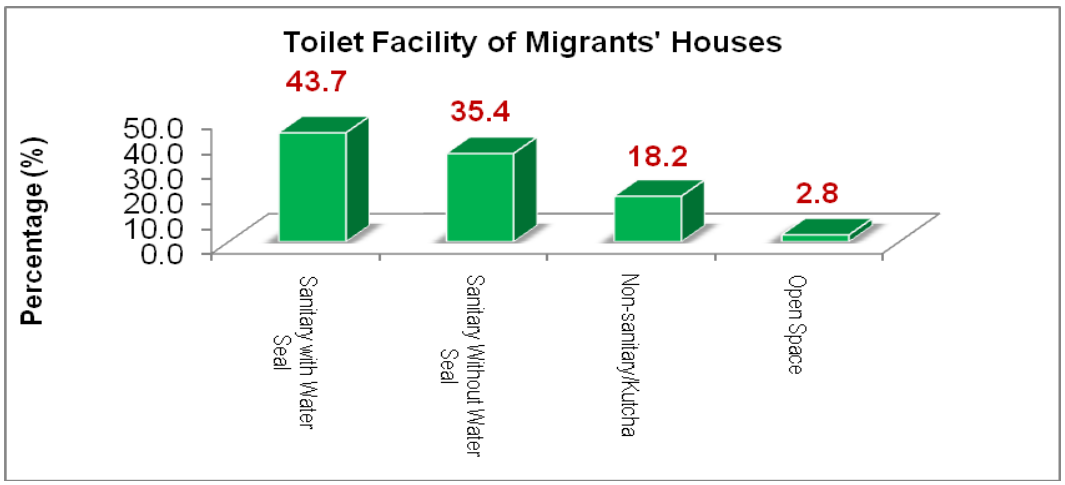


Fig 4.7: Toilet Facility of House of Internal Migrants, 2011

Toilet facility of house of internal migrants is given in Fig 4.7. Most of their houses have sanitary toilet but 43.7% are sanitary with water seal and 35.4% are sanitary with no water seal and 2.8% in open space.

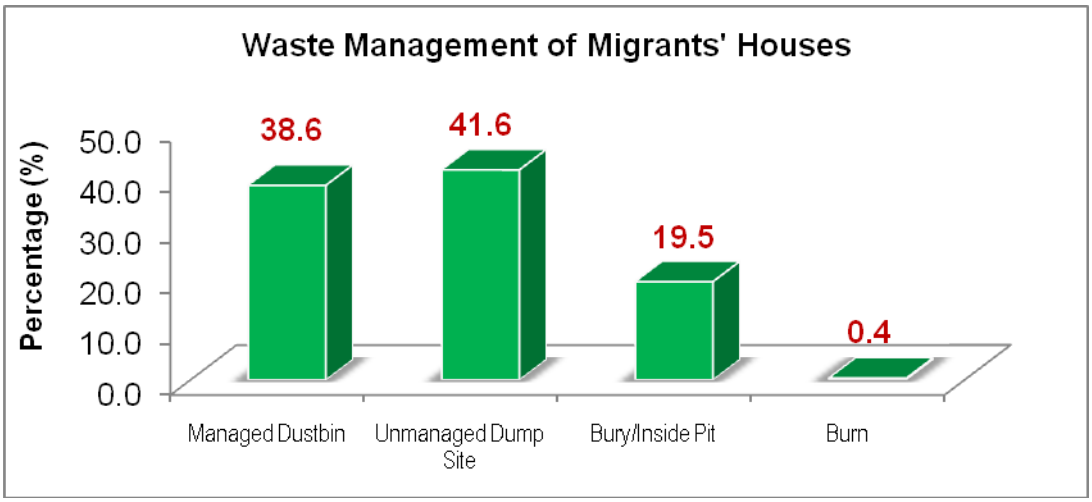


Fig 4.8: Distribution of Waste Management of House of Internal Migrants, 2011

Distribution of waste management of house of internal migrants is given in Fig 4.8.

Though 38.6% of the houses of migrants have managed dustbin, 41.6% of their houses do not have good waste management, 19.5% bury/inside pit and only 0.4% burn.

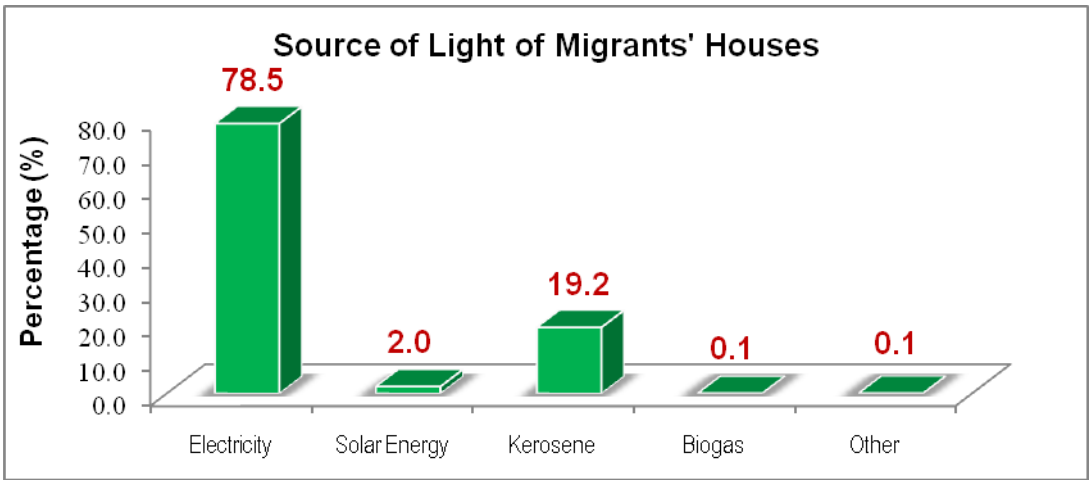


Fig 4.9: Distribution of Source of Light of House of Internal Migrants, 2011

Electricity facility is available in 78.5% of the migrants' houses. 19.2% houses use kerosene and 2% use solar energy.

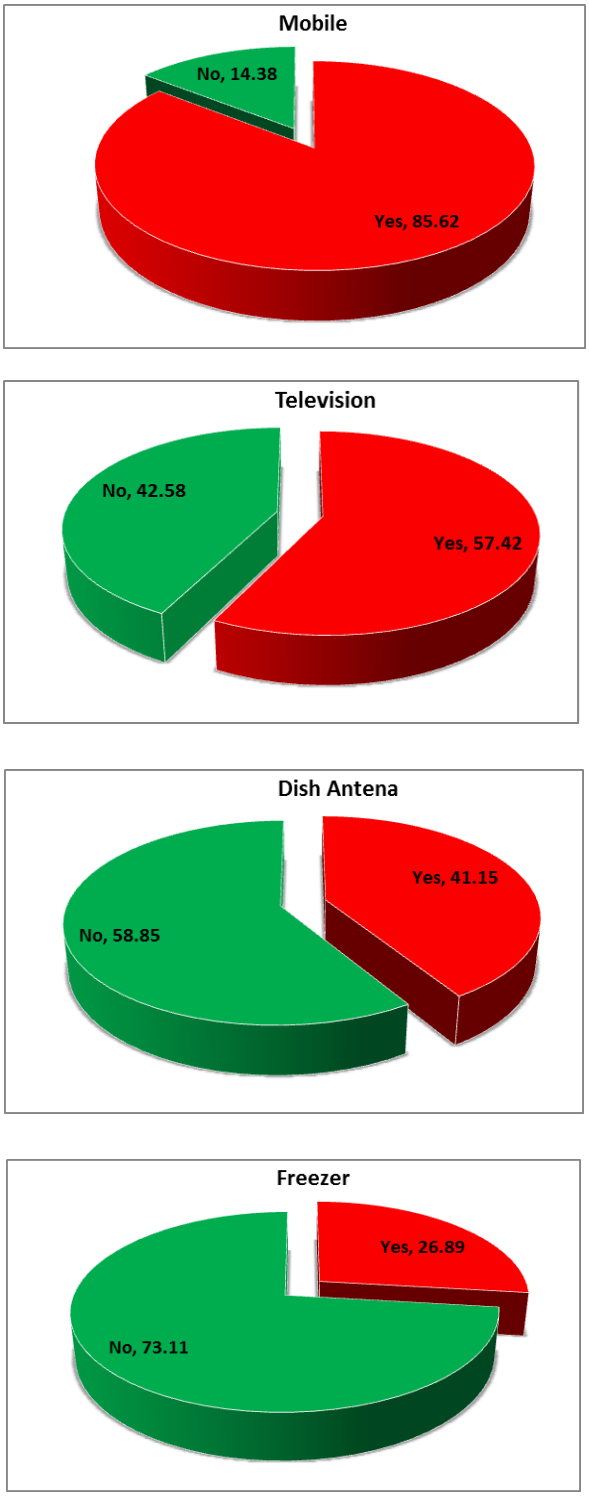


Figure 4.10: Household Materials of House of Internal Migrants, 2011

A majority, 85.62% of the migrants' households own mobile; 57.42% have television; 41.15% have dish antenna; however, only 26.9% have freezer.

4.2 Wealth Index of Migrants

Filmer and Pritchett (1999; 2001) proposed an index based on household asset ownership indicators. Their method is especially useful when information on household income and consumption expenditures are not available. As a proxy for long-run household wealth, they constructed a linear asset index from a set of asset indicators, using principal components analysis to derive the weights. They argue that this asset index is robust and produces internally coherent results. Principal component analysis is further used by Vyas and Kumaranayake (2006) for constructing socio-economic status indices. We apply Principal Component Analysis (PCA) to construct wealth indexes of internally migrated population. Ten binary household asset indicators are selected whose descriptive statistics and factor scores are displayed in Table 4.1. Factor scores associated with all the indicators are large enough. However, the variable 'Has Mosaic or Cement Floor' gives the highest score followed by 'Has Brick Wall'. It is revealed that the first principal component solely can explain a major amount (45.47%) of the total variation (see Table 4.2 and Fig. 4.11). We, thus, select the first principal component to construct the desired wealth index. This wealth index is an indirect way of measuring household income though it is usually an assessment of standard of living.

Table 4.1: Results from principal components analysis

Asset Indicators	Mean (%)	SD	Factor Score
Has Brick-cement Wall	0.5327	0.49893	0.7945
Has Brick-cement Roof	0.2769	0.44748	0.7120
Has Mosaic or Cement Floor	0.5821	0.49323	0.8106
Has Electricity	0.7854	0.41058	0.6546
Has Sanitary Toilet	0.7903	0.40709	0.5688
Has Good Waste Management	0.5838	0.49294	0.4192
Has Mobile	0.8562	0.35090	0.4196
Has Television	0.5742	0.49447	0.7432
Has Dish Antenna	0.4115	0.49211	0.7627
Has Freezer	0.2689	0.49893	0.7166

Table 4.2: Total variation explained by the principal components

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	4.547	45.467	45.467
2	1.009	10.089	55.556
3	.882	8.818	64.374
4	.834	8.341	72.715
5	.719	7.190	79.905
6	.621	6.207	86.112
7	.477	4.769	90.881
8	.373	3.726	94.607
9	.304	3.044	97.650
10	.235	2.350	100.000

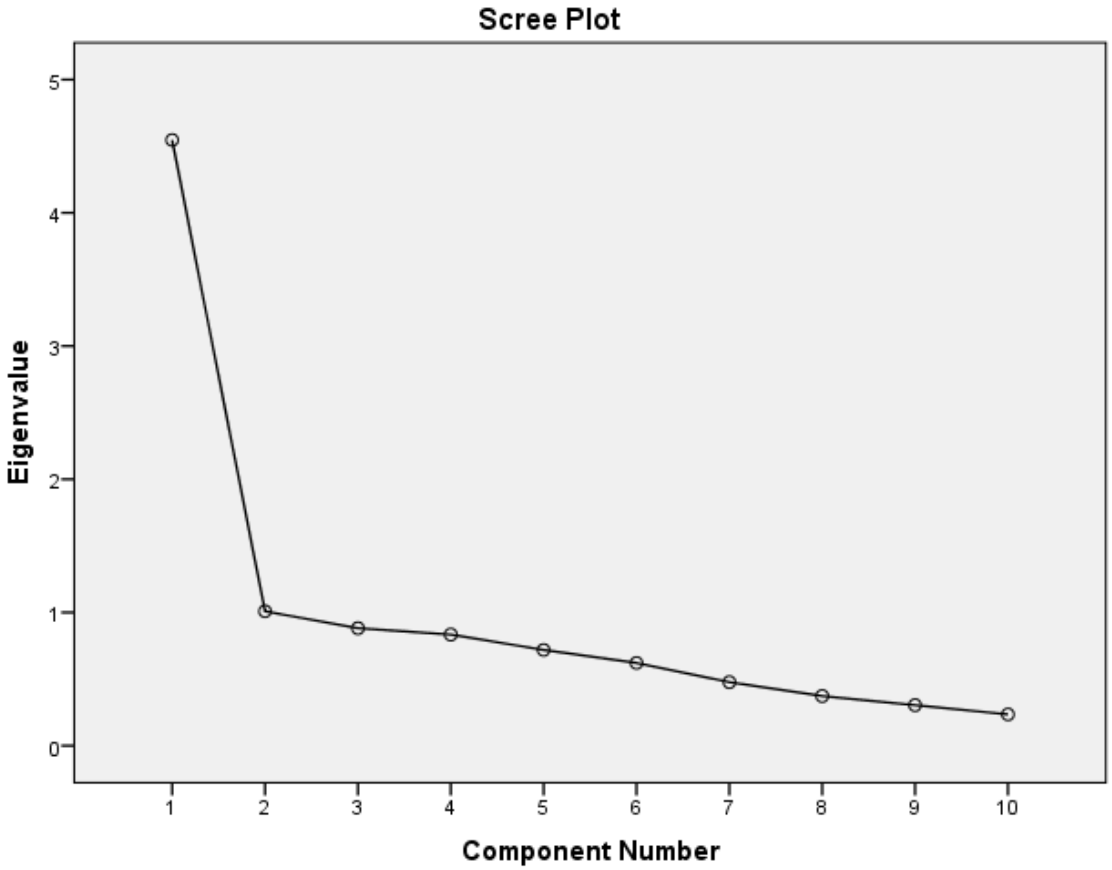
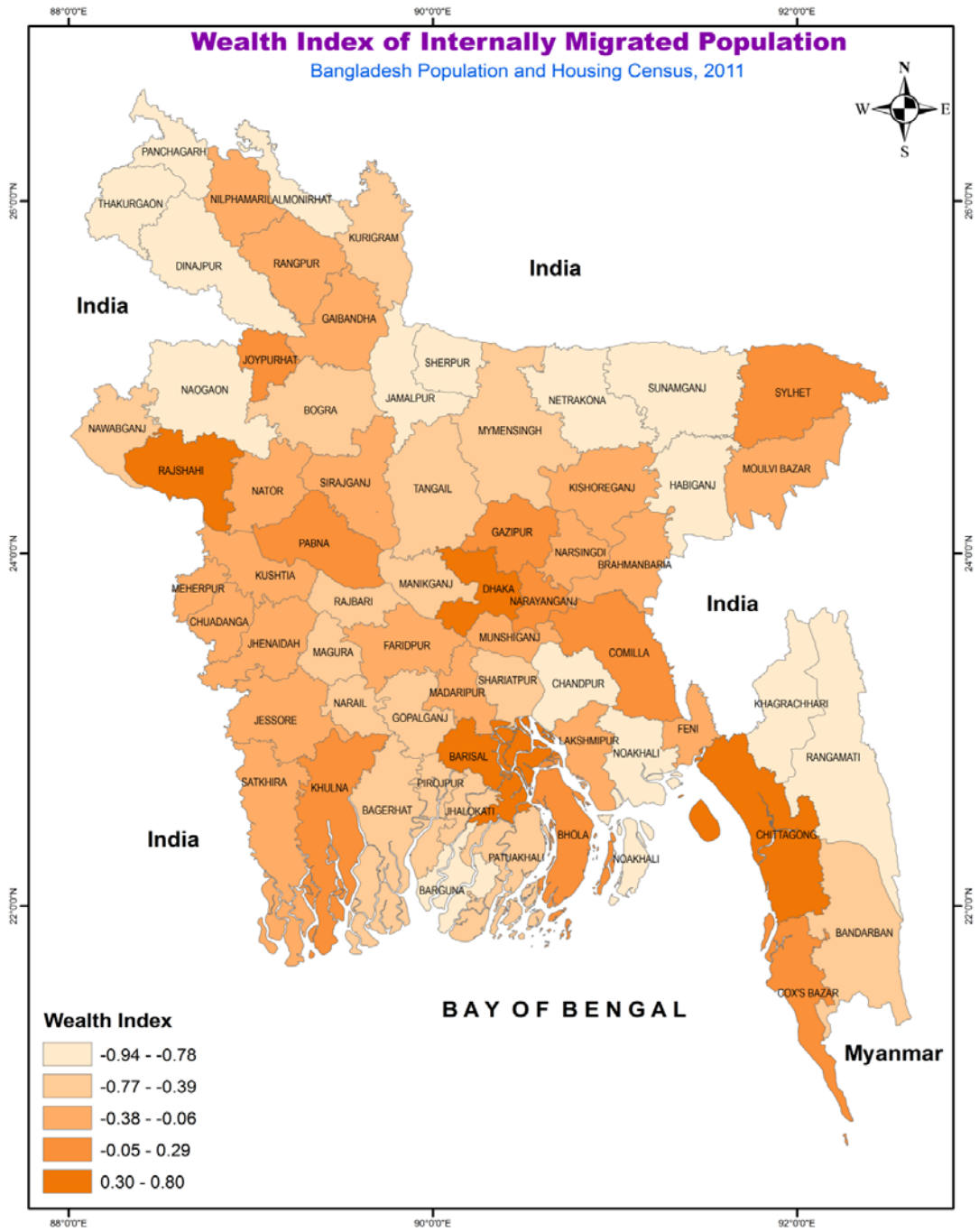


Figure 4.11: Scree Plot of Principal Components Analysis



Map 4.1: Distribution of Wealth Index of Internal Migrants, 2011

Distribution of wealth index of internal migrants by district is shown in Map 4.1. From the map it is revealed that on an average living standard of migrants those who live in Dhaka, Rajshahi, Chittagong and Barisal districts are better than other districts of Bangladesh. On the other hand, standard of living is the poorest among the migrants who live in Dinajpur, Lalmonirhat, Panchagarh, Thakurgaon, Naogaon, Sherpur, Jamalpur, Netrakona, Hobiganj, Shunamganj, Barguna, Chandpur, Noakhali, Khagrachari and Rangamati districts.

Table 4.3: Wealth index quantiles of internal migrants

	Wealth Index Quantiles				
	Poorest (20%)	2-Q	3-Q	4-Q	Richest (20%)
Bangladesh	19.7	19.8	21.4	17.6	21.4
Rural	32.7	28.1	22.7	11.2	5.3
Urban	6.8	11.7	20.1	24.0	37.4
Division					
Barisal	22.09	21.74	19.04	14.76	22.38
Chittagong	28.70	17.48	20.36	16.76	16.70
Dhaka	12.41	18.71	24.84	20.25	23.78
Khulna	21.91	24.64	20.88	15.55	17.01
Rajshahi	18.20	15.41	15.13	19.13	32.13
Rangpur	42.75	25.13	15.71	10.46	5.95
Sylhet	20.52	19.30	22.63	16.46	21.10
Sex					
Male	15.3	16.4	21.9	20.9	25.5
Female	22.5	22.0	21.1	15.6	18.9
Reason of Migration					
Marriage	29.5	26.3	19.1	12.4	12.7
Education	7.6	9.2	12.9	21.8	48.6
Employment/Business	3.1	10.1	25.5	26.3	35.0
In Search of Work	20.2	23.2	27.6	17.6	11.4
Natural Calamity	51.3	26.7	14.4	6.2	1.3
Family Quarrel	24.3	24.1	22.4	10.1	19.1
Tortured/Deserted by Spouse	34.9	9.5	31.7	4.8	19.0
Others	14.1	15.6	21.2	20.9	28.1
Duration of residence					
0 - 5	14.8	19.3	24.6	21.0	20.4
5 - 10	17.1	18.9	22.1	18.7	23.3
10 - 15	19.8	19.3	21.9	16.2	22.7
15 - 20	21.2	20.5	20.7	15.8	21.9
20 - 25	23.4	20.0	18.2	15.6	22.7
25 & Over	29.1	21.7	16.1	13.3	19.7
Religion					
Islam	19.0	19.6	21.6	17.7	22.1
Hinduism	22.6	22.1	20.7	17.2	17.4
Buddhism	48.0	19.0	6.0	16.0	11.0
Christianity	35.2	14.4	16.8	13.6	20.0
Other	35.3	17.6	11.8	35.3	0.0

Contd.

	Wealth Index Quantiles				
	Poorest (20%)	2-Q	3-Q	4-Q	Richest (20%)
Age Group					
0 - 14	16.6	19.9	23.9	18.9	20.6
15 - 64	19.6	19.7	21.2	17.7	21.8
65 & over	31.6	21.5	16.3	12.2	18.3
Literacy					
Cannot Read and Write	36.4	26.1	21.4	10.3	5.8
Can Read Only	24.3	25.4	24.8	15.7	9.8
Can Read and Write	11.2	16.0	20.7	21.2	30.9
Highest class passed					
Illiterate	27.3	23.1	24.6	15.4	9.6
Primary	27.5	23.9	23.6	14.3	10.7
Below SSC	21.6	23.6	23.0	17.3	14.4
SSC	11.8	15.0	20.7	22.5	30.0
HSC	8.0	10.3	15.6	22.3	43.7
Graduate	5.6	6.0	11.4	20.8	56.2
Masters	3.2	4.5	7.7	15.1	69.6
School Type					
Government	12.2	15.0	18.9	22.5	31.4
Non-government/MPO	9.4	13.3	18.6	20.8	37.9
Religious	13.7	20.5	27.3	25.9	12.7
Non-formal	28.6	12.1	25.3	13.2	20.9
Others	18.9	16.2	18.9	21.6	24.3
Hours Worked (Group) per week					
< 21	26.9	21.8	21.4	12.6	17.2
21 - 28	31.9	24.0	18.4	13.8	12.0
28 - 35	28.4	19.3	20.0	14.0	18.3
35 - 42	17.5	13.9	18.1	19.4	31.1
42 - 49	11.5	16.2	26.1	20.7	25.5
49 - 56	11.2	19.3	27.0	21.6	20.8
56 +	9.7	16.1	24.8	23.5	25.9
Activity Status					
Employer	8.0	11.2	13.5	23.5	43.8
Employee	7.2	14.9	26.2	23.7	28.0
Self-employed-Agriculture	49.3	22.8	13.8	7.9	6.2
Self-employed-Non-Agriculture	17.2	21.0	25.5	18.4	17.9
Family Helper	20.9	26.7	16.5	10.2	25.7
Others	28.4	22.5	19.2	15.7	14.2

Contd.

