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URBANIZATION AND MIGRATION IN BANGLADESH

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Photo Credit: Drik Images, bengalpix, Mohammad Younus, 2016

Design and Printing Supervision: Expressions Ltd

ISBN: 978-984-34-1317-8

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PREFACE

About 3.5 billion people, half the planet's population, live in cities today. In Bangladesh the number of city dwellers is growing, largely due to rural-urban migration, with currently about 28 percent of the population living in urban centres. United Nations projections indicate the rural population of Bangladesh to be declining, while the overall population continues to grow; this implies that urban areas will be absorbing the added population. This is an unprecedented opportunity for the country to decrease its existing income and productivity gaps. Global evidence shows that it is rare for a country to achieve per capita income above US$10,000 before at least half of the population lives in cities.

This UNFPA-commissioned report provides an analytical review, as well as policy recommendations on some of the key issues with regard to the country's migration-led urbanization. The study clearly indicates that Bangladesh's urban concentration is highly skewed towards the eastern parts, with Dhaka accommodating the majority of migrants, and making it one of the largest megacities in the world. It also shows some new trends in current urbanization patterns; more and more girls and young women, between the ages of 15-29, are migrating to cities. This marks a significant change from the earlier, male dominated, patterns of migration, albeit with challenges. While cities offer better income opportunities for female migrants, a large number are subject to sexual harassment and unequal treatment at their workplaces. A further key concern relates to Bangladeshi cities ranking very low on global city livability indices. These classifications are largely based on the dearth of infrastructure, degradation of environment, high level of pollution and congestion. Moreover, a number of Bangladeshi cities are highly vulnerable to floods, water-logging, coastal surges, river erosion and other climate-induced problems.

In order to relieve pressure on the current centres such as Dhaka and Chittagong, this study suggests to decentralize services and develop more secondary cities and towns in different parts of the country. This can be achieved through 'even handed' policies, reducing the large gaps in education and health services as well as infrastructure standards between Dhaka and smaller cities. Given the feminization of migration, the study furthermore recommends an increase in educational and employment opportunities, housing for girls and women, as well as increased efforts to ensure their safe mobility in cities.

The Sustainable Development Goals place an emphasis on making cities inclusive, safe, resilient and sustainable. In line with these goals I hope that policymakers, city planners, academics, development partners and civil society organization will find this report useful in anticipating and planning urbanization programs in a sustainable manner. I would like to thank and congratulate all researchers, who contributed to this study. Finally, I extend, on behalf of UNFPA, my sincere gratitude to the European Union for its financial contribution without which this study might not have been possible.

Argentina Matavel Piccin
UNFPA Representative

ACKNOWLEDGEMENTS

This monograph is really an outcome of the preparation of the UNFPA-supported study The Impact of Demographic Transition on Socio-Economic Development in Bangladesh, published in 2015. That comprehensive study contained important analysis of urbanization and migration trends and issues, but embedded as it was in a broader study of population and development concerns, the analysis of urbanization and migration was necessarily relatively brief. Clearly, a more detailed, stand-alone study was needed. Thus the UNFPA commissioned the present study.

UNFPA Bangladesh has shown great determination to ensure that important findings from the 2011 Population Census and their policy implications are made widely available, and this determination has borne fruit in the publication of a number of monographs analysing various issues utilizing census data, including one dealing the urbanization and one with migration. However, the mandate given us for the present study was broader – to utilize not only the Census data but all available sources of data and available reports dealing with urbanization and migration in Bangladesh to prepare a comprehensive report on urbanization and migration. The aim was not only to analyse the available census data responsibly and effectively, but also to relate the findings to broader policy issues.

When approached by UNFPA to prepare this monograph, we were happy to agree, both because of the key importance of the subject for Bangladeshi planners, and because of the strong backup we knew we would receive from UNFPA as we moved forward in preparing the monograph. Our thanks go particularly to the UNFPA representative, Argentina Matavel Piccin, for her guidance and assistance in developing the content and outline for the monograph, and for her constant support along the way. Her Deputy, Iori Kato, also gave us tremendous and valued support. Our thanks also go to other staff of UNFPA Bangladesh – Mahboob E Alam – Programme Officer/Statistician and M. Shahidul Islam – Policy Adviser (economist) - who provided valuable assistance and were always ready to respond to our queries.

The preparation of the monograph was greatly assisted by the two Reference Group meetings at which key findings from the report at earlier and later stages were discussed. We are grateful indeed to all those who participated in these meetings and provided incisive comments and suggestions, which helped guide further revision of the monograph. We also acknowledge the assistance of the Bangladesh Bureau of Statistics, in making data available, including special tabulations that proved crucial in deepening our understanding of urbanization and migration trends. The ready access to data is important in enabling researchers to contribute to timely and evidence-based government policy making, and is much appreciated.

In order to better understand the problems and potentials of urbanization and migration across the country, the study team visited a number of large and medium sized cities – Chittagong, Khulna, Comilla, Mymensingh and Jessore – and met city mayors along with some relevant officials. In addition, fruitful discussions were held with the Chittagong Development Authority Chairman, the Khulna Development Authority Chairman, and the Director of the Urban Development Directorate in Dhaka. We gratefully acknowledge all of them for sharing their invaluable views and experiences with us. In Dhaka, we also took the opportunity to meet some key international development partners (e.g. World Bank, Asian Development Bank, and other United Nations agencies) for a knowledge sharing meeting and further discussions.

We owe a debt of gratitude to Riffat Mahmood, a lecturer in the Department of Geography and Environment at Jagannath University, who made a considerable contribution to the data analysis in the study and through much careful checking of materials.

The responsibility for errors and omissions rests entirely with us. Comments and criticisms would be welcome and should be directed to us.

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Dhaka, October 2016

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ACRONYMS

BBS – Bangladesh Bureau of Statistics

BMET – Bureau of Manpower, Employment and Training

CUS – Centre for Urban Studies

DCC – Dhaka City Corporation

DHS – Demographic Health Surveys

DMA – Dhaka Metropolitan Area

DMC – Dhaka Megacity

EEZ – Exclusive Economic Zone

EPZ – Export Processing Zone

ESCAP – Economic and Social Commission for Asia and the Pacific

GC – Growth Centre

GDP – Gross Domestic Product

GED – General Economic Division

GNP – Gross National Product

LPG – Liquefied Petroleum Gas

MUR – Mega-urban Region

NGO – Non-governmental Organization

NIPORT – National Institute of Population Research and Training

OUA – Other Urban Area

PEC – Post Enumeration Check

RAJUK – Capital Development Authority

RMG – Ready Made Garments

SDG – Sustainable Development Goals

SMA – Statistical Metropolitan Area

TFR – Total Fertility Rate

UNFPA – United Nations Population Fund

WB – World Bank

EXECUTIVE SUMMARY

1. Introduction

As they undergo economic development, countries experience a gradual shift in the locus of economic activities, and hence in population distribution, towards urban areas. This is because development normally involves a decline in the share of agriculture in national product and a rise in the share of industry and services, and finally a shift from both agriculture and industry towards services. Industry and services are, of course, present in rural areas, but their key concentration is in urban areas. Typically, product per worker is considerably higher in the industrial and services sectors than in agriculture, so that surplus labour is drawn away from agriculture, and productivity in agriculture rises, partly as a result of rural wages being driven up by a growing shortage of labour in the sector. Bangladesh is perhaps reaching this turning point.

Bangladesh is the most densely populated country on earth. In 2011, the overall density for the country was 976 persons per km^2 and the national urban density was 3,785 persons/ km^2. The national population density was higher than that in many cities in Western countries. Dhaka Megacity exhibits the highest density: 10,337 persons/ km^2. However, the core-the City Corporation-had a much higher density – 55,668 persons per km^2.

2. Objectives of the Study

This study outlines the trends in urbanization in Bangladesh, discusses the differences in people's lives in rural and urban areas, provides an overview of migration patterns affecting the growth of urban areas, analyses trends in the distribution of people between different kinds of urban areas, discusses particular issues facing Bangladesh's key mega-urban region, Dhaka, and deals with issues related to urban development planning. The monograph ends with some conclusions and policy recommendations.

3. Data and Methodology

For the period between 1981 and 2001, the consistency of definitions of urban areas in Bangladesh made for good comparability between the results of the different censuses. This was not the case, however, in 2011. Four different estimates of the urban population are provided by the 2011 census, varying by some 8.4 million. This resulted from definitional changes, which greatly complicate the analysis of urbanization trends. The Census report documents the nature of these changes, but is silent about the reasons why they were made.

The best estimate of actual trends uses the adjusted figure for 2001 and the 2011 figure adjusted to include the populations for the SMAs as defined in the 2001 census; this shows the number of urban dwellers rising from 31.078 million to 41.944 million, an increase of 35.0 percent.

The key reason for the wide range of estimates of the urban population in 2011 was that definitions

of urban areas were changed in the 2011 Population Census. To quote the Census report:

> In 2011, the concept of SMA, growth centre and some other urban areas was abandoned and the areas covered only city corporations, paurashavas, upazila headquarters and cantonment area. ... If the former SMA, Other Urban Area (OUA) and GCs are taken into account, the percentage of urban population would have been raised to 27.66%. Moreover, if the urban population of 2011 is adjusted by the PEC adjustment factor, the percentage of urban population in 2011 stands at 28.0% (2011 Census National Volume 3, pp. 8-9).

Table 1 shows that the key issue is the contraction in the areas considered urban. Not only was the areal extent of urban areas in 2011 much smaller than it was in 2001; it was also smaller by some 7.4 percent than it was in 1991, when the recorded urban population was some 36% smaller. The sharpest contraction in urban areas was in Dhaka and Chittagong divisions. Contractions of the areas of the four major metropolitan areas– Dhaka, Chittagong, Khulna and Rajshahi– account for a large proportion of the total area contractions (see Table 1). But between 2001 and 2011, there appears to have been a small overall contraction (some 3.2 percent) in the area of other urban localities as well, a contraction which is the net outcome of expansion of some areas and contraction of others.

Table 1: Change in areal extent of the urban areas in Bangladesh 2001-2011

Locality	Area (sq. km.)			Percentage change
	1991	2001	2011	2001-2011
BANGLADESH	**9,577**	**10,712**	**8,867.4**	**-17.2**
Chittagong SMA	986	1,045	450.9	-56.9
Dhaka Megacity*	1,353	1,371	495.8	-63.8
Khulna SMA	267	267	137.8	-48.4
Rajshahi SMA	377	377	374.1	-0.8
TOTAL SMAs**	2,983	3,060	1,458.6	-52.3
REST OF BANGLADESH	**6,594**	**7,652**	**7,408.8**	**-3.2**

Source: 2001 Census Report, National Series, Vol. 3, Table 04; 2011 Census Report, National Volume 3, Table 3.2.2.

* Includes Dhaka, Gazipur and Narayanganj districts

** Includes Dhaka Megacity

The provision by BBS of figures for the total populations of the four largest cities (Dhaka Megacity, Chittagong SMA, Khulna SMA and Rajshahi SMA) according to the old definition of urban areas leads to a revised urban percentage of 28.0% in 2011. However, this goes only part way towards enabling a true comparison of urban growth over the 1991-2011 or 2001-2011 period, for two reasons. First, adjustments have not been made for shrinkages in the land areas of many other urban areas (though on a net basis, these are only small shrinkages). Second, although the recorded geographic extent of the urban areas other than the SMAs declined only slightly between 2001 and 2011, the fact that it declined at all means that these urban populations were underestimated to some extent, because over a 10-year period of quite rapid population growth, with continuing urbanization, the areal extent of urban areas would have expanded, not contracted. The same point can be made about the four megacities. Use of the same boundaries as in 2001 for these would lead to an underestimate of the real growth in the population of their urban agglomerations. Therefore, even the revised figure of 28.0% for 2011 is undoubtedly an underestimate of the percentage urban that is truly comparable to the 2001 figure.

A further major problem in analyzing urban populations in the 2011 census is that in the census reports, tabulations of characteristics of urban populations are for the unadjusted urban populations, and are therefore not comparable with 2001 data.

The contraction in the total area considered urban between 2001 and 2011 no doubt accounts for the discrepancy between the census figure and the projected percentage urban for Bangladesh in 2011 by the United Nations Population Division. The Population Division used almost exactly the same 2001 percentage urban for Bangladesh (24.1% compared with the official Bangladesh figure of 23.8%) but for 2011 it estimated a proportion urban of 31.2% compared with the official (adjusted) figure of 28.0%. The United Nations estimate may well be closer to the mark than the adjusted figure of 28 percent produced by the 2011 Population Census. And of course by

the present time (2016) the urban percentage will have increased further – probably to well over one third of the population.

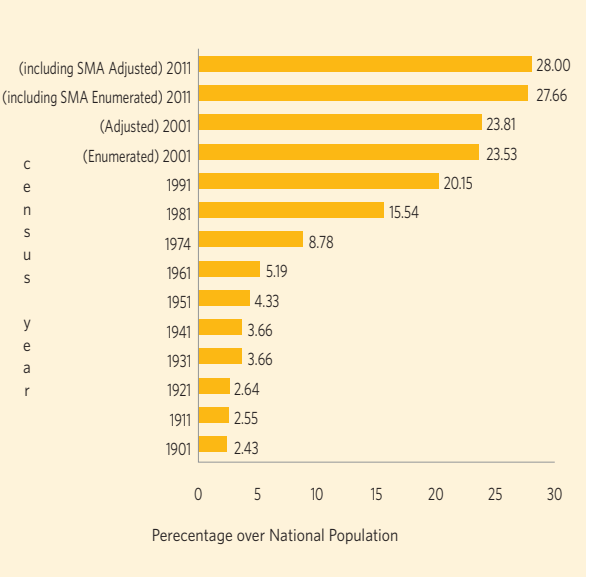
4. Key Results and Findings

a) Urban growth and regional patterns of urbanization

Urbanization in Bangladesh has increased steadily over time (see Figure 1). Even as recently as 1974, the proportion of the population living in urban areas was only 9 percent. The steady increase to a figure of 28 percent in 2011 reflects fundamental changes in the nature of the Bangladeshi economy and society. Not only did the proportion of population living in urban areas increase, but the urban areas in which a growing share of the population were living were themselves changing remarkably. As recently as 1980, even the capital city, Dhaka, was only a fraction of its present size, more like a provincial city compared with its populous neighbour in Indian West Bengal, Kolkata. Indeed, according to UN estimates, in 1960 Dhaka had only one tenth of Kolkata's population, and by 1980 just over one third, but remarkably, it had passed Kolkata by 2005 and was almost three million in front by 2015. More generally, the urban population, not only in Dhaka but also in smaller cities was being gradually drawn into a modern, "connected" globalized urban population through the influence of longer periods spent in educational institutions and through the penetration of modern communication media.

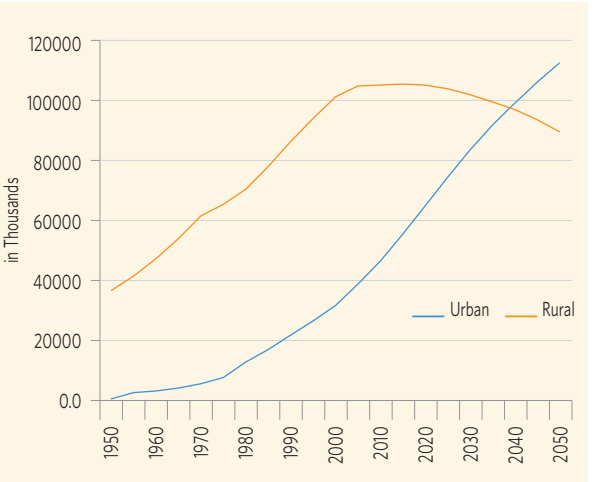
United Nations projections show a slight decline in Bangladesh's rural population setting in after 2015, a decline which picks up after 2020 resulting in a fall of 15.5 million in the rural population between 2020 and 2050 (see Figure 2). While these estimates and projections have a considerable margin of error, the key point is that from now on, the entire increase in Bangladesh's population (which could amount to some 52 million over the 40-year period between 2016 and 2046) will probably have to be accommodated in urban areas. And if the rural population declines as projected, the increase in the urban population will be even larger than the increase in Bangladesh's total population.

Figure 1: Level of urbanization in Bangladesh (1901-2011)



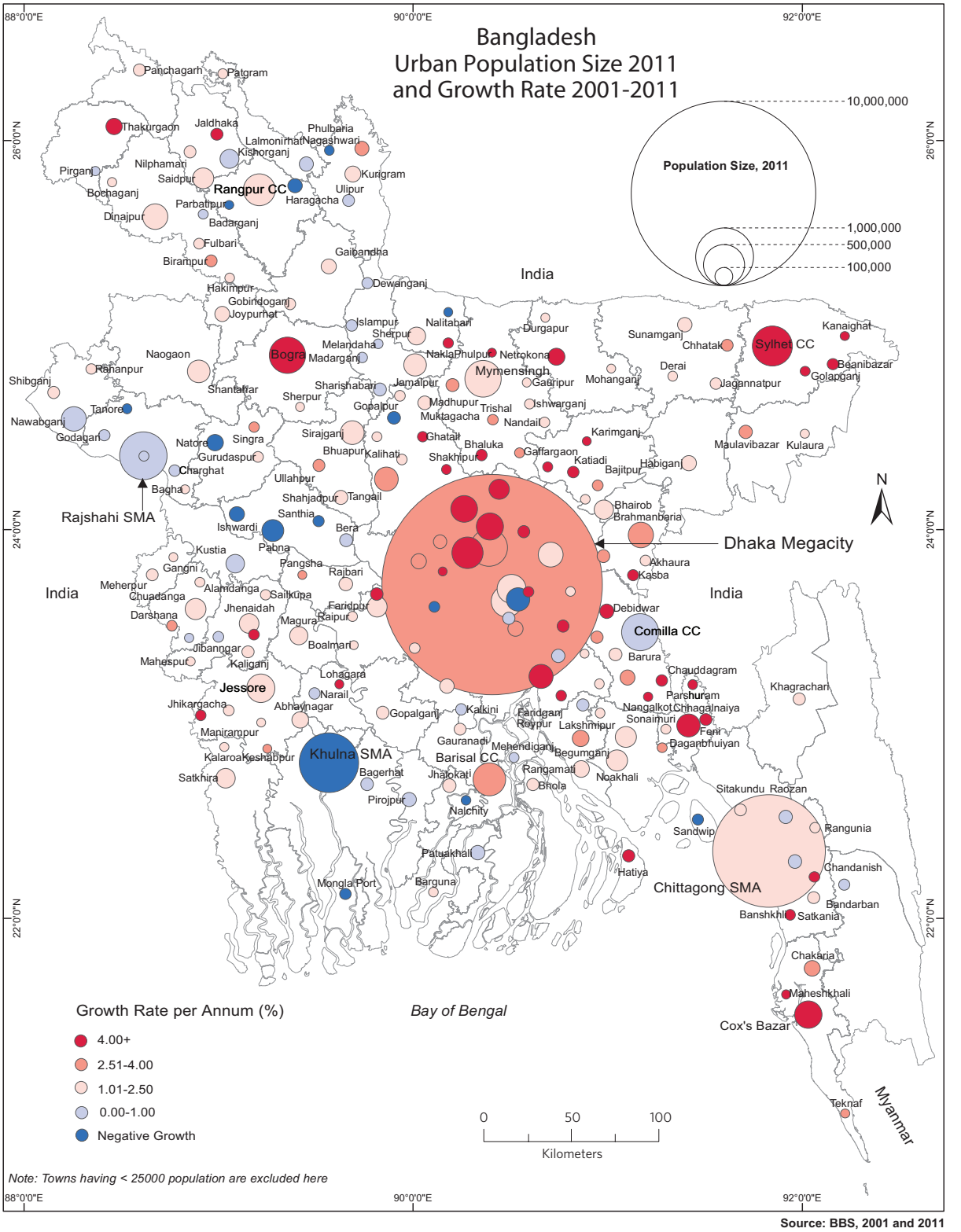
Source: 2011 Populations Census, National Volume 3 - Urban Area Report, Table 24, p. XII

Figure 2: Growth of the urban and rural populations of Bangladesh, and projections to 2050



Source: United Nations, Population Division, 2014

Map 1 shows the distribution of cities and towns in Bangladesh in 2011, and their growth rates. The dominance of Dhaka is readily apparent, as is the good "spread" of smaller cities and towns across the country. There was great variation in the growth rates of the populations of Bangladesh's largest cities and towns over the 2001-2011 period (for the SMA's, see Table 2). The range was from a possible decline of 21 percent in Rajshahi's population to an increase of 91 percent in the population of Bogra, 133 percent in Savar City and a remarkable 332 percent in



Source: BBS, 2001 and 2011

Map 1

Cox's Bazar. It is extraordinary to find that two of Bangladesh's four largest metropolitan areas (Khulna and Rajshahi) may actually have lost population over the decade between 2001 and 2011. It is very unusual for large cities in a country with a growing population and a healthy rate of economic development to experience a decline in population.

Table 2: Enumerated and adjusted populations of Bangladesh's SMAs in 2001, and alternative estimates of rates of increase between 2001 and 2011

	2001 population		2011 Population	% change 2001-2011	
	Enumerated	Adjusted		(3)/(1)	(3)/(2)
	(1)	(2)	(3)	(4)	(5)
Dhaka	9,672,763	10.466,601	14,171,567	46.5	35.4
Chittagong	2,991,723	3,370,506	3,724,433	24.5	10.5
Khulna	1,172,831	1,275,596	1,046,341	-10.8	-18.0
Rajshahi	651,062	857,998	679,889	4.4	-20.8

Source: 2011 Population Census Report, Vol. 1, Analytical Report, p. 39

What proportion of Bangladesh's urban population lives in large cities, secondary cities and smaller towns? Using unadjusted 2011 census figures for Dhaka, Chittagong, Khulna and Rajshahi, cities of more than 1 million people make up 28.5 percent of Bangladesh's urban population, while 16.2 percent live in cities of 200,000 to one million, 10.9 percent in cites in the 100,000 to 200,000 population range, and 44.4 percent in towns of less than 100,000 population. However, if we use the adjusted mega-urban region populations of Dhaka, Chittagong and Khulna, this proportion living in cities of more than 1 million population rises to 45 percent of Bangladesh's urban population, and the proportion living in smaller urban areas – particularly those with populations below 100,000 – falls correspondingly.

The level of primacy of Dhaka Megacity has been increasing over time. In the 1991 Census 31 percent of the country's urban population lived there, but this had climbed to 34 percent in the 2011 Census (using the adjusted urban figures). Between 1991 and 2011, Dhaka Megacity more than trebled in population, a growth that was fueled by massive migration as well as natural increase. Aside from Dhaka, on the whole, the larger cities have higher population growth rates than the smaller cities and towns, though growth in most city size categories was quite rapid. The most impressive growth has been in cities with populations in the 200,000 to half a million range, which increased in population by more than 3.5 percent per annum over the entire 1991-2011 period.

Urbanization in Bangladesh is regionally unbalanced. Overall, in the Eastern part of the country (i.e. east of the Jamuna-Padma-Meghna River), 34 percent of population lives in urban areas, compared with 17 percent in Western areas– only half as high. What is responsible for this concentration in eastern areas? The eastern areas are much better provided with certain vital urban facilities such as natural gas, electricity, transport, credit and markets, thus attracting major non-agricultural activities such as manufacturing, transportation, health, education and other service activities, as well as millions of rural-urban migrants. The location of Bangladesh's capital city, Dhaka, and major port, Chittagong, there provided an impetus for more rapid urban growth throughout the region, particularly in areas with good access to these two megacities. The connectivity between Dhaka and Chittagong was greatly improved by the construction of the Meghna Bridge as part of the Dhaka-Chittagong highway in 1991, facilitating the linear urban development between Dhaka and Chittagong, which has seen the rapid growth of cities along the route, notably Comilla and Feni.

Cities and towns in the western part of the country are not only smaller but are also growing more slowly than those in the eastern part of the country. The three cities which exceeded 300 percent growth over the 1991-2011 period are all located in the eastern part of the country. Among the top 43 cities, including Dhaka Megacity and the three SMAs, only 15 are located in the western region and the average growth of these cities was 140 percent. By contrast, 28 cities in the eastern part recorded a 212 percent growth rate.

A key factor in slow urban growth in the west is the poor socio-economic condition of the hinterland of its urban centres. The decline of the jute industry had a major role in stifling urban growth in Khulna. Another political factor

disadvantaging the southwestern part of the country was that after partition of the Indian subcontinent, towns such as Khulna and Jessore lost their close links to the megacity of the region, Kolkata. The region also has poor transportation connectivity with the more dynamic eastern part of the country. The opening of the Bangabandhu Bridge in 1998 provided an important link between the northwest parts of the country and the eastern parts, but there is still no bridge link with the southwest of the country. The Padma Bridge, once completed in 2019, will dramatically increase connectivity between Dhaka and the southwestern parts of the country.

One of the most outstanding features of trends in urbanization in Bangladesh is the emergence of the Dhaka-Chittagong growth corridor. This is a natural outcome of the need for close interaction between the nation's largest city, Dhaka, and its key port, Chittagong. Transportation links (rail and road) facilitated development of the growth corridor, increasing the incentive to locate industries along this route, and help explain the relatively dynamic growth of manufacturing industry in the towns of Comilla and Feni.

b) Migration trends in the 2001-2011 period

Data on internal migration in the 2011 census is from the sample census questionnaire, which covered only 168,000 respondents.

Map 2 shows the proportion of each district's population who are in- and out-migrants, using the data on recent migration. Bars of much the same height reflect a balance between in-and out-migrants, whereas sharp differences in height reflect an excess of either in-migrants or out-migrants. Thus Gazipur, for example, reflects a heavy preponderance of in-migrants, while Barisal shows a heavy preponderance of out-migrants. Very short bars reflect situations with very little migration. Thus districts such as Bogra, Natore and Jessore, where rates of both in-migration and of out-migration have been low, show almost no net migration. The rate of net migration was very high in Dhaka Megacity, because not only was the rate of in-migration very high, but the rate of out-migration was quite low.

A number of districts have sharply higher rates of out-migration than of in-migration, resulting in substantial net migration losses. Notable among these are (i) Rangpur in the north; (ii) a number of districts within fairly easy reach of Dhaka (e.g. Faridpur, Sherpur, Mymensingh, Chandpur); and (iii) a number of districts in Barisal Division (Barisal, Bhola and Patuakhali).

Inter-district migration in Bangladesh focuses to a remarkable extent on Dhaka Megacity. Of all lifetime in-migrants, 42 percent went to Dhaka District, and 56 percent to the three districts making up the Dhaka Megacity-Dhaka, Gazipur and Narayanganj. Of all recent migrants, 38 percent went to Dhaka District and 58 per ceznt to the broader Dhaka Megacity area. Chittagong district was the other major destination of in-migrants (6 percent of lifetime migrants; 5 percent of recent migrants). Remarkably, then, the two major urban agglomerations of Dhaka and Chittagong between them received almost two thirds of all inter-district migrants, whether measured as lifetime migrants or recent migrants. Within Dhaka Megacity, Gazipur and Narayanganj districts recorded higher proportions of the nation's recent in-migrants than of its lifetime migrants, whereas the reverse was the case for Dhaka District. This reflects the tendency for recent migration streams to the megacity to focus more on the outlying areas than on the increasingly overcrowded Dhaka District.

The share of migrants going to Dhaka and Chittagong was well in excess of Dhaka and Chittagong's share of the total population. The only other districts whose share of recent in-migrants exceeded their share of total population were Munshiganj and Habiganj (both slightly more than their share of population).

The rapid growth of urban populations in the eastern part of Bangladesh is largely fuelled by migration. By contrast, of all the districts in the western part of Bangladesh, only four (Barisal, Khulna, Jessore and Bogra) received more than 1 percent of all of Bangladesh's recent in-migrants. Khulna experienced a net migration loss between 2001 and 2011.

Dhaka Megacity receives migrants from every corner of Bangladesh, but certain districts contribute disproportionately to this migration flow. Some of the districts which have contributed disproportionately to the lifetime migration flow, when compared with their share of total population, are located close to Dhaka, such as Mymensingh, Tangail, Kishoreganj, Munshiganj, Chandpur and Comilla. But there are other districts as well which are over-represented in the lifetime movement to Dhaka. Notable among these are districts in Barisal Division (particularly Barisal District, but also Bhola and Patuakhali districts) along with Noakhali and Rangpur districts. The pattern is much the same for recent migration, but with some notable differences: the importance of Mymensingh, Tangail, Sherpur and Rangpur increases, while the importance of Barisal decreases somewhat.

The importance of Barisal Division as a source of migrants to Dhaka is confirmed from another source – the 2013 Urban Health Survey. This showed that, although Barisal accounts for only about 6 percent of the national population, about 20 percent of female slum dwellers in Dhaka came from Barisal, and apparently much the same proportion of male slum dwellers.

c) The feminization of migration

The sex ratio of the large cities, particularly Dhaka, remains male-dominated, with a sex ratio of 121 males per 100 females in Dhaka in 2011 though considerably lower in the other largest cities, and in all cases, declining over time. To understand the changes requires attention to the sex ratios of migration streams at particular ages.

Figure 3 shows age-sex pyramids for the non-migrant rural and urban populations, and for recent (i.e. in last 5 years) migrants to these areas. The heavy dominance of females aged 15-29 in the migration to rural areas is regularly found in Bangladesh. It results largely from the pattern of marriage migration (village exogamy), though much of this migration is not captured in the census because it covers too short a distance, failing to cross a district boundary. Though the role of young men is greater in the rural-urban migration flows, even in these flows, females have been playing an increasingly important role over time, and indeed now dominate the flow at ages 15-29.

The feminization of migration to the large cities of Bangladesh is one of the most striking findings of the 2011 Census. It represents a truly momentous change from the earlier, male-dominated patterns of migration to the cities. However, the extent of this feminization of migration may be exaggerated in the census data, for two reasons: first, the likelihood of greater under-enumeration of mobile males in the cities-living in temporary accommodation, in barracks or on the streets-than of females; second, the likelihood that the six-month reference period for migration, which leads to seasonal and short-term migrants not being counted as migrants, would affect male migrants more than females.

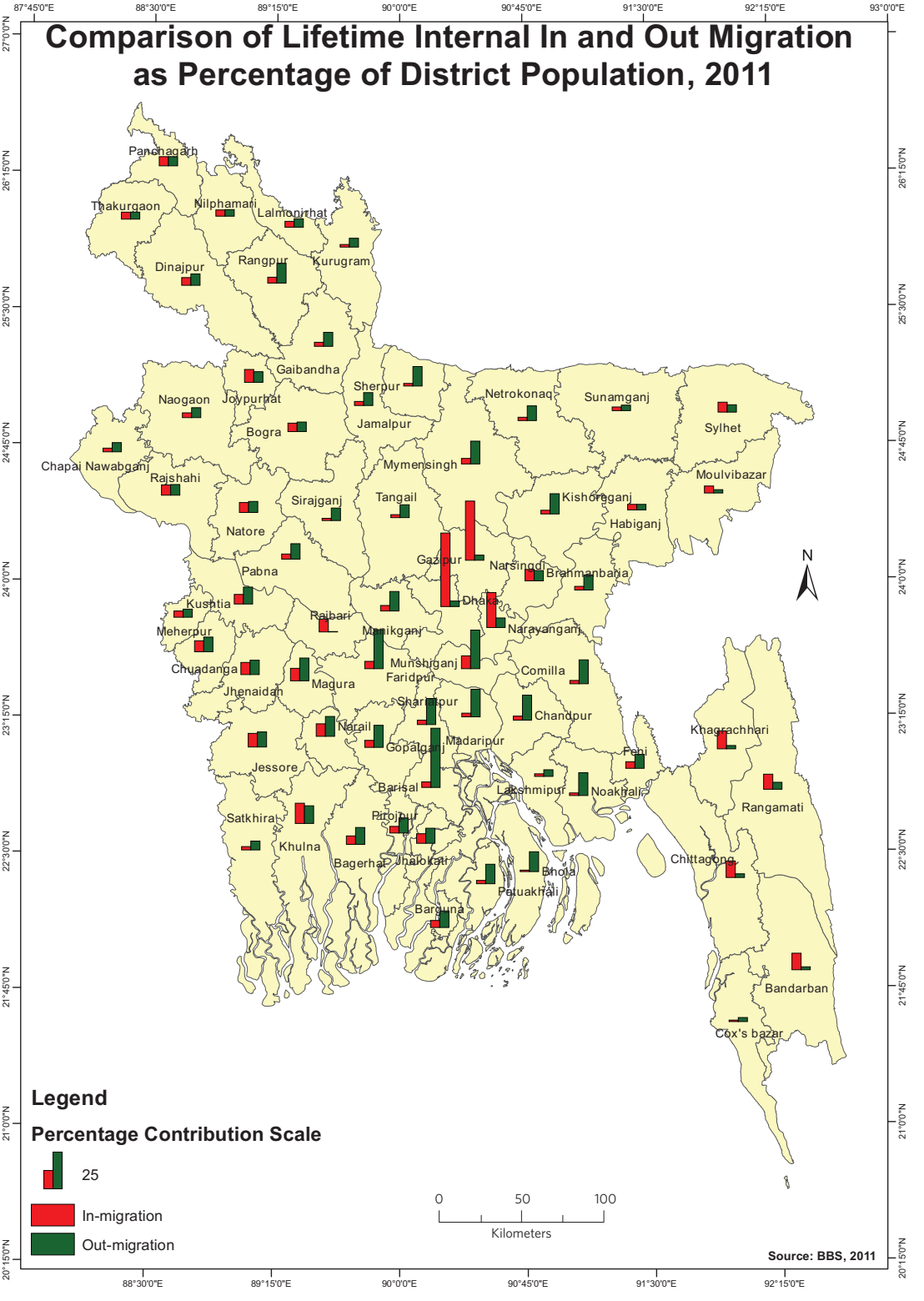
For both males and females, there are disproportionately large numbers of young adults (aged 15-29) in the cities, and conversely, lower proportions of young adults in the rural areas. To focus more intensively on the impact of the migrant flow to the major cities in Bangladesh, Table 3 shows the age-sex structure of migrants to the main destination areas– Dhaka Megacity and environs (Dhaka, Gazipur and Narayanganj districts), and Chittagong Megacity and environs (Chittagong District), compared with the age-sex structure of the non-migrant population of these megacities.

Table 3: Age composition and sex ratios of recent migrant and non-migrant populations of Dhaka and Chittagong, 2011

	Dhaka Megacity		Chittagong District	
	Recent migrants	Non-migrants	Recent migrants	Non-migrants
% aged 15-29	48.2	31.8	44.0	32.7
% aged 30-39	16.6	17.6	17.6	14.7
Sex ratio, ages 15-29	57.7	84.2	66.5	90.1
Sex ratio, ages 30-39	128.2	95.6	107.0	93.1

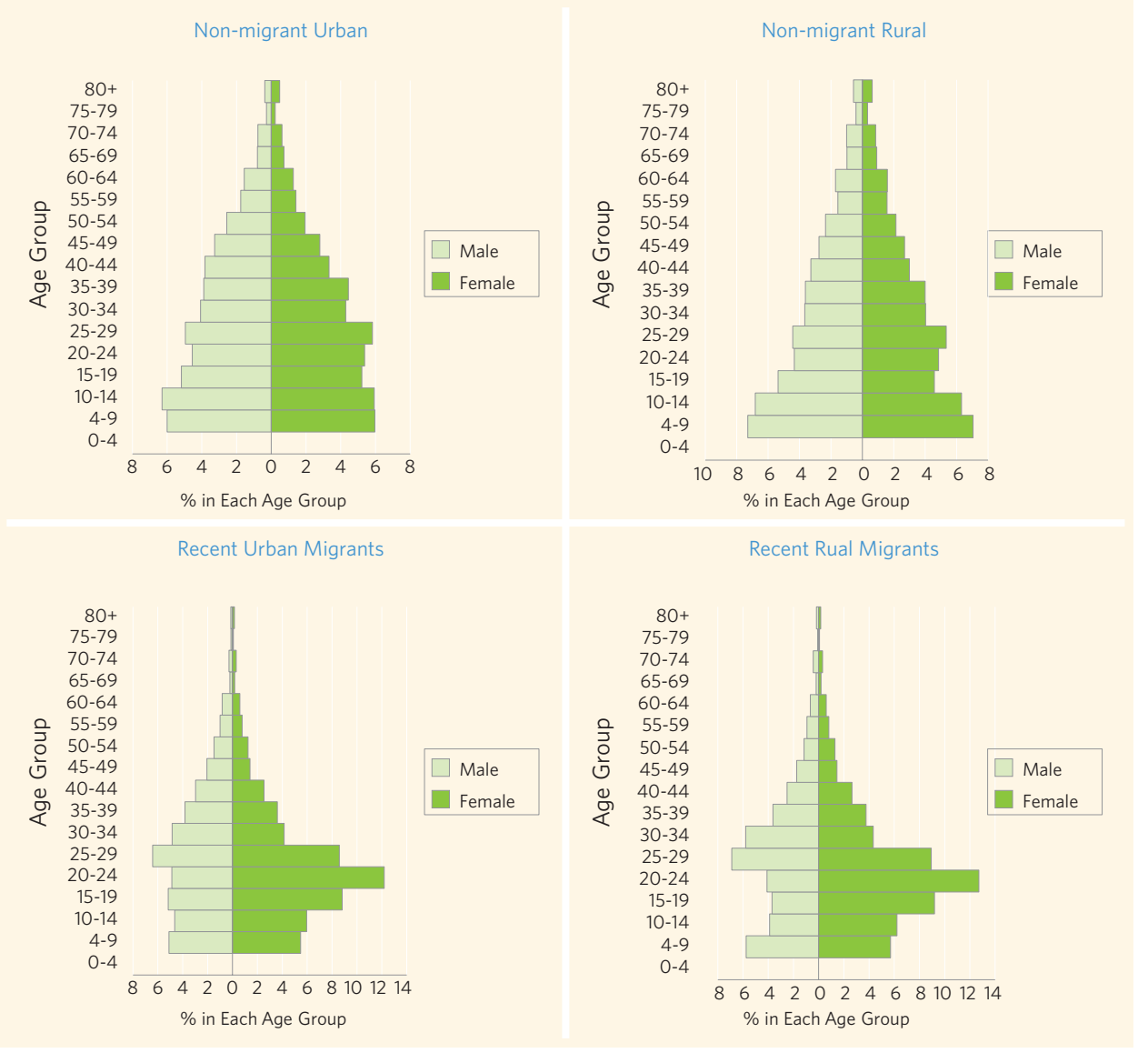
Source: Calculated from unpublished data supplied by BBS

Note: sex ratio=males/females x 100


Comparison of Lifetime Internal In and Out Migration as Percentage of District Population, 2011
Panchagarh
Thakurgaon
Nilphamari
Lalmonirhat
Dinajpur
Rangpur
Kurugram
Gaibandha
Naogaon
Joypurhat
Bogra
Sherpur
Jamalpur
Netrokonaq
Sunamganj
Sylhet
Chapai Nawabganj
Rajshahi
Mymensingh
Moulvibazar
Sirajganj
Tangail
Kishoreganj
Habiganj
Natore
Gazipur
Narsingdi
Brahmanbaria
Pabna
Dhaka
Kushtia
Rajbari
Narayanganj
Meherpur
Manikganj
Munshiganj
Chuadanga
Faridpur
Comilla
Jhenaidah
Magura
Shariatpur
Chandpur
Narail
Khagrachhari
Gopalganj
Madaripur
Feni
Jessore
Barisal
Lakshmipur
Noakhali
Rangamati
Satkhira
Pirojpur
Khulna
Bagerhat
Jhalokati
Chittagong
Bhola
Patuakhali
Barguna
Bandarban
Cox's bazar
N
Legend
Percentage Contribution Scale
25
In-migration
Out-migration
0
50
100
Kilometers
Source: BBS, 2011
87°45'0"E
88°30'0"E
89°15'0"E
90°0'0"E
90°45'0"E
91°30'0"E
92°15'0"E
93°0'0"E
27°0'0"N
26°15'0"N
25°30'0"N
24°45'0"N
24°0'0"N
23°15'0"N
22°30'0"N
21°45'0"N
21°0'0"N
20°15'0"N

Map 2

Figure 3: Age pyramids of non-migrant and migrant populations, 2011



Source: Calculated from unpublished data supplied by BBS

The age-sex structure of both the lifetime and the recent migrant population to Dhaka and Chittagong differs considerably from that of the non-migrant population. Focusing on recent migrants, they are concentrated much more heavily at ages 15-29 than is the non-migrant population. As for sex ratios, from ages 10 to 29 there is a strong female dominance; in this age range, for Dhaka Megacity, there are 167 female migrants for every 100 male migrants, and for Chittagong District, 166 female migrants for every 100 male migrants. This is a remarkable change from the traditional male dominance of rural-urban migration at these ages, both in Bangladesh and elsewhere in South Asia. The job opportunities that have opened for young women in the RMG industry are probably a large part of the explanation.

In Dhaka and Chittagong, for both males and females, a higher proportion of recent migrants than of non-migrants are in the age group 15-29. But the preponderance of this age group is much more marked for females than for males. Indeed, in both Dhaka and Chittagong, more than 50 percent of female migrants are in this

age group. But the gender differentials reverse in the age group 30-39, where migrants are over-represented among males but under-represented among females. So the male migration stream has a broader age composition than the female stream.

Many negative consequences of women's increasing migration into big cities, and particularly, their employment in the RMG sector, can be listed. Sexual harassment, unequal treatment of women and unsafe working conditions persist in this industry. The litany of problems facing women garment industry workers reflects the lack of sophistication of many of those migrating to the urban areas, and their powerlessness in the face of cultural norms of submission to male authority into which they have been socialized.

But there are clearly many gains to women as well. A number of studies have investigated the wider social ramifications of the dramatic increase in women's employment in the RMG industry. The general conclusions appear to be that employment in this industry, although exploitative, does offers women an income, which their families value, and this may enable them to postpone marriage and childbearing. Garment industry work has also contributed to the relaxation of norms regarding purdah, extended education for girls, and reduction in family size. While these changes are most evident for women who actually work in this industry, the change in social norms benefits women outside the industry as well. Rural-urban migration must be assessed realistically as having contributed to improvements in women's conditions in Bangladesh but in a context in which deep-seated cultural norms adversely affecting women's lives remain strong.

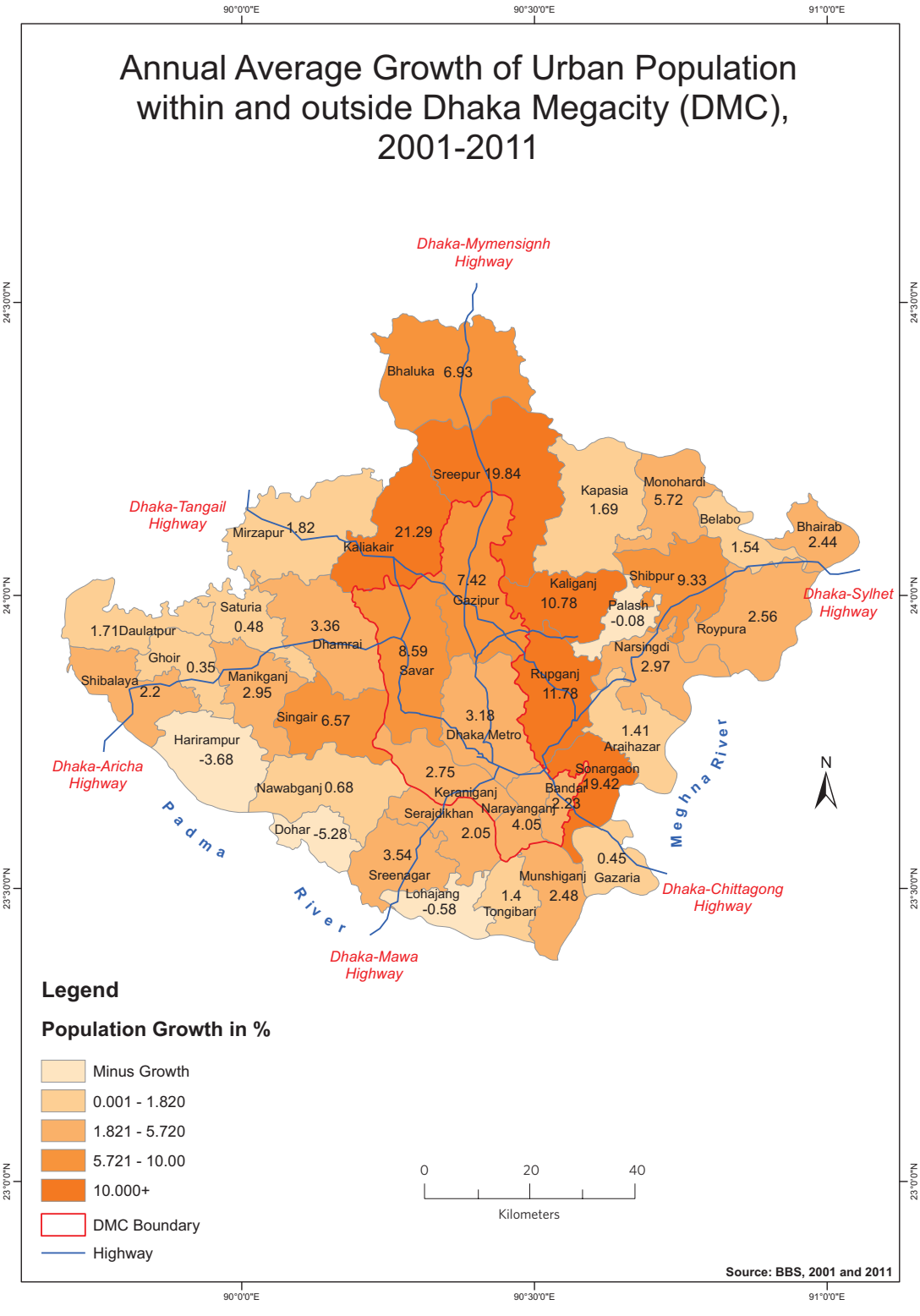
Recent trends in patterns of international labour migration have also affected women. Since 2013, their share in the international labour migration flow from Bangladesh has increased sharply. This requires close monitoring and evaluation.

d) Dhaka Megacity: Urbanization and migration patterns

Dhaka Megacity (DMC) which lies at the centre of the country and has good accessibility (through road, rail and water ways), is Bangladesh's biggest urban agglomeration, consisting at present of 4 city corporations, 2 big cities, 4 cantonment areas, several towns and a huge urban fringe area (see Map 2). In 2011, its population was 14.2 million – 10% of Bangladesh's total population or 33.8% of the urban population. DMC has four times the population of Chittagong SMA, the country's second biggest mega urban region. DMC holds the country's largest agglomeration of industries, commerce, services (health, education, judicial, transportation etc.) and informal sector activities. As a result, it produces about one-third of the country's total GDP. The country's urban future is heavily dependent on the healthy growth of DMC.

Map 2 shows the growth rates of areas within the SMA area (within the red boundary), and in a number of sub-districts surrounding Dhaka SMA. Compared with the other largest cities in the country, DMC exhibits a high population growth rate. In the 2001-2011 period, the average exponential growth rate throughout the entire DMC area was 3.8%. The rate varied from 2.8% (in the core area of DMC) to 5.0% (outside the core, i.e. in the periphery areas). Yet it is the growth rates of some of the sub-districts surrounding the SMA that are really startling. The sub-districts immediately to the north and east of the SMA (Kaliakair, Sherpur, Kaliganj, Rupganj and Sonargaon) all had annual average rates of increase in excess of 10 percent in the 2001-2011 period, two of them indeed reaching 20 percent or more.

Yet the growth in areas surrounding Dhaka is far from even. Some of the sub-districts further out, especially those to the south-west, experienced slow growth or even negative growth. The pattern of road development helps to interpret the trends. The importance of connectivity via the Dhaka-Mymensingh highway, the Dhaka-Tangail highway, the Dhaka-Sylhet highway and


Annual Average Growth of Urban Population within and outside Dhaka Megacity (DMC), 2001-2011
90°0'0"E
90°30'0"E
91°0'0"E
24°30'0"N
24°0'0"N
23°30'0"N
23°0'0"N
Dhaka-Mymensignh Highway
Dhaka-Tangail Highway
Dhaka-Sylhet Highway
Dhaka-Aricha Highway
Dhaka-Chittagong Highway
Dhaka-Mawa Highway
Padma River
Meghna River
Bhaluka 6.93
Sreepur 19.84
Kapasia 1.69
Monohardi 5.72
Belabo 1.54
Bhairab 2.44
Mirzapur 1.82
Kaliakair 21.29
7.42 Gazipur
Kaliganj 10.78
Shibpur 9.33
Palash -0.08
Roypura 2.56
Saturia 0.48
1.71 Daulatpur
3.36 Dhamrai
8.59 Savar
Narsingdi 2.97
Ghoir 0.35
Shibalaya 2.2
Manikganj 2.95
Rupganj 11.78
Singair 6.57
3.18 Dhaka Metro
1.41 Araihazar
Harirampur -3.68
Sonargaon 19.42
Nawabganj 0.68
2.75 Keraniganj
Bandar 2.23
Narayanganj 4.05
Serajdikhan 2.05
Dohar -5.28
3.54 Sreenagar
0.45 Gazaria
Munshiganj 2.48
Lohajang -0.58
1.4 Tongibari
N
Legend
Population Growth in %
Minus Growth
0.001 - 1.820
1.821 - 5.720
5.721 - 10.00
10.000+
DMC Boundary
Highway
0
20
40
Kilometers
Source: BBS, 2001 and 2011

Map 3

the Dhaka-Chittagong highway, in particular, is apparent. The location of factories along these routes has provided employment opportunities which have attracted migrants. Availability of residential land and house rent at a lower price than in the core area also attracts migrants from middle to lower economic strata.

Rural to urban migrants are heavily focused on DMC. Based on post census sample survey data 2011, it has been observed that Dhaka, Gazipur and Narayangonj districts within which DMC is located, attracted 67.4% of the total rural–urban migrants (5,969,978). Surprisingly, these three districts also were the destination of nearly half (47.7%) of total rural-rural migrants (5,820,906). The explanation is that a large number of rural-rural migrants migrated to rural unions within the fringe areas of DMC, some of which had been classified as urban in previous censuses. The massive flow of migrants towards DMC indicates the attractiveness of this urban agglomeration's employment opportunities, and also reflects the lack of appropriate and adequate development schemes in the vast rural areas and in secondary towns (small and medium sized towns), which virtually pushes rural people to migrate to mega urban areas. The quality of school education and health services in secondary towns also remains very poor and unattractive to the migrants.

e) Environmental and livability issues facing Bangladesh's cities

Since independence, most of Bangladesh's cities and towns have grown rapidly. Dhaka has turned from a provincial capital city into a giant megacity. To accommodate millions of migrants, the city has been rapidly expanding, horizontally as well as vertically, destroying its drainage, wetlands, vegetation and air. The conditions of utility services and physical infrastructure are also very poor due to overcrowding of people, growing disparity among the citizens and lack of good governance. As a result, Dhaka is classified as one of the world's most unlivable megacities. Urban development experts and environmentalists generally believe that Dhaka City now lies on the verge of an environmental and social catastrophe.

Other cities also face environmental and livability issues, though on a smaller scale. Bangladesh's vulnerability to natural disasters – floods, water-logging, coastal surges, river erosion, directly affects a number of its cities, at the same time as it forces some of those suffering from these natural disasters to move to urban areas. Meanwhile, as cities grow, a litany of environmental challenges emerges, in the areas of transportation bottlenecks, air and water pollution, lack of sanitation, problems of waste disposal, etc. Though the percentage of the urban population living in poverty has been falling, large numbers of urban poor remain powerless to improve their condition in the face of powerful vested interests limiting availability of affordable housing, efficient and cheap public transportation, and work that pays a living wage.

5. Some Conclusions and Recommendations

While population momentum will ensure considerable population growth over the next three decades, a rapid reduction in present fertility levels to somewhat below replacement levels would contribute in a major way to keeping this increase within manageable bounds by ameliorating the pressure of population increase in both rural and urban areas. This can be achieved through meeting the unmet need for family planning.

a) Urban policy

Urbanization and economic development are processes that proceed in parallel. Urbanization is both an index of development (economic/social) and a stimulus to development, if properly managed and planned. If badly managed, urbanization is accompanied by adverse socio-economic and environmental consequences. Therefore, what is needed are urbanization policies that will lead to sustainable development across the country. That is the principle, but the specifics of what such policies are, is a highly contested matter.

Bangladesh is a country which challenges prevailing theoretical formulations about urban policy. Given the increasing consensus in World Bank and other circles around the need for further urban agglomeration in developing countries, a

favourable attitude toward further concentration of Bangladesh's population in the two mega-urban regions (Dhaka and Chittagong), and in the Dhaka-Chittagong corridor, may be appropriate. But the special circumstances of these mega-urban regions, and of the urban situation of Bangladesh more generally, need to be taken into account. Inadequate urban management and governance may prevent firms from realizing agglomeration economies. Such economies may fail to materialize when supplies of electricity and water are inadequate and unreliable, and when the urban transport system is poorly managed, congested and chaotic, as it is in Dhaka.

b) Dhaka Megacity issues

Herein lies the dilemma for Bangladeshi planners. Dhaka Megacity produces a very substantial proportion of Bangladesh's GDP, yet the losses to productivity from transportation congestion are immense. Other woes of Dhaka Megacity have been outlined in Chapters 6 and 7. The issue is whether vast investments in public transportation systems, sewerage and waste disposal systems for Dhaka will enable it to prevent the diseconomies of agglomeration outweighing economies of agglomeration as the city grows ever larger, and even if so, whether the same sums invested in smaller cities in Bangladesh would contribute more to national production.

One of the key issues facing the Dhaka mega-urban region is the environmental challenge of further expansion of one of the world's largest megacities in a fragile environment with large flood-prone areas. One of the key issues is the high proportion of flood-prone areas in Dhaka's surrounds. These areas, largely still used for agriculture and ponds, are potentially extremely profitable if filled in for the construction of factories and housing estates. Earth filling for this purpose is going on apace in many areas surrounding Dhaka. The dilemma is that this worsens the flooding and drainage issues suffered throughout the megacity, but under the prevailing political system, those with influence can frequently bypass zoning regulations and profit from developments with serious implications for the community generally.

The question might be raised: has Dhaka simply become too big to manage? After all, it has grown tremendously rapidly, it is ranked as one of the world's least liveable cities, and its environmental problems are immense. Is there a limit to the population size that the Dhaka mega-urban region can sustain?

Many analysts have argued that there is no limit to the size megacities can reach. Although diseconomies of agglomeration can increase, this can be offset to a considerable extent by poly-nucleation. The World Bank's 2009 study makes the case strongly that peaks of high productivity – found in the megacities-are crucial in economic growth. There is no doubt that a high proportion of Bangladesh's GNP is produced in Dhaka and Chittagong, where the peaks of high productivity are located. But the daunting prospect of a further 50 million to be added to Bangladesh's urban population seems to point clearly to the need to develop other high-productivity urban nodes as well, as well as fostering in situ urbanization, where localities transform into urban areas without the need for people to move to cities.

c) Connectivity issues and secondary cities

Transportation developments are likely to play a key role in channeling urban growth. In the past, the transportation barrier posed by the mighty Jamuna-Padma-Meghna River, crossable only by ferries, seriously hindered economic development to the west of this barrier. The construction of the Bangabandhu Bridge over the Jamuna River (opened in 1998) boosted development in the northwest of Bangladesh. The opening of the Padma Bridge over the Padma River (scheduled for 2019) is likely to have a similar result for the development of the southwest of the country. Indeed, it is likely to have an even more significant impact, given that it will greatly shorten travel time, not only to the Khulna and Barisal Divisions, but also through to Kolkata, the metropolis of northeast India.