	Wealth Index Quantiles				
	Poorest (20%)	2-Q	3-Q	4-Q	Richest (20%)
Marital Status					
Never Married	13.6	17.6	22.8	20.2	25.8
Married	21.2	20.7	21.0	17.1	20.0
Widowed	30.5	19.7	18.7	11.8	19.2
Divorced	33.0	13.2	17.6	14.3	22.0
Separated	18.9	16.9	28.4	16.9	18.9
Age at First Marriage					
10 - 18	25.9	24.4	21.7	14.4	13.5
18 - 22	21.9	20.3	21.6	17.6	18.6
22 - 26	16.1	15.7	21.2	19.8	27.2
26 - 30	12.4	12.8	16.3	20.5	38.1
30 - 34	9.1	8.5	13.2	21.6	47.6
34 +	15.4	12.9	15.4	18.3	38.0

To assess the correlation with socio-demographic variable, the wealth index of migrants is categorized into five quantiles. The major proportion of migrants, live in rural, is in the poorest quantile of wealth index. Conversely, the major proportion of migrants, live in urban, is in the richest quantile of wealth index. Among the divisions, Rajshahi has the highest percentage of richest migrants 32.13% followed by Dhaka 23.78%, Barisal 22.38% and Sylhet 21.10%. The maximum proportion of migrants in the poorest quantile of wealth index is in Rangpur division 42.75%. Comparatively, greater proportion of male migrants is in the richest quantile (25.5% male and 18.9% female). Muslims and Hindus are almost equally distributed in five quantiles of wealth index, but majority of Buddhists 48.0%, Christians 35.2% and migrants from other religion 35.3% are in poorest quantiles. Migrants of all age groups are almost equally distributed in different wealth quantiles.

Literate migrants are richer than illiterate. 30.9% of migrants who can read and write are in the richest quantile, whereas, only 5.8% of migrant who cannot read and write are in in the richest quantile. Education level seems to influence standard of living. The maximum of illiterate migrants 27.3% is in the poorest quantile. As the education level increases, proportion of migrants in the richest quintile increases; the percentages of the migrants in the richest quantile for graduate and master levels are 56.2% and 69.6%. Migrants those who have general education (Government and Non-government MPO) are richer than those who have religious or non-formal education. A maximum, 37.9% of migrants who have education in Non-government MPO schools are in the richest quantile, whereas, only 12.7% of religious school and 20.9% of non-formal school are in the richest quantile. Economic activity status also influence standard of living. The highest proportion of the employers 43.8% and that of employees 28.0% are in the richest quantile. On the other hand the highest proportion of the self-employed-agriculture 49.3% is in the poorest quantile.

Comparatively, higher proportion 33% are in poorest quantile for divorced and 30.5% for widowed. Percentages of richest quantile increases as the age at marriage increases. It is highest 47.6% for age at first marriage in age group 30-34.

No noticeable variation in the proportion of different wealth quantiles is observed due to duration of residence. The proportion of migrants in the richest quantile is the highest for those who migrated for education 48.8% and is lowest for those who migrated for natural calamity 1.3%. On the other hand, the proportion of migrants in the poorest quantile is the highest for those who migrated for Natural Calamity 51.3% and is lowest for those who migrated for employment or business 3.1%.

5. DETERMINANTS AND FACTORS OF INTERNAL MIGRATION

5.1 Determinants of Internal Migration

Determinants of migration vary from country to country and even within a country, it varies depending on the socio-economic, demographic and cultural factors. Internal migration is usually related with some socio-demographic variables. The probabilistic nature of internal migration can be described through a logistic regression model. Consider a binary variable M that takes value 0 if a person is non-migrant and takes value 1 if he/she migrated internally. We assume the transition 0 to 1 depends on some determinants such as age, family size, sex, marital status, religion, Ethnicity, slum dwelling, Tenancy, education, activity status, birth place, residence

The mathematical model can be formalized as

$$log\left\{\frac{\Pr(M_i=1)}{\Pr(M_i=0)}\right\} = \beta_0 + \beta_1 D_{1i} + \cdots + \beta_k D_{ki}, \quad i = 1, 2, \ldots, n\ ,$$

where D_{ji} represents the determinants.

Here, $\exp(\beta_i)$ is the effect of a unit increase in D_{ji} on the odds $log\left\{\frac{\Pr(M_i=1)}{\Pr(M_i=0)}\right\}$.

Table 5.1 shows that average age and household size of migrant population are significantly different from that of non-migrant population. The variable age has an odds ratio 1.013, which refers that a person with older age is 1.3% more likely to be a migrant. The odds of family size is 1.044 indicates that a person with larger family size is 4.4% more likely to migrate. The migration rate is also different between male and female. Males are 39.2% less likely to be migrant than females. This is natural, because women usually migrate internally when get married. Marital status also has a significant effect on Migration. Separated people are most likely to migrate followed by married people, whereas, never married people are least likely to migrate. Among different religious people, Hindus migrate more often than others. On the contrary Buddhists migrates with a lower rate than others. Ethnic people have 58.7% less chance to migrate. Slum dwellers, on the other hand, have 244.9% higher chance to migrate than non-slum. Migrated people mostly live in a rented house. The migration rate is higher among higher educated people and those who have technical/vocational education. Migration rate also varies for economic activity status. Employees are most likely to migrate followed by employers. People, farming in own lands, are less prone to migrate. People having birth in rural area are 47% more likely to be migrant than those having birth in urban. In consequences, migrated population mostly live in urban areas at present. Among different divisions, Dhaka is mostly preferred by migrant people; their second, third and fourth preferences are Sylhet, Khulna and Rajshahi, respectively.

Table 5.1: Relation of socio-demographic variables with internal migration and logistic regression output

		Non migrant	Migrant	t/Chi-Square	p-value	Odds Ratio	p-value
Age		26.26±19.35	31.65±17.16	-56.77	0.000	1.013	0.000
Family size		4.34±1.93	4.62±2.0	-25.47	0.000	1.044	0.000
Sex	Male	96.4%	3.6%	1977.84		.608	0.000
	Female	94.2%	5.8%			Ref	
Marital Status	Never Married	97.5%	2.5%	7349.14	0.000	.286	.000
	Married	93.2%	6.8%			.813	.016
	Widowed	94.3%	5.7%			.683	.000
	Divorced	95.3%	4.7%			.552	.000
	Separated	91.8%	8.2%			Ref	
Religion	Islam	95.3%	4.7%	652.94	0.000	1.798	.001
	Hinduism	94.2%	5.8%			2.231	.000
	Buddhism	98.8%	1.2%			.454	.000
	Christianity	96.8%	3.2%			1.225	.302
	Other	97.3%	2.7%			Ref	
Ethnic	Yes	99.6%	.4%	505.91	0.000	.413	.000
	No	98.9%	1.1%			Ref	
Slum	Yes	96.6%	3.4%	3235.63	0.000	3.449	0.000
	No	99.0%	1.0%			Ref	
Tenancy	Rented	95.1%	4.9%	56723.54	0.000	8.984	0.000
	Rent free	99.2%	.8%			1.434	.000
	Owned	99.4%	.6%			Ref	
Highest Classed Passed	Illiterate	95.0%	5.0%	4271.52	0.000	.285	.000
	Primary	96.1%	3.9%			.223	0.000
	Below SSC	94.9%	5.1%			.294	.000
	SSC	93.5%	6.5%			.376	.000
	HSC	91.8%	8.2%			.487	.000
	Graduate	89.4%	10.6%			.647	.000
	Masters	84.5%	15.5%			Ref	
Education Field	General	94.7%	5.3%	512.84	0.000	1.781	.000
	Technical/Vocational	90.1%	9.9%			3.536	.000
	Religious	97.0%	3.0%			Ref	
Activity Status	Employer	92.4%	7.6%	7122.27	0.000	2.002	.000
	Employee	87.7%	12.3%			3.411	.000
	Self-employed-Agriculture	98.5%	1.5%			.373	.000
	Self-employed-Non-Agriculture	95.0%	5.0%			1.285	.000

Contd.

		Non migrant	Migrant	t/Chi-Square	p-value	Odds Ratio	p-value
	Family Helper	96.5%	3.5%			.877	.034
	Others	96.1%	3.9%			Ref	
Birth Residence	Rural	41.3%	58.7%	286.98	0.000	1.470	.000
	Urban	50.8%	49.2%			Ref	
Current Residence	Rural	99.4%	.6%	19914.52	0.000	.244	0.000
	Urban	97.4%	2.6%			Ref	
Division	Barisal	99.4%	.6%	5074.37	0.000	.413	.000
	Chittagong	99.4%	.6%			.412	.000
	Dhaka	98.4%	1.6%			1.073	.000
	Khulna	98.9%	1.1%			.758	.000
	Rajshahi	99.0%	1.0%			.671	.000
	Rangpur	99.4%	.6%			.410	.000
	Sylhet	98.5%	1.5%			Ref	

5.2 Causes of Migration: Pull and Push Factors

Economic reasons were the main motivators for moving from one residence to another residence within the region. However, when moving from one region to another it was mostly for employment reasons followed by social reasons. The relative importance of the types of reasons for moving from residences to residences within the region or in another region was dependent on how long people have been living at their previous residences. The motivation for choosing a residence in another region was mainly for social followed by environmental reasons. As a comparison, a residence within the same region was chosen mainly for environment, social and economic reason, and these reasons were of similar importance.

The propensity to migration is usually influenced by a combination of push-pull factors. People migrated to cities and towns because they are attracted by livelihood opportunities. Regardless of skill, the migrated population can find diversified livelihood opportunities with various incomes in the towns and cities. Thus, the poor rural population considers migration a livelihood coping strategy. On the other hand, a considerable number of the population migrates to urban areas from villages for higher/better education, employment and investment opportunities. These privileged migrants occasionally create employment opportunities in urban areas for the poor migrants.

The causes of migration are usually explained by using two broad categories, namely, push and pull factors. For example, people of a certain area may be pushed off by poverty to move towards a town and/or industrial base for employment, while a better employment or higher education facility may pull people to avail these opportunities. People's decision to migrate from one place to another may be influenced by many non-economic factors such as,

personal maladjustment in the family or community. When maladjustment arises, economic disadvantage may appear as a strong influential or push factor in migration decision of an individual.

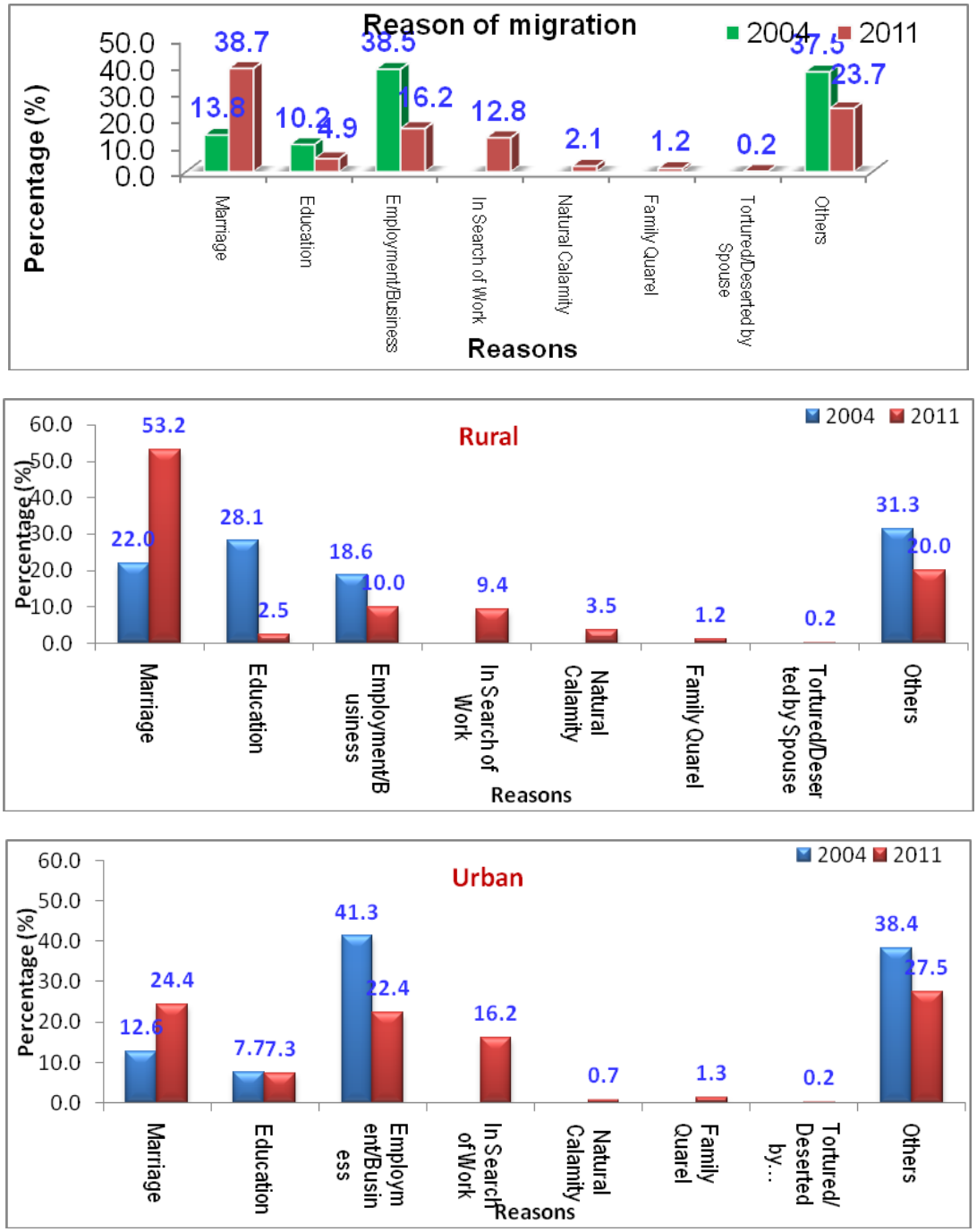


Figure 5.1: Distribution of migrants by cause, 2004, 2011

In 2004, a maximum, 38.5%, of internal migration took place due to employment and business activities, while in 2011 the maximum 38.7% of internal migration took place due to marriage. In the same year, the share of push factors like natural calamity, family quarrel and tortured or deserted by spouse is respectively 2.1%, 1.2% and 0.2%. The reasons of internal

migration varies between rural migration and urban migration. In 2004, the maximum proportion of rural migration took place due to some other reason 31.3 than marriage 28.1%, education 22% and employment or business 18.6%. Whereas, the maximum proportion of urban migration occurred due to employment and business. In 2011, the maximum proportion of rural migration took place due to marriage 53.2%, whereas, the maximum proportion of urban migration occurred due to some other reason 27.5%.

Table 5.2: Factors of internal migration

		Pull Factors				Push Factors			Others
		Marriage	Education	Employment/ Business	In Search of Work	Natural Calamity	Family Quarrel	Tortured/Deserted by Spouse	
Division	Barisal	50.47	8.36	16.13	7.33	0.59	0.89	0.20	16.04
	Chittagong	30.92	4.21	17.88	16.50	4.33	1.99	0.12	24.06
	Dhaka	25.59	5.25	21.23	15.23	0.90	0.98	0.13	30.69
	Khulna	63.64	3.69	7.60	5.93	1.36	0.86	0.19	16.74
	Rajshahi	43.22	6.57	13.40	5.04	2.96	1.13	0.17	27.52
	Rangpur	55.47	1.78	7.64	7.07	10.89	1.35	0.30	15.49
	Sylhet	32.34	4.52	18.95	27.85	0.12	2.20	0.35	13.68
Sex	Male	10.46	6.90	30.37	21.86	3.19	1.52	0.16	25.53
	Female	56.35	3.70	7.44	7.17	1.48	1.03	0.20	22.64
Age (broad age group)	0 - 14	17.69	7.32	6.99	7.87	1.14	1.84	0.11	57.04
	15 - 64	43.06	4.59	18.38	13.74	1.94	1.02	0.17	17.11
	65 & over	36.05	2.65	10.68	13.52	8.89	2.53	0.56	25.12
Age (in Group)	0 - 4	25.28	2.46	6.97	4.84	0.53	1.86	0.27	57.80
	5 - 9	15.51	6.93	6.56	6.99	1.16	1.85	0.05	60.93
	10 - 14	14.13	11.25	7.40	10.91	1.56	1.80	0.05	52.90
	15 - 19	32.96	10.49	10.23	11.57	1.45	1.41	0.11	31.77
	20 - 24	49.62	6.70	12.34	9.62	0.82	0.87	0.10	19.95
	25 - 29	47.93	4.32	17.74	12.72	0.76	0.82	0.11	15.59
	30 - 34	45.75	3.38	22.34	13.76	1.01	0.90	0.14	12.72
	35 - 39	44.66	3.10	20.07	14.97	1.45	1.08	0.23	14.43
	40 - 44	41.26	3.19	21.73	16.55	2.25	0.98	0.18	13.86
	45 - 49	40.68	2.74	21.65	15.90	3.35	1.09	0.17	14.42
	50 - 54	35.11	3.89	21.53	17.12	4.24	0.99	0.23	16.89
	55 - 59	37.75	3.19	22.30	15.11	5.07	1.23	0.41	14.95
	60 - 64	35.68	2.08	20.22	16.35	6.54	1.59	0.50	17.05
	65 - 69	37.20	3.24	13.65	12.63	8.36	2.73	0.34	21.84
	70 - 74	33.14	3.53	13.14	14.31	8.63	0.78	0.59	25.88
	75 +	37.60	1.15	4.96	13.74	9.73	4.01	0.76	28.05

Contd.

		Pull Factors				Push Factors			Others
		Marriage	Education	Employment/ Business	In Search of Work	Natural Calamity	Family Quarrel	Tortured/Deserted by Spouse	
Religion	Islam	35.28	5.01	16.95	13.94	2.35	1.25	0.19	25.03
	Hinduism	62.76	4.26	11.36	5.45	0.30	1.02	0.14	14.71
	Buddhism	40.50	7.00	9.00	6.00	10.50	2.00	0.00	25.00
	Christianity	47.20	5.60	19.20	2.40	0.00	0.00	0.00	25.60
	Other	35.29	0.00	26.47	17.65	2.94	0.00	0.00	17.65
Literacy	Cannot Read and Write	43.44	1.33	8.89	20.76	4.58	1.59	0.36	19.06
	Can Read Only	39.10	3.01	11.12	15.32	2.67	1.31	0.11	27.36
	Can Read and Write	38.05	7.06	21.37	9.39	1.03	0.95	0.09	22.06
Highest Classed Passed	Illiterate	32.86	2.56	12.49	22.62	3.45	1.72	0.21	24.09
	Primary	39.13	3.10	10.89	16.48	2.98	1.35	0.23	25.83
	Below SSC	49.69	3.37	13.21	12.10	2.10	1.16	0.15	18.22
	SSC	40.98	4.64	20.59	11.14	1.84	1.11	0.28	19.43
	HSC	32.70	11.07	23.66	8.57	1.38	0.81	0.10	21.70
	Graduate	20.60	11.78	40.46	7.84	0.79	0.89	0.05	17.59
	Masters	15.56	16.89	42.62	8.14	0.71	0.31	0.00	15.77
Activity Status	Employer	8.02	10.89	42.98	23.21	1.72	1.15	0.00	12.03
	Employee	10.27	4.53	45.28	22.95	1.04	0.87	0.14	14.93
	Self-employed-Agriculture	20.37	2.07	11.52	24.31	16.14	2.17	0.10	23.33
	Self-employed-Non-Agriculture	14.56	2.69	28.24	32.93	3.87	1.66	0.33	15.71
	Family Helper	33.33	3.82	12.98	21.88	5.34	1.53	0.25	20.87
	Others	18.09	5.06	17.53	40.11	2.81	1.46	0.67	14.27
Marital Status	Never Married	14.66	10.70	10.24	10.71	1.28	1.81	0.08	50.51
	Married	46.71	3.12	19.04	13.50	2.31	0.90	0.14	14.29
	Widowed	52.86	1.45	5.33	10.98	4.27	2.30	0.66	22.16
	Divorced	14.29	2.20	18.68	23.08	0.00	8.79	6.59	26.37
	Separated	13.51	0.68	16.89	33.78	3.38	4.05	4.73	22.97
Age at First Marriage	10 - 18	65.04	2.01	6.38	7.50	1.83	1.05	0.26	15.92
	18 - 22	45.28	2.38	16.96	16.25	2.72	1.05	0.18	15.17
	22 - 26	20.52	3.95	35.83	21.33	3.78	1.04	0.22	13.33
	26 - 30	11.21	7.19	44.37	22.33	2.57	0.89	0.14	11.30
	30 - 34	5.80	7.61	54.71	17.21	1.27	0.72	0.00	12.68
	34 +	12.90	6.81	41.94	22.58	2.51	0.72	0.00	12.54

Regardless of division marriage seems to be the most dominant reason of internal migration. A maximum, 63.6%, migration occurred in Khulna division for this reason. The second most prominent reason of migration is employment or business. The highest percentage of internal migration occurred for this reason in Dhaka division 21.2%. Among the push factors, natural calamity has the highest frequency in different divisions. Its occurrence is highest in Rangpur division 10.9%. Females migrate mainly for marriage 56.3%. Males, on the other hand, migrated for employment and business 30.4% with a higher rate than others. People aged more than 15 migrated mainly for marriage 43.1% for age group 15-64 and 36.0% for age group 65+. The highest proportion of migration for work (employment/business) occurred for the working age people 18.4%. Marriage is again the most influential factor among different religious people and the second most prominent factor is employment or business. It is noticeable that a maximum among all religions, 10.5% of Buddhists migrated for natural calamity.

Factors of migration vary among different classes of economically active population. Employers and employees mainly migrated for their work 43.0% and 45.3%, respectively. Self employed people migrated mostly for searching job 24.3% for agricultural sector and 32.9% for non-agricultural sector. Maximum number of family helpers migrated for marriage 33.3%. The proportion of migration due to natural calamity is highest for self employed migrants who are involved in agricultural sectors 16.1%.

Major proportion of married and widowed people migrated for marriage 46.7% and 52.9%, respectively, whereas, maximum proportion of divorced and separated people migrated for searching job 23.1% and 33.8%, respectively. Never married people mainly migrated for some other reason 50.5%. The proportions of migration due to family quarrel and misbehave of spouse is highest for divorced people 8.8% and 6.6%, respectively and then for separated people 4.1% and 4.7%.

Marriage is the main reason of migration for those people whose education levels are below graduate. On the other hand major proportion of migrants migrated for their work 40.5% and 42.6%, respectively. It is noticeable that as the education level increases the proportion of migration for the push factors (natural calamity, family quarrel and tortured/deserted by spouse) decreases.