Over the 20-year period 1991-2011, there has been rapid growth of some secondary cities-in particular, those with populations between 200,000 and 500,000. Urban areas increasing rapidly included Sylhet, Bogra, Chandpur, Cox's

Bazar, and two of the cities in the Dhaka-Chittagong corridor – Comilla and Feni. Secondary cities most favourably placed for development should continue to witness rapid growth; the need is to discern those factors that would single out a city as "favourably placed for development". International experience, and Bangladesh's own experience with Export Processing Zones, indicate that singling out particular regions or cities as "growth poles" rarely succeeds unless there are underlying advantages that can be built on through policy measures.

d) Policies for Dhaka's development

Some policies specifically related to controlling Dhaka's growth and integrating other areas better with the megacity could be as follows:

a) Develop commuter trains and other transportation modes connecting with the city's vast hinterland so that potential migrants can commute to the city instead of migrating. This will reduce the migration pressure on the city and improve rural life and development. India has already developed commuter services for rural potential migrants by connecting big urban centres with their hinterlands.

b) Seek to develop secondary towns in different parts of the country, so that rural potential migrants can work and settle down in nearby district towns or other small towns. While varied employment opportunities are basic to the drawing power of any city or town to potential migrants, it has also been observed that migrants usually want to settle or stay at a town if it has certain essential facilities or services – like quality and affordable schooling facilities, quality healthcare services for the family members, and security of life and property.

c) Decentralize some employment and facilities from DMC to some regional towns (divisional cities, greater district towns etc.). Some important services which can be decentralized from DMC are-judicial, education, health, banking, and some industries and businesses.

d) Strengthen and empower local government institutions.

e) Create adequate employment and associated facilities in and around rural regions so that many potential rural out-migrants can find suitable work near their home. Due to Bangladesh's favourable geographical setting, labour intensive and highly profitable integrated farming can be introduced in many areas, and in some cases be associated with agro-processing industries. In addition, the government should ensure that banking and other credit facilities, marketing facilities, and security of investment are assured for rural people and entrepreneurs.

e) Secondary city recommendations

Ensuring "even handed" policies to reduce the large gaps in education and health services and infrastructure standards between Dhaka and smaller cities should be a key objective, one of its expected benefits being an upgrading of the quality of their labour force, which is a key factor investors take into account in their location decisions. The physical, economic, social and political linkages among secondary cities and between them and larger and smaller settlements need strengthening to provide greater access to urban services, facilities, and job opportunities to people living in rural areas, and to create an integrated system of urban centres through which the benefits of urbanization and economic development can be spread more widely.

In addition, however, a systematic assessment is needed of the growth potentials of the secondary cities in Bangladesh, since these potentials differ from place to place. Once these have been identified, strategic investments should be made aimed at building on the potentials identified. Bangladesh's experience with Export Processing Zones (EPZs) suggests that promotion of particular cities or regions is unlikely to succeed unless there are strong supporting arguments for such location. Rather than seeking "growth centres" to promote, following the principles outlined above should help realize the potential for further growth and diversification of the economy of many of these secondary cities.

f) Gender issues

The present study has highlighted gender issues related to urbanization and migration. For example, there is no doubt that the opportunity for employment in the RMG sector has challenged earlier norms of seclusion and enabled young women to earn an income, marry later, achieve greater importance in their family and community, and gain greater confidence, but it has also made them subject to new forms of exploitation and discrimination. Some policy needs:

- Facilitate women's education, particularly at the tertiary level, where females still lag. This will enable women to take up some of the more lucrative urban employments that have tended to be firmly in male hands.
- Widen the range of employment opportunities for women. While the RMG sector has given women a firm foothold in industrial employment, women need a stronger place in modern service sector activities. Campaigns may be needed to change the mind-set of employers about suitable work for women.
- Government-employer partnerships are needed to improve dormitory and other accommodation for female factory workers, emphasizing adequate hygiene, lighting, security and recreational possibilities.
- Safety for mobile women must be improved. Women in the city face many dangers and harassments. A multifaceted approach is needed, including better implementation of regulations protecting women, and public education campaigns so that women's rights are better respected.
- Labour legislation and workplace safety campaigns can improve working conditions for both women and men.

URBANIZATION AND MIGRATION IN BANGLADESH

Introduction

Bangladesh is one of the least urbanized countries in Asia, but urbanization is proceeding quite rapidly. Whereas only 9 percent of the population lived in urban areas in 1974, by 2011 this proportion had reached 28 percent (see Table 1 below), and in reality, probably even higher. According to United Nations projections, it is likely that by 2040, half of Bangladesh's population will be living in urban areas. Indeed, the United Nations projects that from now on, all of the increase in Bangladesh's population will be taking place in urban areas. This increase is not insubstantial; according to recent population projections, between about 46 and 60 million are likely to be added to Bangladesh's population between 2011 and 2041 (UNFPA 2015, Chapter 3). The urban areas in which they will live will range from small towns and larger towns to cities and mega-urban regions. This trend in urbanization has very important implications not only for the kind of lives Bangladeshi people will live, but also for the planning issues facing government.

Table 1: Bangladesh urban population and level of urbanization, 1970-2011

Year	Urban population ('000)	Av. Ann. Growth rate (%)	Level of Urbanization (%)	Rural population ('000)
1951	1,820	-	4.3	40,207
1961	2,641	3.7	5.2	48,240
1974	6,274	8.6	8.8	65,180
1981	13,536	7.5	15.5	73,568
1991	22,455	5.3	20.2	89,000
2001	31,078	3.3	23.8	99,444
2011	41,944	3.0	28.0	107,829

Source: 2011 Population Census report, Vol. 3, p. XII

This monograph will outline the trends in urbanization in Bangladesh, discuss the differences in aspects of people's lives in rural and urban areas, provide an overview of migration patterns affecting the growth of urban areas, analyse trends in the distribution of people between different kinds of urban areas, discuss particular issues facing Bangladesh's key mega-urban region, Dhaka, and deal with issues related to urban development planning. The monograph will end with some conclusions and policy recommendations.

One key point must be kept in mind – it is no longer easy to identify exactly what constitutes an urban or rural area (see Champion and Hugo, 2004). These days, many localities, particularly those in the areas of extended influence of large cities, are a mixture of what are generally considered to be urban and rural characteristics, so that it is hard to say whether they are rural or urban. Aside from this, even areas that might be considered "truly" rural are now linked to urban areas through communications (television, mobile phones, better public transportation etc.) in ways that were inconceivable four or five decades ago. Thus "urban" characteristics have permeated rural areas in such a way that the estimate that 28 percent of Bangladeshi population lives in rural areas needs to be interpreted carefully.

The traditional definitions of urbanization using official definitions and administrative boundaries vary from one country to another because there is no standardized definition of urban and rural. This situation is particularly troublesome if it is used for a cross country analysis or to determine the aggregate urbanization status of the regions. In the face of the diverse urban definitions, international reporting and comparisons of urban populations does elicit a degree of conformity, but the differences can be misleading (Alkema, Jones and Lai, 2014; Mc Granahan and Satterthwaite, 2014). As the resolution and availability of remote sensing improves, it will become increasingly feasible to apply definitions based on density of populations, independent of administrative functions. Attempts to develop and apply more internationally comparable demographic definitions of urban are already

being made. A step in this direction was taken for the World Bank's World Development Report 2009 (Uchida and Nelson 2010; World Bank 2009). The resulting adjustments suggest that part of the explanation for Asia not being much more urban than Africa, despite higher incomes per capita, is that some of the key countries, including India and Bangladesh, have relatively restrictive definitions of what is urban.

In discussing urbanization and migration issues in Bangladesh, it is important to keep in mind some of Bangladesh's unique features. One is that Bangladesh is the most densely populated country on earth, apart from a couple of city states. Its population exceeds that of Russia, but its land area is only 0.9 percent that of Russia. The average population density over the whole of Bangladesh in 2011 was 976 persons per sq. km. This is almost as high as the average density of the 76 largest cities in the USA (1,200 per sq. km), or of the 6 largest cities in Australia (1,400 per sq. km.). It exceeds the population density in cities such as Atlanta, Boston, Pittsburgh, Cincinnati, Cleveland, Brisbane and Bordeaux, and is barely less than the density of 1,100-1,300 per sq. km. in Chicago, Houston, Philadelphia, Seattle, Perth, Adelaide, Nice, Nantes, and Quebec City. Urbanization in Bangladesh is occurring, then, in a context in which the whole country has densities matching those of many large cities in the Western world. As for the population density of Bangladesh's largest city, Dhaka, it is the highest recorded in any major world city, at 43,500 per sq. km. well ahead of its nearest rivals Mumbai (32,400 per sq. km.), Hong Kong (26,400), Karachi (23,400) and Kinshasa (19,900).[1]

Another unique aspect of Bangladesh is that it has reduced its fertility rate to almost replacement level, at a lower level of per capita GNP than any other country that has reached this level of fertility. However, despite having almost reached replacement level fertility, demographic momentum built into the age structure will result in a population growth of perhaps 50 million in the next 30 years, all of which may have to be accommodated in urban areas. These special features of Bangladesh's situation need to be kept in mind in assessing the role of urbanization and migration in Bangladesh's development.

In the present study, as well as examining urbanization and migration trends and issues in general, special attention will be given to the way that these issues differentially affect men and women. In this context, another unique aspect of Bangladeshi development should be noted. Despite having one of the lowest average ages of female marriage in the world, this has not (as many might have argued) prevented fertility from being lowered to near-replacement level, nor has it prevented Bangladesh from making great strides in female secondary school education.

Bangladesh clearly has many unique geographical, demographic and societal features, which need to be kept in mind in assessing the ways in which its patterns of urbanization and migration are playing out and in inferring their policy implications. Merely drawing on available assessments of issues facing other countries in somewhat similar circumstances, though valuable, will certainly not suffice.

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[1] All figures in this paragraph are taken from *Demographia World Urban Areas, 11th Annual Edition: 2015:01*. Population density, of course, varies according to the land area included in these metropolitan areas. But while densities would differ according to the areal extent of the metropolitan areas compared, according to the comparative data used in this publication, Dhaka's unique situation seems clear; there appear to be only three other metropolitan areas in the world with a density more than half that of Dhaka.

CHAPTER 1

POPULATION MOBILITY, URBANIZATION AND DEVELOPMENT

CHAPTER 1: POPULATION MOBILITY, URBANIZATION AND DEVELOPMENT

1. What is Urbanization?

As there is sometimes confusion about the meaning of urbanization, the definition of urbanization needs to be clarified. Urbanization is not the same as urban population growth. Urbanization means an increase in the proportion of population living in urban areas. If population growth in a country is 2 percent per annum, and the growth of urban population is also 2 percent per annum, urbanization is not taking place, although the urban population is increasing quite rapidly. If, on the other hand, urban population is increasing by 4 percent per annum in a country where population growth is 2 percent per annum, then urbanization - an increase in the urban share of the total population - is clearly taking place.

In this example – an annual increase of 4 percent in the urban population - there are three possible contributors to this rapid rate of growth. The first is the natural increase of the urban population – the excess of births over deaths in urban areas. The second is net migration from rural areas. The third is reclassification of rural areas to give them urban status. In this third case, there is no movement of population, but urbanization occurs "in situ", as an area formerly rural changes its characteristics so that it now meets the criteria for being considered an urban area. Reclassification was probably a major factor in Bangladesh's very rapid urban population growth in the 1970s, as the number of urban centres increased from 108 in 1974 to 492 in 1981, and again in the 1980s, as the land area classified as urban increased by 83 percent between 1981 and 1991. Between 2001 and 2011, however, reclassification resulted in a decline in Bangladesh's recorded urban population, because large areas, previously considered urban, were changed in status from urban to rural.

The three sources of urban population growth may seem discrete and clear-cut, but in some ways they are not. Consider migration and natural increase. Net migration contributes directly to urban growth, but once the migrants are there, the babies they have add to the natural increase of the urban population. The contribution of migration to urban population growth is therefore greater than the initial contribution, measured by net migration. Again, though, natural increase of the rural population swells the "stock" of rural dwellers from which rural-urban migrants are drawn. In this sense, natural increase of the rural population fuels rural-urban migration.

2. Theoretical Perspectives on the Interrelationship between Population Mobility, Urbanization, Changing Employment Structure and Development

As they undergo economic development, countries tend to experience a gradual shift in the locus of economic activities, and hence in population distribution, towards urban areas. This is because development normally involves a decline in the share of agriculture in national product and a rise in the share of industry and services, and finally from both agriculture and industry towards services. Industry and services can and do, of course, take place in rural areas, but their key concentration is in urban areas. Typically, product per worker is considerably higher in the industrial and services sectors than in agriculture, so that a situation may be reached where agriculture is producing only, say, 30 percent of national product, but employing over 50 percent of the workforce. Gradually, however, as industry and services expand, surplus labour is drawn away from agriculture, and productivity in agriculture rises, partly out of necessity as rural wages are driven up by a growing shortage of labour in the sector.

In many cases, this transformation of the workforce has demographic as well as economic underpinnings. Fertility rates frequently fall as economic development proceeds, and over time, the young cohorts entering the workforce also stop increasing in size, and perhaps begin to contract. If economic development is rapid

enough, the absorption of labour in other sectors leads to a shortage of workers in agriculture, driving up wages, and requiring productivity advances in the sector if they have not already been taking place.

3. Special Aspects of the Bangladesh Situation in Relation to Migration and Urbanization

a. Population distribution and density

Bangladesh is characterized, not only by its extreme population density overall, but by a fairly uniform pattern of high density over most of the country. In only 5 out of Bangladesh's 64 districts (zila) does density fall below 500 per sq. km., and these all lie either in the Sundarbans or the Chittagong Hill Tracts, the two regions least favourable for intensive agriculture. The highest population density of any division is in Dhaka Division. This is not only the result of the presence of the Dhaka Megacity in the Division, which raises the overall population density, but also of the Division's favourable endowments of agricultural land. Every district in the Dhaka Division has a population density of 800 per sq. km. or above, and two thirds have densities exceeding 1,000 per sq. km.

Since the 1990s, the most urbanized divisions (Dhaka and Chittagong) have been increasing their share of the population, at the expense of all other divisions except Sylhet (Table 1.1). By far the largest increase in share is in the Dhaka Division, mainly as a result of the growth of the Dhaka Megacity. In 2011, Dhaka Division held one third of Bangladesh's total population, and Dhaka and Chittagong combined held over half the total population. The greatest relative decline in share was recorded by the Barisal Division. Over the 20-year period 1991-2011, Barisal's share fell by 1.2 percentage points. While this may not appear to be a very dramatic change, it represented a 17 percent decline in Barisal's share. Indeed, Barisal Division's population barely grew at all between 2001 and 2011. This is bound up with environmental issues in Barisal Division, much of which lies in the fragile environment of the coastal delta; this has had major effects on migration patterns which will be discussed in Chapter 4.

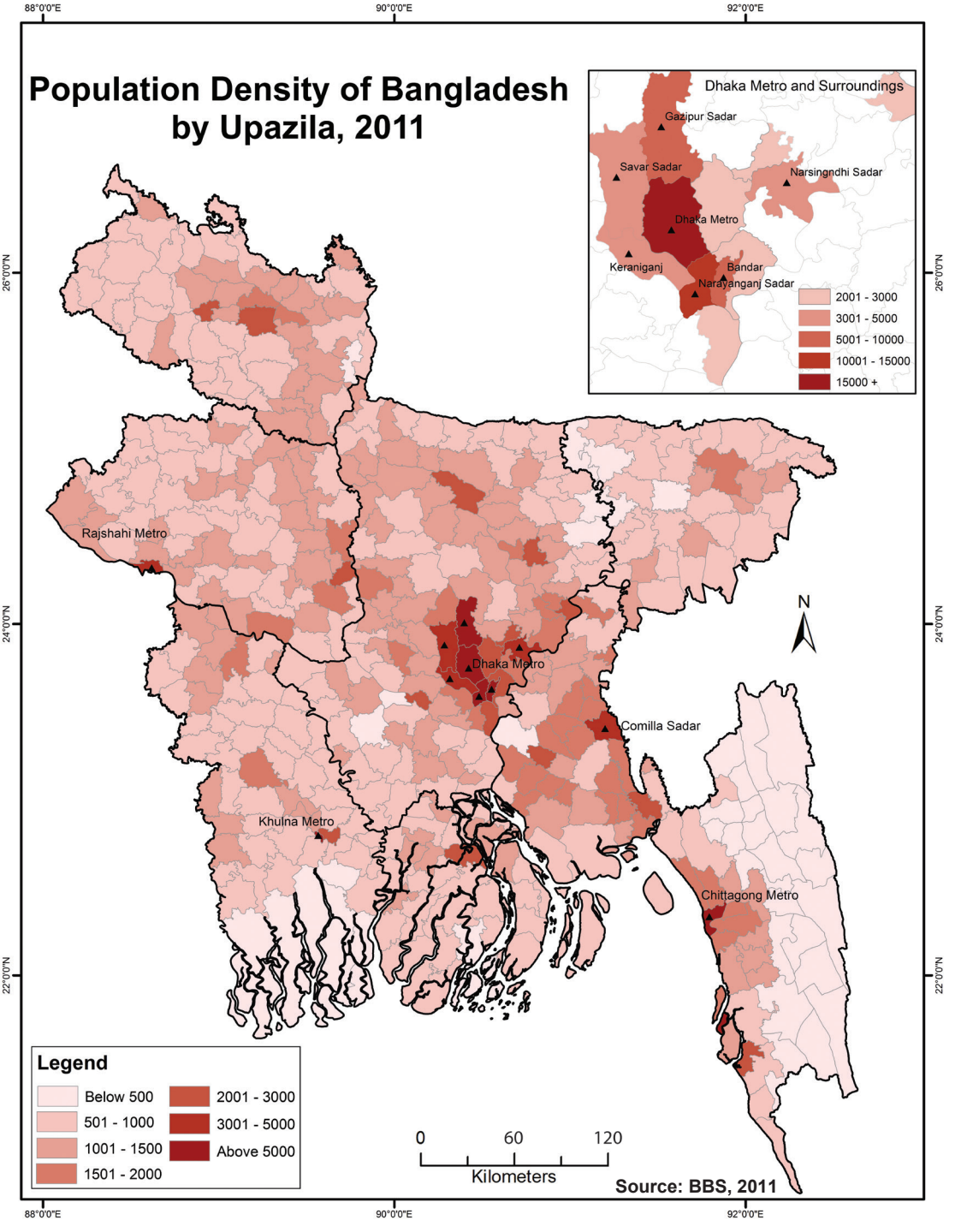
Table 1.1: Population distribution by Division, 1991-2011

	Number (millions)			Percent			Change
Division	1991	2001	2011	1991	2001	2011	1991-2011
Dhaka	32.7	39.0	47.4	30.7	31.4	32.9	2.2
Chittagong	20.5	24.3	28.4	19.3	19.5	19.7	0.4
Rajshahi	14.2	16.4	18.5	13.4	13.2	12.8	-0.5
Rangpur	12.0	13.8	15.8	11.3	11.1	11.0	-0.3
Khulna	12.7	14.7	15.7	11.9	11.8	10.9	-1.0
Sylhet	6.8	7.9	9.9	6.4	6.4	6.9	0.5
Barisal	7.5	8.2	8.3	7.0	6.6	5.8	-1.2
TOTAL	106.3	124.4	144.0	100.0	100.0	100.0	100.0

Source: Population Census reports, 1991, 2001, 2011

While population density at the district level is fairly uniform over much of Bangladesh, the picture becomes more complex at the sub-district (upazila) level. This is partly because the higher densities in urban areas, which are considerably "diluted" in most cases by using district-level figures, are more clearly apparent at the sub-district level. At the same time, there are also sub-district differences in agricultural productivity, affecting population density. Map 1.1 shows the population density at sub-district level. It shares the same major feature as the map of population densities by district: the sub-districts with population densities of less than 500 per sq. km. are mostly concentrated in the Sundarbans and the Chittagong Hill Tracts. However, in the sub-district map, there are some other less densely populated sub-districts scattered in different parts of the country. These include five challenging sub-districts in Dhaka Division-haor areas[2] in the northeast of the division, adjoining Sylhet, and flood-prone areas in the southwest of the division.

Very high population densities, of course, are restricted to the sub-districts with high levels of urbanization. As a rough rule of thumb, population densities exceeding 2,000 per sq. km. reflect the predominance of urbanized areas with a high proportion of non-agricultural employment. Thus if a sub-district has a density above this figure, it reflects the presence of a substantial urbanized population, even though some parts of the sub-district may still be predominantly rural. Map 1.1, not surprisingly, shows the dominance


Population Density of Bangladesh
by Upazila, 2011
Dhaka Metro and Surroundings
Gazipur Sadar
Savar Sadar
Narsingndhi Sadar
Dhaka Metro
Keraniganj
Bandar
Narayanganj Sadar
2001 - 3000
3001 - 5000
5001 - 10000
10001 - 15000
15000 +
Rajshahi Metro
Dhaka Metro
Comilla Sadar
Khulna Metro
Chittagong Metro
N
Legend
Below 500
501 - 1000
1001 - 1500
1501 - 2000
2001 - 3000
3001 - 5000
Above 5000
0
60
120
Kilometers
Source: BBS, 2011
88°0'0"E
90°0'0"E
92°0'0"E
26°0'0"N
24°0'0"N
22°0'0"N

Map 1.1

of Dhaka Megacity among densely populated areas, as well as the importance of Chittagong and Rajshahi. The relatively urbanized belt from Dhaka to Chittagong is also apparent, as is a more urbanized area in the north-west, and the Rangpur-Kishoreganj area.

b) Flooding, water-logging, riverbank erosion, loss of coastal areas

A recent analysis of population and development issues in Bangladesh (UNFPA 2015: 10-12) stressed the centrality of Bangladesh's unique population-environment relationship in relation to development and migration patterns in Bangladesh (see box below).

c) Poverty trends and poverty alleviation

Reducing the proportion of the population living in poverty is a key aim of development planning in Bangladesh. Measurement of poverty is complex, and estimates of the incidence of poverty differ widely according to the particular measure used. Estimates of the proportion of Bangladeshis living in poverty in 2010 varied from 76.5 percent using the measure of income less than $2 a day through 58 percent using the ADB's revised Asian regional poverty line to 31.5 percent using the official Bangladesh national poverty line (UNFPA 2015: Table 1). Importantly, all measures of poverty show substantial reductions in the poverty rate between the early 1990 and 2010, though despite these improvements, Bangladesh still had the highest poverty rate in the Asia-Pacific region (UNFPA 2015: 6). Bangladesh uses two poverty lines – an "upper" poverty line which is used in relation to MDG goals and other purposes, and a lower or "extreme" poverty line which measures absolute deprivation. The extremely poor make up about 18 percent of the population and a majority of the total poor. This group are living in abject conditions, and improving their living conditions must be given very high priority. In this context, It is crucial to understand the role migration and urbanization might play in alleviating poverty.

Box: Population Pressure on Land and Environment

The country's location on the Indo-Gangetic plain has historically provided favourable conditions for subsistence agriculture: a favourable climate, fertile soil, plentiful fresh water supply, abundant growth of vegetation with a great biodiversity within a small area have supported a vigorous peasant mode of production based on the use of family labour. But population density reached 1,015 persons per square kilometre in 2011, three times the density of India and seven times China's. While similar density can be observed elsewhere in Asia at sub-national levels (e.g., Java in Indonesia). Bangladesh is the only major country to have such high density while half the labour force remains dependent on agriculture for their livelihood. As Streatfield and Karar (2008) noted, Bangladesh's exceptionally high population density makes it a "special case" among developing countries and places it at great risk of reaching saturation in terms of its ability to absorb further population growth.

Although the population of Bangladesh has increased by 83 million persons since independence, the land under cultivation ("net cropped area") has declined by 6.6 percent.[3] Essentially there is no "land frontier" remaining in Bangladesh that would allow the supply of land to be augmented. It has been estimated that 26,000 people per year are losing their land due to the effects of flooding and erosion (Hessel 2013). Those who lose their land either have to migrate or resort to living on chars—islands or areas of land that are created during floods, or other marginal lands. Such areas usually lack safe drinking water, sanitation, health and education services, or roads. The country and its people are now exposed to a wide range of climate-related risks. Acute population pressure on the country's floodplains causes rural displacement and migration to urban areas as well as to less densely - populated rural and marginal lands like hilly/forest areas, mangrove forest region, haor areas, char lands and even hazard/disaster prone and climate-stressed coastal regions. Further population increase can only intensify this pressure, which will be greatly exacerbated by expected climate change, including potential sea-level rise. Salinization, water-logging and riverbank erosion are among the processes that affect the human use of the land and increase the vulnerability of various population groups, particularly the poor. (UNFPA 2015: 10)

A young flower salesman talking via mobile phone. *Photo: Drik*

d) Gender issues and changing educational and employment opportunities for women

Bangladesh is a patriarchal society, in which the chances for girls and women to compete with men on an equal footing have traditionally been severely limited. Considerable progress has been made on many fronts over recent decades, however (World Bank, 2007). On the legal and policy front, Bangladesh has a National Women's Policy which was first approved in 1997, and later revised and approved by Cabinet in 2011. Bangladeshi women have also made strides in education, reaching near parity with males in primary and secondary education, though still lagging badly in tertiary enrolments. Women's labour force participation rate has more than tripled since 1989, and has risen from 23.9 percent in 2000 to 36.0 percent in 2010. While part of this increase simply reflected a more complete enumeration of unpaid family workers engaged in activities such as livestock and poultry raising (Rahman and Islam 2013), increased employment in the ready-made garments (RMG) industry was also very important. Women have benefited from new economic opportunities through micro-finance, though there is debate over the extent to which this has led to women's empowerment (Goetz and Sen Gupta 1996; Kabeer, 2000; Mahmud, 2003).

Child marriage remains perhaps the greatest obstacle to women's advancement in Bangladesh. Forty six percent of girls aged 15-19 are currently married, according to the 2011 DHS, and even more shocking, according to the 2014 DHS, 9 percent of girls aged 15 have already begun childbearing.[4] The minimum legal age at marriage for girls (18) is constantly flouted. Child marriage contravenes various international conventions that Bangladesh is a signatory to and violates the human right to choose whom and when to marry. "Continuing high levels of child marriage both reflect attitudes to the role of women that need to change, and lead to consequences that perpetuate unequal gender relations: withdrawal of girls from school, wide age differences between spouses, and less capability of young wives to deal with domestic violence" (UNFPA 2015: 134).

In the present study, these important gender issues will be approached from a specific perspective: examination of the possible part that migration and urbanization might play in either exacerbating or ameliorating them. For example, there is no doubt that opportunities for employment in the RMG sector has challenged earlier norms of seclusion and enabled young women to earn an income, achieve greater importance in their family and community, and gain greater confidence, but it has also made them subject to new forms of exploitation and discrimination.

4. The Role of Population Mobility, Urbanization and Changing Employment Structure in Bangladeshi Development since the 1960s

In Bangladesh, over recent decades the structure of employment has changed considerably. In 1972, about 75 percent of the workforce was in primary industry (mostly agriculture), and 25 percent in non-agricultural sectors. By 2010, these ratios had changed greatly; 47 percent were in agriculture, and 53 percent in non-agriculture (17 percent in industry and 35 percent in services). The more recent changes are shown in Table 1.2.

Table 1.2: Distribution of the employed population and of GDP across broad industry sectors, 2002 and 2010

	Employed population		GDP	
Sector	2002	2010	2002	2010
Agriculture	51.7	47.4	19.9	18.0
Industry	14.0	17.3	24.1	27.4
Services	34.3	35.2	56.0	54.6
Total	100	100	100	100

Source: 2002 and 2010 Labour Force Surveys; BBS unpublished tabulations

These changes were accompanied by considerable population redistribution through migration. Given dense rural populations, there was no agricultural frontier to absorb migrants from densely settled rural areas, such as was available in Southeast Asian countries such as Thailand and Malaysia in the mid-20th century. Migration flows were much more oriented to moving to non-agricultural jobs in the towns, by those formerly working in agricultural or non-agricultural jobs (or often both) in rural areas. It is therefore not surprising that migration flows have continued to be focused on urban areas, and in particular on large cities, as will be discussed later.

The share of agriculture in employment is much greater than its share in GDP, and correspondingly the share of industry and services in GDP is much higher than its share in employment. This is characteristic of most developing countries. As shown in Table 1.4, real GDP per worker is slightly higher in the industry sector than in services, and in turn much higher in services than in agriculture. Further increases in product per head in Bangladesh could result from increases in any of the three sectors, but a further shift of labour from agriculture to other sectors would likely be a major component of future increases in overall productivity, and of higher average earnings by workers. It appears from Table 1.3 that it was in the 1970s that the industry and services sectors grew much faster than the agriculture sector, that the 1980s saw a stalling of sectoral restructuring, but that from 1990 onwards, the restructuring resumed. The share of agriculture in GDP halved between 1990 and 2014, while that of both industry and services increased.

Table 1.3: GDP per worker, 2000-2010 and annual growth rate

Broad economic sectors	Real GDP per worker (BDT)				Annual Growth rate (percent)			
	1999	2003	2006	2011	1999-2003	2003-2006	2006-2010	1999-2010
Agriculture	37,655	35,001	40,190	43,223	-2.4	4.6	1.8	1.4
Industry	157,689	160,290	178,618	176,612	0.5	3.6	-0.3	1.1
Services	140,441	147,322	143,201	170,654	1.6	-0.9	4.4	1.9

Source: UNFPA, 2015, Table 2.1

Table 1.4: Changing structure of GDP in Bangladesh, 1970-2014

	% of GDP					
	1970	1980	1990	2000	2010	2014
Agriculture	54.6	31.6	32.8	23.8	17.8	15.9
Industry	8.7	20.6	20.7	23.3	26.1	27.9
Services	36.7	47.8	46.6	52.9	56.0	56.2
GDP	100	100	100	100	100	100

Source: World Bank, World Development Indicators

The urbanization that has accompanied this change in economic structure was slow to produce very large cities, and was characterized by continuing links between urban populations

and the rural areas from which most of them originated. The largest city in Bangladesh, Dhaka had reached a population of only half a million by 1961. But its growth over the subsequent three decades was spectacular, with a population of 1.6 million being reached in 1974, 3.4 million in 1981 and 6.5 million in 1991 (Islam, 1995: Table 1, p. 190). The experience of doubling in each decade could not, of course, be continued forever, and Dhaka's SMA population was 9.7 million (unadjusted), 10.5 million (adjusted) in 2001 and 14.1 million in 2011, still a very rapid growth but well short of a doubling in each decade. Part of the reason for the very rapid growth was expansion of the area included in the city. This was particularly the case for population growth over the 1980s, because Dhaka's area expanded from 797 sq. km. in 1981 to 1,353 sq. km. in 1991. Areal expansion after that time was only slight. Though growth of population through areal expansion of the city might be considered an artificial element in growth, to a large extent it reflected a reality of urban growth; fringe areas of the city were rapidly changing their characteristics from rural to urban as population boomed through natural increase, overspill from the central city and migration into the vicinity of the city from all over Bangladesh, and this needed to be recognized through extension of the city's boundaries.

The large contribution of migration to the swelling of Bangladeshi city populations from the 1960s onwards meant that by 2000, and even today, only a relatively small proportion of city dwellers were entirely divorced from rural roots.

5. Brief Survey of Recent Developments

"Over the past few decades, Bangladesh has made remarkable progress in raising incomes, reducing poverty and improving social indicators" (General Economics Division, 2015: xxxiii). Over the 6th Plan period, the economic transformation of Bangladesh from an agrarian economy towards one based more on manufacturing and modern services made progress. Labour productivity in agriculture rose at much the same rate as in the economy as a whole, though progress with diversification of agriculture has been slow. The economic base in rural areas has been diversified, with expansion of non-farm rural enterprises and services (General Economics Division, 2015: xxxiv). The growth rate of per capita GDP has increased steadily from the decade of the 1980s (1.5 percent per annum) to the 2011-2015 period (5 percent per annum (General Economics Division, 2015: Fig. 2.4). The labour force has contributed much to this growth, both because of a rising share of the population in the labour force age groups and rising participation rates for females.

The growth of manufacturing has been impressive, dominated by the ready-made garment industry (RMG). The share of RMG in manufacturing employment rose from 44 percent in 2001 to 51 percent in 2009. It has thrived in the labour-abundant urban agglomerations. "Garments account for half of total formal employment in Dhaka City, 65 percent of formal nonfarm jobs in the peri-urban areas of metropolitan Dhaka, and 67 percent of formal employment in Chittagong City" (Muzzini and Aparicio, 2013: 26).

Not withstanding several decades of moderately high economic growth, however, Bangladesh remains a poor country. Per capita GDP in nominal terms was $1,033 in 2013 and Bangladesh ranked 186 out of 213 countries in per capita Gross National Income (GNI), placing it in the bottom fifth of countries ranked by income (World Bank 2014). In South Asia, only Afghanistan and Nepal ranked lower than Bangladesh in GNI per capita. Bangladesh until recently remained classified as a "low income" country by the World Bank, whereas neighbouring Pakistan, India, Sri Lanka and Bhutan had all graduated to "lower middle-income" status. However, the rate of economic growth over the FY 2011-15 period was 6.3 percent, ahead of India, Thailand and Indonesia and the average for all developing countries (General Economics Division, 2015: xxxiii). Therefore it was hardly surprising that in October 2015, Bangladesh was newly classified by the World Bank as a lower middle income country.

Over the Sixth Plan period, the manufacturing sector grew much faster than agriculture. "Growing at an average pace of 9.4 percent a year, this was a record average growth over any previous 5-year period. Expanding at an average rate of 6 percent, the services sector also performed well. Modern services such as banking, other financial services and information communications technology did particularly well" (General Economics Division, 2015:.). As a result of these trends, the share of manufacturing in GDP increased from 17 to 20 percent over the period.

As mentioned in the introduction, no other country on earth has reached replacement level fertility at such low average levels of income. This has resulted in a significant shift in the age structure of the population, resulting in a demographic dividend which should enable Bangladesh to derive maximum benefit from educational investments, raising educational levels further, following fairly impressive gains in recent years in lengthening the average number of years in school among cohorts entering the labour force ages (see UNFPA, 2015, Chapter 3).

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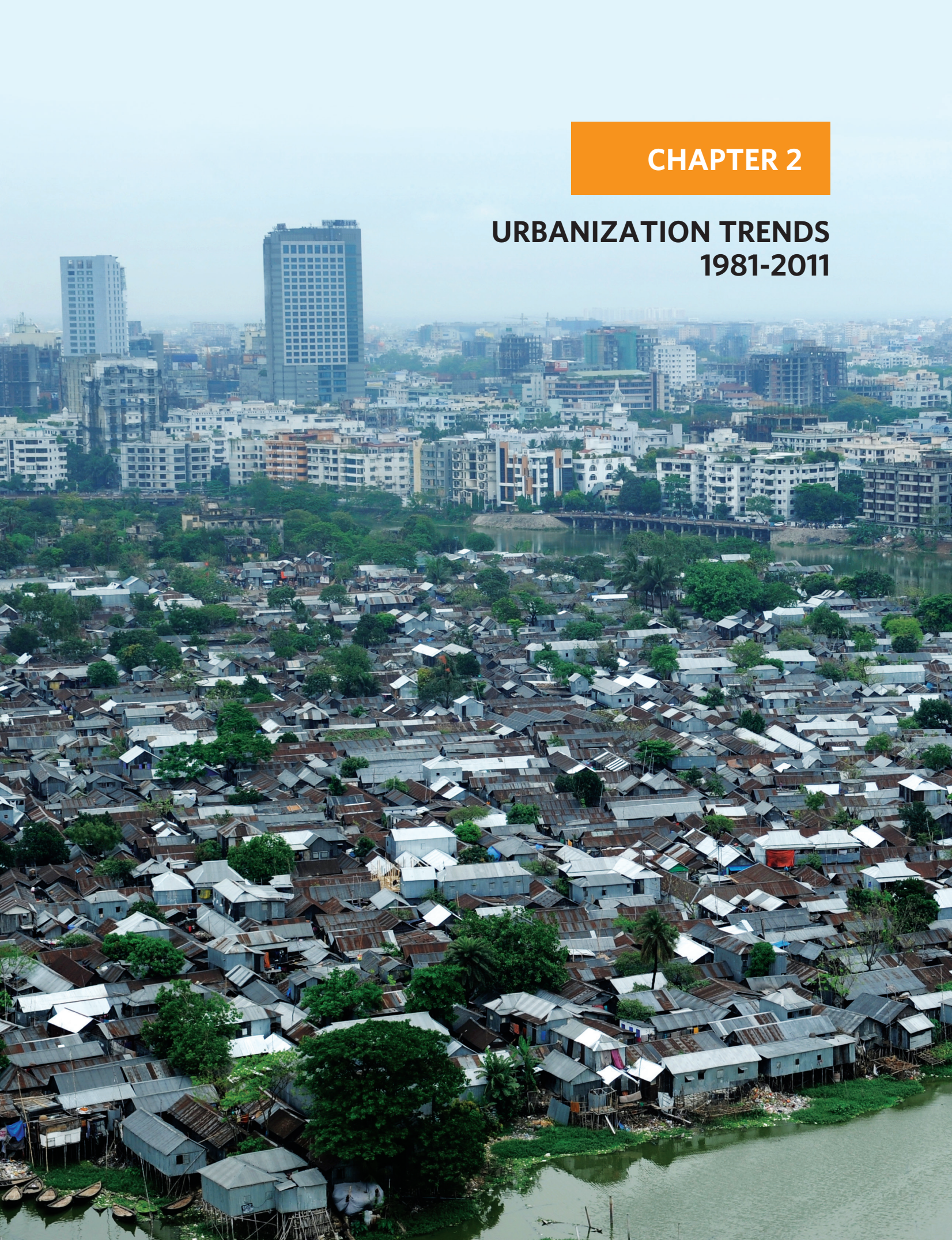
[2] Haors are backswamp areas, flooded every year during the monsoon.

[3] Estimated from data published in the Bangladesh Bureau of Statistics, Statistical Pocketbook, 2012.

[4] There is some evidence that age at marriage is systematically understated in Bangladesh surveys (Streatfield et al, 2015), but this does not gainsay the fact that average female age at marriage and first childbearing is very young.



CHAPTER 2

URBANIZATION TRENDS 1981-2011

CHAPTER 2: URBANIZATION TRENDS 1981-2011

1. Data Issues in Studying Urbanization in Bangladesh: Sources, Definitions, Procedures

For the period between 1981 and 2001, the consistency of definitions of urban areas in Bangladesh made for good comparability between the results of the different censuses, though users need to be aware that the enumerated and adjusted figures from these censuses differ considerably. Changes in definitions in the 2011 Census, however, greatly complicated analysis of trends in urbanization and the characteristics of urban and rural populations.

Readers of the Urban Area Report of the Bangladesh Census for 2011 will be confused by the figures given in Table 2.1 of that report for 2001 and 2011. By drawing on different figures provided in the table, the reader could conclude (from the enumerated figures) that the urban population rose from 29.256 million in 2001 to 33.563 million in 2011, an increase of 14.7 percent; or alternatively (from the figures adjusted for undercount), that it rose from 31.078 million to 35.095 million, an increase of 12.9 percent. The best estimate of actual trends, however, uses the adjusted figure for 2001 and the 2011 figure adjusted to include the populations for the SMAs as defined in the 2001 census; this shows the number of urban dwellers rising from 31.078 million to 41.944 million, an increase of 35.0 percent.

Estimates of the urban population from the 2001 census differ by 1.8 million between the enumerated population (29.256 million) and the population after applying the adjustment factor for undercount (31.078 million). The estimated percentages urban do not differ very much, however (23.53% and 23.81% respectively) because the total population was also adjusted for undercount.[5] The 2011 Population Census was a different story, providing a more complicated picture of urbanization, with four different estimates of the urban population, varying by some 8.4 million. This resulted from definitional changes made in the 2011 Census. To cite from the 2011 Population Census Report (National Volume 3, pp. 8-9):

> In 2011, the concept of SMA, growth centre and some other urban areas was abandoned and the areas covered only city corporations, paurashavas, upazila headquarters and cantonment area. Due to the definitional change, the percentage of urban population has decreased and come down to 23.30% in 2011 as against 23.53% in 2001. ... If the former SMA, Other Urban Area (OUA) and GCs are taken into account, the percentage of urban population would have been raised to 27.66%. Moreover, if the urban population of 2011 is adjusted by the PEC adjustment factor, the percentage of urban population in 2011 stands at 28.0%.

It hardly needs to be stressed that the adjustment of urban areas in the 2011 Census which led to substantial contraction of the area of the largest cities is precisely the opposite of normal practice. In most countries, the re-drawing of urban boundaries is mainly for the purpose of incorporating peri-urban areas, previously designated as rural but in fact having urban characteristics, into the urban area. In Bangladesh the reverse process occurred, with areas previously being considered urban being re-classified as rural. While the census report documents the nature of these changes, it is silent about the reasons why they were made.

The BBS made some provision for comparing the 2011 urban population with that for 2001 by providing additional figures for the populations of the four largest cities (Dhaka Megacity, Chittagong SMA, Khulna SMA and Rajshahi SMA) according to the old definition of urban areas. This raised the total urban population from 33,563,183 in 2001 to 41,943,532 in 2011, and the urban percentage to 28.0 percent in 2011. However, these adjustments go only part way towards enabling a true comparison of urban growth over the 2001-2011 period, or indeed over the 1991-2011 period. The problem is that

adjustments have not been made for shrinkages in the land areas of many other urban areas between 2001 and 2011. Details of these shrinkages are provided in Appendix Table 2.2; a summary of some key features is shown in Table 2.1.

The adjusted urban population of 41.94 million for 2011, then, was only a partial adjustment, and the revised proportion urban of 28.0% is undoubtedly an underestimate of the figure that is truly comparable to the 2001 figure. A further problem with analysis of urban populations in the 2011 Census is that in the census reports, tabulations of characteristics of urban populations are for the unadjusted urban populations, and are therefore not comparable with 2001 data. Moreover, no adjustments were made to tables in the census reports showing various characteristics of urban and rural areas. These continued to use the populations of SMAs in their shrunken boundaries, unadjusted to their 2001 boundaries.

Table 2.1: Change in geographical extent of urban areas in divisions and selected districts between 2001 and 2011

Division and district	Area in sq. km^2		% increase or decrease 2001-2011
	2001	2011	
CHITTAGONG	**3251.6**	**2462.3**	**-24.3**
Chittagong	1254.9	450.9	-64.1
Noakhali	117.7	202.6	72.2
DHAKA	**2998.6**	**2093.5**	**-30.2**
Dhaka	797.5	213.8	-73.2
Gazipur	475.6	173.2	-63.6
Tangail	210.0	237.5	13.1
KHULNA	**1261.8**	**1104.4**	**-12.5**
Khulna	341.4	137.8	-59.6
Jessore	127.3	139.6	9.7
RAJSHAHI	**1254.0**	**1193.0**	**-4.9**
Rajshahi	502.5	374.1	-25.6
Pabna	213.0	127.3	-40.2
Natore	92.5	110.7	19.6
RANGPUR	**897.3**	**872.9**	**-2.7**
Rangpur	157.2	99.5	-36.7
Panchagarh	51.9	61.1	17.7
SYLHET	**417.8**	**475.7**	**13.9**
Sunamganj	119.6	138.9	16.1
Sylhet	137.7	157.1	14.1

Source: Extracted from 2011 Census Report, National Volume 3, Table 3.3.2

It is clear from Table 2.1 that the sharpest contraction in urban areas was in Dhaka and Chittagong divisions. The most dramatic contraction of all was in Dhaka District, where Bangladesh's largest city is located. Here the land area defined as urban declined from 797.5 sq. km. in 2001 to 213.8 sq. km. in 2011, a decline of 73% (see Table 2.1). There were also sharp contractions in area in two districts forming part of Dhaka Megacity – Gazipur (a decline of 63.6%) and Narayanganj (a decline of 42.6%). Further analysis shows that, contractions of the urban areas of the districts containing not only the Dhaka Megacity but also the other three major metropolitan areas – Chittagong (by 64%), Khulna (by 59.6%) and Rajshahi (by 25.6%) – account for a large proportion of the total contractions in urban areas. But substantial declines were also recorded in the areal extent of urban areas in some districts that had no really large cities – the most prominent examples being Pabna (a decline of 40 percent), Rangpur (a decline of 37 percent), Lalmonirhat (a decline of 21 percent) and Gaibandha (a decline of 13 percent). These are documented in Appendix Table 2.2.

The census report does not specify the precise geographical area used for the adjusted populations of Dhaka Megacity and Chittagong, Khulna and Rajshahi Statistical Metropolitan Areas (SMAs), though presumably they were roughly the same (perhaps exactly the same) as those used for these megacities in 2001. Nor does the census report give the exact (contracted) areas used for the unadjusted populations of these four megacities in 2011.

In Table 2.2, an attempt is made to calculate roughly the change in areal extent of urban areas other than the four largest metropolitan areas between 1991, 2001 and 2011. Rough indications of the unadjusted area used for the urban population of these four largest metropolitan areas were obtained as follows: for Dhaka Megacity, by adding the recorded urban areas of Dhaka, Gazipur and Narayanganj districts; for the unadjusted areas of Chittagong, Khulna and Rajshahi cities, using the urban areas of Chittagong District, Khulna District and Rajshahi District as an approximation. The extent of the decline in these areas compared with the 2001

Census is then obtained, and the extent of decline in area of other urban localities is obtained by subtracting this estimated unadjusted area of the 4 large cities from the total area of cities and towns in 2011, as shown in Table 3.2.2 of the 2011 Census Report, National Volume 3.

Table 2.2: Change in areal extent of the urban areas in Bangladesh 2001-2011

Locality	Area (km²)			Percentage change 2001-2011
	1991	2001	2011	
BANGLADESH	**9,577**	**10,712**	**8,867.4**	**-17.2**
Chittagong SMA	986	1,045	450.9	-56.9
Dhaka Megacity*	1,353	1,371	495.8	-63.8
Khulna SMA	267	267	137.8	-48.4
Rajshahi SMA	377	377	374.1	-0.8
TOTAL SMAs**	2,983	3,060	1,458.6	-52.3
REST OF BANGLADESH	**6,594**	**7,652**	**7,408.8**	**-3.2**

Source: 2001 Census Report, National Series, Vol. 3, Table 04; 2011 Census Report, National Volume 3, Table 3.2.2

* Includes Dhaka, Gazipur and Narayanganj districts

** Includes Dhaka Megacity

The results in Table 2.2 are very important. They suggest that the adjustments of the populations of these four cities by the Census authorities must have gone a considerable way towards providing a figure for Bangladesh's total urban population that is comparable to the 2001 figure. This is because the contraction in area of the four megacities between 2001 and 2011 accounts for by far the greater part of the contraction of urban areas in Bangladesh as a whole. But between 2001 and 2011, there was a small overall contraction in the area of other urban localities as well, a contraction which is the net outcome of expansion of some areas (by 72 percent in the case of Noakhali) and contraction of others. Details are available in the 2011 Census Report, Volume 3, Table 3.2.2, but no details are available about the basis for increasing the areas of urban localities in some districts and decreasing those of others, with a net total decrease in area of some 3.2 percent.

The adjustments made by BBS do not fully solve the problem of comparing urban populations in 2011 with those in earlier years. The implication of Table 2.2 for the analysis in this report needs to be made clear. Assuming that in calculating the adjusted populations of Dhaka Megacity and Chittagong, Khulna and Rajshahi SMAs, the BBS used the same boundaries as were used in the 2001 Census, the adjusted urban population for Bangladesh as a whole should not be too wide of the mark in comparing the population living within the urban boundaries used in the 2001 Census, because the recorded geographic extent of the remaining urban areas declined only slightly between 2001 and 2011. However, the fact that it declined at all means that these urban populations were certainly underestimated to some extent, because over a 10-year period of quite rapid population growth, with some continuing urbanization, the areal extent of the urban areas would certainly have expanded, not contracted. The same point can be made about the four megacities. For Dhaka Megacity, a sophisticated analysis using the smallest spatial unit for which census data are available (the census tract) to integrate population data with satellite information showed that over the 2001-2011 period, the built up area increased from 14,641 ha to 19,556 ha, or by 33 percent (Dewan and Corner, 2014: 105). Use of the same boundaries as in 2001 for Dhaka and the other large cities would therefore lead to an underestimate of the real growth in their populations.

The point can be emphasized by comparing the areal extent of places classified as urban areas in Bangladesh in all censuses between 1981 and 2011. This is shown in Table 2.3. It is notable that the urban area in 2011 was smaller by some 7.4 percent even than it was in 1991, when the recorded urban population was some 36% smaller. It is also noteworthy that the areal extent of urban areas in Barisal and Sylhet divisions actually increased between 2001 and 2011, whereas in Rajshahi it declined by 5%, and in Khulna by 13%. The lion's share of the decline in urban area was in Dhaka and Chittagong divisions, where the area considered urban contracted by some 30% and 24% respectively.

Table 2.3: Areal extent of urban areas in Bangladesh censuses by division, 1981-2011

Division	1981	1991	2001	2011
BANGLADESH	**5,230.2**	**9,576.9**	**10,711.9**	**8,867.4**
Dhaka	1,226.9	2,641.9	2,998.6	2,093.5
Chittagong	1,988.6	3,053,5	3,251.6	2,462.3
Rajshahi	440.3	1,084.4	1,254.0.	1,193.0
Khulna	597.5	1,174.1	1,261.8	1,104.4
Barisal	368.4	509.3	630.8	665.7
Sylhet	210.3	337.4	417.8	475.7
Rangpur	397.8	776.4	897.3	872.9

Source: 1991 Census Report, Vol. 3, Urban Area Report, Table 10; 2011 Census Report, Vol. 3, Urban Area Report, Table 3.3.2

Note: In 1981 and 1991, Rangpur and Sylhet divisions had not yet been created. The urban areas of these divisions in 1981 and 1991 have been calculated by summing the urban areas of the zilas that were later included in Rangpur and Sylhet divisions

The contraction in the total area considered urban between 2001 and 2011 no doubt accounts for the discrepancy between the census figure and the projected percentage urban for Bangladesh in 2011 by the United Nations Population Division. The Population Division used almost exactly the same 2001 percentage urban for Bangladesh (24.1% compared with the official Bangladesh figure of 23.8%) but for 2011 the Population Division estimated a proportion urban of 31.2% compared with the official (adjusted) figure of 28.0%. Admittedly, the Population Division's estimate for the 2011 percentage urban could be incorrect, but given its experience in comparative international analysis of urbanization trends, its estimate needs to be taken seriously. For the reasons already discussed, the United Nations estimate of 31.2 percent urban in 2011 may well be closer to the mark than the adjusted figure of 28 percent produced by the 2011 Population Census. Indeed, even the United Nations figure may be an underestimate of the true urban percentage; analyses by the World Bank show a considerably higher level of urbanization for five South Asian countries (including Bangladesh) than the level based on their official definitions of urban – in other words, "sizeable portions of their populations are living in settlements that, although they may exhibit urban characteristics, are governed as rural areas" (Ellis and Roberts, 2016: 55; see also Deuskar and Stewart, 2016).

2. Trends in Number of Urban Localities

The BBS divides urban places in Bangladesh into three categories: townships (with populations below 100,000), cities (with populations between 100,000 and 5 million) and megacities (with populations above 5 million). Table 2.4 shows the trend in number of urban places between 1981 and 2011. The number of urban centres increased slowly between 1981 and 2001, and then fell between 2001 and 2011. However, trends were entirely different between different categories of urban places. The number of very small townships (below 5,000 population) declined dramatically after 1991, while the number of townships with populations above 10,000 increased sharply between 1991 and 2001, and increased slightly between 2001 and 2011. Between 2001 and 2011, it was the larger townships (with populations in the 25,000 to 100,000 range) that increased most in number, presumably mainly because of the movement of smaller towns into higher categories as they grew larger.

Table 2.4: Number of urban places in Bangladesh, 1981-2011

Type of urban place	1981	1991	2001	2011
TOWNSHIP: POPULATION				
Below 5,000	160	325	60	25
5,000-9,999	129	80	90	64
10,000-14,999	-	-	81	58
15,000-19,999	8	17	54	50
20,000-24,999	110	49	53	43
25,000-49,999	41	14	118	159
50,000-74,999	23	19	37	46
75,000-99,999	-	-	13	17
ALL TOWNSHIPS	**471**	**504**	**506**	**462**
CITIES: POPULATION				
100,000-199,999	8	14	15	26
200,000-299,999	1	-	5	7
300,000-399,999	1	-	2	3
400,000-499,999	-	-	-	3
500,000-999,999	-	-	-	2
1 million to 1,999,999	-	-	-	-
2 million to 2,999,999	-	-	-	1
3 million to 4,999,999	-	-	-	1
ALL CITIES	**10**	**14**	**22**	**43**
MEGACITY (5 MILLION AND ABOVE)	**-**	**1**	**1**	**1**

Source: 2011 Population Census, Volume 3 – Urban area Report, Tables 3.4.2.1 and 3.4.2.2

Upmarket high-rise residential apartments are mushrooming in Dhaka, *Photo: Drik*

The number of cities grew continuously between 1981 and 2011, and almost doubled in number between 2001 and 2011. The overall trend is therefore clear: a decline in number of very small towns, and an increase in number of larger towns and especially of cities. To what extent these trends simply reflect the transition of individual towns into higher size categories as their populations increase, and to what extent it also reflects the loss of urban status for some townships requires further investigation.

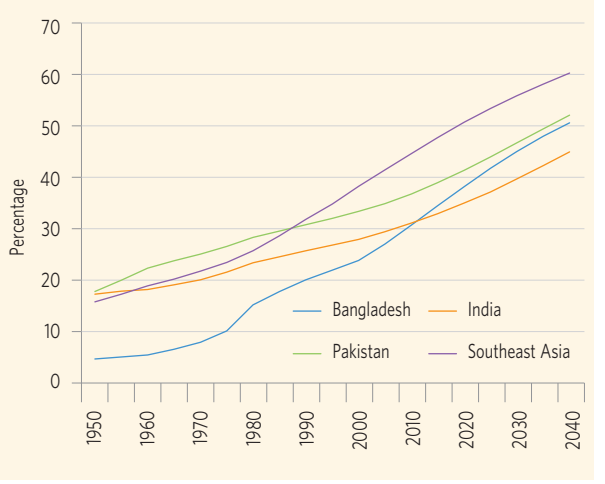
3. Trends in Level of Urbanization

Urbanization in Bangladesh has increased steadily over time (see Table 1 and Figure 2.1). Even as recently as 1974, the proportion of the population living in urban areas was only 9 percent. The steady increase to a figure of 28 percent in 2011 (and actually higher) reflects fundamental changes in the nature of the Bangladeshi economy and society. Not only did the proportion of population living in urban areas increase, but the urban areas in which a growing share of the population were living were themselves changing remarkably. As recently as 1980, even the capital city, Dhaka, was a fraction of its present size, high rise buildings were few and far between, and shopping malls were non-existent. Dhaka was like a provincial city compared with its populous neighbour in Indian West Bengal, Kolkata. Indeed, according to UN estimates, in 1960 Dhaka had only one tenth of Kolkata's population, and by 1980 just over one third, but remarkably, it had passed Kolkata by 2005 and was almost three million in front by 2015.[6] More generally, the urban population, not only in Dhaka but also in smaller cities was being gradually drawn into a modern, "connected" globalized urban population through the influence of longer periods spent in educational institutions and through the penetration of modern communication media.

Compared with the South and Southeast Asian regions, Bangladesh has historically had a low level of urbanization. As shown in Figure 2.1, it was not until 1985 that Bangladesh reached the level of urbanization reached by South and Southeast Asia in 1950. By 2010 urbanization in Bangladesh had caught up with that in India, though

Bangladesh remained somewhat behind Pakistan. However, it is not likely to reach Southeast Asia's level of urbanization over the next few decades, because since 1980, urbanization in Southeast Asia has surged ahead of South Asia. This is not true, however, of Bangladesh's closest Southeast Asian neighbor, Myanmar, which was far more urbanized than Bangladesh up to 1980, but because urbanization barely increased over the subsequent two decades, Bangladesh has now caught up.

Figure 2.1: Trends in urbanization – Bangladesh, India, Pakistan and Southeast Asia

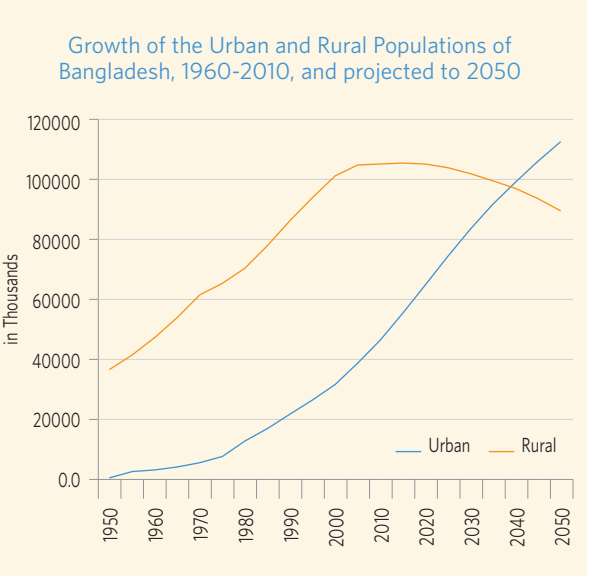


Source: United Nations, Population Division, 2014

4. Urban and Rural Population Growth or Decline

Because Bangladesh was already very densely populated by the mid-20th century, there was no frontier region into which surplus rural population could move, with the possible exception of relatively disaster-prone areas such as coastal Barisal, and parts of the Chittagong Hill Tracts, where settlement of Bengalis, resented by the local population, led to a protracted war (Van Schendel, 2009: 211-213). While many rural populations had multiple sources of livelihood, the gradual decline in the proportion of the labour force working in agriculture was in general terms associated with a movement of many workers into cities and towns. The general trend is reflected in United Nations series showing urban and rural population over time. Two aspects are important: the trend in absolute numbers of the urban and rural populations, and the trend in the proportion of the population living in urban and rural areas. These two elements are shown in Figures 2.2 and 2.3, based on United Nations data. The United Nations data up to 2000 is based on the official Bangladesh census data, while for later years the U.N. has clearly modified the 2011 Census data to show a somewhat higher population living in urban areas – as already noted, a reasonable adjustment.