6. PATTERNS AND TRENDS OF URBANIZATION IN BANGLADESH

6.1 Introduction

Urbanization is generally regarded as a four-dimensional process - demographic, economic, environmental and socio-technical. According to R. P. Misra, "Urbanization is a process which reveals itself through temporal, spatial and sectoral changes in the demographic, social, economic, technological and environmental aspect of life in a given society. These changes noticeable themselves in the increasing concentration of population in human settlements larger than villages, in the increasing involvement of people in secondary and tertiary production function, and in the progressive implementation of social characters which are atypical of traditional rural societies (Misra, 1978)".

Urbanization is an indicator of development. The proportion of urban increases with the socio-economic development of the country. Bangladesh is one of the most densely populated countries in the world and has occurred rapid growth of urban population for last four decades. An attempt has been made to observe the current situation and trends of urbanization in Bangladesh and to identify the factors work behind the rapid urbanization. An attempt has also been made to assess the positive and negative impacts of urbanization. Finally a number of recommendations have been proposed to face the challenges of urbanization in Bangladesh.

Research on urbanization with spatial and temporal variations are very much lacking. Chaudhury (1980) attempted to understand the complex process of urbanization and its variations. Urbanization is viewed both as cause and effect in socio-economic development accompanied by demographic and cultural change (Laskar, 1983). Demographic and economic indicators are considered to be the most important aspects of urbanization. Indeed urbanization and economic development have been closely linked since the industrial revolution of the seventeenth and eighteenth centuries. Eusuf (1993) studied the urban growth and their changing pattern in rank-order by population size. The analysis of the trend and pattern of any dynamic process is usually carried out for specific period of time and place.

6.2 Level of Urbanization and Urban Growth

Often "level of urbanization" and "urban growth" is used synonymously though they do not bear the same nuance. There exists significant conceptual distinction between level of urbanization and urban growth. So, they should be distinguished from one another.

Level of Urbanization

Level of Urbanization

Level of urbanization or simply ·urbanization' refers to the proportion of population living in the urban areas. The degree or level of urbanization may be denoted as,

$$U^n = \frac{U_P}{T_P} \times 100 \ ,$$

where, U^n = level of urbanization, U_p = total urban population and T_p = total population.

Urbanization is indicated by an increase in $\boldsymbol{U^n}$ over a period of time. For instance, in 1981, the total population and urban population of Bangladesh were 87.12 and 13.23 millions, respectively. Hence level of urbanization in 1981,

$$U_{81}^n = \frac{13.23}{87.12} \times 100 = 15.18.$$

In 1991, the total population was 106.31 million and the urban population was 22.46 million. Therefore

$$U_{91}^n = \frac{22.46}{106.31} \times 100 = 21.12.$$

Thus, over 10-year period (1981 - 1991) the proportion of population in the urban areas increased from 15.18% to 21.12%. This is the highest ever intercensal increase in the level of urbanization.

Urban Growth

Urban growth refers to an increase in total urban population, whereas urbanization refers to an increase in the percentage of urban population. That is why urban growth may occasionally take place without urbanization. As for example, between 1901 and 1911, the urban population of Dhaka division increased from 269 thousand to 293 thousand, indicating an annual urban growth rate of 0.86%; but the proportion of urban population declined from 3.16% to 3.05% of the total population. Thus, during the decade 1901-1911, Dhaka division had experienced an urban growth with negative urbanization.

Between 1981 and 1991 the urban population of Bangladesh increased from 13.23 million to 22.46 million, indicating an annual average urban growth of 5.29% while the proportion of urban population increased from 15.18% to 21.12% of the total population. Hence urban growth took place with positive urbanization. This was because the rate of expansion of rural population was lower than that of urban population. In 2011 proportion of urban population was 23.30% with urban growth rate of 1.37 which was half of the preceding census. This suggests that urbanization is increasing but at a decreasing rate.

6.3 Trend of urbanization in Bangladesh, 1891 - 2011

Urbanization trends may be best appreciated by examining the degree of urbanization in terms of indices such as, urban proportion, rate of urbanization and rate of urban population growth over a specified period of time. The trend of urban population for the period 1891-2011 is presented in Table 6.1. This time series data shows a continuing increase in both number and percentage of urban population over that period with inconsistent growth rates. The period 1891 - 2011 has been divided in to four distinct periods: period of sluggish growth (1891 - 1921), period of moderate growth (1921-1951), period of rapid growth (1961-1991) and (2001-2011) is declining period. It is worth revealing that the urban population of Bangladesh at various census years up to 1941 was estimated from the undivided Indian census counts by adjusting for provincial changes at the time of partition. In independent Bangladesh the first census was held in 1974.

Table 6.1: Distribution of population, level of urbanization, inter-census variation and urban growth rate, 1891 - 2011.

Census Year	Total population (Million)	Annual Growth Rate (Exponential)	Total urban population (Million)	Level of urbanization (%)	Intercensal variation (Million)	% of Intercensal variation	Annual Growth Rate (Exponential)
1891	24.67	-	0.54	2.18	-	-	-
1901	28.93	1.59	0.70	2.43	0.17	30.73	2.68
1911	31.56	0.87	0.81	2.56	0.10	14.95	1.39
1921	33.25	0.52	0.88	2.64	0.07	8.85	0.85
1931	35.60	0.68	1.07	3.02	0.20	22.20	2.00
1941	42.00	1.65	1.54	3.66	0.46	43.20	3.59
1951	42.06	0.02	1.82	4.33	0.28	18.38	1.69
1961	50.84	1.90	2.64	5.19	0.82	45.11	3.72
1974	71.48	3.41	6.27	8.78	3.63	137.57	8.65
1981	87.12	1.98	13.23	15.18	6.95	110.85	7.46
1991	106.31	1.99	22.46	21.12	9.23	69.75	5.29
2001	124.33	1.57	29.26	23.53	6.80	30.28	2.65
2011	144.04	1.47	33.56	23.30	4.31	14.72	1.37

Source: *Bangladesh population census and housing census 1891 to 2011*.

In 1891 the urban population of Bangladesh was only 0.54 million which increased to 33.56 million in 2011. In the earlier part of the century a very low share of the total population lived in urban areas but after 1941 rapid increase of urban population is observed. The trend of urbanization from 1891 to 2011 is shown in Fig 6.1.

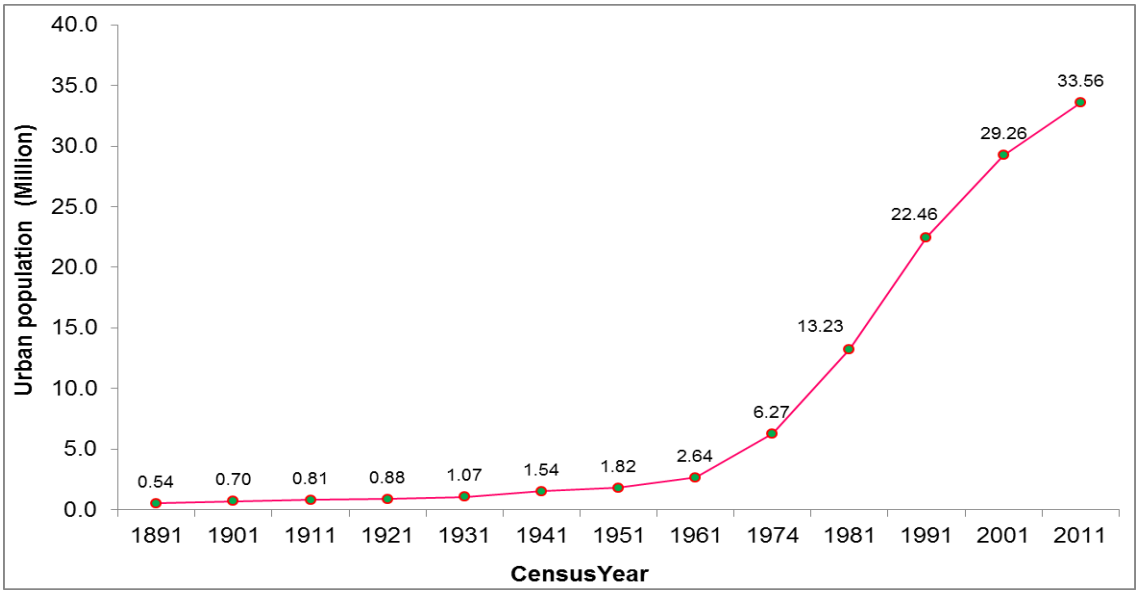


Fig. 6.1: Trend of urbanization in Bangladesh, 1891 - 2011

The level of urbanization, as measured by the proportion of total population living in urban areas presented in Fig. 6.2. In 1891 urban population was 2.18%, which increased to 2.43% in 1901. The reasonably low level of urbanization during the period may be attributed to the profit motive policy of the British Colonial Government to abolish aboriginal industries and to build up industrial-commercial accumulation around Calcutta that effectively turned the area which is today Bangladesh into its rural locality. Besides, there was gross under enumeration in the census of 1921 because of the refusing of the enumeration for political reasons (UN/ESCAP, 1981).

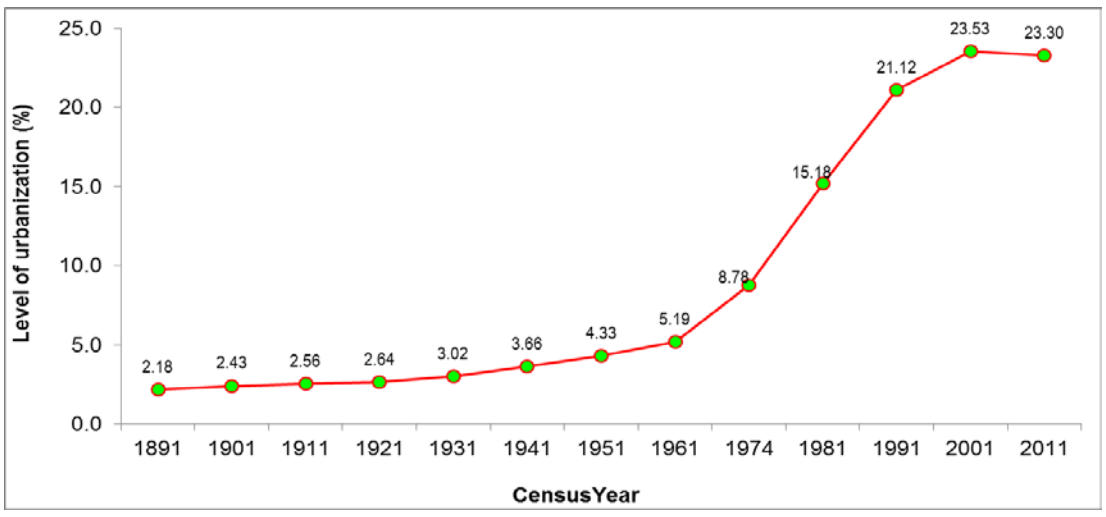
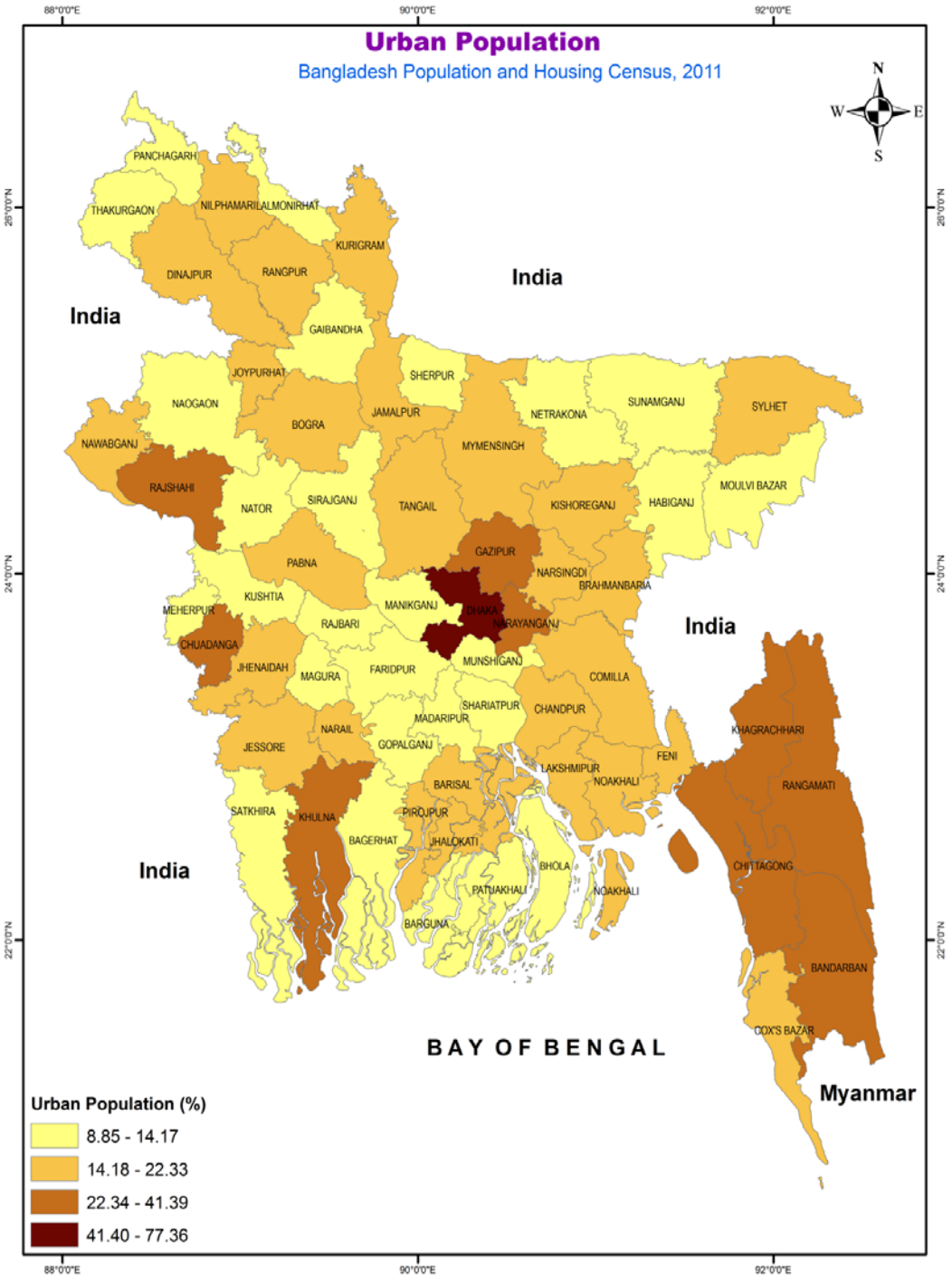


Fig. 6.2: Distribution of level of urban growth, 1891-2011

In 1961, the urban population was only 5.19% which increased to 8.78% in 1974. Since then, there has been steady growth of urban population and in 2001 and 2011 level of urbanization were 23.53% and 23.30%, respectively.



Map 6.1: Distribution of urban population, 2011

Bangladesh is undergoing a rapid urbanization process, while the rural population is peak at 110.48 million in 2011. Bangladesh being largely a rural country 76.7% of the population lives in rural areas in 2011. Urbanization is the process by which large number of people permanently concentrated in relatively small area forming city. Internal rural to urban migration means that people move from rural areas to urban area. In this process, the number of people living in urban area increases and the number of people living in rural area decreases.

6.4 Trend of Urbanization by Division (1961 - 2011)

The concentration of the highest proportion (34.33%) of urban population in Dhaka is mainly due to shifting a large number of people of different categories from different parts of the country in and around Dhaka city in order to get employment, higher education, medical facilities and to enjoy other amenities of life.

A study on the level of urbanization and share of national urban population along with total urban population for each of the seven divisions reveals that Dhaka Division overwhelmingly holds the highest rank in all the censuses both for level of urbanization and share of national urban population (Rouf and Jahan, 2009). On the other hand, the rank of Sylhet Division is the lowest for both.

Table 6.2 shows the level of urbanization by division with their ranks for all the censuses from 1961 to 2011. Dhaka emerged the highest urbanized region since 1961 census followed by Chittagong division. From 1981 to 2011 for the level of urbanization rank of Dhaka division is 1, rank of Chittagong and Khulna divisions are 2 and 3, respectively. The least urbanized division is Sylhet.

Table 6.2: Divisional trend of urbanization in Bangladesh, 1961-2011.

Division	Level of urbanization						Rank					
	1961	1974	1981	1991	2001	2011	1961	1974	1981	1991	2001	2011
Barisal	2.79	3.52	11.21	12.90	14.23	12.53	5	5	4	5	6	5
Chittagong	5.61	9.17	17.67	21.76	23.73	20.69	2	3	2	2	2	2
Dhaka	7.02	13.60	20.51	28.34	34.33	27.97	1	1	1	1	1	1
Khulna	5.36	9.79	16.32	18.99	20.00	18.31	3	2	3	3	3	3
Rajshahi	4.20	5.31	10.40	13.82	14.75	14.72	4	4	5	4	4	4
Rangpur				12.49	14.32	12.13	-	-	-	6	5	6
Sylhet	2.03	2.75	8.72	10.56	12.36	10.08	6	6	6	7	7	7

Significant upward trends of level of urbanization are found in Dhaka, Chittagong and Khulna divisions. The primary reasons behind the fast growing trend of urbanization of Dhaka are largely due to the establishment of Capital City, having various government and non-government offices, industrial and commercial organizations, educational institutions etc. Besides, the easy employment opportunity in the informal sector has much contribution towards this rapid urbanizing trend. Chittagong and Khulna, on the other two highly urbanized regions have seaports, divisional headquarters, industrial and commercial belts and educational institutions that attract people from different parts of the country for better employment, commerce and educational purposes. The pattern of urbanization by division from 1961 to 2011 can be seen in the following figure.

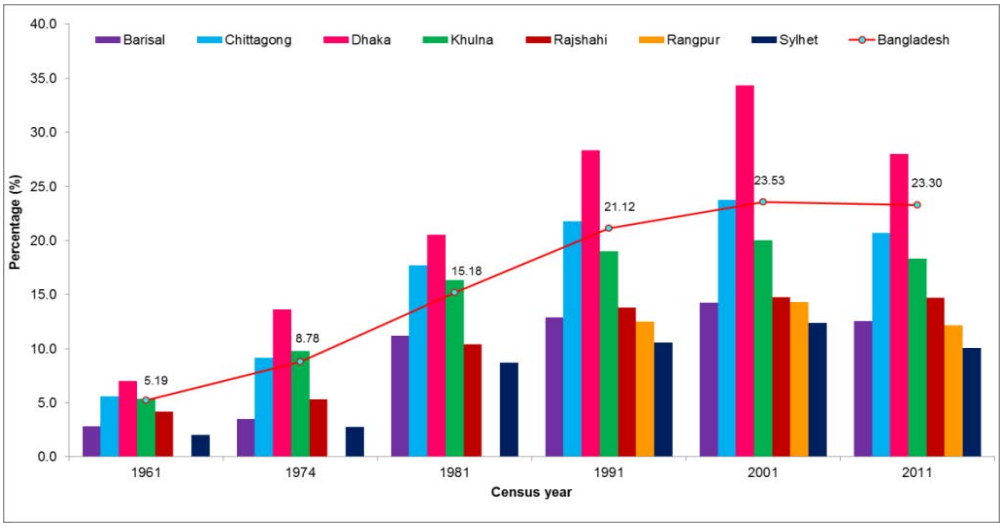


Fig. 6.3: Distribution of urbanization by division, 1961-2011.

6.5 Consistency of the Regions

We can have an understanding about the consistency of the regions concerning their level of urbanization (LOU) with respect to their respective share of urban population (SOUP) by comparing their ranks as well as partial tenure in LOU and SOUP. Table 6.3 shows the comparison for the censuses from 1961 to 2011. Dhaka, Chittagong and Khulna appeared as highly consistent regions while other regions emerged as moderately inconsistent regions.

Table 6.3: Comparison between LOU and SOUP with rank by division, 1961-2011.

Division	1961		1974		1981		1991		2001		2011	
	LOU	SOUP	LOU	SOUP	LOU	SOUP	LOU	SOUP	LOU	SOUP	LOU	SOUP
Barisal	2.79	4.51	3.53	2.67	11.21	5.39	12.06	4.48	14.23	3.97	16.36	4.06
Chittagong	5.61	21.54	10.31	19.89	17.67	22.12	19.42	20.34	24.79	20.59	24.30	20.57
Dhaka	7.02	40.63	17.00	50.38	20.51	39.77	26.92	43.78	34.23	45.68	32.86	46.43
Khulna	5.36	11.78	9.78	11.92	16.33	12.84	17.55	11.13	20.68	10.40	17.99	8.41
Rajshahi	4.46	10.85	5.42	7.08	10.29	8.71	14.03	10.02	17.17	9.60	17.94	9.88
Rangpur	3.90	8.00	4.74	5.22	10.54	7.53	11.57	6.97	13.49	6.39	13.36	6.28
Sylhet	2.03	2.69	4.29	2.84	8.72	3.64	9.54	3.27	12.44	3.38	14.76	4.36
Bangladesh	5.19	100.00	10.06	100.00	15.54	100.00	18.73	100.00	23.53	100.00	23.30	100.00
Rank												
Barisal	6	6	7	7	4	6	5	6	5	6	5	7
Chittagong	2	2	2	2	2	2	2	2	2	2	2	2
Dhaka	1	1	1	1	1	1	1	1	1	1	1	1
Khulna	3	3	3	3	3	3	3	3	3	3	3	4
Rajshahi	4	4	4	4	6	4	4	4	4	4	4	3
Rangpur	5	5	5	5	5	5	6	5	6	5	7	5
Sylhet	7	7	6	6	7	7	7	7	7	7	6	6

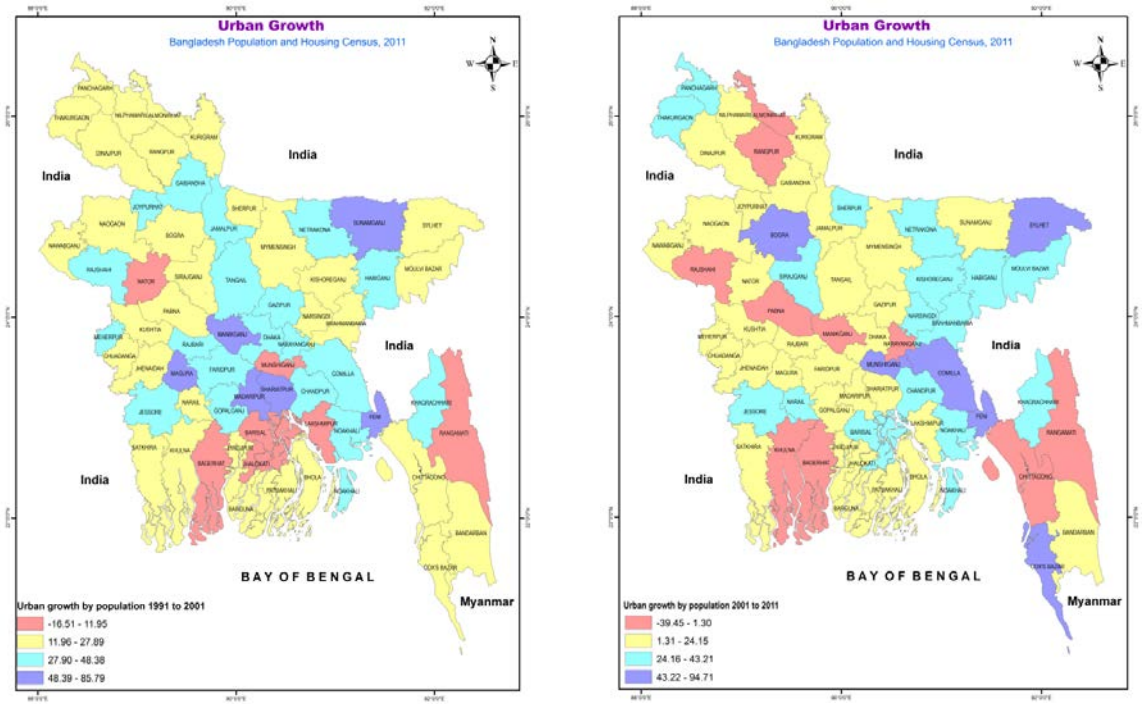
Table 6.4: Correlation matrix for LOU

Census year	1961	1974	1981	1991	2001	2011
1961	1					
1974	0.915	1				
1981	0.914	0.947	1			
1991	0.943	0.980	0.959	1		
2001	0.923	0.981	0.947	0.996	1	
2011	0.838	0.937	0.886	0.960	0.979	1

Table 6.5: Correlation matrix for SOUP

Census year	1961	1974	1981	1991	2001	2011
1961	1					
1974	0.988	1				
1981	0.996	0.990	1			
1991	0.997	0.996	0.994	1		
2001	0.995	0.997	0.992	0.999	1	
2011	0.989	0.993	0.985	0.996	0.998	1

The Pearson correlation coefficient measures the linear association between two scaled variables and the results are displayed in Table 6.4 and Table 6.5. From the above tables all correlation coefficient is positive and highly significant at both levels in LOU and SOUP. Significant upward urban growth is also found in the regions of Dhaka, Chittagong and Khulna.