Figure 2.2: Growth of the urban and rural populations of Bangladesh



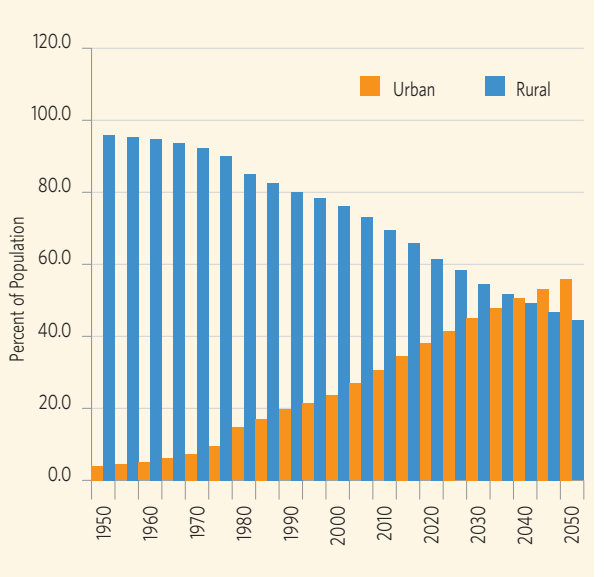
Source: United Nations, Population Division, 2014

As far as absolute numbers are concerned, Figure 2.2 shows that the urban population has been increasing by progressively larger numbers in each 5-year period – almost 1 million a year between 1985 and 1990, climbing to an estimated 1.5 million a year between 2000 and 2005, and a projected 1.9 million a year between 2015 and 2020. By contrast, the rural population – which in the 1960s was climbing by 1.5 million each year – slowed to increases of 0.9 million a year in the 1970s, accelerated again to increases of 1.5 million a year throughout the 1980s and 1990s, but thereafter slowed dramatically to essentially cease growing from 2005 onwards. Indeed, the UN projections show a slight decline in rural population setting in after 2015, a decline which picks up after 2020 such that the rural population would fall by 15.5 million between 2020 and 2050.

While these estimates and projections have a considerable margin of error, the key point cannot be gainsaid, and needs to be stressed. From the present time onwards, the entire increase in Bangladesh's population (which could amount to some 52 million over the 40-year period between 2016 and 2046) will probably have to be accommodated in urban areas. And if the rural population declines as projected, the increase in the urban population would be even larger than the total increase in Bangladesh's population.

Figure 2.3 shows the trends in the percentage of the population living in urban and rural areas. The steady increase in the urban share of the total population would lead to a situation in which the urban share would climb above half in 2040, though this would only bring it up to the average level of urbanization in the world today.

Figure 2.3: Rural-urban population distribution (%) 1950-2010 and projected to 2050



Source: United Nations, Population Division, 2014

5. Regional Differences and their Correlates

The highest levels of urbanization in Bangladesh are in the eastern part of the country. In the divisions of Dhaka, Chittagong and Sylhet (i.e. all of Bangladesh east of the river variously known in its passage through Bangladesh as the Jamuna, Padma and Meghna), the proportion of the population living in urban areas in 2011 was 34 percent. In the divisions to the west of this river (Barisal, Khulna, Rajshahi and Rangpur), the proportion of population living in urban areas was 17 percent – only half as high.[7] Despite the complications arising from areal changes between 2001 and 2011, the picture of east-west divisions did not change much between 2001 and 2011. In 2001, the percentages were 29.8 and 15.8 respectively.

The actual numbers of urban population, the percentage urban and the growth rate of the urban populations of each division and district between 2001 and 2011 are shown in Table 2.5.[8] The table is based on the unadjusted urban populations, giving the unrealistically low overall level of urbanization for Bangladesh of 23.3 percent. This is because it is not possible from the information supplied by BBS to estimate the adjusted urban populations by district when the adjusted figures for the largest cities are used.

The growth rates of the urban population between 2001 and 2011 were extraordinarily rapid in Comilla, Cox's Bazar, Feni, Bogra and Sylhet. Each case has specific reasons for rapid growth – for example, Cox's Bazar is unique in Bangladesh in its development as a tourist destination. In the case of Bogra, the very sharp increase in population resulted from boundary changes – more than a doubling of the urban area from 80 sq. km. in 2001 to 185 sq. km. in 2011.

On the other hand, substantial decreases in urban population were recorded in Narayanganj, Pabna, Lalmonirhat and Rangamati. In all cases, contraction of the area classified as urban appears to have been the main cause. In Narayanganj, the area included fell from 189 sq. km. in 2001 to 108.8 sq. km. in 2011, a decrease of 42.6 percent. In Pabna, there was a decrease of 40.2 percent in urban land area, in Lalmonirhat 21.1 percent decline in urban land area and in Rangamati, a 21.8 percent decline. However, there were districts where, although the area classified as urban decreased between 2001 and 2011, the urban population increased. Notable among these was Gazipur, where clearly the massive increase in urban population through the growth of industry and housing was able to more than counterbalance the decrease in the area classified as urban.[9]

Table 2.5: Percentage of urban population by division and district, 2001-2011

Division and district	Urban population 2001	Urban population 2011	% increase 2001-11	% Urban 1991	% Urban 2001	% Urban 2011
BARISAL	**1,162,775**	**1,361,943**	**17.1**	**12.5**	**14.2**	**16.4**
Barguna	87,582	103,094	17.7	8.3	10.3	11.5
Barisal	394,567	519,016	31.5	15.0	16.8	22.3
Bhola	234,302	243,317	3.8	12.9	13.8	13.7
Jhalokati	104,070	112,003	7.6	12.8	15.0	16.4
Patuakhali	175,284	201,882	15.2	10.4	12.0	13.1
Pirojpur	166,970	182,631	9.4	12.2	15.0	16.4
CHITTAGONG	**6,022,650**	**6,905,480**	**14.7**	**20.7**	**24.8**	**24.3**
Bandarban	92,766	100,423	8.3	29.7	31.1	25.9
Brahmanbaria	336,184	448,493	33.4	12.1	14.0	15.8
Chandpur	314,102	435,724	38.7	9.3	13.8	18.0
Chittagong	3,381,723	3,152,629	-6.8	45.5	51.1	41.4
Comilla	535,289	840,326	57.0	9.0	11.7	15.6
Cox's Bazar	272,395	499,011	83.2	13.6	15.4	21.8
Feni	170,200	293,742	72.8	8.8	13.7	20.4
Khagrachhari	171,035	215,808	26.2	32.0	32.5	35.1
Lakshmipur	225,426	262,997	16.7	14.1	15.1	15.2
Noakhali	353,342	496,700	40.6	10.3	13.7	16.0
Rangamati	170,188	159,627	-6.2	36.4	33.5	26.8
DHAKA	**13,364,520**	**15,584,835**	**16.6**	**28.0**	**34.2**	**32.9**
Dhaka	7,794,086	9,317,043	19.5	88.1	91.6	77.4
Faridpur	227,471	271,100	19.2	10.3	13.0	14.2
Gazipur	929,770	1,037,574	11.6	39.0	45.8	30.5
Gopalganj	113,133	128,705	37.6	7.0	9.7	11.0
Jamalpur	331,264	387,869	17.1	11.3	15.7	16.9
Kishoreganj	356,941	489,030	37.0	12.3	13.8	16.8
Madaripur	140,365	157,810	12.4	8.0	12.2	13.5
Manikganj	95,579	128,710	34.7	7.8	7.4	9.2
Munshiganj	148,352	186,106	25.4	9.2	11.5	12.9
Mymensingh	660,331	798,127	20.9	12.9	14.7	15.6
Narayanganj	1,221,955	988,956	-19.1	51.1	56.2	33.5
Narsingdi	349,585	447,645	28.1	16.0	18.4	20.1
Netrokona	187,839	247,183	31.6	7.8	9.5	11.1
Rajbari	118,891	136,042	14.4	10.3	12.5	13.0
Shariatpur	114,776	131,044	14.2	7.2	10.6	11.3
Sharpur	136,171	188,106	38.1	9.5	10.6	13.8
Tangail	438,011	543,785	24.1	9.4	13.3	15.1
KHULNA	**3,041,699**	**2,822,121**	**-7.2**	**18.3**	**20.7**	**18.0**
Bagerhat	206,554	195,331	-5.4	13.2	13.3	13.2
Chuadanga	274,519	306,157	11.5	26.0	27.4	27.1
Jessore	400,851	513,552	28.1	13.4	16.2	18.6
Jhenaidah	230,392	280,192	21.6	12.8	15.0	15.8
Khulna	1,284,208	777,588	-39.4	50.1	54.0	33.5
Kushtia	214,275	235,526	9.9	11.0	12.3	12.1
Magura	105,323	120,414	14.3	7.2	12.8	13.1
Meherpur	68,154	83,393	22.4	9.2	9.9	12.7
Narail	85,809	112,352	30.9	10.2	12.3	15.6
Satkhira	171,614	197,616	15.2	8.3	9.2	10.0
RAJSHAHI	**2,808,131**	**3,317,022**	**18.1**	**14.7**	**17.2**	**17.9**
Bogra	389,069	670,388	72.3	11.1	12.9	19.7
Joypurhat	121,305	143,910	18.6	10.3	14.3	15.7
Naogaon	222,576	275,567	23.8	7.9	9.3	10.6
Natore	191,826	228,008	18.9	11.5	12.6	13.4
Chapal Nawabganj	269,087	320,278	19.0	18.7	18.9	19.4
Pabna	449,390	387,675	-13.7	17.6	20.7	15.4
Rajshahi	843,625	854,619	1.3	30.2	34.8	32.9
Sirajganj	321,253	436,577	35.9	11.3	11.9	14.1
RANGPUR	**1,868,314**	**2,109,071**	**12.9**	**12.1**	**13.5**	**13.4**
Dinajpur	370,864	453,699	22.3	12.8	14.0	15.2
Gaibandha	195,107	210,524	7.9	7.1	9.1	8.8
Kurigram	278,071	326,494	17.4	14.1	15.5	15.8
Lalmonirhat	141,361	129,209	-8.6	10.1	12.7	10.3
Nilphamari	235,839	289,974	23.0	13.8	15.0	15.8
Panchagarh	72,015	95,149	32.1	8.2	8.6	9.6
Rangpur	457,234	442,713	-3.2	16.7	18	15.5
Thakurgaon	117,823	161,309	36.9	9.4	9.7	11.6
SYLHET	**987,538**	**1,462,711**	**48.1**	**10.1**	**12.4**	**14.8**
Habiganj	191,633	244,966	27.8	7.8	10.9	11.7
Maulvibazar	145,301	208,079	43.2	7.9	9.0	10.8
Sunamganj	217,006	256,117	18.0	7.2	10.8	10.3
Sylhet	433,598	753,549	73.8	5.4	17.0	21.9
BANGLADESH	**29,255,627**	**33,563,183**	**14.7**		**23.5**	**23.3**

Source: 2011 Population Census, Volume 2, Table Z01; Volume 3, Table 3.4.1.1; 2001 Population Census, Vol. 1, Analytical Report, Table 4.3

Turning our attention from the total urban population in each district to the population of individual cities and towns, Map 2.1 shows the distribution of cities and towns of various sizes across Bangladesh in 2011. There is a dense pattern of towns and cities across the country, but centrally-located Dhaka Megacity is dominant.

Table 2.6 shows the growth of Bangladeshi cities with 2011 populations above 100,000. There were 17 cities with populations above 200,000, but as six of them (including Dhaka) were located within the Dhaka mega-urban region, we could consider them separate nodes in one megacity; thus there were actually 12 separate cities – or urban agglomerations-in Bangladesh with populations exceeding 200,000. Using the same adjustments for Dhaka Megacity, there were 34 cities and towns with populations exceeding 100,000 in 2011.

The recorded population growth rate of the largest cities – Dhaka, Chittagong, Khulna and Rajshahi-over the 2000-2010 period was relatively slow (indeed, in the case of Khulna there was a recorded decline). This was not because of a reduction in the area of these cities between 2001 and 2011; there was such a drastic reduction, but in Table 2.6 the figure revised by BBS for the populations of these cities to coincide with the area included in 2001 was used, and the effect of the reduction in area was therefore avoided. However even this revised figure undoubtedly under-stated the real increase in the population of these urban agglomerations, because of substantial urban population growth outside the 2001 boundaries of these SMAs. In other words, these cities are seriously under-bounded in the sense that the built up areas of the urban agglomerations extends well outside their boundaries, and any discussion of their growth needs to take into account trends in the surrounding areas. This will be discussed at greater length in Chapter 5, which deals with Mega-urban regions.

Table 2.6: Growth of Bangladesh's largest cities and towns (populations above 100,000), 1991-2011

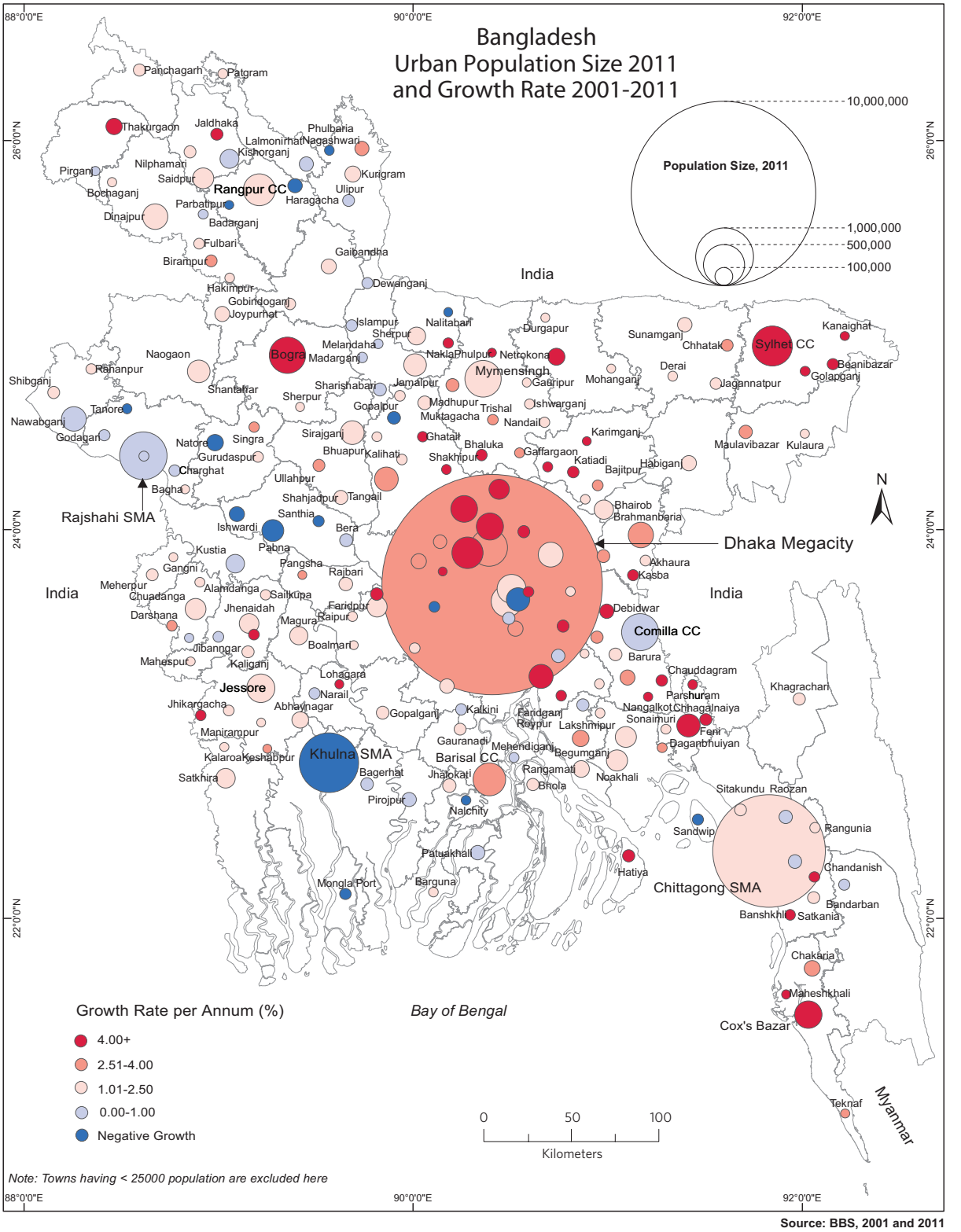
City	Population 1991 ('000)	Population 2001 ('000)	Population 2011 ('000)	% increase 1991-2001	% increase 2001-11
Dhaka*	6,487	9,673	14,172	118.47	46.5
Chittagong*	2,080	2,992	3,724	79.04	24.5
Khulna*	921	1,173	1,046	13.57	-10.8
Rajshahi*	507	651	680	34.12	4.5
Sylhet	234	316	532	35.0	68.4
Comilla	225	278	408***	23.6	46.8
Tongi**	169	283	406	67.5	43.5
Bogra	164	210	401	28.0	91.0
Mymensingh	273	333	390	22.0	17.1
Barisal	203	235	339	15.8	44.2
Rangpur	208	266	307	27.9	15.4
Savar City**	107	128	297	19.7	132.9
Narayanganj**	202	241	286	19.4	18.5
Shiddirganj**	-	-	257	-	-
Jessore	161	215	237	33.5	10.2
Cox's Bazaar	47	52	224	10.7	331.6
Gazipur (Kaliakair)**	265	123	213	-53.7	73.5
Brahmanbaria	122	145	194	18.9	33.8
Dinajpur	136	167	191	22.8	14.4
Narsinghdi	105	152	185	44.8	21.7
Chapai Nawabganj	131	152	181	16.0	19.1
Chandpur	100	109	171	9.0	56.9
Tangail	106	129	167	21.7	29.5
Sirajganj	106	135	167	27.4	23.7
Kadam Rasul	-	-	166	-	-
Feni	27	93	157	239.7	69.2
Tarabo**	-	-	151	-	-
Naogaon	101	124	151	22.8	21.8
Jamalpur	109	128	150	17.4	17.2
Pabna	138	160	144	15.9	-10.0
Saidpur	54	120	133	122.2	10.8
Begumganj	-	-	133	-	-
Noakhali	66	76	131	15.8	72.4
Chaudanga	88	114	129	29.5	13.2
Sreepur**	-	-	126	-	-
Faridpur	69	101	122	46.4	20.8
Bhairab	70	93	119	33.0	27.5
Satkhira	73	95	113	30.2	18.7
Jhenaidah	63	87	111	38.2	27.7
Kushtia	72	84	108	15.5	29.0
Kishoreganj	60	78	104	28.7	34.0

Source: 2011 Population Census, National Volume 3 – Urban Area Report, (Table 3.4.1.4); 2001 Population Census, Volume 1 – Analytical Report (Table 4.15)

* Officially adjusted so that comparison can be made with the former definition of urban areas. See 2011 Census report Vol. 3, p. 8. However, another problem remains in comparing the populations of these cities between 2001 and 2011, in that the 2001 figures in the table are the enumerated population. Adjusted populations were 10,466 for Dhaka, 3,371 for Chittagong, 1,276 for Khulna and 858 for Rajshahi – respectively 8.2%, 12.7%, 8.8% and 31.8% larger than the enumerated populations.

** Actually part of the Dhaka Megacity

*** Combining Comilla Sadar Dakshin City and Comilla Addarsha Sadar. See Census Report, Vol. 3, p. 93. 1991 and 2001 populations are for Comilla Addarsha Sadar alone, but at that time it included the area classified in 2011 as Comilla Sadar Dakshin.



Source: BBS, 2001 and 2011

Map 2.1

There is unfortunately a further problem in calculating growth rates of Bangladesh's largest SMAs between 2001 and 2011, namely, that the 2001 Census report gives two different figures for their populations – an enumerated one and an adjusted one – without giving any details about the procedure in preparing the adjusted figure. This makes a big difference to the rates of growth (or decline) of these SMAs between 2001 and 2011, as shown in Table 2.7. Using the adjusted figure for the 2001 populations of these cities reduces the growth rate of Dhaka and Chittagong in a non-trivial way, and it leads to an even greater decline in Khulna's population. But it is in the case of Rajshahi that it makes the greatest difference. Use of the adjusted figure for 2001 turns a slight increase into a decrease of 21 percent between 2001 and 2011.

What is clear from Tables 2.6 and 2.7 is that there was great variation in the growth rates of the populations of Bangladesh's largest cities and towns over the 2001-2011 period. The range was from a possible decline of 21 percent in Rajshahi's population (if the adjusted population figure is used for 2001) to an increase of 91 percent in Bogra's population, 133 percent in Savar City and a remarkable 332 percent in Cox's Bazar. It is extraordinary to find that two of Bangladesh's four largest metropolitan areas (Khulna and Rajshahi) may actually have lost population over the decade between 2001 and 2011. It is very unusual for large cities in a country with a growing population and a healthy rate of economic development to experience a decline in population. This appears to differentiate Bangladesh from other Asian countries, as the only other Asian country that has witnessed such a decline in two of its four largest cities is the Republic of Korea, where circumstances are very different: most of Korea's population lives in large cities, population growth is very slow and population is rapidly ageing (see ESCAP and UN Habitat, 2015: 24-30). The sharp difference in growth between the two largest (and Eastern) cities – Dhaka and Chittagong-and decline in the next two largest (and Western) cities – Khulna and Rajshahi – serves to underline the apparent gulf between urbanization trends in Eastern and Western wings of Bangladesh.

Table 2.7: Enumerated and adjusted populations of Bangladesh's SMAs in 2001 and alternative estimates of rates of increase between 2001 and 2011

	2001 population		2011 Population	% change 2001-2011	
	Enumerated	Adjusted		(3)/(1)	(3)/(2)
	(1)	(2)	(3)	(4)	(5)
Dhaka	9,672,763	10.466,601	14,171,567	46.5	35.4
Chittagong	2,991,723	3,370,506	3,724,433	24.5	10.5
Khulna	1,172,831	1,275,596	1,046,341	-10.8	-18.0
Rajshahi	651,062	857,998	679,889	4.4	-20.8

Source: 2001 populations: 2001 Census Report, Vol. 1, Analytical Report, p. 39; 2011 populations: 2011 Census Report, National Volume 3, Table 2.3

In the case of Dhaka Megacity, it is clear that Dhaka City Corporation itself, Paurashavas on its outskirts (Tongi, Savar City, Narayanganj, and Gazipur) and other urban areas on its outskirts grew rapidly (see 2011 Census Report, National Volume 3, Table 2.3). This will be discussed in more detail in Chapter 7.

Careful comparison of changes in boundaries of different cities between the two census years is needed before jumping to conclusions about other reasons for rapid or slower population increase. There was great variation in the trend of increase or decrease in area of these cities between 2001 and 2011. Three cities – Barisal, Bogra, and Chandpur – had increases in area of over 50 percent, and another – Jessore – of 45 percent. This no doubt accounted for much of the rapid growth recorded in the populations of the first three of these cities (ranging from 44 percent to 91 percent in 10 years). Only Jessore proved to be an exception, with a population increase of only 10 percent despite the enlarged boundaries.

Khulna's population decline deserves more careful analysis, however. There were certainly some special circumstances. As the census report observes (Volume 3, Table 2.3), there was migration away from Khulna as a result of the collapse of an industry (which although the census report does not mention it, was the jute processing industry), which had been a major employer in the city. Even so, the decline in Khulna's population is surprising. Additional factors included the lack of reliable power supply, an important deterrent to industrial

development. This is currently being addressed through construction of a coal-fired power plant at Ramphol and increasing supplies of LPG, with four LPG plants now operating at Mongla port. Additional factors deterring industrial and service sector development in Khulna included lack of an airport, poor water supply as a result of salinity, and lack of quality schools and health services. Though it is the third largest city in Bangladesh, Khulna lags well behind Dhaka and Chittagong in many urban facilities.

6. Components of Urban Population Growth

It is important to know the extent to which urban population growth in any country or region results from (1) a rural/urban differential in natural increase in favour of urban areas; (2) a transfer of population from rural to urban areas through net migration gains in urban areas at the expense of rural areas; or (3) a reclassification of areas from rural to urban categories (what is sometimes referred to as in situ urbanization). In the case of Bangladesh, however, the effect of reclassification between 2001 and 2011, rather than contributing to the growth of urban populations as in most countries, was to decrease urban populations, and it was only the contribution of natural population increase and net migration to urban areas that resulted in overall urban population growth. Of course, in the case of certain individual urban areas, boundary extensions did contribute to their population growth.

Can the relative contribution of these components to changing urban populations and levels of urbanization in Bangladesh be determined? It can be done, but only in a very rough way. The methodology is to use the 2001 urban population as the base, and from information on birth and death rates in urban areas, calculate the expected natural increase of urban population over the period. The difference between the expected urban population based on natural increase and the recorded urban population is the combined effect of net migration and of boundary changes in urban areas.

Using this approach, it is found that the 2001 urban population of 31.1 million could have been expected to increase to approximately 35.6 million as a result of natural increase, assuming that the rate of natural increase of the urban population was the same as the rural. However, the rates of natural increase are not likely to be the same. What we know about this is that fertility rates are lower in urban than in rural areas, but mortality rates are much the same (see Table 3.2). In any case, fertility rates are the main influence on age structure, both because birth rates are considerably higher than death rates, and because differentials in death rates affect all parts of the age pyramid, whereas differentials in birth rates affect only the youngest cohorts in the age pyramid. Bearing this in mind, it can be assumed that the rate of natural increase in urban areas was somewhat lower than in rural areas, and therefore the urban population in 2011, based on natural increase alone, would have been approximately 34.9 million.

The difference between the urban population as projected to reflect differential urban and rural natural increase and the recorded (adjusted) figure of 41.9 million can be considered to represent the combined effect of net rural-urban migration and boundary changes. Assuming the same rate of natural increase in urban as in rural areas, a rough calculation of the 2001-2011 trends shows the contribution of natural increase to urban population growth was 42 percent, and of migration and reclassification was 58 percent. Using the (more realistic) lower figure for natural increase, the contribution of natural increase to urban population growth would have been 35 percent, and of migration and reclassification 65 percent.

The difficulty is that boundary changes had such a massive impact that it is difficult to disentangle their effect from that of rural-urban migration. Indeed, it is likely that boundary changes would have made for a decline in urban populations, and this was more than offset by the contribution of migration to growth of urban areas. The reality is probably that, with the slowing of rates of natural increase and the acceleration of economic development, migration came to play a particularly important role in the growth of urban areas in Bangladesh, but this role is very difficult to disentangle because of the data issues.

7. Changing Population Densities as a Proxy for Changing Urbanization

Given the uncertainties about the actual trends in urbanization, outlined in this chapter, another approach to getting an overall sense of where urbanization has been most rapid is to concentrate on overall growth of population – and of population density-in different districts, regardless of urban and rural classifications. When this is done, a picture emerges that adds some support to the analysis already conducted.

Table 2.8 shows the 15 most densely populated districts according to the percentage change in population (and population density) between 2001 and 2011. (see Appendix Table 2.1 for the full details of all districts). By far the most rapid increase in population was in the districts surrounding Dhaka-Dhaka itself, Narayanganj and (especially) Gazipur. The numbers represented by this rapid increase were also huge, because of the large total population of these three districts. In terms of population density, Gazipur climbed in rank from 10th to 4th most densely populated district – a truly remarkable change in just 10 years, reflecting the rapid industrialization and population growth in this district on the northern fringes of Dhaka.