Map 6.2: Urban growth 1991-2001 and 2001-2011

Urban growth from 1991 to 2001 and from 2001 to 2011 is shown in Map 6.2.

In the coming decades the urban population in Bangladesh will continue to grow but the rate of growth of urban population may go down to some extent.

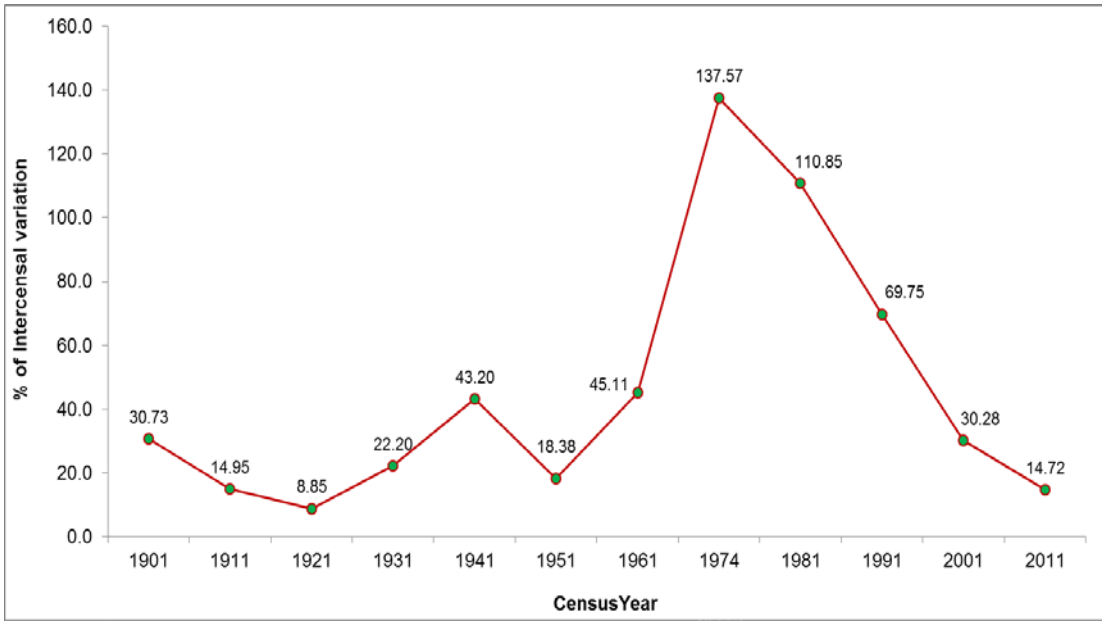


Fig. 6.4: Distribution of intercensal urban variation (in percent), 1901 – 2011

Urbanization in Bangladesh has several peculiar facets and dimensions. Table 6.4 provides the proportion of total population residing in the urban areas of Bangladesh in all censuses from 1901 to 2011 with their inter-census variation and annual average growth rates. This time series data shows a gradual increase in both number and percentage of urban population over that time period with fluctuating growth rates in Fig. 6.5

Between 1941 and 1951 the annual average growth rate (AAGR) decreased from 3.59 to 1.69 though proportion of urban population increased in absolute sense. Lower growth rate of urban population during the period 1941-1951 might be the effect of the devastating Bengal Scarcity, the Second World War and the partition of India in 1947. A significant increasing trend was found in all respects from 1961 and it has been continuing since then. In 1981 the country had over 13.23 million urban people with 15.18% level of urbanization accompanied by 110.85% increase and an average annual growth rate of 7.46. It is worth mentioning that the latter two rates of urban population growth were less than that of the previous census of 1974. In case of 1991 census the above rates were respectively 69.75% and 5.29% which were also less than that of 1981. Similar results were also observed for the census 2001 and census 2011. This indicates that urbanization in Bangladesh after 1974 is increasing but at a decreasing rate.

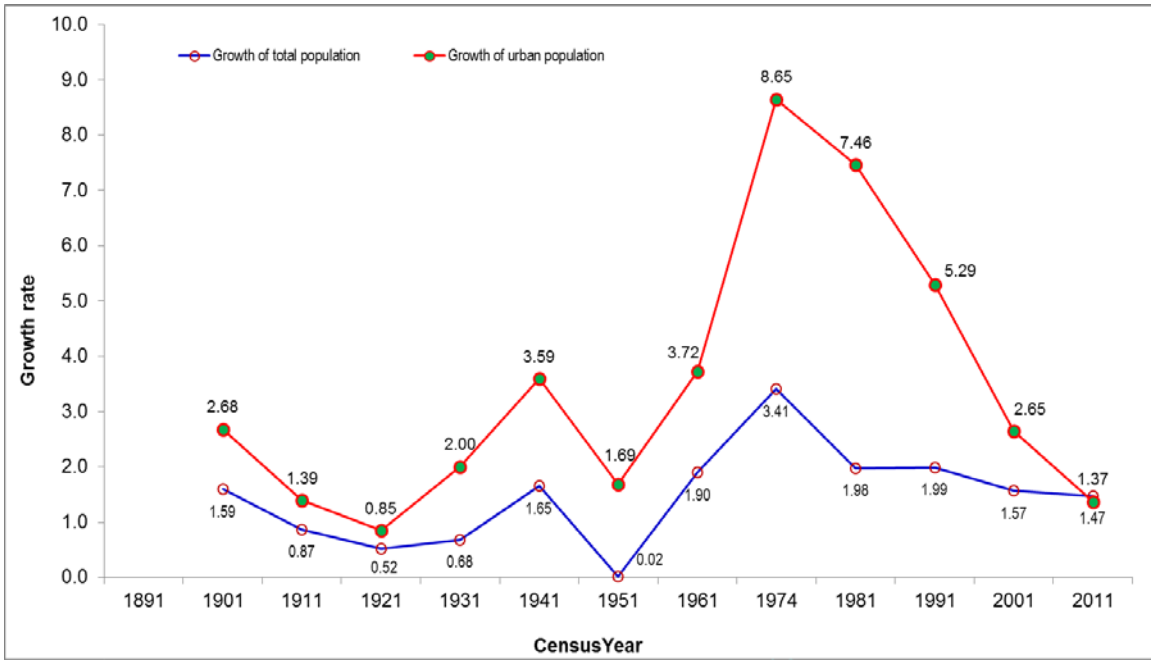


Fig. 6.5: Comparison between total population growth and urban population growth (1891-2011)

The Spearman rank correlation coefficient between total and urban population growth is 0.864 and its p-value is 0.000. It means that the correlation is positive and highly significant. After 1974 the proportion of urban population increased predominantly due to 'rural - urban migration' and the flexibility of the definition of the concept 'urban'. About 30% of the total increase in urban population during 1974-1981 could be explained by the extended definition of urban area in 1981. Therefore, the trend can be summarized as-

- A consistent rising trend in the growth of urban population was found over the period of 1901 to 2011 except in 1911 - 1921 and 1941-1951 decades.
- Level of urbanization was very low during the British colonial rule i.e., up to 1947 because of their exploiting attitude.
- From 1960s the pace of urbanization had got momentum and continued till 1991.
- Industrial development paved the way for urbanization in Bangladesh.
- After 1974 level of urbanization is increasing but at a decreasing rate.
- Flexibility of the definition of urban area is highly responsible for accelerating the growth rate of urban population.

This is indicative of the fact that growth of urban population is increasing relative to rural population. A major cause of urbanization in Bangladesh is that the agriculture sector is no longer able to absorb the surplus labor force entering the economy every year. Inability of the agriculture sector to provide sufficient employment or sufficiently high household incomes to cope with a growing number of dependents can encourage people to seek

employment outside agriculture. In the case of Bangladesh the rural to urban migration has contributed to more than 40% of the change in urban population. The trap of employment opportunities existing in these cities is another reason for urban migration. Most of the industrial establishments and businesses as well as business services are concentrated in the largest cities. Dhaka alone accounts for 80% of the garments industry-the mainstay of manufacturing in Bangladesh. The domination of business services, particularly finance and real estate services is considerably higher in the four major cities relative to the rest of the country.

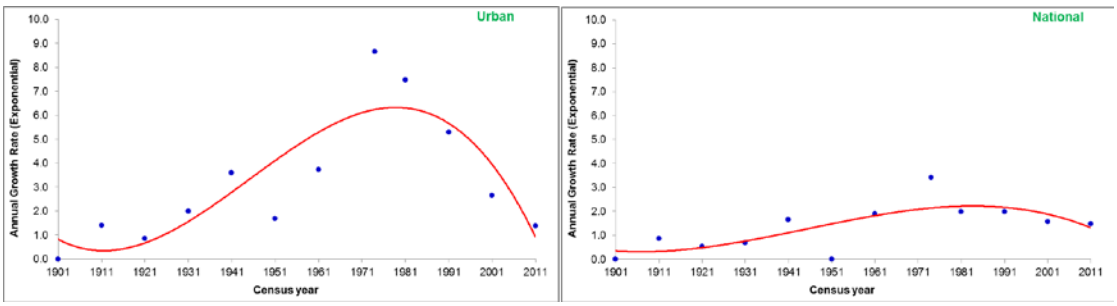


Fig. 6.6: Distribution of Urban and National annual growth rate, 1911 – 2011

Urban	: $y = 287846 - 0.00004x^3 + 0.2284x^2 - 444.21x$, $R^2 = 0.7448$
National	: $y = 62370 – 0.000008x^3 + 0.0495x^2 - 96.259x$, $R^2 = 0.5517$

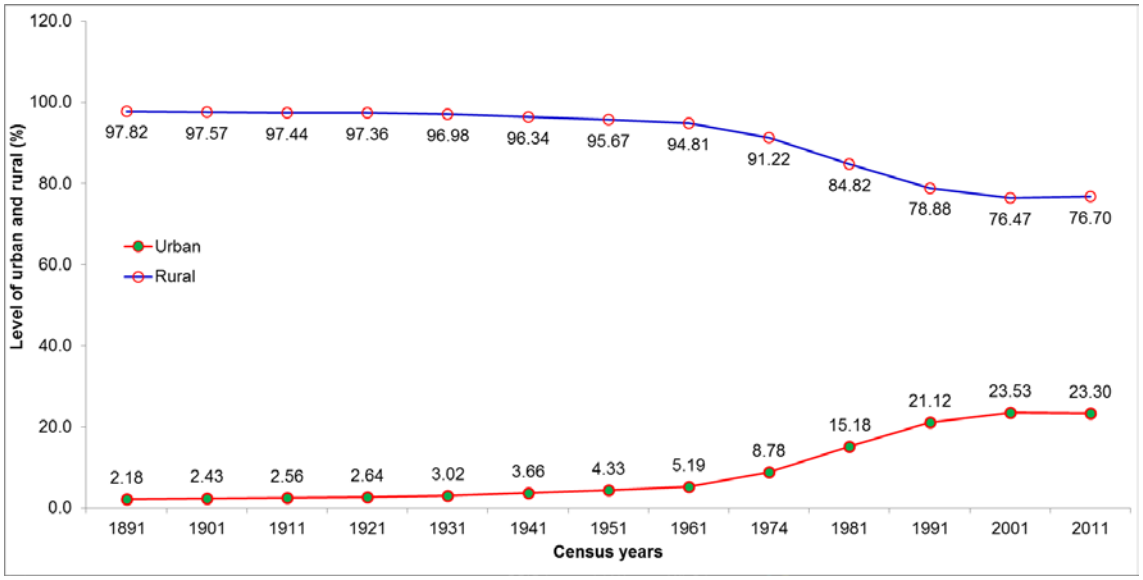


Fig. 6.7: Distribution of Rural and Urban population, 1891 - 2011

These differential growth rates, caused by net rural-urban migration and lower rates of natural increase in urban centers, explain the increasing proportion of the population living in urban areas, which is estimated to be 34% of the total in 2011.

6.6 Urban-Rural Ratio

The Urban-Rural (U-R) ratio is defined as the number of urban per 100 rural. Rural population in Bangladesh was last estimated at 110.48 million in 2011 census, according to the Bangladesh Bureau of Statistics (BBS, 2011). Rural population refers to people living in rural areas as defined by national statistical offices. It is calculated as the difference between total population and urban population. In Fig. 6.8, the latest proportion and historical proportion are presented.

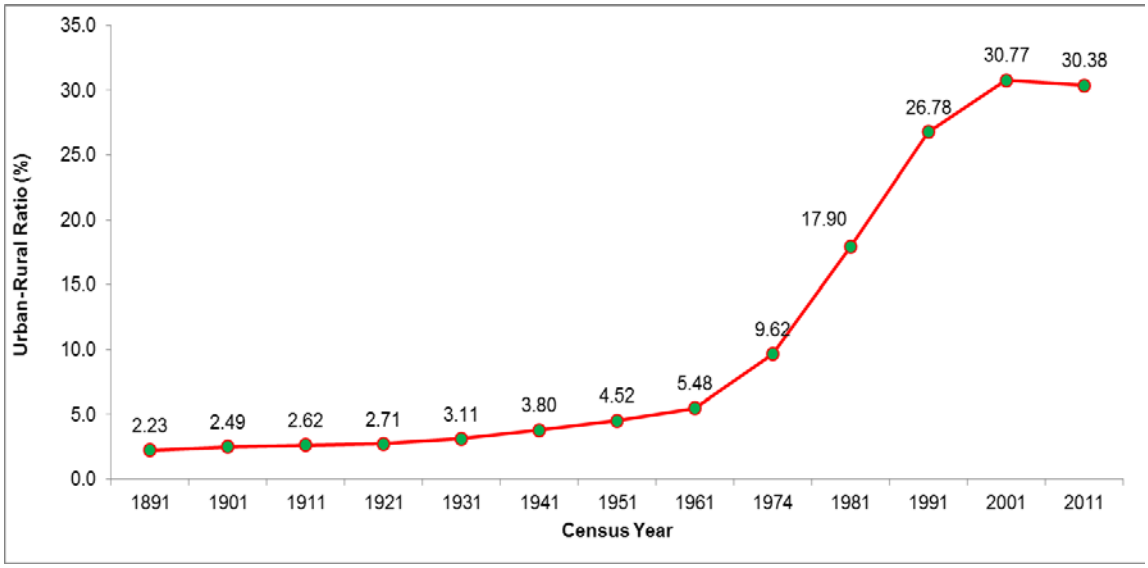


Fig. 6.8: Distribution of Urban-Rural (U-R) ratio, 1901 - 2011

Upon independence, Bangladesh was a predominantly rural society with less than 9.62% of the population living in urban areas. Over the subsequent decades, urban population growth has averaged 46.9% per decade compared with 13.5% in rural areas.

6.7 Urban Demographic Characteristics

Age sex composition of a population is an important feature for demographic and socio-economic analysis. The age-sex composition of a population from the latest census shed light on the current fertility and mortality behavior of the population. It also focuses on the labour force potential, female population of reproductive age, children of schooling age, aged population which needs attention for social rehabilitation etc. The population of reproductive age, particularly the females are necessary for forecasting the future growth and taking appropriate measures for birth control and planned population growth. The age-sex composition of population obtained from the population census - 2001 has been discussed in this chapter. This chapter has been organized in such way that in the first part the sex composition of population disaggregated by residence; religions etc. have been discussed and in second part the age composition of population with past condition and present change with urban-rural variation by religious groups have been presented.

The age and sex structure of the population is presented in population pyramids by grade of urban area in Fig. 6.9, providing an overview of the population structure in 2011. In general, the Bangladesh population is exhibiting an aging trend with a decreasing proportion of young people and an increasing proportion of the aged. The shorter length of the 1 band at the bottom of the pyramid, for both men and women in urban areas reflects rapidly declining fertility during the last decade. The longer length of the 3 band at the bottom of the pyramid, for both men and women in urban areas reflects rapidly increasing fertility during the period 1981-1991.

In addition, these population pyramids show a high proportion of the population in working ages, indicating the typical characteristic of a "golden population structure" but also indicating significant challenges to ensure enough jobs for this portion of the population.

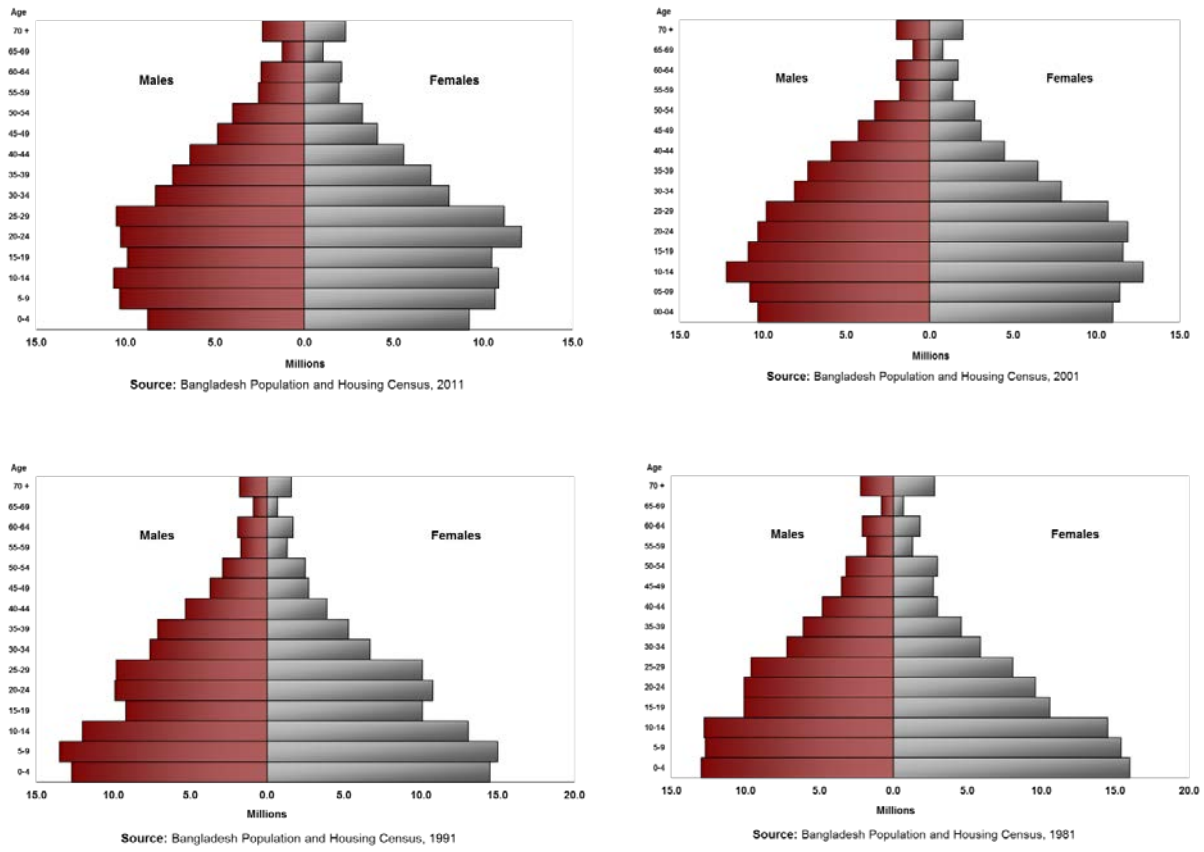


Fig. 6.9: Sex differential of urban population, 1981 - 2011

The proportion of population 10-19 is highest in urban areas, while the proportion of the population in the ages 20-39, the prime working ages, is highest in urban areas. This also indicates much higher need for employment among the population in urban areas compared to other areas. The total dependency ratio of the population is closely associated with population age structure. This indicator indicates the burden on the working age population. Following table presents the dependency ratios by urban area.