Table 2.8: Change in population densities in 15 most densely populated districts of Bangladesh, 2001-2011

District	Population density 2001	Density ranking 2001	Population density 2011	Density ranking 2011	% increase in population and density	Change in ranking	Populat. 2011 ('000)
Dhaka	5,831	1	8,111	1	39	-	12,044
Narayanganj	3,161	2	4,139	2	31	-	2,948
Narsingdi	1,744	3	1,930	3	11	+1	2,225
Gazipur	1,231	10	1,852	4	50	+6	3,404
Comilla	1,490	4	1,719	5	15	-1	5,387
Feni	1,336	6	1,530	6	15	-	1,437
Munshiganj	1,355	5	1,487	7	10	-2	1,446
Brahmanbaria	1,244	9	1,457	8	17	+1	2,840
Chittagong	1,252	8	1,421	9	13	-1	7,616
Chandpur	1,333	7	1,404	10	5	-3	2,416
Sirajganj	1,121	11	1,290	11	15	-	3,097
Kushtia	1,082	12	1,210	12	12	-	1,947
Rangpur	1,059	13	1,200	13	13	-	2,842
Lakshmipur	1,034	15	1,200	13	16	+2	1,710
Nilphamari	1,016	17	1,186	15	17	+2	1,834

Source: Appendix Table 2

The overall population densities in these districts was the highest in Bangladesh, aside from Narsingdi which, although its population growth was not so rapid, was still urbanizing and reaching population densities that were indicative of a largely urbanized population, because they were in excess of what would be sustainable in an agriculture-based district.

Other important trends which are highlighted by the focus on changing populations and densities between 2001 and 2011 can be observed in Appendix Table 2.1. Most notably, the rapid increase in population in Cox's Bazar and Sylhet singles them out as districts with considerable power to attract migrants. As shown earlier in Table 2.5, both districts urbanized rapidly over the period, largely because of the rapid growth of the cities of Sylhet and Cox's Bazar.

The very slow population increase in the Divisions of Khulna (7 percent) and Barisal (2 percent) over the period reflects the outmigration that took place in these two divisions. Some districts in these divisions actually lost population over the period – Khulna and Bagerhat in Khulna Division, and two of the four districts in Barisal Division – Jhalokati and Barisal, while Pirajpur's population remained constant. As will be discussed in more detail in Chapter 7, migration from Barisal Division to Dhaka, both long-term and temporary migration, was an important component of the growth of Dhaka Megacity's population, including the slum areas where many of these migrants congregate.

8. Sex Ratios of Urban Population

The urban areas in Bangladesh have always had an excess of males in their population. This excess, however, has been declining over time. The trend in sex ratio of the large cities is shown in Table 2.9. The decline in sex ratio was least for Dhaka, and most marked for Chittagong. In all these large cities, the sex ratio in 2011 was higher in the core city than in the outlying areas (data not shown). As for the comparative situation in 2011, Figure 2.4 shows the sex ratio of the urban population by region and division. Clearly, Dhaka has a much higher sex ratio than other cities and towns, and as Dhaka dominates

the urban populations of the eastern part and the non-coastal parts of the country, the sex ratio of their urban areas is considerably higher than in western and coastal parts of Bangladesh.

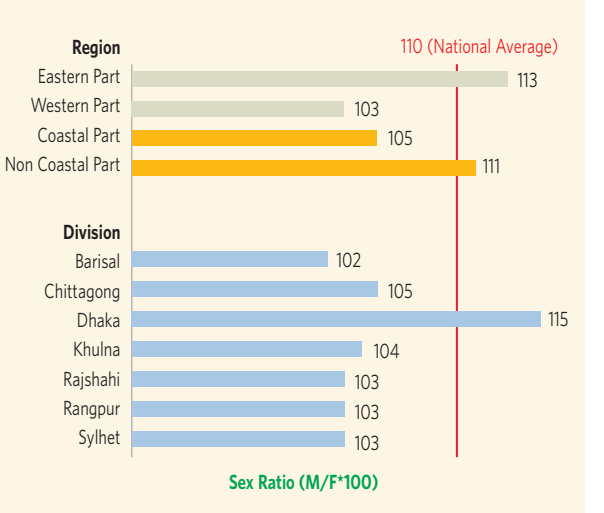
The changing sex ratios of migrants to the urban areas, and how this is modifying the sex ratio of urban areas, will be discussed in Chapter 4.

Table 2.9: Sex ratios in Bangladesh's four largest cities, 2001 and 2011

City	Population	Sex ratio	
	2011 ('000)	2001	2011
Dhaka Megacity	14,172	125.4	121.0
Chittagong SMA	3,724	121.2	109.5
Khulna SMA	1,046	113.6	106.7
Rajshahi SMA	680	112.9	106.1

Source: Calculated from 2011 Census Report, National Volume 3, Table 2.3

Figure 2.4: Sex ratio of urban population by region and division, 2011



Source: Calculated from 2011 Census Report, National Volume 3, Table 3.4.1.3

[5] The 1991 Census also gave enumerated and adjusted figures for the total urban population. The enumerated urban population was 20,872,204 and the adjusted population was 22,455,174, or 7.6 percent larger than the enumerated urban population (see 2001 Census Report, Vol. 1, Table 4.1).

[6] It appears, though, that the real growth of Kolkata's population was more rapid than that recorded in its official boundaries. Based on nighttime lights data, the proportion of Kolkata's built-up area lying outside the official boundary exceeds that within these boundaries (Ellis and Roberts, 2016: 65-67).

[7] These percentages have been calculated using the revised estimates of the populations of Dhaka Megacity and Chittagong, Khulna and Rajshahi SMAs. These percentages are actually slightly too low, because in trying to determine the urban population of each region by adding the difference between the adjusted populations of Dhaka Megacity and Chittagong, Khulna and Rajshahi SMAs and the enumerated populations for these cities, to eastern and western region urban populations, the resultant total urban population estimate was more than 1 million less than the adjusted urban population presented in the Census report.

[8] For more detailed tables on growth of urban populations by district from 1974 to 2011, see BBS 2015b, Tables 1 and 2.

[9] Tellingly, Gazipur's ranking among districts in terms of overall population size climbed sharply from 24th in 2001 to 7th in 2011.

9. Key Points – Chapter 2

- Changes in definitions of urban areas in the 2011 Population Census complicates analysis of urbanization trends in Bangladesh.
- Provision by BBS of estimates of the populations of Dhaka, Chittagong, Khulna and Rajshahi in 2001 boundaries enables a better comparison of 2001-2011 trends. This adjustment shows that the percentage of the population living in urban areas rose from 23.5% in 2001 to 28.0% in 2011.
- However, even with this adjustment, the areal extent of urban areas in Bangladesh declined slightly, whereas in reality the built up area of urban areas must have increased. Therefore the figure of 28.0 percent is an underestimate of the true urban population.
- The estimate by the United Nations of 31.2% urban in 2011 may well be closer to the mark.
- There is a dense pattern of towns and cities across Bangladesh, but centrally-located Dhaka is dominant.
- The number of cities in Bangladesh almost doubled between 2001 and 2011 – to 43 – and the number of townships with populations above 25,000 also increased. But there was a sharp decrease in the number of smaller towns.
- United Nations projections indicate that the entire increase in Bangladesh's population from 2015 onwards will have to be accommodated in urban areas.
- The population of some of Bangladesh's urban areas grew very rapidly between 2001 and 2011, notably those on the outskirts of Dhaka, as well as Comilla, Cox's Bazar, Feni, Bogra (because of boundary changes) and Sylhet.
- However, the third largest city in Bangladesh – Khulna-actually declined in population between 2001 and 2011, and the fourth largest city – Rajshahi – also declined when compared with its adjusted 2001 population.
- The sex ratio (males per 100 females) in Bangladesh's four largest cities is above 100, though it declined between 2001 and 2011.

CHAPTER 3

CHARACTERISTICS OF BANGLADESH'S RURAL AND URBAN POPULATIONS

CHAPTER 3: CHARACTERISTICS OF BANGLADESH'S RURAL AND URBAN POPULATIONS

How sharp are urban-rural differences in Bangladesh? This question will be examined in this chapter, by comparing a number of characteristics of urban and rural populations, drawing on census and other sources.

1. Fertility and Mortality Levels and Trends

According to the 2014 DHS, the total fertility rate (TFR) of women in urban areas was 2.0 and in rural areas 2.4. More detailed data on TFR from the 2011 Population Census is given in Table 3.1. This shows clearly that the rather wide differences in fertility between rural and urban areas in 1991 had narrowed considerably by 2011. Indeed, in Barisal and Khulna, there was essentially no rural-urban difference, and only in Sylhet could the difference be described as wide. To investigate whether this reflects a narrowing of the urban-rural differences in wanted fertility or improvements in the effectiveness of the family planning program in rural areas, we need to turn to the DHS Survey.

Table 3.1: Total fertility rate by rural-urban residence and division, 1991 and 2011

Division	1991		2011		Ratio, rural/urban	
	Rural	Urban	Rural	Urban	1991	2011
Barisal	3.82	2.00	1.95	1.92	1.91	1.01
Chittagong	3.85	2.14	2.52	1.84	1.80	1.37
Dhaka	3.88	2.16	2.16	1.91	1.79	1.13
Khulna	3.72	2.04	1.86	1.78	1.82	0.98
Rajshahi	3.83	2.92	1.84	1.49	1.31	1.23
Sylhet	-	-	2.86	1.97	-	1.45
Rangpur	-	-	2.19	2.06	-	1.06
BANGLADESH	**3.82**	**2.77**	**2.16**	**1.86**	**1.38**	**1.16**

Source: 2011 Population Census Report, Volume 4, Tables 5.5 and 5.6

How much does wanted fertility differ from actual fertility in urban and rural areas? It is possible to calculate wanted fertility rates in the same manner as the conventional age-specific fertility rates, except that births the mother indicated had been unwanted are omitted from the numerator; the remainder are cumulated to form a total wanted fertility rate. This is analogous to the conventional total fertility rate (TFR). The total wanted fertility rate may be interpreted as the number of wanted births that a woman would bear by age 50, if she experienced the wanted fertility rates observed for the past three years. As shown in Table 3.2, the wanted fertility rate in rural areas was more than half a child less than the actual fertility rate, while in urban areas it was half a child less. This indicates that women in urban areas are closer to achieving their wanted fertility than are those in rural areas, though the reason why this is so needs to be investigated. In both rural and urban areas, the wanted fertility rate is well below replacement fertility level, indicating that if family planning information and services can be made readily and cheaply available, fertility in Bangladesh will reach a level below replacement level.

Table 3.2: Wanted fertility rates for the three years preceding the survey, 2014

	Total wanted fertility rate	Total fertility rate
Rural	1.7	2.4
Urban	1.5	2.0

Source: NIPORT et al., 2016, Table 6.6

Turning to mortality, early childhood mortality rates have been declining over time throughout Bangladesh. Though the 2011 DHS showed only slight urban-rural differences in early childhood mortality, the 2014 DHS showed substantial differences, more in line with the urban-rural differences found in most developing countries (See Table 3.2).

Table 3.3: Early childhood mortality rates for the 5-9-year period preceding DHS Surveys

Type of mortality	2011		2014	
	Urban	Rural	Urban	Rural
Neonatal	32	33	21	31
Postneonatal	10	10	13	9
Infant mortality	42	43	34	40
Under-5 mortality	50	55	37	49

Source: NIPORT et al, 2013, Table 8.3; NIPORT et al, 2016, Table 8.3

Note: Rates are deaths per 1,000 live births

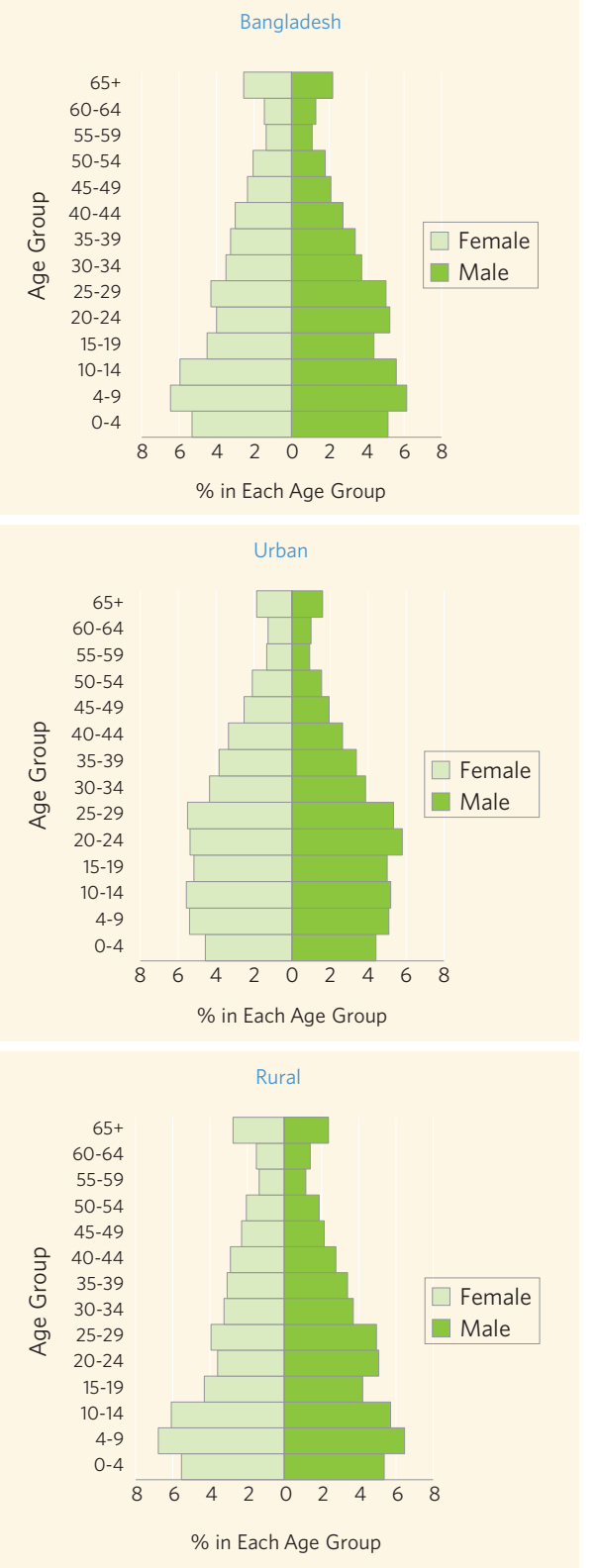
2. Differences in Age and Sex Structure

By way of background, it is important to note that the sex ratios (males per 100 females) in Bangladesh have been declining over time. The decline accelerated in the 2001-2011 period; the sex ratio fell from 116 in urban areas and 104 in rural areas in 2001 to 109 in urban areas and 97 in rural areas in 2011. The Census report (Volume 3, p. 41) comments that the sex ratios are "remarkably lower" in 2011, but does not draw the obvious conclusion – that unless there was much higher mortality for males than for females in the intervening period, or a big drop in the sex ratio at birth (both highly unlikely), or an increase in overseas migration of males (which to some extent did occur), the sharp fall indicates that there must have been differential mis-recording of the population by sex in one or other census (or both).

There are important differences in age and sex structure between urban and rural areas in Bangladesh. These differences result mainly from different fertility rates and rates of migration. The difference in overall sex ratios (109 males for every 100 females in urban areas and 97 males for every 100 females in rural areas) largely result from different migration patterns for males and females, and need to be analysed in relation to particular age groups, as will be done below.

In terms of overall age structure of urban and rural populations, one would expect that the lower fertility in urban areas would result in an older population, but in fact this is more than offset by the "younging" of the urban population as a result of rural-urban migration flows, which are heavily concentrated in the young adult age groups.

Figure 3.1: Bangladesh: National, Rural and Urban Age Pyramids, 2011



Source: 2011 Population Census Reports

Figure 3.1 shows the age pyramids for urban and rural areas of Bangladesh according to the 2011 Population Census. They are drawn showing the proportion each age-sex group (e.g. females aged 15-19) makes up of the total population, not of the total population of that sex. This is in order to show more clearly not only the age structure differences for each gender in urban and rural areas, but the extent to which, in any one age group, one gender predominates in urban or rural areas. Important differences can be observed. Because migration flows are mainly in the young working ages, this section of the urban population (aged 15-29) is swollen relative to the rural population, whereas the elderly population is a somewhat higher proportion in rural areas, partly because relatively few old people migrate, and the flow among those who do migrate tends to be from urban to rural areas, sometimes because those who migrated to the cities when they were young want to return to their home area for retirement.

As for sex ratios, they show important differences. Females outnumber males in the age groups 20-24 and 25-29, in Bangladesh as a whole and also in rural areas. In the urban areas, young women outnumber young men in the 20-24 year age group, a surprising finding in view of the overall male surplus in urban areas, including in age groups adjacent to the 20-24 age group. As age misstatement could play a role, there is a case for comparing sex ratios in broader age groups. This is done in Table 3.4, which shows a strikingly low sex ratio in the 15-29 year age group, especially in rural areas, but also to some extent in urban areas, though in urban areas, the low ratio at age 20-24 is to some extent offset by higher ratios in the adjacent age groups. Overseas labour migration of males could partly explain the low sex ratios at ages 15-29 in Bangladesh as a whole, while female migration to the urban areas to participate in the RMG industry could partly explain the relatively low sex ratios in this age group in urban areas.

Table 3.4: Sex ratios in broad age groups, 2011

Age group	Bangladesh	Urban	Rural
0-14	105.0	105.7	104.8
15-29	87.3	99.3	83.1
30-44	98.7	116.7	93.3
45-64	114.6	133.4	109.8
65+	116.2	116.4	116.1
All ages	100.2	109.3	97.6

Source: 2011 Population Census

Table 3.5 shows some indicators of urban-rural differences in age structure. A number of indicators are presented: the percentages in the key functional age groups; the dependency ratio (a crude indicator of the proportion of dependant age population to working age population); and the support ratio, i.e. the ratio of working age population to the elderly. Urban areas of Indonesia are at a considerable advantage in having a lower proportion of both young and old dependants than rural areas. This becomes clear in the age pyramid, where the considerably higher number of both children and elderly in rural areas is clearly apparent, offsetting the lower share in the working ages. Another important point is that, although the share of those in the working ages (15-64) in urban areas is almost identical for males and females, females have a somewhat higher share at ages 15-29. This appears to reflect greater feminization of recent migratory flows of young people to urban areas. However, in rural areas as well, females considerably outnumber males at ages 15-29.

Table 3.5: Indicators of age structure differences between urban and rural areas of Bangladesh, 2011

Indicator	Urban male	Urban female	Rural male	Rural female
% aged 0-14	29.8	30.8	37.4	34.7
% aged 15-64	66.6	65.8	57.1	60.6
(% aged 15-29)	(30.7)	(33.8)	(24.0)	(28.1)
(% aged 30-64)	(35.9)	(32.0)	(33.1)	(32.5)
% aged 65+	3.6	3.4	5.5	4.7
Dependency ratio*	0.50	0.52	0.75	0.65
Support ratio**	18.5	19.4	10.4	12.9

Source: 2011 Population Census Report, Vol. 3, Table PO2

*Population 0-14+65+/15-64 **Population 15-64/65+

3. Household Size

Changes in the average household size are very important for urban planners, affecting both the number and size of housing units required. The growth in number of additional housing units needed can differ greatly from the growth rate of the population if average household size is changing. In the large cities of Bangladesh, as in the country as a whole, the average household size declined sharply between 1991 and 2001, and this decline continued in the first decade of the 21st century (Table 3.6). This was no doubt largely because of the continuing decline in fertility. In 2001, there was a difference of one whole person in average household size between Sylhet (5.6) and Khulna (4.6). It is noteworthy that fertility was substantially higher in Sylhet than in Khulna.

Table 3.6: Average number of household members in Bangladesh's largest cities, 1991-2011

City	1991	2001	2011
Dhaka Megacity	5.6	4.7	4.4
Chittagong SMA	5.7	5.1	4.6
Khulna SMA	5.1	4.6	4.2
Rajshahi SMA	5.4	4.8	4.5
Sylhet	6.5	5.6	4.9
BANGLADESH	**5.5**	**4.9**	**4.4**
BANGLADESH URBAN	**5.5**	**4.9**	**4.4**

Source: 2001 Population Census Report, Vol. 1, Table 4.11; 2011 Population Census Report, Vol. 3, Urban Area Report, pp. 57-64

Note: 2011 figures are for the City Corporations, not the SMA

4. Marriage

Bangladesh has one of the youngest ages at marriage for females in the world. This has significant ill-effects on economic and social development and, given that the bride typically has little say in the choice of husband, their marriages violate basic human rights. How much does female age at marriage differ between rural and urban areas? As shown in Table 3.7, the answer is "not much". Certainly, there is almost one year's difference in median age at marriage between rural and urban areas, but even in urban areas, the median of 16.5 is extremely low. Moreover, the third section of the table indicates that the urban-rural differential in the proportion of women marrying before age 18 narrowed between 2006 and 2011. It appears that urbanization as such does not make much difference to female age at marriage.

Table 3.7: Indicators of urban-rural differentials in early marriage in Bangladesh

(a) Median age at marriage for women aged 20-49, 2011

Residence	Age
Urban	16.5
Rural	15.6
Total	15.8

(b) Percent of ever married women married at ages 15-19, by current age, 2011

Current age	Urban	Rural
20-24	79	86
25-29	63	76

(c) Percent of women aged 20-24 who were married before age 18, 2006 and 2011

Residence	2006	2011
National	64.1	51.1
Urban	67.4	51.6
Rural	56.2	50.6

Source: (a) NIPORT et al, 2013, Table 4.5; (b) 2011 Census Report, Vol. 4, Table 3.01; (c) BBS, Multiple Indicator Cluster Survey 2006 and VAW Survey 2011

The only factor that makes for significant delay in age at marriage for females appears to be completion of grade 10 secondary education; even among those with incomplete secondary education, median age at marriage is 16.3 – certainly higher than the age below 15 that is the average for uneducated girls or those with only some primary school education, but well below the figure of 19.9 for those who have completed secondary education.

5. Educational Characteristics

Most children in Bangladesh attend school at the primary level, even if they do not all complete this level. Incomplete primary school tends to mean a failure to gain literacy. Table 3.8 compares the illiteracy rate in urban and rural areas of Bangladesh, as well as in Bangladesh's largest city, represented by Dhaka District.

Table 3.8: Rate of illiteracy, by age group and sex, Dhaka and rest of Bangladesh, 2011

Age group	Males			Females		
	Urban	Rural	Dhaka	Urban	Rural	Dhaka
15-19	18.2	13.6	9.2	15.7	10.4	12.6
20-24	17.4	19.3	9.3	19.2	20.8	14.8
25-29	21.4	29.5	15.8	26.1	32.1	20.1
30-34	25.0	39.8	16.6	33.5	45.0	22.9
35-39	28.7	48.0	22.3	40.9	55.4	36.3
40-44	32.5	52.9	25.6	47.4	63.8	39.2
45-49	32.1	54.3	26.8	49.3	67.0	42.3
50-54	36.2	57.0	27.8	57.6	73.4	47.8

Source: Calculated from 2011 Population Census, Volume 4, Table PO7 and Volume 3, Table PO7

At most ages, illiteracy rates for males in rural areas are well above urban rates and roughly twice as high as in Dhaka. Female illiteracy rates are higher than those for males except at ages 15-19, though the differences only become extreme at ages above 35. For females, too, the urban-rural differential is marked, though not quite as extreme as for males. Clearly, though many uneducated people live in Dhaka, in general, illiteracy rates are lower in Dhaka than in other urban areas, and much lower than in rural areas. Nevertheless, the fact that around 20 percent of 30-34 year olds – a key working age group-in Bangladesh's capital city are illiterate is not a reason for satisfaction. It should be noted, however, that there is a fairly steep gradation towards lesser illiteracy by age group, both in Dhaka and in the rest of the country, reflecting the considerable strides Bangladesh has made in increasing educational enrolment rates in recent times.

Another important statistic is the proportion who have reached various levels of education. This is shown in Table 3.9, for the year 2012. This table has the disadvantage of including all people aged 6 and above, even though many children aged 6-19 have not yet completed their education. However, the general picture it gives does reflect the higher educational attainment of the urban population, with well over twice as high a proportion having completed secondary school or more than among the rural population, and a much lower proportion of the urban than the rural population with incomplete primary education or less. The educational attainment of women aged 15-49 (which is not much affected by inclusion

Table 3.9: Educational attainment of household population, 2011 (%)

	Incomplete primary or less	Completed primary/ incomplete secondary	Completed secondary or more	Total
MALE (AGED 6+)				
Urban	41.3	32.4	26.3	100.0
Rural	58.8	29.9	11.3	100.0
Total	54.3	30.6	15.1	100.0
FEMALE (AGED 6+)				
Urban	46.0	35.3	18.7	100.0
Rural	60.9	32.6	6.5	100.0
Total	57.2	33.3	9.5	100.0
FEMALES (AGED 15-49*)				
Urban	35.4	41.6	23.0	100.0
Rural	49.9	42.0	8.1	100.0

Source: NIPORT et al., 2013, Tables 2.10.1, 2.10.2 and 3.2.1

* Ever married

of those who have not yet completed their education) confirms the higher average levels of education in urban areas, with three times as large a proportion in the high educational category compared with the rural population. However, though the proportion with very low levels of education is lower in urban than in rural areas, it is worrying that more than one third of urban women have none or incomplete primary education.

The 2011 Population Census gives information on educational attainment of the working population in urban and rural areas. This is presented for males in Table 3.10; females are not included in the table because only 11 percent of the female population were included in the working population, and thus their educational attainment would not represent that of women as a whole. The differential between rural and urban areas is not especially sharp, but this may be partly because of the inclusion of a substantial urban population in the "rural" category, as already discussed in Chapter 2.

In comparing the educational capital of rural and urban populations in Bangladesh, evidence presented in Tables 3.8 and 3.9 only goes part-way. What these tables do not show is the wide gulf between the quality of education imparted in

Table 3.10: Educational attainment, working population aged 15+, 2011 Census (percent)

Educational attainment	Males	
	Urban	Rural
No education	5.1	6.0
Primary school	23.8	35.5
Junior secondary	17.7	21.5
Senior secondary	34.6	31.0
University	18.7	5.9
Total	100	100

Source: Calculated from 2011 Population Census, Volume 4, Table P09

rural and urban schools, on average. There is no doubt that the average student emerging from, say, eight years of schooling in rural schools is much less equipped to deal with the issues facing citizens of modern Bangladesh than those who have received their schooling in urban areas.

6. The Employment Structure of Rural and Urban Areas

The common belief that most of the rural population are engaged in agriculture and that manufacturing and service sector employment is heavily concentrated in urban areas is actually not correct. What is correct is that most agricultural employment is in rural areas, but this does not mean that most rural dwellers are engaged in agricultural activities. This is clear from Table 3.11, which shows that in 2012, only about 44 percent of employed males living in rural areas worked in agriculture, and 12 percent of employed females. Why is this? Firstly, because there are many other activities taking place in rural areas, ranging the whole gamut from various kinds of manufacturing, through trade, repairs and service activities; secondly, because many rural dwellers actually commute each day to work in urban areas, almost always in non-agricultural activities.

It is important to note that it is often difficult for respondents to identify their main economic activity in response to questions in censuses or surveys. In both urban and rural areas, many people engage in multiple activities, and the activity at which they spend most time is not necessarily the one that brings them the most income. Thus the distribution of workers across industries or occupations in Table 3.11 can only

Table 3.11: Occupation of those aged 15-49 who were employed in the previous 12 months, 2012

	Professional, technical	Business	Factory worker, blue collar service	Semi skilled labour/ service	Unskilled labour	Farmer, agricultural worker	Home based manufac.	Domestic servant	Total*
MALES									
Urban	9.8	32.4	17.5	23.8	7.0	7.6	0.1	0.0	100.0
Rural	3.8	21.6	8.1	13.0	7.5	44.4	0.1	0.0	100.0
FEMALES									
Urban	15.2	4.9	35.1	21.6	0.4	0.4	6.2	15.1	100.0
Rural	11.1	5.6	18.4	22.8	1.5	11.6	16.6	10.4	100.0

Source: NIPORT et al., 2013, Tables 3.6.1 and 3.6.2

* Includes small group of other and missing, so row totals do not add exactly to 100%

be considered a rough indication of the actual structure of employment in Bangladesh.

In Bangladesh, a great deal of employment is in the informal sector. Indeed, in 2010, 87.5 percent of the total employed population (and 92.3 percent of employed females) worked in the informal sector. In urban areas, more of the employed population work in the formal sector – 27.6 percent of males and 19.0 percent of females (BBS, 2011: 51).

Is it possible to compare effectively the changing industrial structure of employment in rural and urban areas in Bangladesh over time? Information from the Labour Force Surveys does enable us to do this, at least for the period between 2000 and 2010. The overall structure of employment did not change dramatically over this period. The share of agriculture in employment fell somewhat, in manufacturing and construction rose, and the share of different components of the services sector rose and fell, but overall the share of services barely changed.