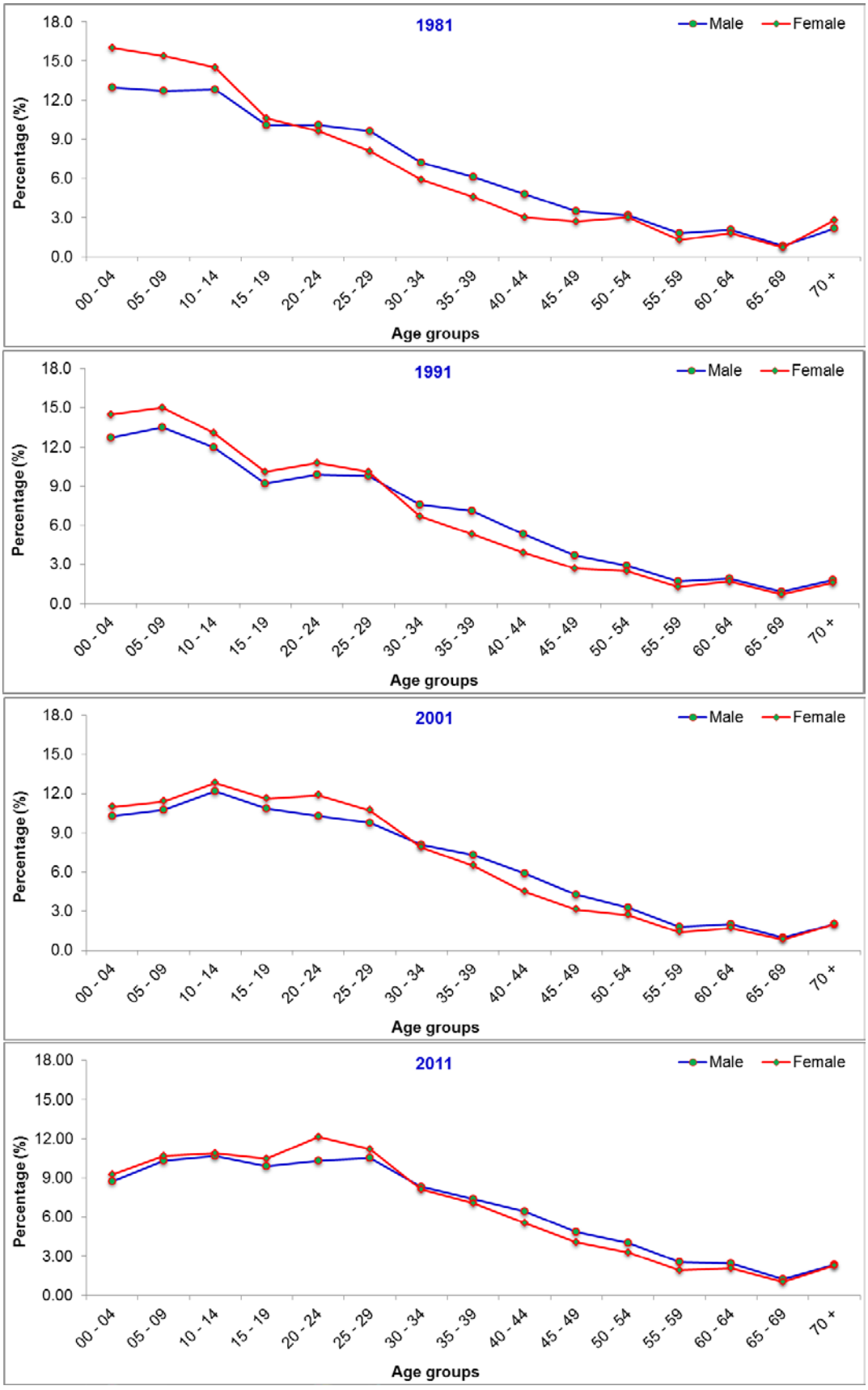


Fig. 6.10: Distribution of urban population by age and sex, 1981 - 2011

The Demographic Dividend

A plentiful supply of young, healthy and educated workers unburdened by both young and old dependent can provide a boost to economic growth, providing the enabling social and economic conditions also exist. The period during which the proportion of the population in the labour force ages is increasing, provides a one-time "demographic window of opportunity", or "demographic dividend" for investing heavily in human resource development. As measured by the proportion of the population in the labour force ages (here defined as ages 15-59) this "window" projected to open widely in Bangladesh over the next 20-30 years, which is a relatively short period. Similarly, the "dependency ratio" can be expected to drop sharply over the next 20 years before rising again with the growth of the elderly population. How widely the window will open and for how long depends upon which of the three fertility scenarios will actually occur; but all scenarios show a widening window over the 2011-21 decade. This is the optimum period for investing in human resources and establishing other enabling conditions for economic growth in Bangladesh. Bangladesh began to enter the "window of opportunity" period from 1991 onwards as the dependency ratio declined. By 2011 the dependency ratio had reached its lowest level in 100 years. This does not mean that the window will close completely during these plan periods but rather that these will be favorable periods in which to adopt policies to take advantage of the "dividend".

The demographic dividend is not automatic; it is achieved only if the correct human resources policies are pursued. The dividend appears as an addition to the growth that could be expected by capital investment in infrastructure, improved technology, manufacturing plant, or by trade policy, market liberalization, etc. Dividend theory focuses specifically on human resource development. The demographic bonus is more likely to be achieved if in addition to being in plentiful supply, young people are skilled, educated, healthy and productive. Consequently, dividend theory stresses the need to invest more in schooling and technical training to enhance work skills. At the same time, these investments should be easier for governments to make given that the dependent population is at its lowest relative to the working age population. The policies required to achieve the second demographic dividend are concerned mainly with providing mechanisms and incentives for people to save during their working years. That implies developing retirement savings plans with favorable terms, especially with respect to taxation. Government might also consider the establishment of a "sovereign wealth fund" that could finance retirement benefits in the long term, which would take pressure off annual budgets.

6.8 Dependency Ratio

Dependency ratio of population is defined by the ratio of population 0-14 years and 65 years and over to the population 15-64 years. This is a summary measure of the age composition of

population. If the population in the age group 0-14 is high then the dependency ratio would be higher. The population proportion in the older age group (65 years and over) has also some impact on the dependency ratio.

The dependency ratio of population from 1911 to 2011 has been presented in the table 6.11. It is observed from the table that dependency ratio was below 100 up to 1951 and then it increased to a high 116 in 1974. Afterwards it started decreasing with only 83 for 2001 census. This is very encouraging that the dependency ratio is decreasing in the recent years.

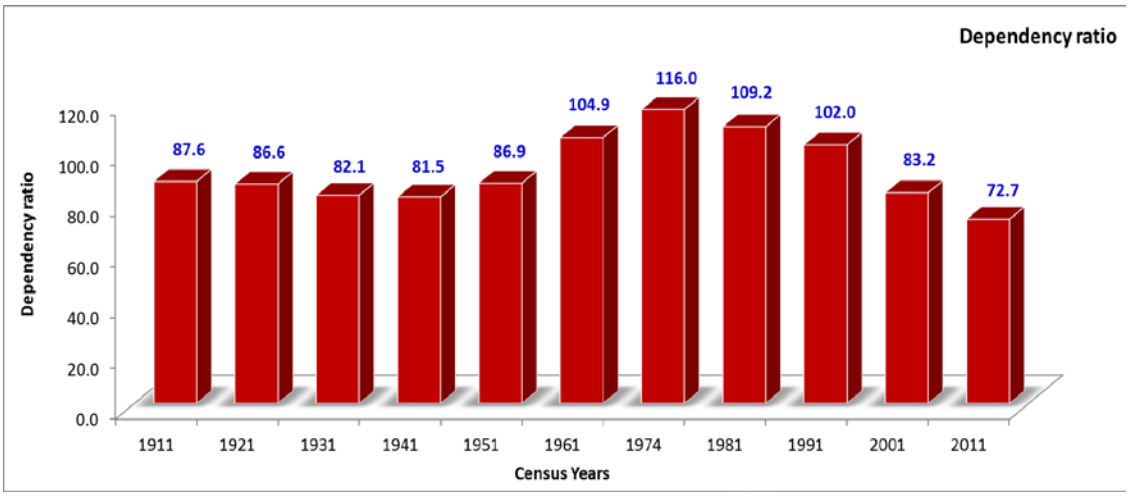


Fig. 6.11: Dependency ratio in urban areas, 1911 - 2011

Table 6.6: Dependency ratio in urban areas by sex, 1981 - 2011

	1981		1991		2001		2011	
	Male	Female	Male	Female	Male	Female	Male	Female
00-14	38.5	45.9	38.2	42.6	33.3	35.2	29.7	30.8
15-64	58.5	50.6	59.1	55.1	63.7	62.0	66.7	65.9
65+	3.0	3.5	2.7	2.3	3.0	2.8	3.6	3.4

In 2011, the total dependency ratio of the population (percentage of those at the age of 0-14 and 65 and older per 100 people in working ages from 15-64) was male is 33.3% and female is 34.2%, the child dependency ratio (0-14 years of age) was male is 29.7% and female is 3.4% and the aged dependency ratio (65 years old and older) was male and female 3.6% and 3.4%. This proportion differs between urban different of urban area. The increasing rate of urbanization seen in Bangladesh in the first decade of the 21st century is closely related to economic and social structural transition in Bangladesh society in the same period of time.

These changes include increases in educational attainment, diversification of occupational structure and spatial integration.

6.9 Sex Ratio of Population during 1901 - 2011

Sex ratio of population is defined by the number of males per 100 females. The sex ratio in Bangladesh from 1901 to 2011 is presented in Fig. 6.12. It is observed from the table that the sex ratio of the country ranges from a high 111.3 in 1901 to low 104.5 in 1911. However, it seems to be a case of under enumeration of female population in 1901. The high sex ratio of 1951 may be explained by the same reason where the census taken after the partition of India. After 1951, the sex ratio decreased in 1961 and remainder almost same in 1974 and again declined in 1981 and 1991 but increased in 2001.

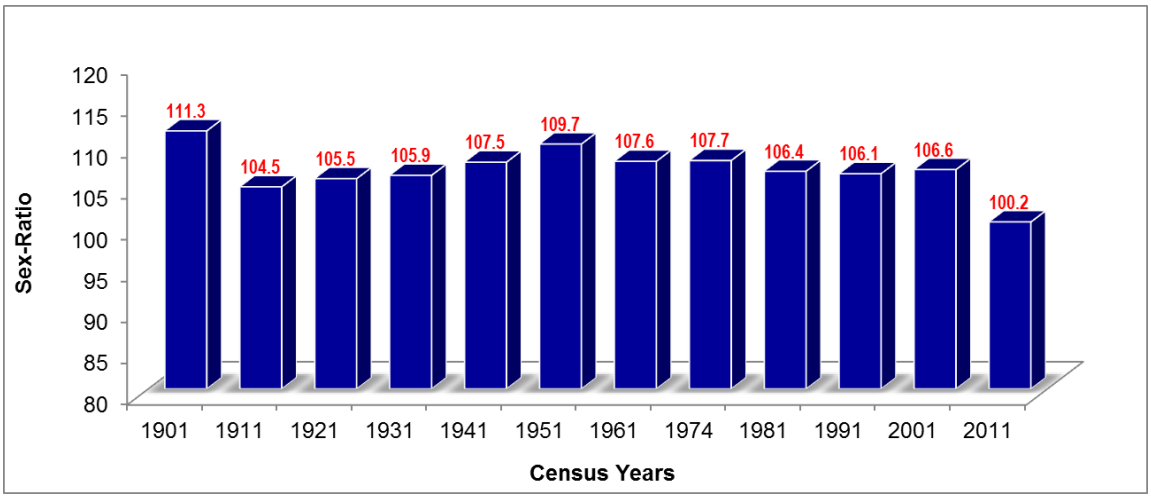


Fig. 6.12: Inter census Sex Ratio of urban population, 1901 - 2011

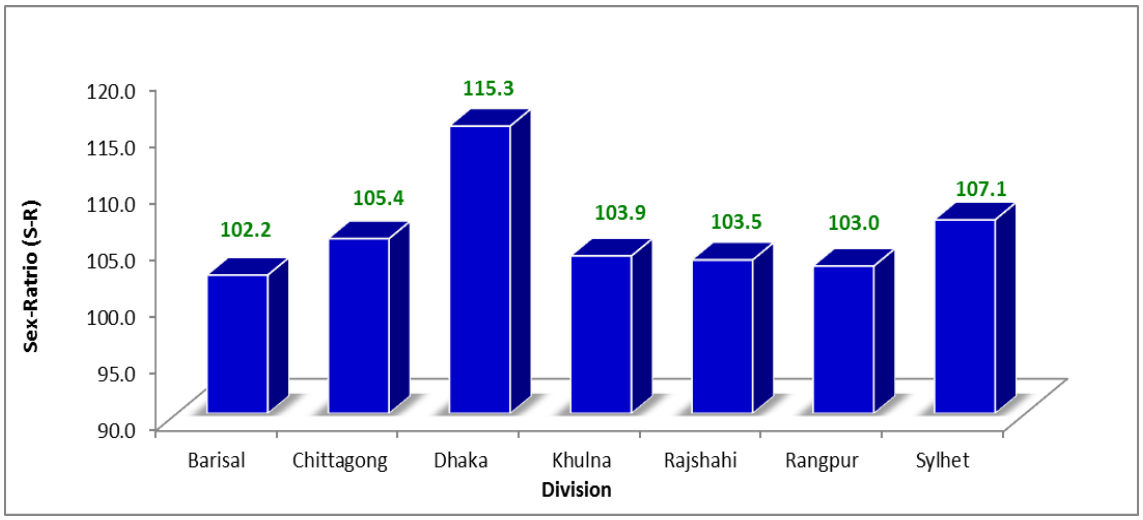


Fig. 6.13: Sex ratio of urban population by division, 2011

The sex ratio is defined as the number of men per 100 women. The sex ratio in Bangladesh has increased over the past few decades, partially recovering the sex ratio that was so negatively affected by a long period. In 2011, the sex ratio was 109; in 2001 it was 116. In general, the sex ratio in urban areas differs little from that in rural areas. However, there are clear differences in the sex ratio across age groups. For the age group 0-14 years, the sex ratio in urban areas is substantially higher than in rural area, while for the age groups 15-19 years through 60-64 years, the sex ratio in rural areas is much higher than in urban areas. Regarding the age group 65 and older, the opposite situation is found as the sex ratio in urban areas is higher than in rural areas.

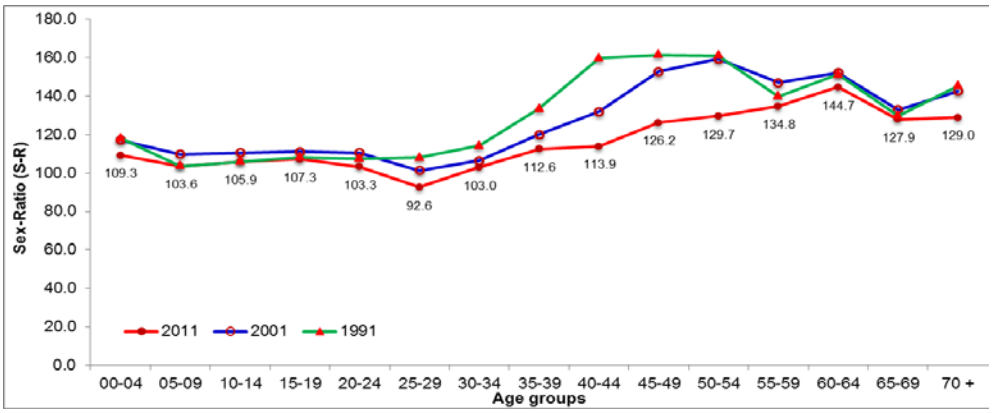


Fig. 6.14: Sex ratio of urban population by age groups, 1991, 2001 and 2011

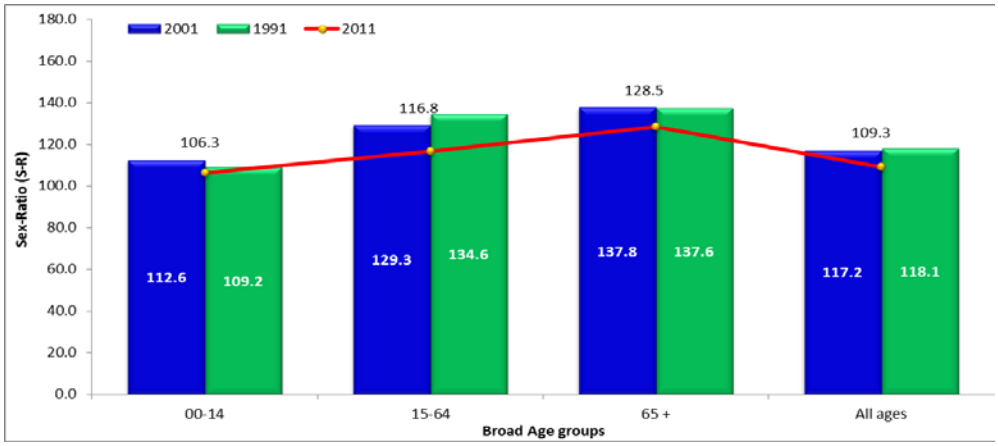


Fig. 6.15: Sex ratio of urban population by broad age groups, 1991, 2001 and 2011

6.10 Sex-Ratio by Locality

There exists variation in sex-ratios in the urban and rural areas of the country. The sex-ratios of urban and rural areas from 1974 to 2001 has been presented in above figure. It is observed from the table that the sex-ratio of the urban population was always higher than its rural counterpart. It can be noted that urban areas of the country are the place of work for many people who migrated from rural areas to urban areas in search of work. In the context of

Bangladesh the employment opportunity for the males are wider than the females. Therefore, the migrated people from rural areas to urban area for better job and work are mainly male population. The influx of females to urban areas are comparatively less. Moreover, those males who work in the urban areas, their spouse stay in the rural areas as because cost of living in the urban areas are high, particularly the cost of accommodation in the urban area is extremely high which cannot be met by the low-income group of urban people. Thus the urban population are male dominated with high sex-ratio. In 1974 the sex-ratio of urban population was 129.4 and in 2001 it has reduced to 117.2. The sex-ratio of urban population are gradually going down which is a good sign and in turn implies that the female labour force are participating in economic activities in the urban areas. The recent development of garments industry in major cities of the country has created some opportunity for employment of female labour force in the urban manufacturing sector. The sex-ratio of the rural area remained almost same over the years. It was 105.9 in 1974, came down to 103.3 in 1981 and 103.4 in 1991 and slightly increased to 103.6 in 2001.

Divisional variation in sex-ratio

The divisional variation in sex-ratio is not well pronounced. The sex-ratio of population in seven administrative divisions has been presented in table 6.7. The sex-ratio of seven administrative divisions of the country shows comparatively higher sex-ratio for Dhaka division. This can explained by the higher proportion of urban population Dhaka division. This is true for both 1991 and 2001 censuses. The sex-ratio of Barisal, Chittagong and Sylhet division same almost similar, however sex-ratio of Khulna and Rajshahi was a bit higher than this three divisions. The urban sex-ratio of Dhaka and Chittagong division was comparatively higher than the urban sex-ratio of the other five divisions. This is true for both 1991 and 2001 census. Among the rural population of the country, the lowest sex – ratio (101.9) was found in Chittagong division in 1991 census and the lowest sex ratio of this division also prevailed in 2001. This may be attributed to more male migration from the rural areas of this division to urban area of this division and also to other urban areas of the country.

Table 6.7: Sex-Ratio by Division & residence, 1991-2011

Division	2001			1991		
	Total	Urban	Rural	Total	Urban	Rural
Bangladesh	106.6	117.2	103.6	106.1	118.1	103.4
Barisal	104.0	112.2	102.7	103.5	111.8	102.3
Chittagong	104.1	116.1	100.7	105.6	123.2	101.4
Dhaka	109.5	121.9	103.6	108.3	121.5	103.5
Khulna	106.5	111.2	105.4	106.2	113.7	104.6
Rajshahi	106.0	110.7	105.2	105.0	109.1	104.4
Sylhet	104.8	115.0	103.5	104.2	114.7	103.1

6.11 Household and Housing Characteristics

Distribution of the main house of the general household by structure is presented in table 6.8. According to 2011 census, 11.32% of main structures of dwelling households are pucca, 19.61% semi- pucca, 66.19% kutcha and the remaining 2.88% are jhupri in the country. In urban area, 31.86% pucca, 32.02% semi-pucca, 33.54% kutcha and the remaining 2.59% belongs to jhupri. The proportion of kutcha structure is the found slightly higher than the other categories of urban area.

Table 6.8: Main House of the General Household by Type of Structure, 2011

	Pucca	%	Semi-Pucca	%	Kutcha	%	Jhupri	%
Bangladesh	3606339	11.32	6249784	19.61	21089127	66.19	918145	2.88
Urban	2317460	31.86	2329003	32.02	2439676	33.54	188414	2.59

In 2011 census, households have been classified into three categories such as general, institutional and others. The total number of urban households in the country is 7502040 of which 7274553 General, 14715 institutional and 212772 are other households. The general household accounts for 96.96%, institutional 0.20% and others 2.84%.

Table 6.9: Urban Household by Type, 2011

Type of Household	Number	Percent
Total	7502040	100.0
General	7274553	96.96
Institutional	14715	0.20
Others	212772	2.84

The annual growth rate of general households during the intercensal periods of 1974-81, 1981-91, 1991-2001 and 2001-2011 are shown in table 6.10. The table shows that the growth rate of general household for the country has been increasing from 1974-81 to 1991-2001 after which the rate has gone down in 2001-2011. For urban area a significant increase of 8.9% is noticed during 1974-81 after which the rate of increase shows a decreasing trend in the three remaining decades.

Table 6.10: Growth rate of general household by residence, 1974-2011

Residence	1974-81	1981-91	1991- 2001	2001-2011
Bangladesh	2.1	2.6	2.8	2.4
Rural	1.3	2	2.2	2.4
Urban	8.9	5.7	4.9	2.4

6.12 Average Size of Household

Average size of households on the basis of dwelling households for 1961 through 2001 have presented in Fig. 6.16. It is observed from the table that average household size fluctuated over the years. In 1961 the household size was 5.3 for the nation as a whole, afterwards it increased 1974 and 5.9 in 1981, then it declined to 5.5 in 1991 and to 4.8 in 2001. The reduction in household size between 1991-2001 is noticeable. The decline in fertility in the recent years and disintegration of joint family households may be responsible for lowering the household size. It is noticed from the table that rural household size was lower all in censuses conducted in 1960, 1974 and 1981 compared to urban household size and the same is true for 1991 census. However, in 2001 census the urban household size was found lower than that of the rural size.

Household by number of members

Household by number of members have been presented in the following figure. It is observed from the figure that the household by number has changed over time.

In 1981, single member household was 3.2%, in 1991 it is decreased to 2.5% and in 2001 and 2011 it is increased to 2.8% and 3.2% respectfully. It is interesting to note that the 2-5 member households are increasing over the decades and 6-7 member households and households with 8 and over members are decreasing. This indicates that extended and joint family house system is loosing its position in the society and nuclear household systems are getting popularity in the society.

It is observed from the table that 2 member household was 7.6% in 1981, reduced to 7.4% in 1991 and again increased to 8.9% and 10.7% in 2001 and 2011 respectively. The 3 member households were 12.0% in 1981, reduced to 7.4% in 1991 and again increased to 12.7% and 16.1% and 19.3% in 2001 and 2011 respectively. The 4 member households were the highest in 2011 (24.6%), but it was14.3% in 1981, 16.6 in 1991 and 21.0% in 2001. The 5 member households was15.0% in 1981, then increased to 17.0% in 1991, 18.7% in 2001 and decreased to 18.5% in 2011. After 5 members, the percentage of households with 6 and more members decreased in later censuses, that is in 1991, 2001 and 2011 with the maximum reduction for 10 and above members household. The percentage of such households were 9.8 in 1981 and decreased to only 3.8% in 2001. Considerable decrease was also observed in 8 member household. It was 8.0% in 1981 and decreased to 4.7% in 2001.

Table 6.11: Dwelling household by number of persons, 1981-2011

Persons per HH	2011		2001		1991		1981	
	Household	**%**	**Household**	**%**	**Household**	**%**	**Household**	**%**
All Groups	**31863396**	**100.0**	**24850280**	**100.0**	**19020483**	**100.0**	**14785048**	**100.0**
1	1030651	3.2	702380	2.8	477852	2.5	479464	3.2
2	3407233	10.7	2210160	8.9	1411930	7.4	1126760	7.6
3	6159495	19.3	3993280	16.1	2421613	12.7	1768764	12.0
4	7834040	24.6	5205700	21.0	3164239	16.6	2119889	14.3
5	5881870	18.5	4645960	18.7	3233789	17.0	2211955	15.0
6	3471388	10.9	3278720	13.2	2746566	14.4	2031234	13.7
7	1849812	5.8	2032760	8.2	2019973	10.6	1640300	11.1
8 +	2228907	7.0	2781320	11.1	3544521	18.8	3406682	23.1

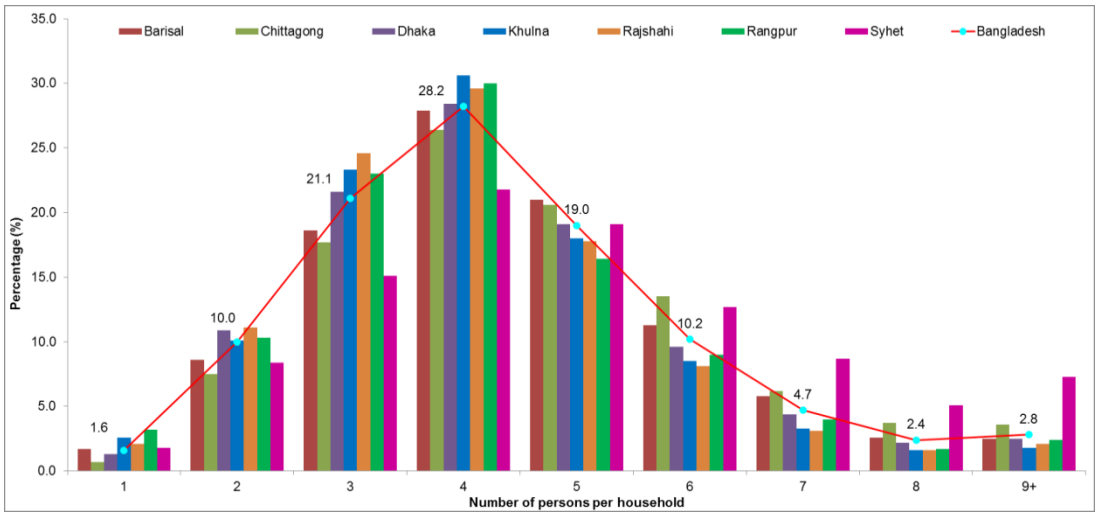


Fig. 6.16: Dwelling household in urban areas by number of persons and divisions, 2011

It is observed from the table that 2 member household was 7.6% in 1981, reduced to 7.4% in 1991 and again increased to 8.9% in 2001. The 3 member households were 12.0% in 1981, increased to 12.7% in 1991 and further increased to 16.1 % in 2001. The 4 member households were the highest in 2001 (21.0%), but it was 14.3% in 1981 and 16.6% in 1991. The 5 member households was 15.0% in 1981, then increased to 17.0% in 1991 and 18.7% in 2001. After 5 member, the percentage of households with 6 and more members decreased in

later censuses, that is in 1991 and 2001 with the maximum reduction for 10 and above member household. The percentage of such households was 9.8% in 1981 and decreased to only 3.8% in 2001. Considerable decrease was also observed in 8 member household. It was 8.0% in 1981 and decreased to 4.7% in 2001.

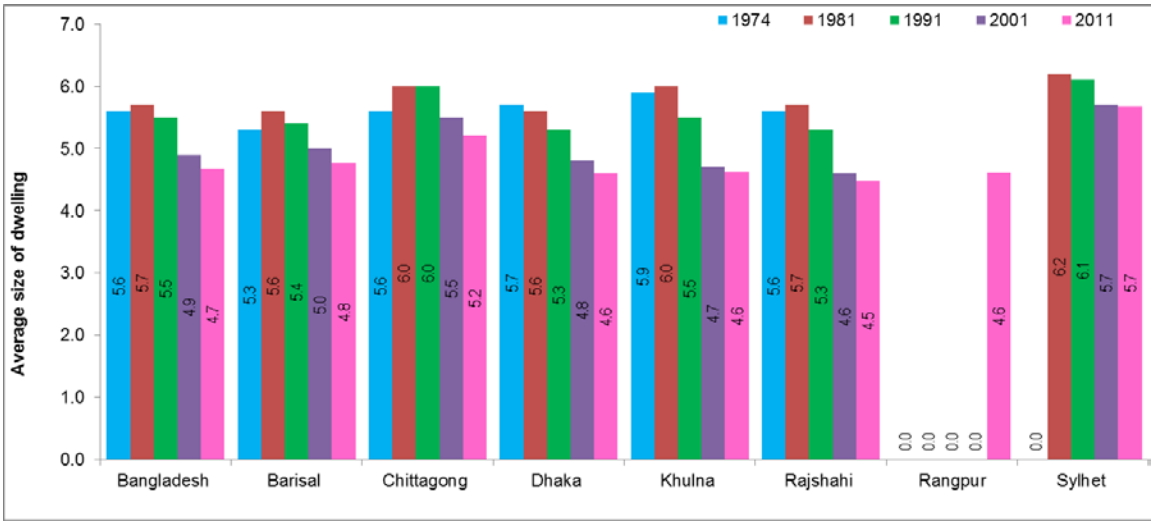


Fig. 6.17: Average size of dwelling by division, 1974 - 2011

An important demographic indicator in analysis of urbanization is household size. The above table presents the percentage distribution of household size in urban areas. The minimum predominant size of household in urban areas consists of 4.6 members and maximum average household size is 5.9 members in 2011 and 1981 respectively. The average number of household members in urban areas in 2001 was 4.8 and in rural area it was 4.9, a substantial decrease compared to the 2011 census. The decrease in the gap in household size between urban and rural areas between the two censuses reflects the impact of decreasing fertility in both areas and spontaneous migration from rural to urban areas over the last decade. It is seen that in 2011 census average size of urban general households is 4.4 which is smaller than the previous censuses. This decreasing situation in household size may be attributed to the division of joint families to nuclear families in recent years.

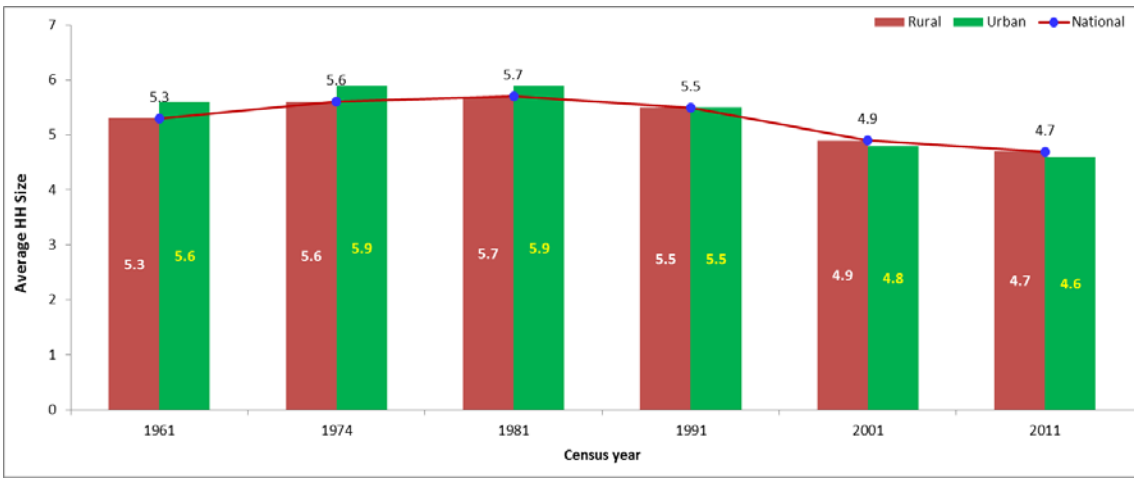


Fig. 6.18: Average household size, 1961 - 2011

6.13 Working and Dependent Population

The above table shows that Barisal City Corporation maintains the highest rate of literacy with 75.27% which is above the national average 72.90%. Dhaka City Corporation and Rajshahi City Corporation rank the second and the third with 74.55% and 73.96% respectively which are also above the national average. Sylhet City Corporation ranks the lowest with 67.46% which is below the national average.

The literacy rates of division have been presented in Fig. 6.19. It is observed that the highest literacy rate 70.13% is maintained by Barisal Division followed by Dhaka Division with 69.00%. The lowest literacy rate 60.19% goes to Sylhet Division.

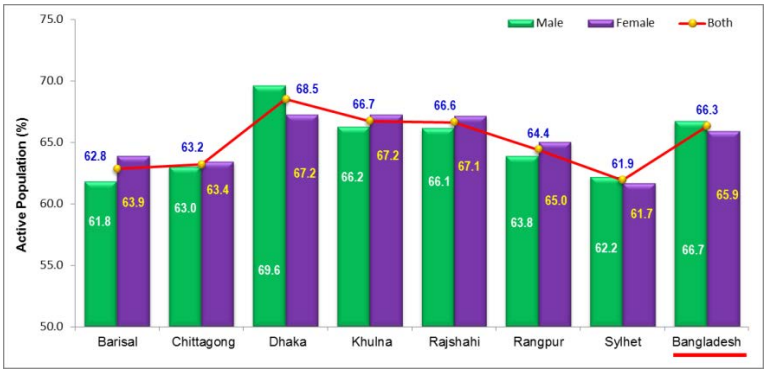


Fig. 6.19: Distribution of active urban population by division, 2011

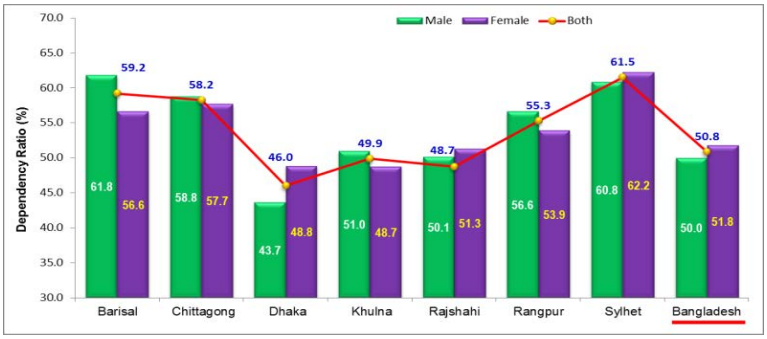


Fig. 6.20: Dependency Ratio of urban population by division, 2011

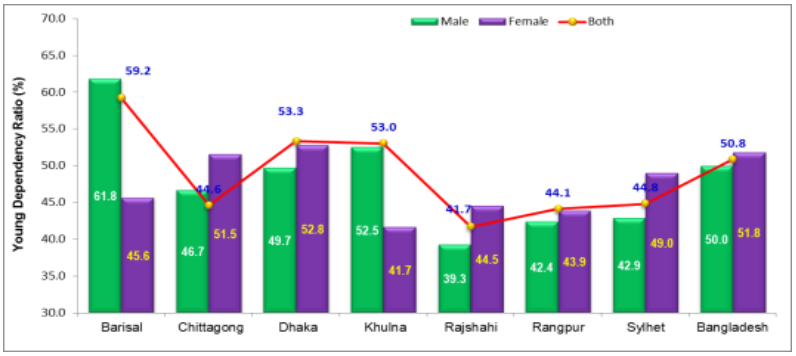


Fig. 6.21: Young Dependency Ratio of urban population by division, 2011

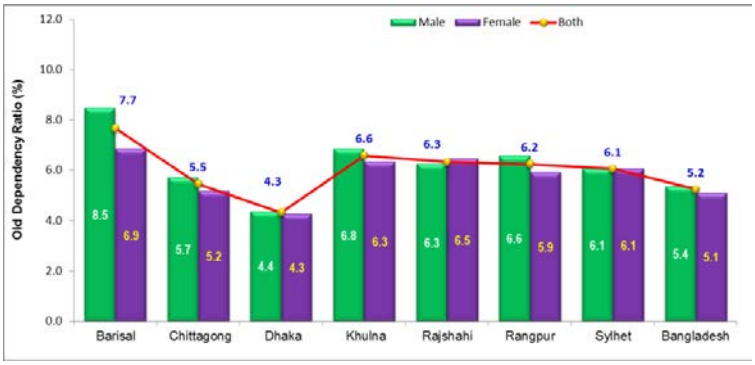


Fig. 6.22: Old Dependency Ratio of urban population by division, 2011

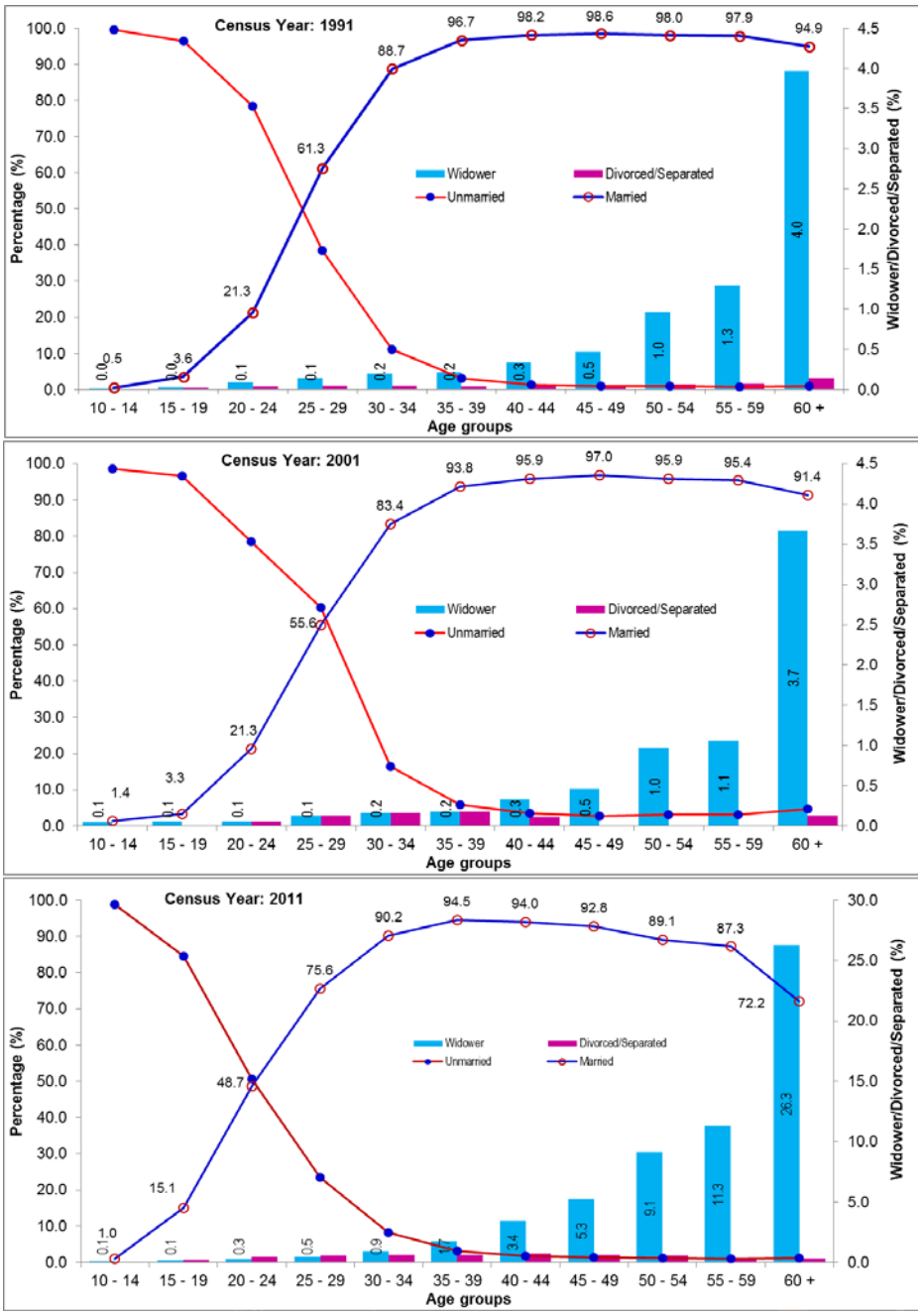


Fig. 6.23: Distribution of marital status of urban population by age groups, 1991, 2001 and 2011

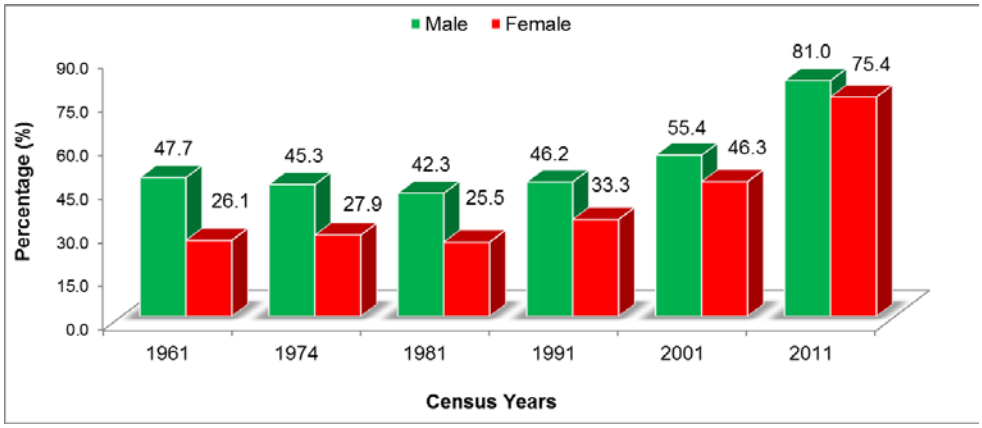


Fig. 6.24: Inter census literacy rate (%) of urban population, 1961 - 2011

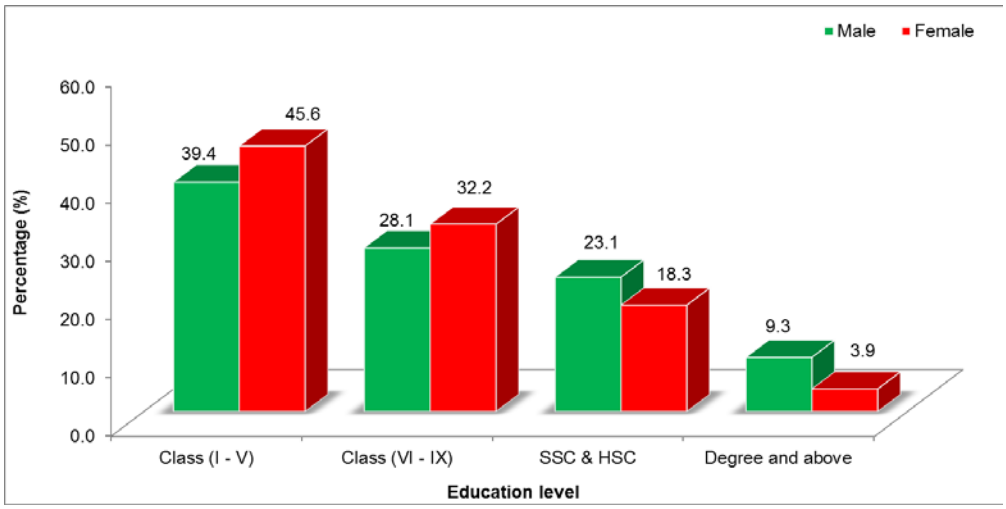


Fig. 6.25: Distribution of education level (%) of urban population by sex, 2011

6.14 Source of Drinking Water

The sources of drinking water of the households obtained from 2001 census and 1991 census e been presented in Fig. 6.26. It is observed from the table that tube-well is the main source of drinking water for the households. As many as 79.77% households reported to use such sources in 2001. The percentage of households who used tube-well water for drinking was 75.73% in 1991. It is seen from the table that only 5.96% households in 2001 and 4.30% in 1991 census used tap water drinking purpose. The use of deep-tube well as the source of drinking water was reported by 4.90% in 2001 as against 9.46% in 1991 census. The use of pond water for drinking declined in 2001 compared to 1991 census. It was 7.88% in 1991 and declined to 3.44% in 2001.

There exists urban-rural variation in the use of water for drinking. The use of tap water increased in 2001 for both urban and rural areas. It was 0.14% and 22.49% in 1991 for rural and urban areas respectively and it rose to 0.34% and 25.54% for such area in 2001. The use

of deep tube-well for urban and rural areas also decreased in 2001. It is encouraging that use of pond water drinking purpose is decreasing, which is an improvement towards sate drinking water situation in 2001 compared to 1991

Household by Source of Drinking Water

The distribution of urban general households by source of drinking water is furnished in next table. It is noticed that only 10.3% households of the country have the access to tap water facilities and 83.9% have tube-well facilities. In urban area, these rates are 37.4% and 59.5% respectively. A significant number of urban households use tap water as a source of drinking water which is much higher than the rate for the country as a while. A negligible percentage of urban households 3.1% depend on other sources for drinking water.

A bar diagram showing general households by sources of drinking water, 2011 is presented.

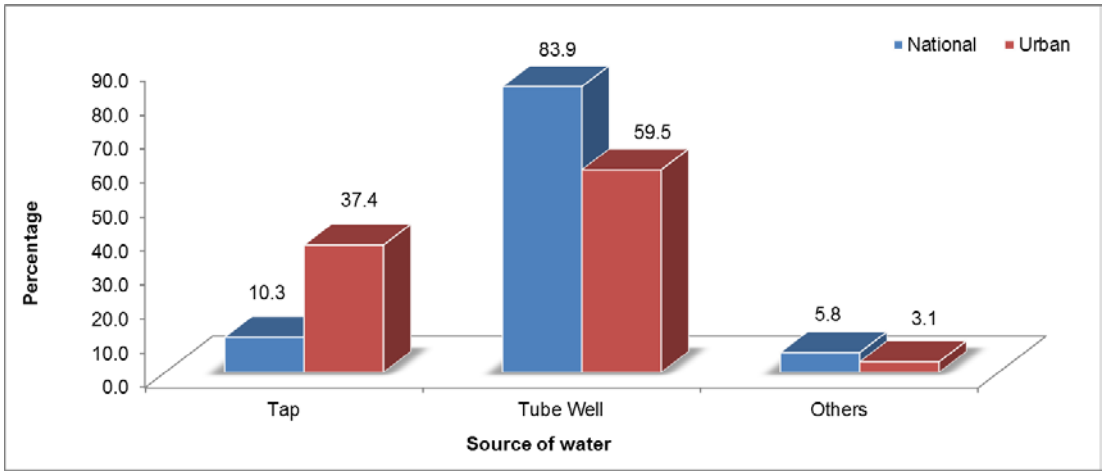


Fig. 6.26: Urban General Household by Source of Drinking Water, 2011

Division wise distribution of general household by source of drinking water is shown in Fig. 6.27. It appears from the table that highest proportion of urban households using tap as the main source of drinking water relates to Dhaka Division 57.7% followed by Chittagong Division 31.9% while Rangpur Division ranks the lowest with only 6.7%. The proportion of urban household using tube-well water as the main source of drinking water is highest in Rangpur Division with 91.8% and the lowest in Dhaka Division with 40.3%. The proportion of urban households using other sources as the main source of drinking water is highest in Sylhet Division with 5.6% while lowest in Rangpur Division 1.5%.