In the present study, it is more important to look in more detail at the structure of employment in rural and urban areas in more recent times. This is done in Table 3.12. What is perhaps surprising is the high proportion of those employed in urban areas who work in the agricultural sector – almost one quarter. Of course, the proportion working in agriculture is much higher in rural areas-over

Urban hawker on footpath. *Photo: Drik*

Table 3.12: Urban and rural population aged 10 years and over who worked during the previous week by main industry by sex in Bangladesh, 2010

Industry	Urban	Rural	Total
Agriculture, forestry, hunting, fishing	24.0	54.6	47.6
Mining and quarrying	0.2	0.4	0.2
Manufacturing	20.5	10.1	12.5
Elect, gas and water	0.5	0.1	0.2
Construction	6.6	4.3	4.8
Trade, restaurants, hotels	18.7	14.6	15.5
Transport, storage & communication	9.5	6.7	7.4
Finance, insurance, real estate etc.	2.0	0.3	0.7
Community, social, personal services	14.8	7.4	9.2
Other	3.2	1.5	1.9
TOTAL	**100.0**	**100.0**	**100.0**

Source: Labour Force Survey data from BBS, 2011, Table 4.7

half. By contract, twice as high a proportion of workers in urban areas than in rural areas work in manufacturing, and twice as high a proportion in services, but the proportion working in construction, trade and transport is not very much higher in urban than in rural areas.

Table 3.13 focuses on gender differences in employment patterns in urban areas of Bangladesh. The differences are very striking. Males are spread across a wide range of activities, with more than 10 percent in each of five major sectors– agriculture, manufacturing, trade, transport and services. By contrast, there are only three major sectors employing more than 10 percent of females– agriculture, manufacturing and services. Surprisingly, almost half of working females living in urban areas work in the agriculture sector. Manufacturing also employs a high proportion– 23 percent, which is higher than the proportion of males who work in this sector. The vast majority of urban females who work in manufacturing work in the garment and knitwear sectors. A striking contrast with many countries is the very small proportion of female workers who work in the "trade, restaurant and hotel" sector. In many countries, this sector would employ as many or more females as males. In Bangladesh, however, the sector is dominated by males, clearly reflecting cultural differences, according to which it is not appropriate for women to work in these activities.

Table 3.13: Urban population aged 10 years and over who worked during the previous week by main industry by sex in Bangladesh, 2010

Industry	Male	Female	Total
Agriculture, forestry, hunting, fishing	13.6	48.9	24.0
Mining and quarrying	0.3	0.0	0.2
Manufacturing	19.4	23.1	20.5
Elect, gas and water	0.6	0.2	0.5
Construction	8.8	1.4	6.6
Trade, restaurants, hotels	24.7	4.5	18.7
Transport, storage & communication	13.0	1.1	9.5
Finance, insurance, real estate etc.	2.5	1.0	2.0
Community, social, personal services	16.1	11.4	14.8
Other	1.0	8.4	3.2
TOTAL	**100.0**	**100.0**	**100.0**

Source: Labour Force Survey data from BBS, 2011, Table 4.7

Another major difference between the male and female workforce in urban areas can be seen in terms of employment status (see Table 3.14). Almost half of female workers are unpaid family workers, compared with only 4 percent of male workers. Males are much more likely than females to be day labourers, but females are much more likely to be servants.

Table 3.14: Employment status of the urban workforce, by sex, 2010 (percent)

Employment status	Total	Male	Female
Regular paid employee	30.3	32.9	24.0
Employer	0.2	0.3	0.1
Self employed (agriculture)	6.4	6.5	6.2
Self employed (non-agriculture)	21.7	27.3	8.4
Unpaid family worker	17.1	4.0	48.2
Irregular paid worker	5.8	6.3	4.4
Day labourer (agriculture)	3.6	4.8	0.9
Day labourer (non-agriculture)	14.4	18.5	4.6
Servant	1.1	0.2	3.2
TOTAL	**100**	**100**	**100**

Source: BBS, 2011, Table 4.11

7. Income Levels and Poverty

Amelioration of poverty is a key objective of Bangladesh's development planning. Poverty rates in Bangladesh have been steadily decreasing, but the key focus here is to examine rural-urban differences in poverty and how poverty amelioration has been proceeding in both areas. As noted earlier, measurement of poverty is complex, but the available measures indicate that extreme poverty in Bangladesh appears to have been declining at a more rapid rate than overall poverty. Urban and rural poverty trends played an important role in this differential decline. The key trend was a rapid decline (47 percent in five years between 2005 and 2010) in extreme poverty in urban areas. The rate of poverty decline in rural areas, both general and extreme poverty, has been slower.

As shown in Table 3.15, poverty is much more prevalent in rural than in urban areas – more than one third of rural dwellers lived in poverty in 2010, compared with one fifth of urban dwellers. The urban-rural differential was particularly marked in the case of extreme poverty – 21 percent in rural areas compared with 8 percent in urban areas. The urban-rural differentials also affect incidence of poverty by division. Given that urban poverty is lower than rural, poverty rates tend to be lower in divisions containing large cities. Thus it is not surprising that the lowest incidence of extreme poverty is found in Chittagong, Khulna and Dhaka divisions. Poverty incidence also reflects to some extent the East-West developmental divide in Bangladesh, with Barisal and Rangpur registering the highest rates of both general and extreme poverty.

Table 3.15: Poverty head count rate (CBN) by severity of poverty and residence, 2005 and 2010

Residence	Upper Poverty Line		Lower Poverty Line	
	2005	2010	2005	2010
National	40.0	31.5	25.1	17.6
Rural	43.8	35.2	28.6	21.1
Urban	28.4	21.3	14.6	7.7

Source: BBS, 2011

Of course, more prosperous areas attract migrants, and this raises the number of poor people in cities. Thus although the rates of poverty in cities are relatively low, the proportion of population living in urban areas is increasing, so the absolute number of poor people living in urban areas could even have increased in the

2005-2010 period, despite the declining rates of urban poverty. What is unclear is how many of those who migrate to the city in order to escape poverty actually succeed in doing so.

It is clear from Table 3.16 that urban areas have much higher proportions of their populations in the two highest wealth quintiles than rural areas: 79 percent compared with 28 percent. The rural areas not only have half their population in the lowest two wealth quintiles, but also a higher level of inequality of wealth, as measured by the Gini coefficient (for which a higher figure indicates a more unequal distribution). Regionally, by far the highest Gini coefficient is found in Dhaka Division, no doubt because it has not only the wealthiest city in Bangladesh but also considerable rural areas, where incomes are much lower.

Table 3.16: Percent distribution of the de jure population by wealth quintiles by residence, 2011

Area	Wealth quintile						Gini coefficient
	Lowest	Second	Middle	Fourth	Highest	Total	
Urban	5.8	5.9	9.2	24.0	55.1	100.0	24.4
Rural	24.5	24.5	23.5	18.7	8.8	100.0	30.3
Total	20.0	20.0	20.0	20.0	20.0	100.0	32.7

Source: NIPORT et al., 2013, Table 2.6

8. Household Possessions

Table 3.17 shows the difference between urban and rural areas in ownership of various household possessions and means of transportation. The generally higher level of prosperity of the urban population is clearly evident in the much higher ownership rate of refrigerators, electric fans and televisions. However, although urban ownership rates of mobile phones are higher than rural, it is remarkable that rural rates of ownership of mobile phones are now as high as they are (87 percent of households), no doubt reflecting both the general increase in income levels of the population and the decline in price of mobile phones, not to mention the strong social pressure to own mobile phones, formerly as a symbol of success but nowadays because they are considered nearly indispensable.

Table 3.17: Percentage of households possessing various household effects and means of transportation by residence, 2014

Possession	Urban	Rural	Total
Housing - earth or sand floor	32.5	81.5	67.8
HOUSEHOLD EFFECTS			
Radio	3.2	3.6	3.5
Television	70.6	33.0	43.5
Mobile telephone	93.4	86.7	88.5
Non-mobile telephone	4.2	0.5	1.6
Refrigerator	40.6	12.3	20.2
Electric fan	85.9	48.5	59.0
DVD/VCD player	12.1	4.8	6.8
Computer/laptop	11.8	2.4	5.1
MEANS OF TRANSPORT			
Bicycle	16.7	28.4	25.1
Motorcycle/scooter	8.0	5.7	6.4
Rickshaw/van	5.5	5.5	5.5
Animal drawn cart	0.2	0.1	0.1
Car/truck/microbus	1.2	0.6	0.8

Source: NIPORT et al., 2015

Some additional information reflecting the extent to which urban and rural populations access various communications media is shown in Table 3.18. In interpreting this information, it must be kept in mind that some of the population classified as rural in the census was in fact living in highly urbanized parts in the vicinity of the largest cities. In any case, some important differences merge, both between urban and rural areas and between males and females in each area. Roughly half of the urban population and 40 percent of the rural population watch television, with only small differences between males and females. Reading of newspapers is less prevalent, and shows a

Table 3.18: Percentage of population engaging in certain activities by sex and urban-rural residence, 2011

Activity	Urban		Rural	
	Male	Female	Male	Female
Reading newspaper	29.1	11.2	23.5	2.6
Listening to radio	3.0	3.6	3.9	4.0
Watching television	51.9	58.2	42.3	37.4
Using internet	4.0	2.1	0.8	0.2

Source: Calculated from 2011 Census Report, Volume 4, Table HO3

more marked gender differential, especially in rural areas. Both radio and internet usage are very limited; in the case of internet, there are very wide differences between urban and rural areas.

9. Summary

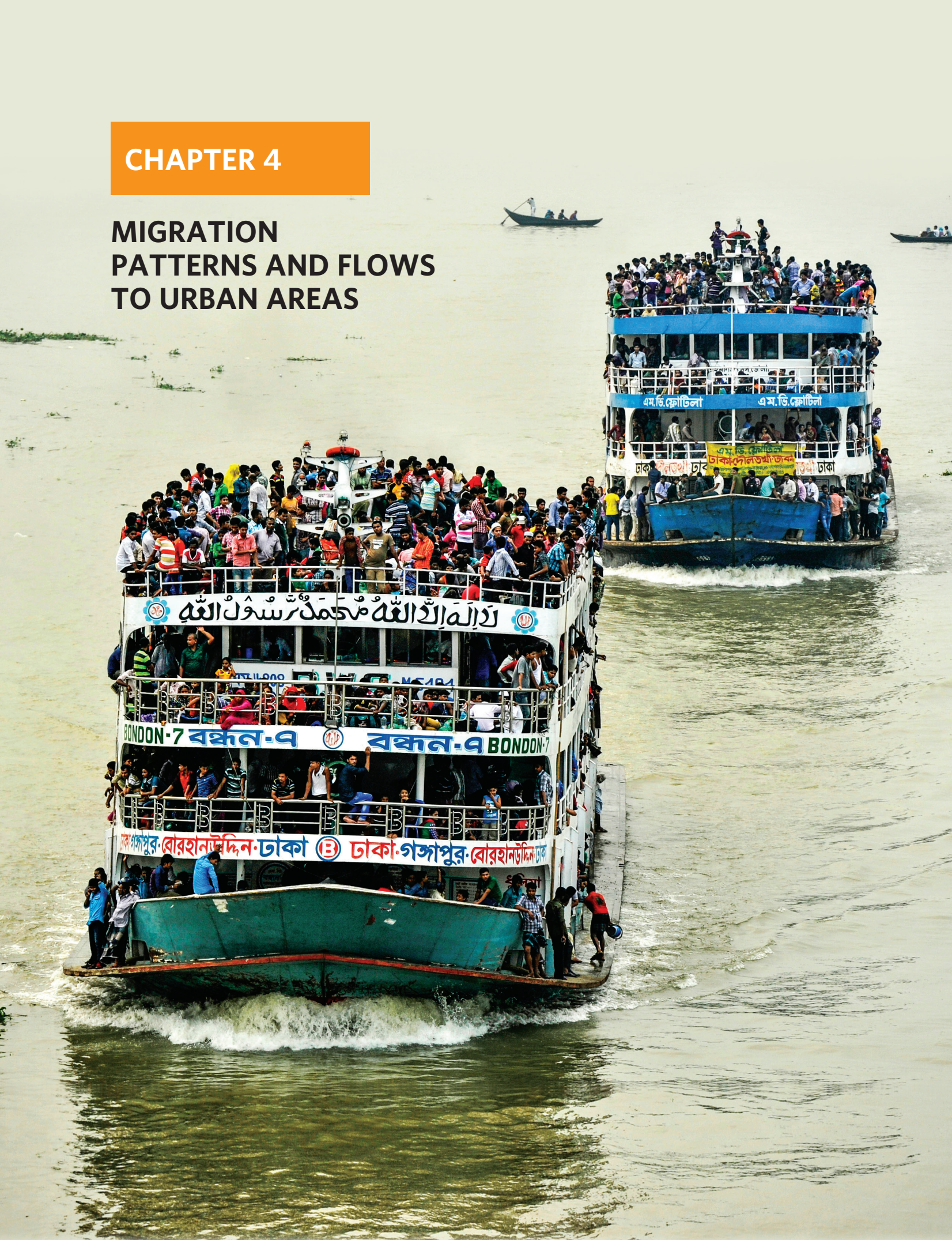
Because of the altered procedures for classifying urban areas in the 2011 Population Census, it is difficult to gain a clear picture of the changing conditions of urban and rural populations in Bangladesh, though some other sources of information aside from the census have also been used. In some respects, it can be argued that the urban-rural dichotomy has lost its relevance in Bangladesh, as peri-urban areas in the vicinity of big cities attract industry and provide living conditions that differ greatly from those in more isolated rural areas. Moreover, the prevalence of electricity, the ubiquity of mobile phones and other communication media, and improved transportation facilities mean that in many ways, rural dwellers are drawn more closely within the orbit of urban life. Does the urban-rural distinction thereby lose its meaning? Not entirely. According to some of the indicators presented in this chapter, urban-rural differences are not very marked, and other more meaningful ways of dichotomising the population should be sought – for example, according to socio-economic status, or by geographic region. On the other hand, some other indicators do show wide differences between urban and rural populations-particularly those showing the incidence of poverty. Poverty is far more prevalent in the rural population, and whereas 55 percent of the urban population is in the highest wealth quintile, this is true of only 9 percent of the rural population. Thus the analysis of the changing distribution of the population between rural areas and different kinds of urban areas remains important.

10. Key Points – Chapter 3

- While in some respects (for example, access to communications), differences between urban and rural areas of Bangladesh are narrowing, according to some measures they remain wide.
- There were only narrow differences in fertility between rural and urban areas in 2011. The wanted fertility rate is well below replacement level in both areas, but urban women are closer to achieving their desired fertility.
- Infant and early childhood mortality rates are declining in both urban and rural areas, but the under-5 mortality rate is lower in urban areas (49) than in rural areas (37).
- A higher proportion of the urban population is in the young working ages (15-29).
- Overall, females outnumber males in the 20-29 year age group, but in urban areas the female excess is only in the 20-24 year age group. Female migration to urban areas could play a part, but so could age misstatement.
- Average number of household members has been declining over time. It is exactly the same in urban areas as in Bangladesh as a whole (4.4).
- Average age at marriage for females in Bangladesh is one of the youngest in the world. It differs little between urban and rural areas.
- At most ages, illiteracy rates for males in rural areas are well above urban rates and roughly twice as high as in Dhaka. The urban-rural differential is marked for females as well, though not quite as extreme as for males.
- Years of schooling also differ greatly between urban and rural areas. For example, among women aged 15-49, 23% of urban women, but only 8% of rural women, have completed secondary school.
- One quarter of urban workers and over half of rural workers are in primary industry. Twice as high a proportion of urban than of rural workers are in manufacturing and services, but the proportion in construction, trade and transport is not much higher.
- Employed women in urban areas are concentrated in three industries – agriculture, manufacturing and services. Male workers are much more widely spread across industries. Half of female, but only 4% of male, workers are unpaid family workers.
- Poverty rates are much lower in urban than in rural areas. 55% of the urban population is in the highest wealth quintile, but only 9% of the rural population.
- The urban population has much higher ownership of refrigerators, electric fans and televisions. But rates of ownership of mobile phones are very high in both areas, with very significant implications for rural dwellers.

CHAPTER 4

MIGRATION PATTERNS AND FLOWS TO URBAN AREAS



CHAPTER 4: MIGRATION PATTERNS AND FLOWS TO URBAN AREAS

1. Introduction

In Bangladesh, internal migration is measured reasonably well by population censuses (though the quality of the data is of real concern – see Afsar 1998: 321). Respondents are asked to report whether their birthplace or former place of residence was an urban or rural area. This was then related to the classification of the rural or urban nature of the current place of residence to determine whether such migrants were classified as rural-rural, rural-urban, urban-rural or urban-urban.

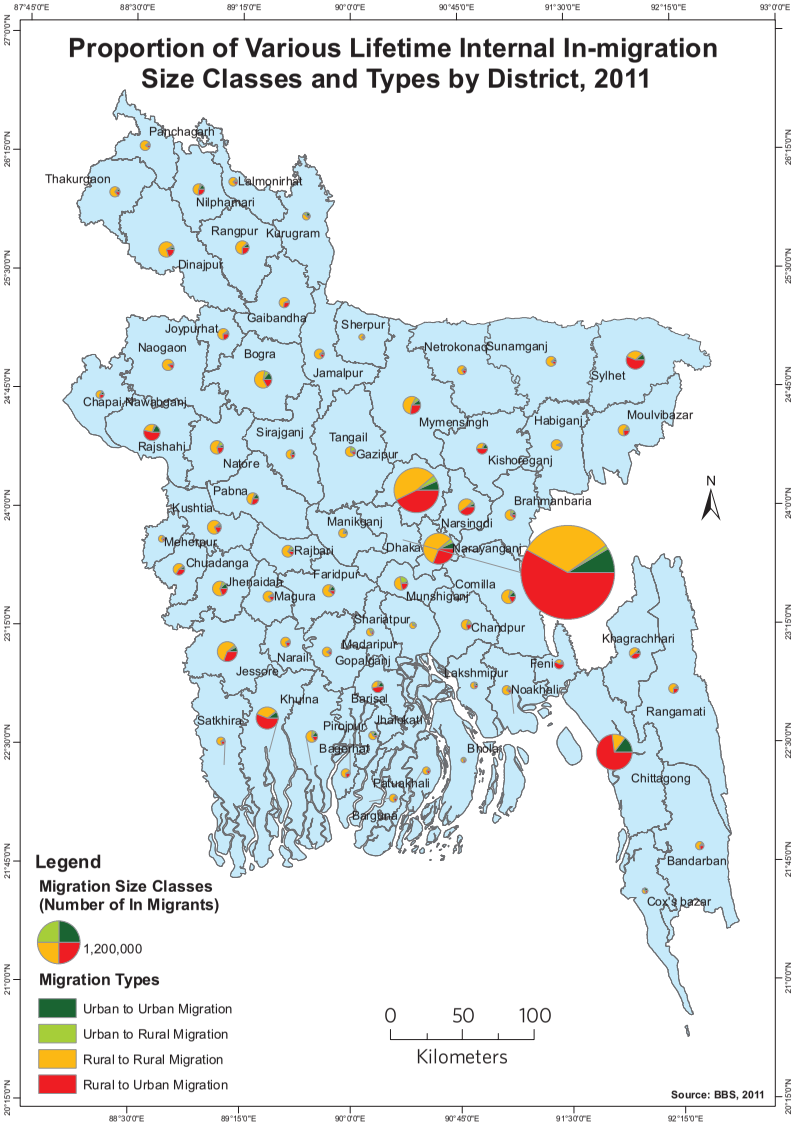
Internal migration in the 2011 Census is based on the sample census questionnaire, which covered only 168,000 respondents. This small sample size could adversely affect the representativeness of the data. The definition of migration is restricted to moves across district (zila) boundaries – both lifetime and over the previous five years. In the case of the previous five years, respondents are classified as migrants if they had changed their place of residence for a period of six months or more. The published data show only gross in-migration for each zila, and are for males and females combined. However, BBS kindly provided more disaggregated migration data for the purposes of the present study.

Much of the rural-rural migration can be explained by cultural reasons, notably the pattern of patrilocal residence and village exogamy which means that many young women move to other rural areas to enter their husband's household. Most of this movement is not captured by the census migration data, because to be considered a migrant, one has to cross a district boundary, and most of the marriage migration takes place within the district. Moreover, although village exogamy is favoured culturally, it is far from universal in Bangladesh. The Bangladesh Fertility Survey in 1989 found that approximately 30 percent of all women were married to men from their own villages (Amin and Cain, 1997: 300), and a more recent study shows that the great majority of moves following marriage are of 0-20 km (Rahaman et al., 2010: Figure 2). Thus Bangladesh does not mirror the North Indian Hindu pattern of strict village exogamy (Jejeebhoy and Halli, 2006).

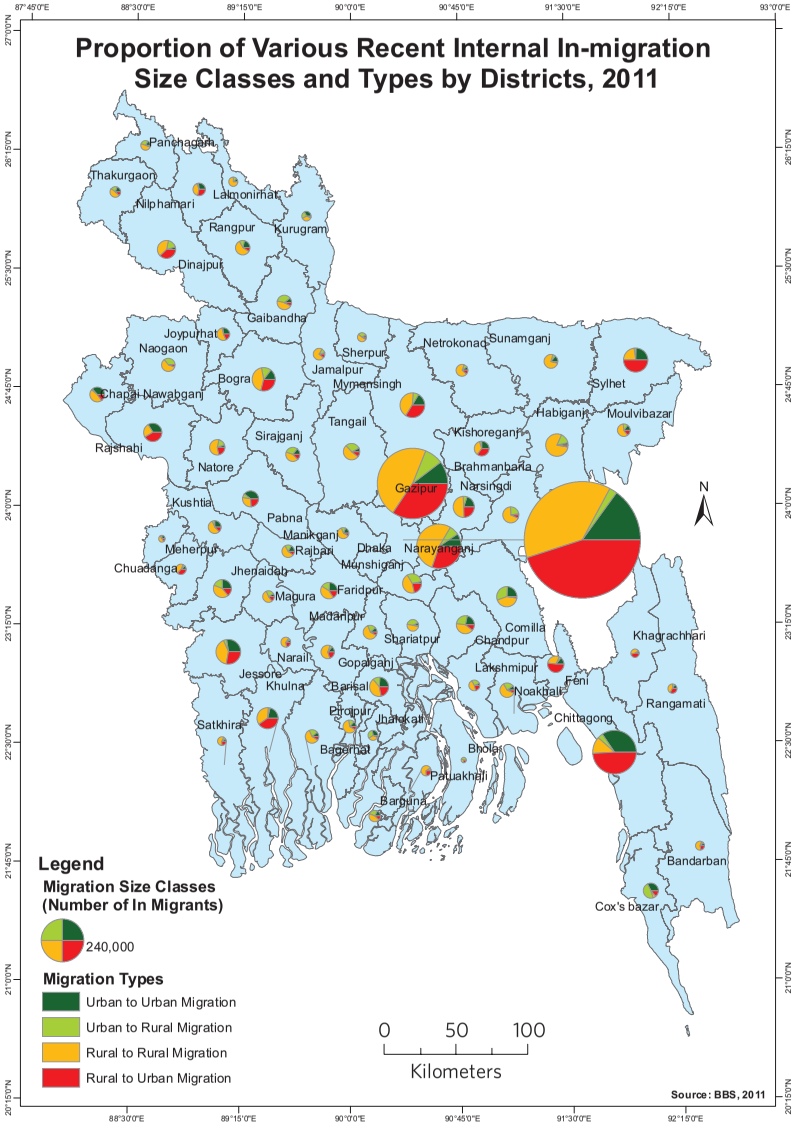
In the census data, the extent of rural-rural migration was affected by the changing procedures in designating localities as rural or urban. It would normally be expected that as the world's most densely populated large country, there would not be high levels of work-oriented rural-rural migration, because of the lack of available unused land for settlement. While the census data suggest otherwise, this is largely because of the official reversion to rural status of some highly urbanized areas, already discussed in Chapter 2. This has led to what is probably the most surprising statistic of all in the 2011 Population Census-the enormous volume of rural-rural migration recorded for the three destination districts making up Dhaka Megacity – Dhaka, Gazipur and Narayanganj (see Maps 4.1 and 4.2). Clearly, this is simply an artefact of the contraction of the areas classified as urban in these districts.

There are other reasons why the migration data from the census does not capture all mobility in Bangladesh. Intense patterns of shorter-term mobility link people and places over quite wide distances. The volume of daily commuting to big cities is quite large, but this does not involve any change of residence. Circular migration, however, does involve periodic changes of residence, in particular affecting big cities and the areas from which they draw seasonal and shorter-term labour.

Because of the definitions used in the census,[10] this movement is not captured in censuses, but it is very important nonetheless, as it is substantial in volume, and it greatly affects the de facto labour force in the cities. Two regions are noted for their seasonal migration patterns – "the *Monga* prone districts in the northwest which suffer prolonged


Proportion of Various Lifetime Internal In-migration Size Classes and Types by District, 2011
Legend
Migration Size Classes (Number of In Migrants)
1,200,000
Migration Types
Urban to Urban Migration
Urban to Rural Migration
Rural to Rural Migration
Rural to Urban Migration
0 50 100
Kilometers
N
Source: BBS, 2011
Panchagarh
Thakurgaon
Lalmonirhat
Nilphamari
Rangpur
Kurugram
Dinajpur
Gaibandha
Joypurhat
Naogaon
Bogra
Sherpur
Jamalpur
Netrokonaa
Sunamganj
Sylhet
Chapai Nawabganj
Rajshahi
Sirajganj
Tangail
Mymensingh
Habiganj
Moulvibazar
Natore
Gazipur
Kishoreganj
Pabna
Brahmanbaria
Kushtia
Manikganj
Narsingdi
Meherpur
Rajbari
Dhaka
Narayanganj
Chuadanga
Faridpur
Jhenaidah
Magura
Comilla
Munshiganj
Shariatpur
Chandpur
Madaripur
Khagrachhari
Narail
Gopalganj
Jessore
Lakshmipur
Feni
Noakhali
Khulna
Barisal
Jhalokati
Satkhira
Pirojpur
Rangamati
Bagerhat
Bhola
Chittagong
Patuakhali
Barguna
Bandarban
Cox's bazar

Map 4.1


Proportion of Various Recent Internal In-migration Size Classes and Types by Districts, 2011
Legend
Migration Size Classes (Number of In Migrants)
240,000
Migration Types
Urban to Urban Migration
Urban to Rural Migration
Rural to Rural Migration
Rural to Urban Migration
0 50 100
Kilometers
N
Source: BBS, 2011
Panchagarh
Thakurgaon
Lalmonirhat
Nilphamari
Rangpur
Kurugram
Dinajpur
Gaibandha
Joypurhat
Naogaon
Bogra
Sherpur
Jamalpur
Mymensingh
Netrokonaa
Sunamganj
Sylhet
Chapai Nawabganj
Rajshahi
Sirajganj
Tangail
Habiganj
Moulvibazar
Kishoreganj
Natore
Brahmanbaria
Gazipur
Narsingdi
Kushtia
Pabna
Manikganj
Meherpur
Rajbari
Dhaka
Narayanganj
Chuadanga
Munshiganj
Jhenaidah
Faridpur
Magura
Madaripur
Comilla
Shariatpur
Chandpur
Khagrachhari
Narail
Gopalganj
Jessore
Lakshmipur
Feni
Noakhali
Khulna
Barisal
Jhalokati
Pirojpur
Rangamati
Satkhira
Chittagong
Bagerhat
Bhola
Patuakhali
Barguna
Bandarban
Cox's bazar

Map 4.2

and severe drought during the winter, and the north-eastern *Haor*-affected areas, which face flooding and water-logging during the monsoon" (Marshall and Rahman, no date: 8). One study in Rajshahi found that 19 percent of all agricultural households, across all wealth groups, migrate in the lean agricultural season (Hossain, 2003). Another report on seasonal migration to Dhaka (Mridha 2015) noted the presence of many day labourers in the city seeking temporary work during lean seasons, or in between harvests. Lacking vocational training, they do work such as construction labouring, trishaw pedalling or odd jobs such as loading and unloading trucks. It is generally recognized that seasonal migration is more prevalent among the lesser educated; the better educated will tend to choose permanent migration (Kuhn, 2005).