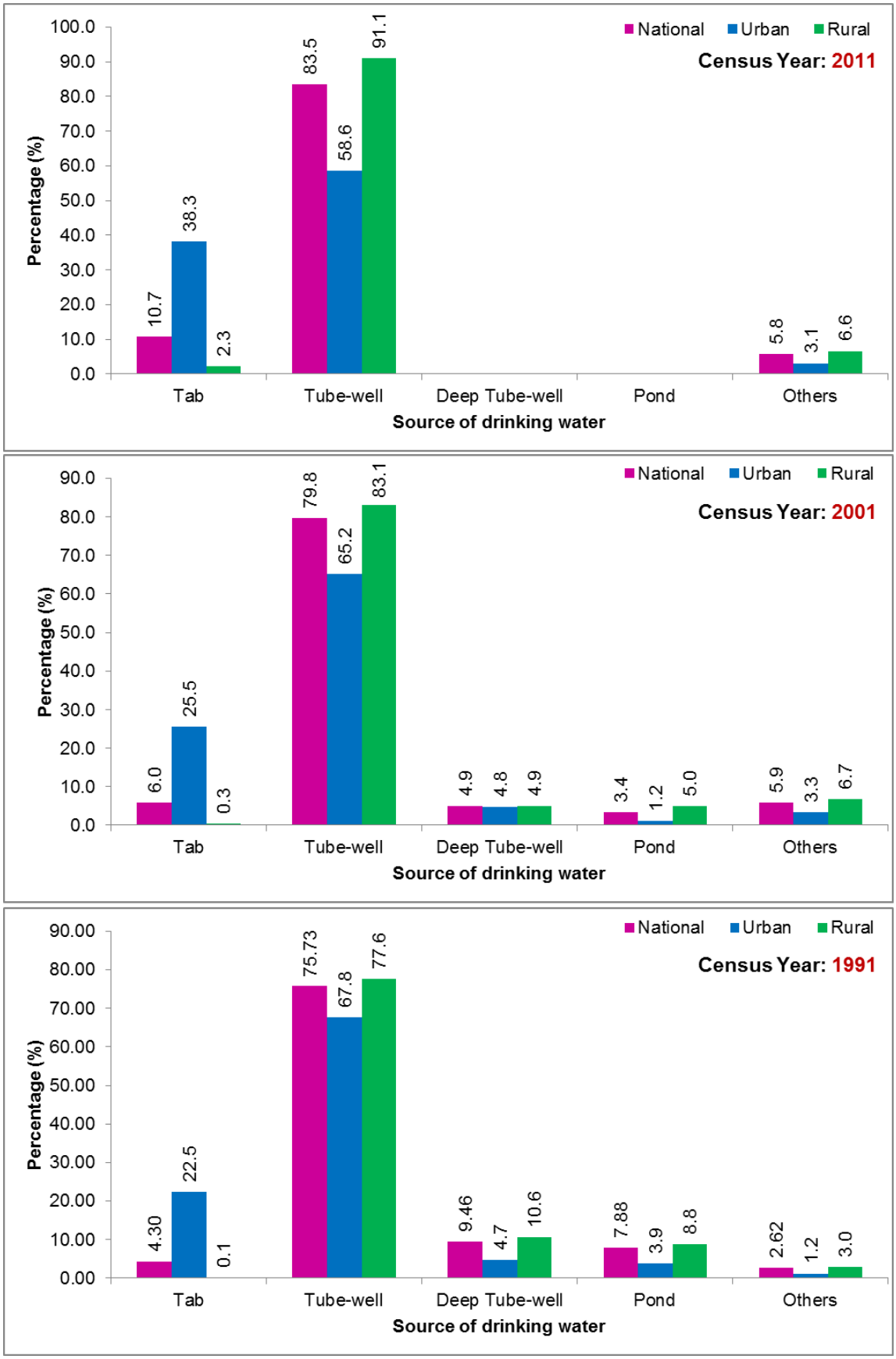


Fig. 6.27: Distribution of source of drinking water by residence, 1991, 2001 and 2011

6.15 Toilet Facility

The toilet facilities for discharge of human waste is an important element for healthy and hygienic environment of household. It is praiseworthy that the use of sanitary latrine has improved tremendously over the last decade. It was only 12.46% in 1991 and it increased to 36.87% in 2001. The rate of increase stands at 195% over the last 10 years. Households having no arrangement for discharge of excreta was 34.20% in 1991 now it declined to 21.59% which is encouraging, however, still more than one fifth of the households at the aggregate level and one fourth households of the rural area has no particular place for discharge of human waste in 2001. The percentage of household having no arrangement for toilet was 7.36% for the urban area of the country. These households are mainly slum and squatter households.

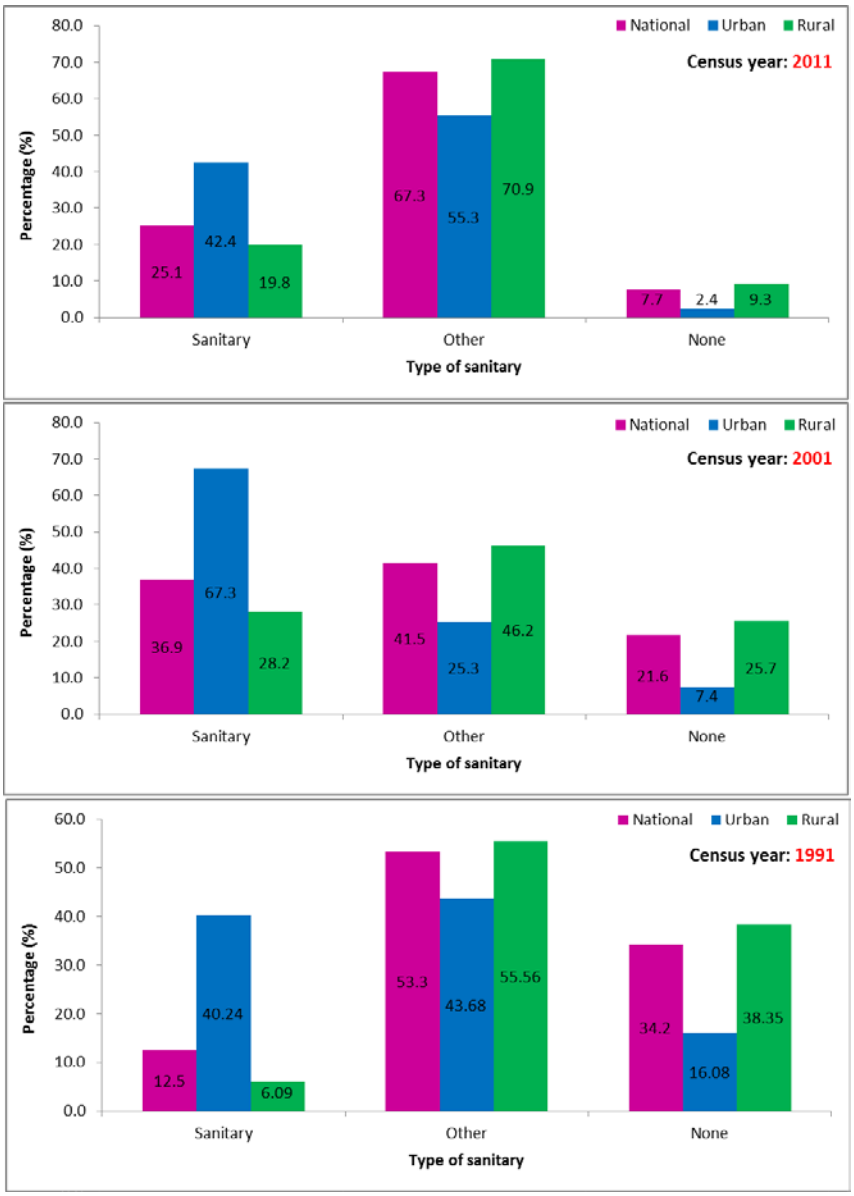


Fig. 6.28: Distribution of toilet facilities in urban areas, 1991, 2001 and 2011

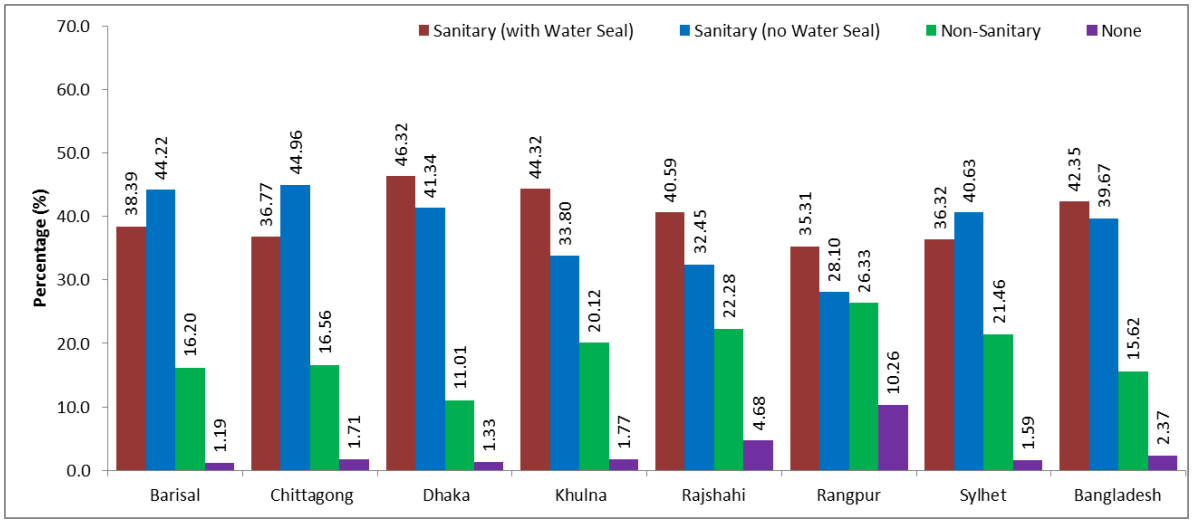


Fig. 6.29: Distribution of toilet facilities in urban areas by division, 2011

6.16 Access to Electricity

It is encouraging that household's access to electricity increased in 2001 compared to 1991. In 1991 only 14.29% households had access to electricity but now it increased to 31.45%. The rate of increase in the last decade stands at 120%. The percentage of households having electric connection was only 4.57% for rural areas and 58.06% for urban areas in 1991 it has increased to 20.13% and 70.94% respectively in 2001.

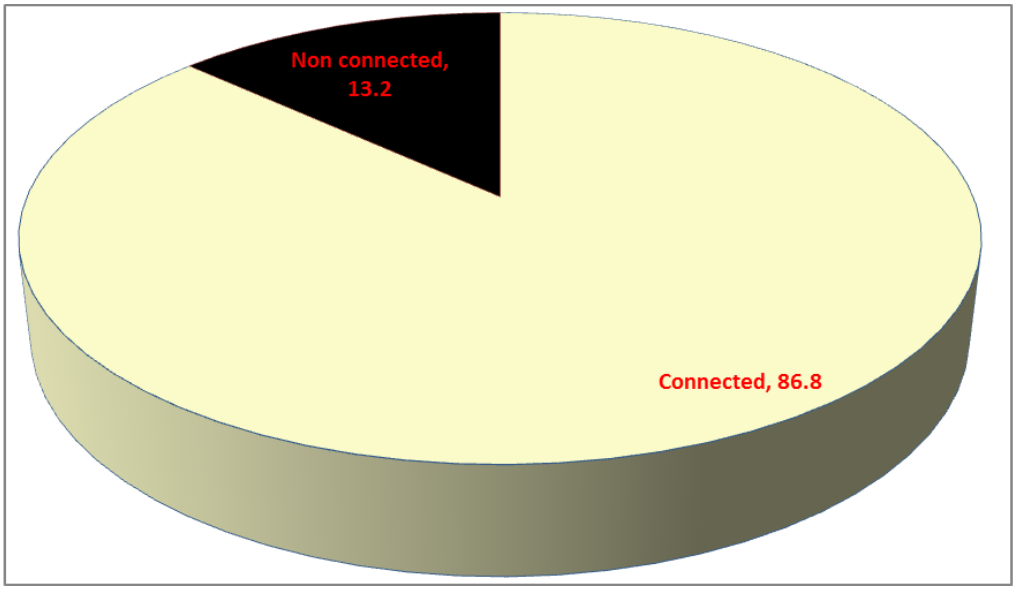


Fig. 6.30: Electricity coverage status in urban areas, 2011

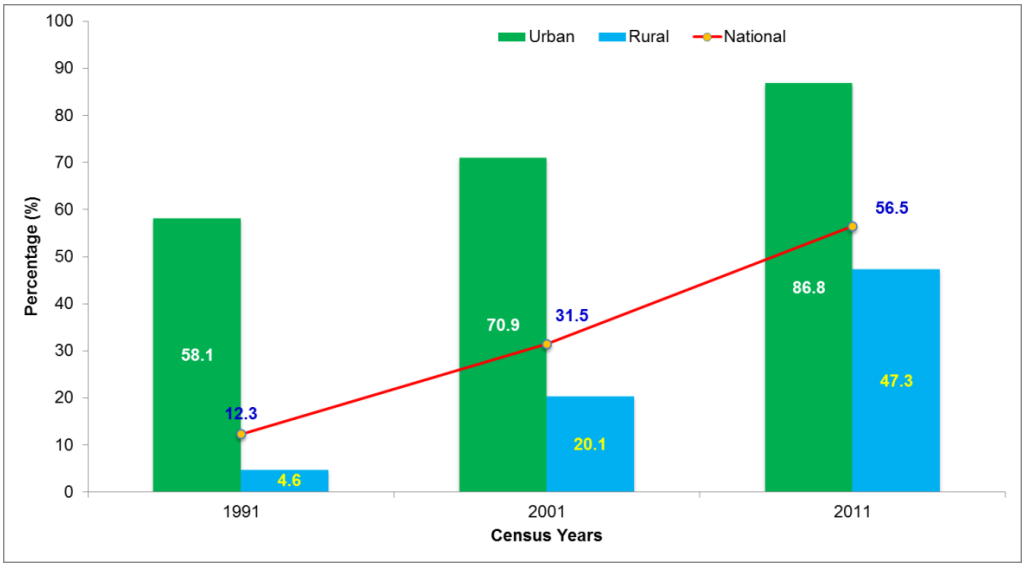


Fig. 6.31: Rural-Urban differential of electricity coverage, 1991, 2001 and 2011

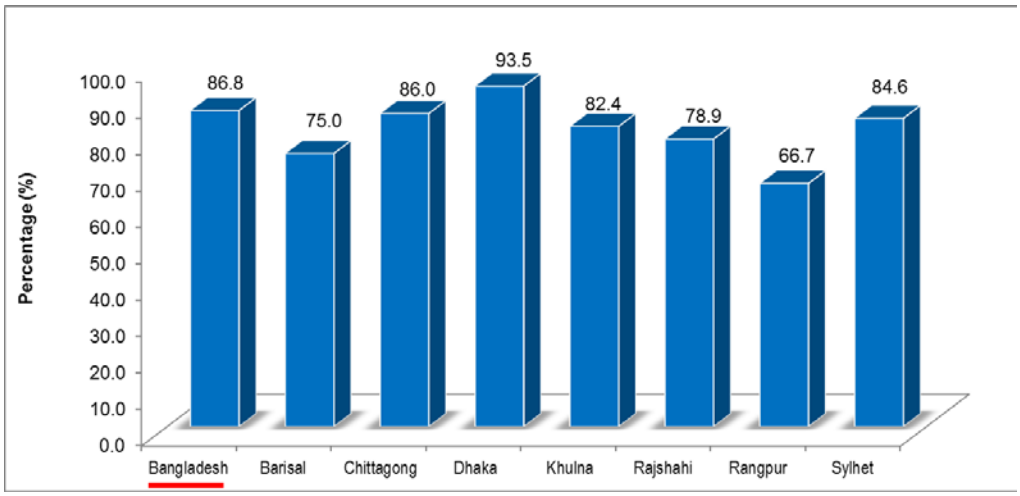


Fig. 6.32: Distribution of electricity coverage in urban areas by division, 2011

6.17 Summary and Conclusion

The level of urbanization had an upward trend all along. During the British colonial rule i.e., up to 1947 level of urbanization was low because of the exploitation of the colonial power. Thereafter, the pace of urbanization got momentum and continued till 1991 and is still maintaining an upward trend. In 1974 the country experienced the highest ever- annual average urban growth rate which was 8.65. This sharp acceleration of urban population growth during the period of 1961 to 1974 may be attributed to some industrial development in the 1960s and the emergence of Bangladesh as a sovereign nation.

Flexibility of the definition of 'urban' is highly responsible for accelerating the growth rate of urban population after liberation. Unlike the level of urbanization, distribution of urban

population did not show rising trend even for a single region. Significant upward growth trend of urban population was found in the regions of Dhaka, Chittagong and Khulna. Hence we can conclude that the rate of urban growth is higher for the administratively important and industrially advanced regions than that of the less important ones.

7. Conclusion and Policy Recommendations

7.1 Conclusion

In Bangladesh migration from rural to urban areas has become a livelihood strategy adopted by an increasing number of families who migrated to city for better employment opportunities. The poverty argument in Bangladesh is strong where many poor and landless migrants are forced to migrate for supporting their families.

This monograph has identified and discussed the major demographic and socio-economic impacts of urbanization, highlighting its role in sustainable development for improving quality of life. A number of major conclusions have emerged from the evidence and discussion in the monograph.

1. Urbanization generally contributes to the lowering of average household sizes. This is largely a result of the behavioral and lifestyle changes which characterize urbanization, including better education, higher age at first marriage and increased female employment. In addition, the cost of caring for the diverse needs of children, combined with the desire for improved living conditions and higher quality of life, tends to discourage urban residents from having large families.
2. With regards to general socio-economic development, it is very clear from historical evidence that cities and towns are innovation diffusion and socio-economic transformation.
3. Finally, analysis suggests that urbanization have many positive impacts on their rural hinterlands through a variety of urban-rural linkages. These linkages include: payments of money by urban residents to their rural kin; transfer of knowledge and skills through migrants returning from urban to rural areas; and the provision of retail, transport, social and administrative services to rural hinterland population.

Historical experience suggests that urbanization is an inevitable process. In light of this observation, combined with the positive impacts on urbanization, it is clear that the main challenge at present is not that of slowing-down urbanization, but of learning how to cope with rapid urban growth. In recognition of the role of cities as engines of economic development, there has recently been a resurgence of interest in urban management as the main tool for coping with rapid urban growth and maximizing the positive demographic and socio-economic impacts of urbanization.

Migration differentials have significant role in identifying the nature and strength of the socio-economic and demographic impacts of the population concerned. Generally, the differentials in migration (selectivity of certain person or group to be more mobile than

others) have been studied mainly by age, sex, marital status, education and occupation.

Economic reasons were the main motivators for moving from one residence to another residence within the region. However, when moving from one region to another it was mostly for employment reasons followed by social reasons. The relative importance of the types of reasons for moving from residences to residences within the region or in another region was dependent on how long people have been living at their previous residences. The motivation for choosing a residence in another region was mainly for social followed by environmental reasons. In 2004, a maximum, 38.5%, of internal migration took place due to employment and business activities, while in 2011 the maximum 38.7% of internal migration took place due to marriage. In the same year, the share of push factors like natural calamity, family quarrel and tortured or deserted by spouse is respectively 2.1%, 1.2% and 0.2%. The reasons of internal migration varies between rural migration and urban migration. In 2004, the maximum proportion of rural migration took place due to some other reason 31.3% than marriage 28.1%, education 22% and employment or business 18.6%. Whereas, the maximum proportion of urban migration occurred due to employment and business. In 2011, the maximum proportion of rural migration took place due to marriage 53.2%, whereas, the maximum proportion of urban migration occurred due to some other reason 27.5%.

Urbanization is an indicator of development. The proportion of urban increases with the socio-economic development of the country. Bangladesh is one of the most densely populated countries in the world and has occurred rapid growth of urban population for last four decades. An attempt has been made to observe the current situation and trends of urbanization in Bangladesh and to identify the factors work behind the rapid urbanization. An attempt has also been made to assess the positive and negative impacts of urbanization.

The present study examined the spatial and temporal nature of urbanization and development in Bangladesh. Factor analyses techniques were used to identify the nature and patterns of living standard for the year 2011. First, it divided the districts (unit of observations) into more manageable homogeneous groups as a focus for further study. Second, it provided opportunities for detail observation into the nature and changes in urbanization and development in each individual district. Similarities and differences between and among the districts in a region provide better understanding of the problems of urbanization and development and thus would be helpful for future regional development planning.

Analysis of simple graphical mapping of factor scores is useful in that it describes the spatial (inter-district) patterns of variation in each factor. It was first necessary to cluster the factor scores among the units of observation (districts). Using cluster analysis, the 64 districts in Bangladesh are classified into three regions that are not equally developed spatially owing to resource, communication, and environmental constraints.

In general, the growth poles are receiving raw materials from its hinterland and the

hinterlands are also receiving finished and manufactured goods and services from the growth poles. Over the period in question, both urbanization and spatial development progressed simultaneously and extended/ expanded onto the hinterland districts in the form of spread effects. As a result, the so-called hinterland districts (old subdivisions or new districts) have experienced significant growth of urbanization and spatial development over the period in question. In 1891 the urban population of Bangladesh was only 0.54 million which increased to 33.56 million in 2011. In the earlier part of the century a very low share of the total population lived in urban areas but after 1941 rapid increase of urban population is observed.

In 1891 urban population was 2.18%, which increased to 2.43% in 1901. The reasonably low level of urbanization during the period may be attributed to the profit motive policy of the British Colonial Government to abolish aboriginal industries and to build up industrial-commercial accumulation around Calcutta that effectively turned the area which is today Bangladesh into its rural locality. In 1961, the urban population was only 5.19% which increased to 8.78% in 1974. Since then, there has been steady growth of urban population and in 2001 and 2011 level of urbanization were 23.53% and 23.30%, respectively. Dhaka emerged the highest urbanized region since 1961 census followed by Chittagong. From 1981 to 2011 for the level of urbanization rank of Dhaka division is 1, rank of Chittagong and Khulna divisions are 2 and 3, respectively. The least urbanized division is Sylhet. Between 1941 and 1951 the annual average growth rate (AAGR) decreased from 3.59 to 1.69 though proportion of urban population increased in absolute sense. Lower growth rate of urban population during the period 1941-1951 might be the effect of the devastating Bengal Scarcity, the Second World War and the partition of India in 1947. A significant increasing trend was found in all respects from 1961 and it has been continuing since then. In 1981 the country had over 13.23 million urban people with 15.18% level of urbanization accompanied by 110.85% increase and an average annual growth rate of 7.46. It is worth mentioning that the latter two rates of urban population growth are less than that of the previous census of 1974. In case of 1991 census the above rates were respectively 69.75% and 5.29% which are also less than that of 1981. Similar results were also observed for the census 2001 and census 2011. This indicates that urbanization in Bangladesh after 1974 is increasing but at a decreasing rate.

It is observed from the table that dependency ratio was below 100 up to 1951 and then it increased to a high 116 in 1974. Afterwards it started decreasing with only 83 for 2001 census. This is very encouraging that the dependency ratio is decreasing in the recent years. The growth rate of general household for the country has been increasing from 1974-81 to 1991-2001 after which the rate has gone down in 2001-2011. For urban area a significant increase of 8.9% is noticed during 1974-81 after which the rate of increase shows a decreasing trend in the three remaining decades. In 1981, single member household was 3.2%, in 1991 it is decreased to 2.5% and in 2001 and 2011 it is increased to 2.8% and 3.2%

respectfully. It is interesting to note that the 2-5 member households are increasing over the decades and 6-7 member households and households with 8 and over members are decreasing. This indicates that extended and joint family house system is loosing its position in the society and nuclear household systems are getting popularity in the society.

The 4 member households were the highest in 2011 (24.6%), but it was14.3% in 1981, 16.6% in 1991 and 21.0% in 2001. The 5 member household was15.0% in 1981, then increased to 17.0% in 1991, 18.7% in 2001 and decreased to 18.5% in 2011.

The percentage of households who used tube-well water for drinking was 75.73% in 1991. It is seen from the table that only 5.96% households in 2001 and 4.30% in 1991 census used tap water for drinking purpose. The use of deep tubewell as the source of drinking water was reported by 4.90% in 2001 as against 9.46% in 1991 census. The use of pond water for drinking declined in 2001 compared to 1991 census. It was 7.88% in 1991 and declined to 3.44% in 2001.

There exists urban-rural variation in the use of water for drinking. The use of tap water increased in 2001 for both urban and rural areas. It was 0.14% and 22.49% in 1991 for rural and urban areas respectively and it rose to 0.34% and 25.54% for such area in 2001. The use of deep tube-well for urban and rural areas also decreased in 2001. It is encouraging that use of pond water for drinking is decreasing, which is an improvement towards safe drinking water situation in 2001 compared to 1991

It is encouraging that household's access to electricity increased in 2001 compared to 1991. In 1991 only 14.29% households had access to electricity but now it increased to 31.45%. The rate of increase in the last decade stands at 120%. The percentage of households having electric connection was only 4.57% for rural areas and 58.06% for urban areas in 1991 it has increased to 20.13% and 70.94% respectively in 2001.

The level of urbanization had an upward trend all along. During the British colonial rule i.e., up to 1947 level of urbanization was low because of the exploitation of the colonial power. Thereafter, the pace of urbanization got momentum and continued till 1991 and is still maintaining an upward trend. In 1974 the country experienced the highest ever annual average urban growth rate which was 8.65. This sharp acceleration of urban population growth during the period of 1961 to 1974 may be attributed to some industrial development in the 1960s and the emergence of Bangladesh as a sovereign nation. This study would help in achieving Sustainable Development Goals (SDGs) in relation to internal migration, urbanization, and combat climate change and its impact.

7.2 Policy Recommendations

Findings suggest that the contributions of migration and urbanization to socio-economic development should be carefully taken into consideration. Migration and urbanization contributed to widening gaps between areas of origin and areas of destination. Findings suggest that national development plans should move far beyond the needs to achieve economic growth and carefully consider more complicated issues of socio-economic development.

Despite rapid urban population growth rate in urban centers and cities, resulting from high economic growth rates and improvements in living standards, a small portion of the urban population does not have the change to benefit from these advantages, it necessary to pay greater attention to this population group.

Rapid urbanization without careful planning may lead to negative consequences for sustainable development of the country. Government should consider carefully investments to improve the infrastructure for attractiveness of some divisional urban centers to reduce the concentration of migration flow to Dhaka. This investment should focus on improving welfare and opportunities for urban residence in the divisions reducing inequalities between urban centers in Bangladesh.

Annex-I

Appendix Table 1: Population and dependency ratio distribution by age and district, 2011

SL	District	0 - 14	15 - 64	65 +	Total	DR in Percent	Child Aged Ratio
1	Barguna	301643	537851	53287	892781	65.99	17.67
2	Barisal	832148	1356910	135252	2324310	71.29	16.25
3	Bhola	722884	969427	84484	1776795	83.28	11.69
4	Jhalokati	238271	399180	45218	682669	71.02	18.98
5	Patuakhali	555459	893808	86587	1535854	71.83	15.59
6	Pirojpur	377918	663207	72132	1113257	67.86	19.09
7	Bandarban	154790	221395	12150	388335	75.40	7.85
8	Brahmanbaria	1208560	1493146	138792	2840498	90.24	11.48
9	Chandpur	895295	1378662	142061	2416018	75.24	15.87
10	Chittagong	2582179	4746430	287743	7616352	60.46	11.14
11	Comilla	2083881	3021698	281709	5387288	78.29	13.52
12	Cox's Bazar	984817	1233657	71516	2289990	85.63	7.26
13	Feni	511996	847314	78061	1437371	69.64	15.25
14	Khagrachhari	232972	353733	27212	613917	73.55	11.68
15	Lakshmipur	683181	956642	89365	1729188	80.76	13.08
16	Noakhali	1264667	1690690	152726	3108083	83.84	12.08
17	Rangamati	212485	360177	23317	595979	65.47	10.97
18	Dhaka	3261813	8458915	323249	12043977	42.38	9.91
19	Faridpur	683619	1128451	100899	1912969	69.52	14.76
20	Gazipur	959130	2333196	111586	3403912	45.89	11.63
21	Gopalganj	436533	671367	64515	1172415	74.63	14.78
22	Jamalpur	832296	1343490	116888	2292674	70.65	14.04
23	Kishoregonj	1180596	1580141	151170	2911907	84.28	12.80
24	Madaripur	434388	668269	63295	1165952	74.47	14.57
25	Manikganj	446596	858753	87518	1392867	62.20	19.60
26	Munshiganj	477376	889579	78705	1445660	62.51	16.49
27	Mymensingh	1956614	2874790	278868	5110272	77.76	14.25
28	Narayanganj	937521	1914815	95881	2948217	53.97	10.23
29	Narsingdi	835407	1289842	99695	2224944	72.50	11.93
30	Netrakona	896655	1208556	124431	2229642	84.49	13.88
31	Rajbari	353421	635111	61246	1049778	65.29	17.33
32	Shariatpur	450058	637196	68570	1155824	81.39	15.24
33	Sherpur	506810	780331	71184	1358325	74.07	14.05
34	Tangail	1173180	2216598	215305	3605083	62.64	18.35
35	Bagerhat	476052	906876	93162	1476090	62.77	19.57
36	Chuadanga	345670	726860	56485	1129015	55.33	16.34

SL	District	0 - 14	15 - 64	65 +	Total	DR in Percent	Child Aged Ratio
37	Jessore	844671	1774504	145372	2764547	55.79	17.21
38	Jhenaidah	551438	1124413	95453	1771304	57.53	17.31
39	Khulna	690217	1504838	123472	2318527	54.07	17.89
40	Kushtia	604869	1242199	99770	1946838	56.73	16.49
41	Magura	313006	554238	51175	918419	65.71	16.35
42	Meherpur	192409	428190	34793	655392	53.06	18.08
43	Narail	253120	426046	42502	721668	69.39	16.79
44	Satkhira	604904	1268325	112730	1985959	56.58	18.64
45	Bogra	1045917	2187034	167923	3400874	55.50	16.06
46	Joypurhat	261231	605051	47486	913768	51.02	18.18
47	Naogaon	760789	1706600	132768	2600157	52.36	17.45
48	Natore	519950	1098052	88671	1706673	55.43	17.05
49	Chapai Nawabganj	579436	998111	69974	1647521	65.06	12.08
50	Pabna	849516	1547612	126051	2523179	63.04	14.84
51	Rajshahi	762725	1712851	119621	2595197	51.51	15.68
52	Sirajganj	1110169	1844006	143314	3097489	67.98	12.91
53	Dinajpur	972050	1870702	147376	2990128	59.84	15.16
54	Gaibandha	842845	1419552	116858	2379255	67.61	13.86
55	Kurigram	742357	1219344	107572	2069273	69.70	14.49
56	Lalmonirhat	456726	740015	59358	1256099	69.74	13.00
57	Nilphamari	674687	1084326	75218	1834231	69.16	11.15
58	Panchagarh	348720	598594	40330	987644	64.99	11.57
59	Rangpur	962964	1776780	141342	2881086	62.15	14.68
60	Thakurgaon	486439	843365	60238	1390042	64.82	12.38
61	Habiganj	848419	1140900	99682	2089001	83.10	11.75
62	Maulvibazar	720281	1111120	87661	1919062	72.71	12.17
63	Sunamganj	1052721	1299956	115291	2467968	89.85	10.95
64	Sylhet	1342357	1952610	139221	3434188	75.88	10.37
	Bangladesh	49881814	87326397	6835486	144043697	64.95	13.70

Appendix Table 2: Transition probability matrix at different steps

Mx1	Barisal	Chittagong	Dhaka	Khulna	Rajshahi	Rangpur	Sylhet
[1,]	0.5574	0.0430	0.2800	0.1100	0.0064	0.0000	0.0077
[2,]	0.0180	0.5530	0.3400	0.0390	0.0077	0.0090	0.0308
[3,]	0.0130	0.0540	0.7800	0.0270	0.0257	0.0122	0.0886
[4,]	0.0415	0.0820	0.3100	0.4840	0.0546	0.0149	0.0093
[5,]	0.0115	0.0280	0.3300	0.0650	0.5008	0.0389	0.0263
[6,]	0.0026	0.0470	0.4900	0.0310	0.0864	0.3045	0.0366
[7,]	0.0111	0.0680	0.2000	0.0110	0.0062	0.0062	0.6993

Mx2	Barisal	Chittagong	Dhaka	Khulna	Rajshahi	Rangpur	Sylhet
[1,]	0.3200	0.0730	0.4200	0.1240	0.0200	0.0057	0.0370
[2,]	0.0260	0.3310	0.4900	0.0520	0.0200	0.0130	0.0700
[3,]	0.0210	0.0820	0.6700	0.0410	0.0360	0.0156	0.1340
[4,]	0.0500	0.1070	0.4600	0.2550	0.0640	0.0185	0.0440
[5,]	0.0200	0.0570	0.4800	0.0770	0.2670	0.0367	0.0640
[6,]	0.0120	0.0740	0.6000	0.0460	0.0840	0.1032	0.0840
[7,]	0.0180	0.0980	0.3300	0.0230	0.0140	0.0096	0.5090

Mx3	Barisal	Chittagong	Dhaka	Khulna	Rajshahi	Rangpur	Sylhet
[1,]	0.1910	0.0900	0.5000	0.1110	0.0310	0.0100	0.0690
[2,]	0.0300	0.2200	0.5400	0.0570	0.0300	0.0150	0.1040
[3,]	0.0250	0.0960	0.6200	0.0480	0.0410	0.0170	0.1580
[4,]	0.0470	0.1130	0.5300	0.1510	0.0610	0.0190	0.0800
[5,]	0.0250	0.0780	0.5400	0.0740	0.1540	0.0290	0.0980
[6,]	0.0200	0.0900	0.6000	0.0520	0.0700	0.0440	0.1210
[7,]	0.0230	0.1100	0.4100	0.0330	0.0220	0.0120	0.3890

Mx4	Barisal	Chittagong	Dhaka	Khulna	Rajshahi	Rangpur	Sylhet
[1,]	0.1200	0.1000	0.5300	0.0950	0.0380	0.0130	0.0990
[2,]	0.0320	0.1660	0.5600	0.0580	0.0360	0.0160	0.1300
[3,]	0.0280	0.1040	0.5900	0.0510	0.0420	0.0170	0.1700
[4,]	0.0430	0.1130	0.5600	0.1020	0.0560	0.0180	0.1100
[5,]	0.0290	0.0920	0.5600	0.0680	0.0990	0.0240	0.1250
[6,]	0.0250	0.1000	0.5900	0.0550	0.0590	0.0260	0.1450
[7,]	0.0260	0.1140	0.4700	0.0400	0.0280	0.0130	0.3140

Mx5	Barisal	Chittagong	Dhaka	Khulna	Rajshahi	Rangpur	Sylhet
[1,]	0.0810	0.1100	0.5500	0.0820	0.0410	0.0150	0.1200
[2,]	0.0320	0.1400	0.5700	0.0570	0.0390	0.0160	0.1500
[3,]	0.0300	0.1100	0.5700	0.0530	0.0420	0.0170	0.1800
[4,]	0.0400	0.1100	0.5700	0.0790	0.0510	0.0180	0.1300
[5,]	0.0300	0.1000	0.5700	0.0640	0.0720	0.0210	0.1400
[6,]	0.0280	0.1100	0.5800	0.0550	0.0520	0.0200	0.1600
[7,]	0.0280	0.1200	0.5000	0.0450	0.0320	0.0140	0.2700

Mx6	Barisal	Chittagong	Dhaka	Khulna	Rajshahi	Rangpur	Sylhet
[1,]	0.0600	0.1100	0.5600	0.0720	0.0430	0.0160	0.1400
[2,]	0.0320	0.1300	0.5700	0.0570	0.0410	0.0160	0.1600
[3,]	0.0310	0.1100	0.5700	0.0540	0.0420	0.0170	0.1800
[4,]	0.0370	0.1100	0.5700	0.0680	0.0480	0.0170	0.1500
[5,]	0.0310	0.1100	0.5700	0.0600	0.0580	0.0190	0.1600
[6,]	0.0300	0.1100	0.5700	0.0550	0.0470	0.0180	0.1700
[7,]	0.0290	0.1200	0.5200	0.0480	0.0350	0.0150	0.2400

Mx7	Barisal	Chittagong	Dhaka	Khulna	Rajshahi	Rangpur	Sylhet
[1,]	0.0480	0.1100	0.5600	0.0660	0.0430	0.0160	0.1500
[2,]	0.0320	0.1200	0.5700	0.0560	0.0420	0.0160	0.1700
[3,]	0.0310	0.1100	0.5600	0.0540	0.0420	0.0160	0.1800
[4,]	0.0350	0.1100	0.5700	0.0620	0.0460	0.0170	0.1600
[5,]	0.0320	0.1100	0.5700	0.0580	0.0500	0.0180	0.1700
[6,]	0.0310	0.1100	0.5700	0.0550	0.0450	0.0170	0.1800
[7,]	0.0300	0.1100	0.5300	0.0510	0.0380	0.0160	0.2200

Mx8	Barisal	Chittagong	Dhaka	Khulna	Rajshahi	Rangpur	Sylhet
[1,]	0.0410	0.1100	0.5600	0.0620	0.0430	0.0160	0.1600
[2,]	0.0320	0.1200	0.5600	0.0560	0.0420	0.0160	0.1700
[3,]	0.0320	0.1100	0.5600	0.0550	0.0420	0.0160	0.1800
[4,]	0.0340	0.1100	0.5600	0.0590	0.0440	0.0170	0.1700
[5,]	0.0320	0.1100	0.5600	0.0570	0.0470	0.0170	0.1700
[6,]	0.0310	0.1100	0.5600	0.0550	0.0440	0.0170	0.1800
[7,]	0.0310	0.1100	0.5400	0.0520	0.0390	0.0160	0.2000

Mx9	Barisal	Chittagong	Dhaka	Khulna	Rajshahi	Rangpur	Sylhet
[1,]	0.0370	0.1100	0.5600	0.0590	0.0430	0.0160	0.1700
[2,]	0.0320	0.1100	0.5600	0.0560	0.0420	0.0160	0.1800
[3,]	0.0320	0.1100	0.5600	0.0550	0.0420	0.0160	0.1800
[4,]	0.0330	0.1100	0.5600	0.0570	0.0440	0.0170	0.1700
[5,]	0.0320	0.1100	0.5600	0.0560	0.0440	0.0170	0.1800
[6,]	0.0320	0.1100	0.5600	0.0550	0.0430	0.0170	0.1800
[7,]	0.0310	0.1100	0.5500	0.0530	0.0400	0.0160	0.2000

Mx10	Barisal	Chittagong	Dhaka	Khulna	Rajshahi	Rangpur	Sylhet
[1,]	0.0350	0.1100	0.5600	0.0570	0.0430	0.0160	0.1800
[2,]	0.0320	0.1100	0.5600	0.0550	0.0420	0.0160	0.1800
[3,]	0.0320	0.1100	0.5600	0.0550	0.0420	0.0160	0.1800
[4,]	0.0330	0.1100	0.5600	0.0560	0.0430	0.0170	0.1800
[5,]	0.0320	0.1100	0.5600	0.0560	0.0430	0.0170	0.1800
[6,]	0.0320	0.1100	0.5600	0.0550	0.0430	0.0160	0.1800
[7,]	0.0310	0.1100	0.5500	0.0540	0.0410	0.0160	0.1900

Mx11	Barisal	Chittagong	Dhaka	Khulna	Rajshahi	Rangpur	Sylhet
[1,]	0.0340	0.1100	0.5600	0.0570	0.0430	0.0160	0.1800
[2,]	0.0320	0.1100	0.5600	0.0550	0.0420	0.0160	0.1800
[3,]	0.0320	0.1100	0.5600	0.0550	0.0420	0.0160	0.1800
[4,]	0.0320	0.1100	0.5600	0.0560	0.0430	0.0160	0.1800
[5,]	0.0320	0.1100	0.5600	0.0550	0.0430	0.0170	0.1800
[6,]	0.0320	0.1100	0.5600	0.0550	0.0420	0.0160	0.1800
[7,]	0.0320	0.1100	0.5500	0.0540	0.0410	0.0160	0.1900

Mx12	Barisal	Chittagong	Dhaka	Khulna	Rajshahi	Rangpur	Sylhet
[1,]	0.0330	0.1100	0.5600	0.0560	0.0420	0.0160	0.1800
[2,]	0.0320	0.1100	0.5600	0.0550	0.0420	0.0160	0.1800
[3,]	0.0320	0.1100	0.5600	0.0550	0.0420	0.0160	0.1800
[4,]	0.0320	0.1100	0.5600	0.0550	0.0420	0.0160	0.1800
[5,]	0.0320	0.1100	0.5600	0.0550	0.0420	0.0160	0.1800
[6,]	0.0320	0.1100	0.5600	0.0550	0.0420	0.0160	0.1800
[7,]	0.0320	0.1100	0.5600	0.0540	0.0410	0.0160	0.1900

Mx13	Barisal	Chittagong	Dhaka	Khulna	Rajshahi	Rangpur	Sylhet
[1,]	0.0320	0.1100	0.5600	0.0560	0.0420	0.0160	0.1800
[2,]	0.0320	0.1100	0.5600	0.0550	0.0420	0.0160	0.1800
[3,]	0.0320	0.1100	0.5600	0.0550	0.0420	0.0160	0.1800
[4,]	0.0320	0.1100	0.5600	0.0550	0.0420	0.0160	0.1800
[5,]	0.0320	0.1100	0.5600	0.0550	0.0420	0.0160	0.1800
[6,]	0.0320	0.1100	0.5600	0.0550	0.0420	0.0160	0.1800
[7,]	0.0320	0.1100	0.5600	0.0550	0.0420	0.0160	0.1900

Mx14	Barisal	Chittagong	Dhaka	Khulna	Rajshahi	Rangpur	Sylhet
[1,]	0.0320	0.1100	0.5600	0.0550	0.0420	0.0160	0.1800
[2,]	0.0320	0.1100	0.5600	0.0550	0.0420	0.0160	0.1800
[3,]	0.0320	0.1100	0.5600	0.0550	0.0420	0.0160	0.1800
[4,]	0.0320	0.1100	0.5600	0.0550	0.0420	0.0160	0.1800
[5,]	0.0320	0.1100	0.5600	0.0550	0.0420	0.0160	0.1800
[6,]	0.0320	0.1100	0.5600	0.0550	0.0420	0.0160	0.1800
[7,]	0.0320	0.1100	0.5600	0.0550	0.0420	0.0160	0.1900

Mx15	Barisal	Chittagong	Dhaka	Khulna	Rajshahi	Rangpur	Sylhet
[1,]	0.0320	0.1100	0.5600	0.0550	0.0420	0.0160	0.1800
[2,]	0.0320	0.1100	0.5600	0.0550	0.0420	0.0160	0.1800
[3,]	0.0320	0.1100	0.5600	0.0550	0.0420	0.0160	0.1800
[4,]	0.0320	0.1100	0.5600	0.0550	0.0420	0.0160	0.1800
[5,]	0.0320	0.1100	0.5600	0.0550	0.0420	0.0160	0.1800
[6,]	0.0320	0.1100	0.5600	0.0550	0.0420	0.0160	0.1800
[7,]	0.0320	0.1100	0.5600	0.0550	0.0420	0.0160	0.1800

Annex-II

Abbreviations

AAGR	Annual Average Growth Rate
ADB	Asian Development Bank
BBS	Bangladesh Bureau of Statistics
BDHS	Bangladesh Demographic and Health Survey
BFS	Bangladesh Fertility Survey
BRAC	Bangladesh Rural Advancement Committee
DHS	Demographic and Health Survey
EA	Enumeration area
GOB	Government of Bangladesh
GPS	Global positioning system
GSO	General Statistics Office
HDI	Human Development Index
HH	Households
HHS	Households size
HIES	Household Income and Expenditure Survey
HPI	Human Poverty Index
IFS	Ideal family size
IOM	International Organization for Migration
LOU	Level of Urbanization
MAM	Mean Age at Marriage
NGO	Non-governmental organization
NIPORT	National Institute for Population Research and Training
PCA	Principal component analysis
PHC	Population and Housing Census
R-R	Rural-to-rural (migration)
R-U	Rural-to-urban (migration)
SD	Standard deviation
SMA	Statistical metropolitan area
SMAM	Singulate Mean Age at Marriage
SOUP	Share of Urban Population

SVRS	Sample Vital Registration System
UN	United Nations
UNDP	United Nations Development Program
UNFPA	United Nations Fund for Population Activities
UNICEF	United Nations Children's Fund
UNSD	United Nations Statistics Division
U-R	Urban-to-rural (migration)
U-U	Urban-to-Urban (migration)
WB	World Bank
WHO	World Health Organization

Annex-III

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Annex-IV

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 Panel
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, Program 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. Labor Force Participation 3. Characteristics of International Migrant Households 4. Population Distribution and Internal Migration	Mr. Nichole MALPAS, Program 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 lslam 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

12/5/15

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(Additional Secretary)
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