Internal migration in Bangladesh is highly gendered. In the last three decades of the 20th century, it was argued that more males than females moved, and the destinations and the reasons for the move also differed sharply between men and women (Afsar, 2000). The overall pattern was clear: females dominated short-distance moves as a result of marriage migration, while males dominated migration to large cities. Such city-ward migration was also concentrated in young adult age groups, 15-24 years (Afsar, 2000:3). A 1980 study of migration to Dhaka found a ratio of 156 males per 100 females among migrants (Islam, 1996: 59). However, the sex ratio of migration to large cities was changing over time. Males were becoming less dominant in the population of the largest cities between 1961 and 1991; for example, the sex ratio in Dhaka Megacity fell from 154 males per 100 females in 1961 to 126 in 1991, and in Chittagong SMA from 188 to 132 over the same period (Afsar, 2000, Figure 2). After 1991, the gender balance of rural-urban migration has changed, as opportunities for women to gain employment in urban areas, particularly in the RMG industry in Dhaka Megacity and Chittagong, have expanded, and large-scale migration of women to these cities has taken place. The females migrating to the cities are no longer predominantly the accompanying spouses of male migrants, but are migrating specifically to seek work. Women are also quite prominent in the flow of seasonal migrants to Dhaka (Mridha 2015).

International migration is also very important for Bangladesh. There are two categories. One is permanent out-migration; the other is contract labour migration, which expands the income-earning opportunities of many Bangladeshi families as well as contributing much-needed foreign exchange. This will only be covered briefly in the current study, but it must be kept in mind that the migration options facing many Bangladeshis (especially males) include both within-country movement and international labour migration. This is well illustrated in a detailed study in Matlab sub-district of Chandpur District over two time periods (1997-99 and 2006-08). This study included overseas destinations. It showed that roughly half of female migrants went to other rural areas of Bangladesh, compared with only one fifth of male migrants. However, in the second period, female migrants were just as likely as male migrants to move to towns and cities. The most striking difference was in the proportion of migrants going overseas; in the 2006-08 period, more than one third of male migrants were going to other countries, but only one percent of female migrants were doing so. This meant that, of those migrating within Bangladesh, males were still more likely than females to be moving to towns and cities. The reasons for migration also showed wide gender differences; three quarters of male migrants cited economic reasons, whereas three quarters of female migrants cited family reasons (marriage, divorce, or joining family) (Alam and Khuda, 2011).

One key task facing migration researchers is to explain, not why people move, but why most people do not move. In 2011, 90.3 percent of the population of Bangladesh were living in the district in which they were born, and this proportion had changed very little since 1991 (2011 Census, Socio-Economic and Demographic Report, Table 7.1). Available research on such issues in Bangladesh is inadequate, even in understanding the reasons for moving by those who do move. It is important to differentiate between the setting and situation of migration (Mitchell, 1985). The setting deals with the broader contextual factors leading to migration flows, whereas the situation

deals more with the specific factors lying behind a particular person's move. Questions in censuses about reasons for migration are focused on the situation rather than the setting of migration.

The analysis in this chapter will rely primarily on the 2011 Population Census data. Two recent contributions to the quantitative analysis of internal migration in Bangladesh are the recent detailed study based on the 2011 Population Census (BBS, 2015), and the UNDP study focusing particularly on the key drivers of migration (Marshall and Rahman, no date).[11] Some of the findings from those studies will be summarized in the discussion that follows, but most of the presentation of 2011 Census data in the present report is based on independent analysis by the authors.

2. Patterns of Internal Migration:

a) Time trends in different kinds of migration

The period of the 1980s was a period of very rapid growth of urban populations, fuelled by high fertility rates and massive rural-urban migration. The rise in the urban percentage of the population was driven by the high migration. This can be seen in Table 4.1, which shows the rate of lifetime internal migration in the periods leading to 1991, 2004 and 2011. More than half of the urban population in 1991 were lifetime rural-urban migrants. This proportion fell sharply in later years, reflecting the fact that the urban population was much larger and a greater share of its growth was being fuelled by natural increase. A much smaller proportion of the rural population were lifetime migrants – less than 5 percent.

Table 4.1: Rate of lifetime internal migration per 1000 population in destination areas for different categories of migrants, 1991-2011

Destination	1991	2004	2011
RURAL DESTINATIONS	**45.2**	**33.7**	**57.2**
Rural to rural	34.2	29.9	52.6
Urban to rural	11.0	3.8	4.6
URBAN DESTINATIONS	**561.5**	**312.0**	**267.3**
Urban to urban	43.6	47.9	44.4
Rural to urban	517.9	264.1	222.9

Source: 2011 Census Report, National Report, Vol. 4: Socio-economic and Demographic Report, Table 7.4

In 2011, the proportions were somewhat different, with rural-rural migration showing a considerable increase. This increase was probably related to the change in urban definitions, resulting in some of the migrants who would in previous censuses have been categorized as rural-urban migrants now being categorized as rural-rural migrants.

b) Inter-district flows

This section will outline the pattern of migration based on data from the 2011 Population Census. Measured as it is by crossing a district boundary, the data do not capture much of the marriage migration, which mostly takes place over fairly small distances, and therefore largely within districts. Even so, the migration patterns vary greatly for males and females. The detailed data on patterns of migration, based on the 2011 Population Census, are presented in Appendix Table 4.1. The key findings of this detailed information will be discussed below.

Inter-district migration in Bangladesh focuses to a remarkable extent on the Dhaka Megacity. Of all lifetime in-migrants, 42 percent went to Dhaka District, and 56 percent to the three districts making up the Dhaka Megacity-Dhaka, Gazipur and Narayanganj. Of all recent migrants, 38 percent went to Dhaka District and 58 percent to the broader Dhaka Megacity area. Chittagong District was the other major destination of in-migrants (6 percent of lifetime migrants; 5 percent of recent migrants). Remarkably, then, the two major urban agglomerations of Dhaka and Chittagong between them received almost two thirds of all inter-district migrants, whether measured as lifetime migrants or recent migrants.

The share of migrants going to Dhaka and Chittagong was of course well in excess of Dhaka and Chittagong's share of the total population. The only other districts whose share of recent in-migrants exceeded their share of total population were Munshiganj and Habiganj (both slightly more than their share of population). In the case of Munshiganj, this no doubt reflects the fact that, because of its location in the wider Dhaka Capital Region, it is increasingly affected by Dhaka's growth.

Within Dhaka Megacity, Gazipur and Narayanganj districts recorded higher proportions of the nation's recent in-migrants than of its lifetime migrants, whereas the reverse was the case for Dhaka District. This reflects the tendency for recent migration streams to the megacity to focus more on the outlying areas than on the increasingly overcrowded Dhaka District.

The rapid growth of urban populations in the eastern part of Bangladesh (i.e. east of the Jamuna-Padma-Meghna rivers) is largely fuelled by migration. By contrast, of all the districts in the western part of Bangladesh, only four (Barisal, Khulna, Jessore and Bogra) received more than 1 percent of all of Bangladesh's recent in-migrants. Khulna's migration figures help explain why its population declined between 2001 and 2011. Its share of lifetime in-migrants exceeded its share of total population, but its share of recent migrants was less than its share of population, and its share of recent out-migrants was well above its share of population; in other words, there was a net migration loss. These figures indicate a turnaround in migration patterns over time. Another noteworthy case is Rangpur District, where the share of recent in-migrants was far below its share of population.

Some maps prepared from 2011 census data help illustrate key aspects of migration patterns in Bangladesh. Maps 4.3 and 4.4 show the proportion of each district's population who are in- and out-migrants, Map 4.3 using lifetime migration data and Map 4.4 using recent migration data. Maps 4.5 and 4.6 show the net migration rate of lifetime and recent migrants, respectively, for each district.

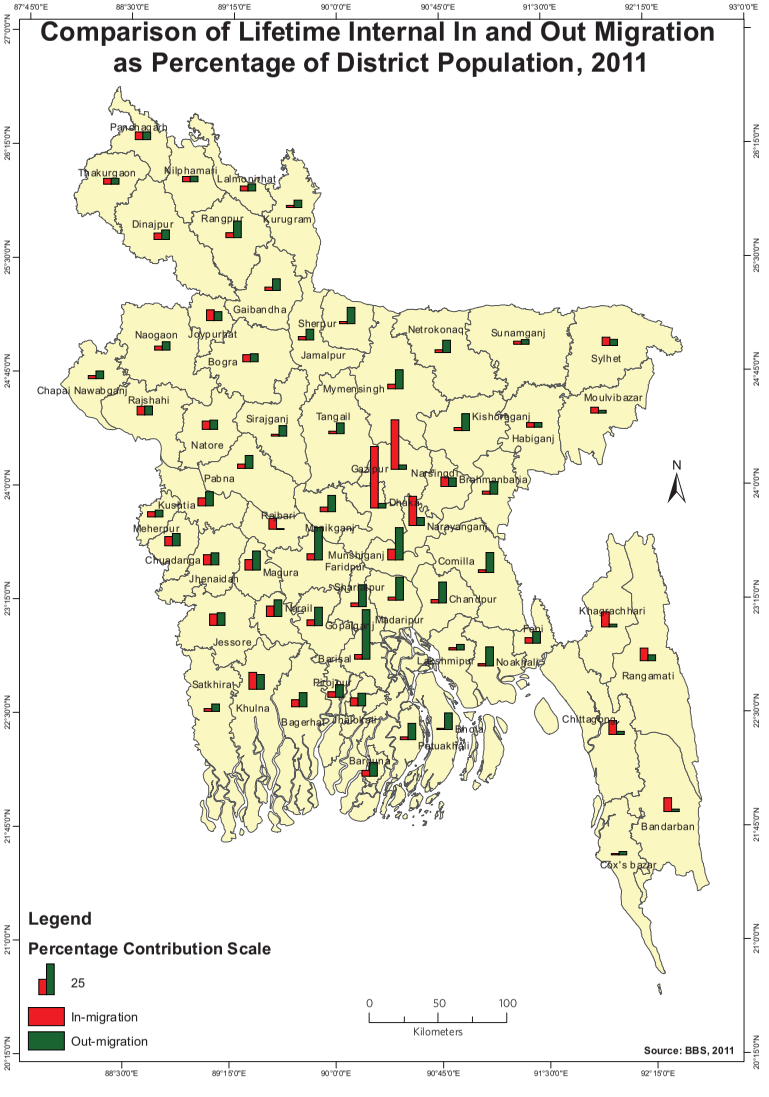
In Maps 4.3 and 4.4, bars of much the same height reflect a balance between in-and out-migrants, whereas sharp differences in height reflect an excess of either in-migrants or out-migrants. Thus Gazipur, for example, reflects a heavy preponderance of in-migrants, while Barisal shows a heavy preponderance of out-migrants. Very short bars reflect situations with very little migration. Thus districts such as Bogra, Natore and Jessore have had very little net migration; rates of both in-migration and of out-migration have been low, and they balance out to show almost no net migration.

The rate of net migration was very high in Dhaka Megacity, because not only was the rate in in-migration very high, but the rate of out-migration was quite low. But turning to the wider Dhaka Division, some districts had significant recent net migration losses (for example, Mymensingh and Faridpur), presumably mainly to Dhaka, which is easily accessible from these areas.

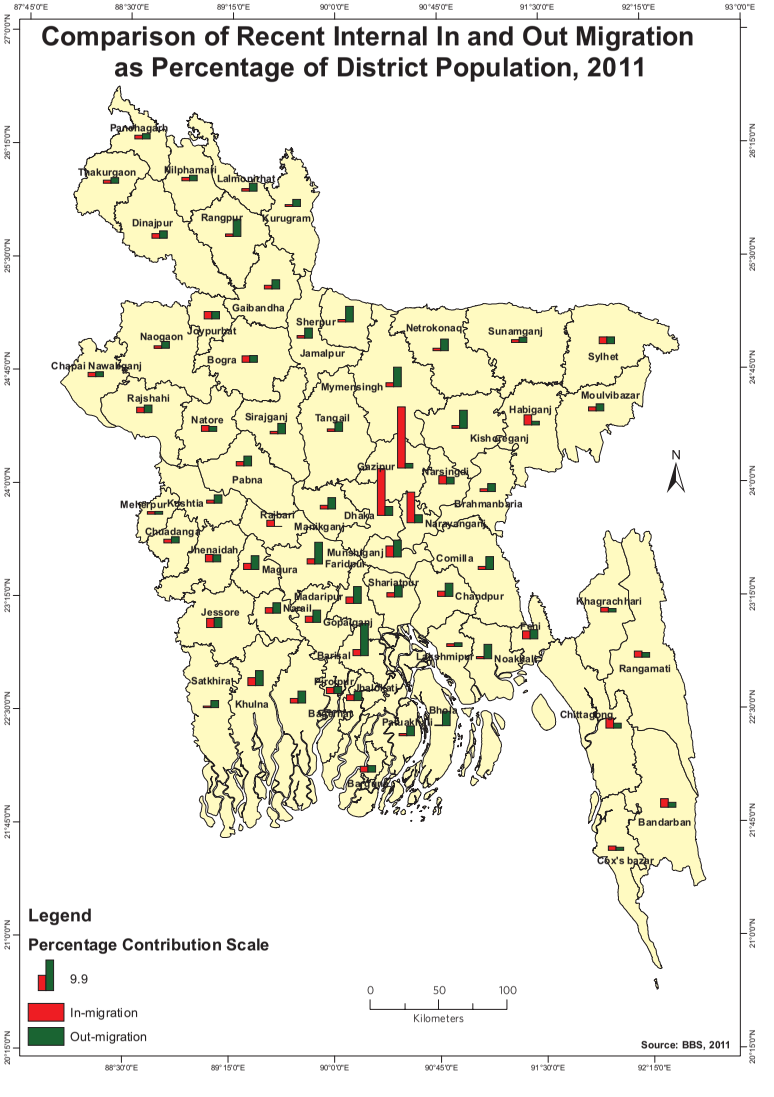
A number of districts have sharply higher rates of out-migration than of in-migration, resulting in substantial net migration losses. Notable among these are (i) Rangpur in the north; (ii) a number of districts within fairly easy reach of Dhaka (e.g. Faridpur, Sherpur, Mymensingh, Chandpur); and (iii) a number of districts in Barisal Division (Barisal, Bhola and Patuakhali). For those in the Barisal Division, compared to other divisions, there may be stronger push factors operating as a result of natural disasters such as loss of land through river erosion or water-logging. It is noteworthy that Barisal District had a sharply higher rate of recent net out-migration than any other district. It might be speculated that the ready and cheap access from Barisal to Dhaka by overnight boat is a factor, leading to significant levels of short-term labour migration which for some may turn into permanent migration.

The broad picture is that, in comparison with other divisions, there has been relatively little lifetime in- or out-migration in Rangpur or Rajshahi divisions. These divisions are characterized by a relatively settled population, reflected by low rates of movement across district boundaries. To some extent, the same applies in Khulna and Sylhet Divisions. But in Dhaka, Chittagong and Barisal Divisions, there has been much more movement, mainly inwards in Dhaka, on balance outwards in Chittagong, and mainly outwards in Barisal (see Figure 4.1).

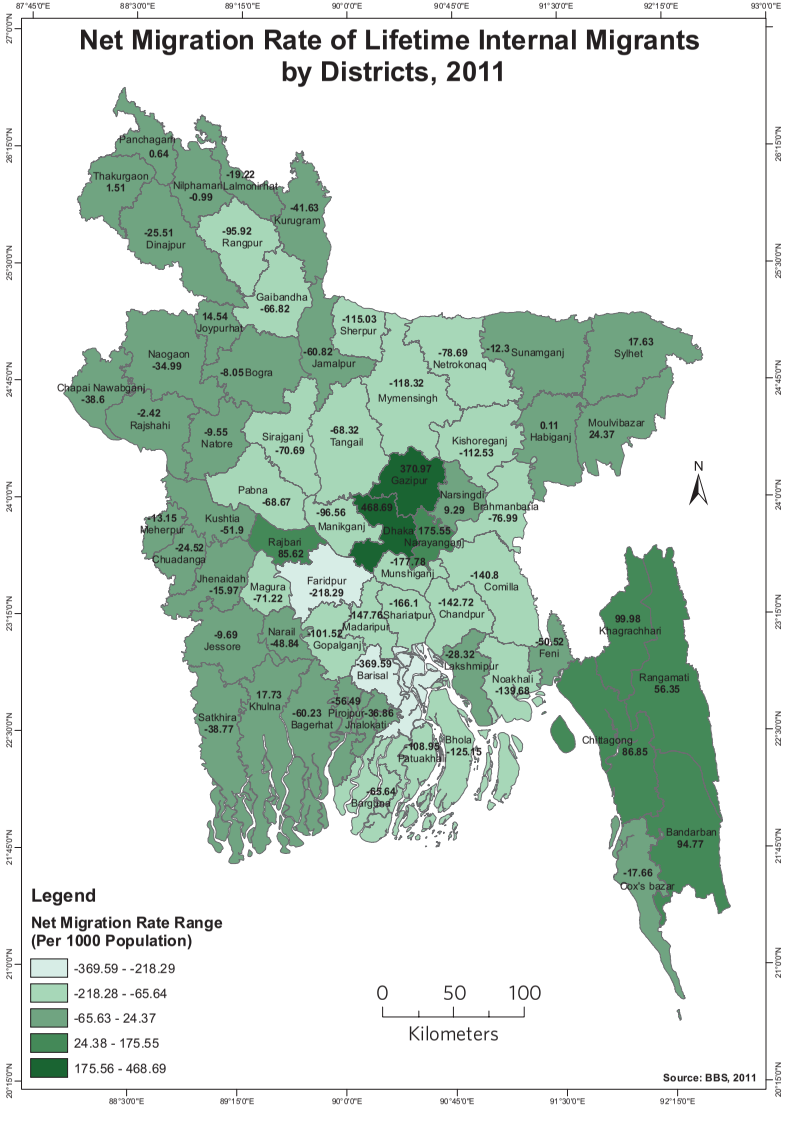
Focusing on the district level, a number of districts have sharply higher rates of out-migration than of in-migration, resulting in substantial net migration losses. Notable among these are (i) Rangpur in the north; (ii) a number of districts


Comparison of Lifetime Internal In and Out Migration as Percentage of District Population, 2011
Legend
Percentage Contribution Scale
25
In-migration
Out-migration
0 50 100
Kilometers
Source: BBS, 2011
N

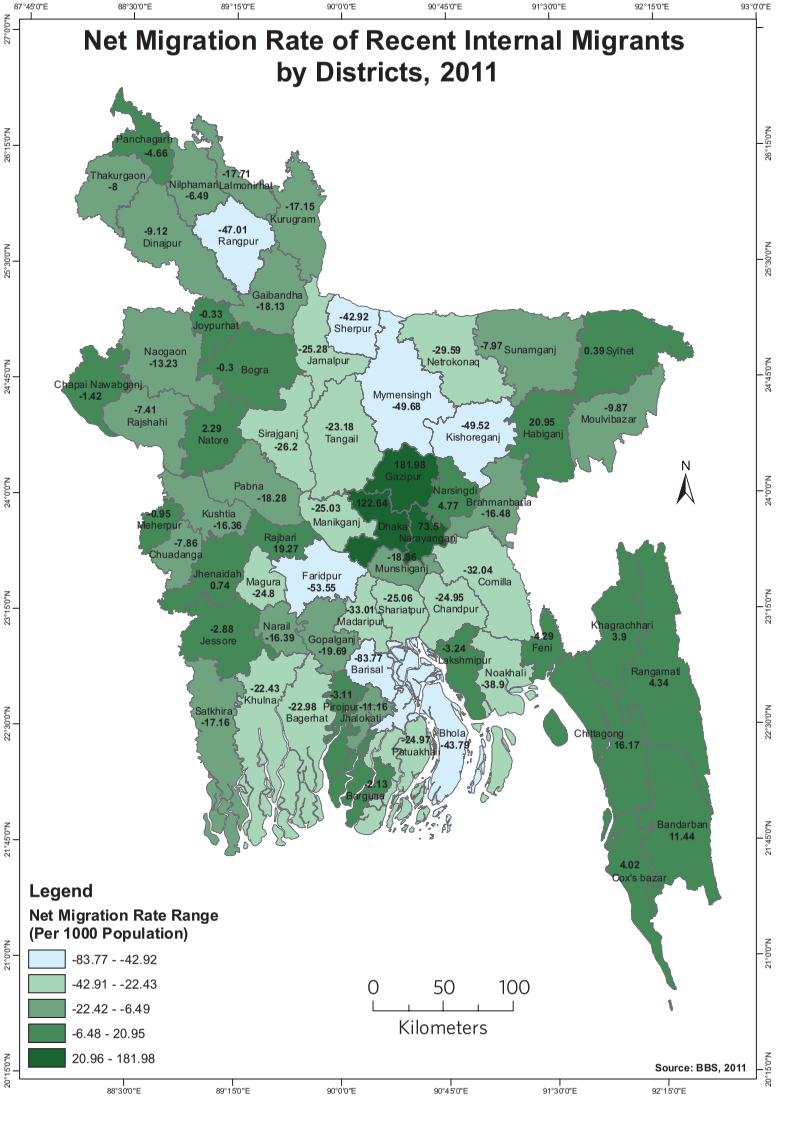
Map 4.3


Comparison of Recent Internal In and Out Migration as Percentage of District Population, 2011
Legend
Percentage Contribution Scale
9.9
In-migration
Out-migration
0 50 100
Kilometers
Source: BBS, 2011
N

Map 4.4


Net Migration Rate of Lifetime Internal Migrants by Districts, 2011
Panchagarh 0.64
Thakurgaon 1.51
Nilphamari -0.99
Lalmonirhat -19.22
Kurugram -41.63
Dinajpur -25.51
Rangpur -95.92
Gaibandha -66.82
Joypurhat 14.54
Naogaon -34.99
Bogra -8.05
Jamalpur -60.82
Sherpur -115.03
Netrokonaq -78.69
Sunamganj -12.3
Sylhet 17.63
Chapai Nawabganj -38.6
Rajshahi -2.42
Natore -9.55
Sirajganj -70.69
Tangail -68.32
Mymensingh -118.32
Kishoreganj -112.53
Habiganj 0.11
Moulvibazar 24.37
Pabna -68.67
Gazipur 370.97
Narsingdi 9.29
Brahmanbaria -76.99
Meherpur -13.15
Kushtia -51.9
Manikganj -96.56
Dhaka 175.55
Narayanganj 468.69
Chuadanga -24.52
Rajbari 85.62
Munshiganj -177.78
Jhenaidah -15.97
Magura -71.22
Faridpur -218.29
Comilla -140.8
Madaripur -147.76
Shariatpur -166.1
Chandpur -142.72
Jessore -9.69
Narail -48.84
Gopalganj -101.52
Feni -50.52
Khagrachhari 99.98
Barisal -369.59
Lakshmipur -28.32
Noakhali -139.68
Rangamati 56.35
Khulna 17.73
Satkhira -38.77
Bagerhat -60.23
Pirojpur -36.86
Jhalokati -56.49
Bhola -125.15
Patuakhali -108.95
Chittagong 86.85
Barguna -65.64
Bandarban 94.77
Cox's bazar -17.66
N
Legend
Net Migration Rate Range (Per 1000 Population)
-369.59 - -218.29
-218.28 - -65.64
-65.63 - 24.37
24.38 - 175.55
175.56 - 468.69
0 50 100
Kilometers
Source: BBS, 2011

Map 4.5


Net Migration Rate of Recent Internal Migrants by Districts, 2011
Panchagarh -4.66
Thakurgaon -8
Nilphamari -6.49
Lalmonirhat -17.71
Kurugram -17.15
Dinajpur -9.12
Rangpur -47.01
Gaibandha -18.13
Joypurhat -0.33
Naogaon -13.23
Bogra -0.3
Jamalpur -25.28
Sherpur -42.92
Netrokonaq -29.59
Sunamganj -7.97
Sylhet 0.39
Chapai Nawabganj -1.42
Rajshahi -7.41
Natore 2.29
Sirajganj -26.2
Tangail -23.18
Mymensingh -49.68
Kishoreganj -49.52
Habiganj 20.95
Moulvibazar -9.87
Pabna -18.28
Gazipur 181.98
Narsingdi 4.77
Brahmanbaria -16.48
Meherpur -0.95
Kushtia -16.36
Manikganj -25.03
Dhaka 73.51
Narayanganj 122.64
Chuadanga -7.86
Rajbari 19.27
Munshiganj -18.86
Jhenaidah 0.74
Magura -24.8
Faridpur -53.55
Comilla -32.04
Madaripur -33.01
Shariatpur -25.06
Chandpur -24.95
Jessore -2.88
Narail -16.39
Gopalganj -19.69
Feni 4.29
Khagrachhari 3.9
Barisal -83.77
Lakshmipur 3.24
Noakhali -38.9
Rangamati 4.34
Khulna -22.43
Satkhira -17.16
Bagerhat -22.98
Pirojpur -11.16
Jhalokati -3.11
Bhola -43.78
Patuakhali -24.97
Chittagong -16.17
Barguna -2.13
Bandarban 11.44
Cox's bazar 4.02
N
Legend
Net Migration Rate Range (Per 1000 Population)
-83.77 - -42.92
-42.91 - -22.43
-22.42 - -6.49
-6.48 - 20.95
20.96 - 181.98
0 50 100
Kilometers
Source: BBS, 2011

Map 4.6

Exam in girl's school. *Photo: Drik*

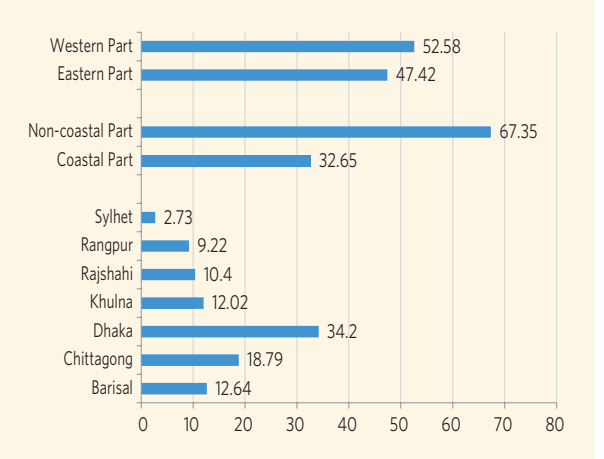
within fairly easy reach of Dhaka (e.g. Faridpur, Sherpur, Mymensingh, Chandpur); and (iii) a number of districts in Barisal Division (Barisal, Bhola and Patuakhali). Figure 4.2 shows the top 10 and bottom 10 districts in terms of net migration. The dominance of the three districts making up the Dhaka Megacity is clear, far exceeding the net migration rate of any of the other districts. As for the highest net out-migration rates, Barisal is far ahead of any other district, followed by Faridpur, Munshiganj and Shariatpur. The great majority of Bangladesh's districts are net out-migration districts; only 16 out of the 64 districts experienced net in-migration.

Over the 1991-2011 period, the out-migration rate from Bangladesh's coastal zone – particularly the Barisal Division-was high. Compared to other divisions, Barisal Division may have stronger push factors as a result of natural disasters such as loss of land through river erosion or water-logging. But it was not just a case of multiple environmental risks and hazards driving people out. If coastal zones are divided into the exposed coast and the interior coast (Uddin and Kaudstaal, 2003), lower out-migration rates are observed from the exposed coast than from the more interior coastal areas. It has been argued that there are logical reasons for this (Haq, 2012). In the exposed coast, high poverty levels inhibit migration, and people are dependent on nature as fishermen and natural harvesters, which at least allow them opportunities to live more cheaply. New land accretion in these areas also helps them to resettle when needed, albeit in hazardous circumstances. NGO and government activities to assist people in the exposed coastal areas gives them some further reasons to stay put.

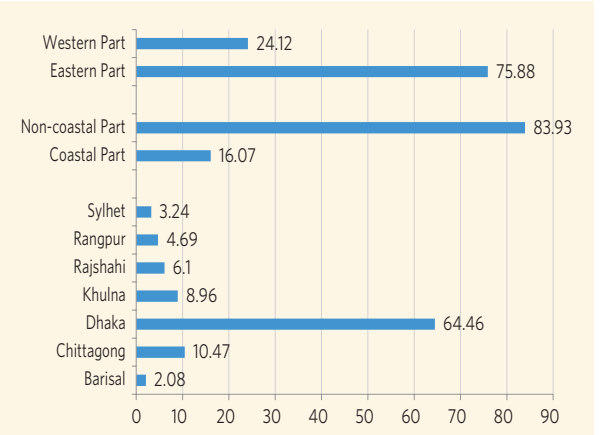
By contrast, the interior coast has a higher literacy rate, few economic opportunities, and better transport connections to other parts of the country, all factors favouring migration as an option. For example, it might be speculated that the ready and cheap access from Barisal to Dhaka by overnight boat is a factor, leading to significant levels of short-term labour migration which for some may turn into permanent migration.

Figure 4.1: Migration indicators by division and region

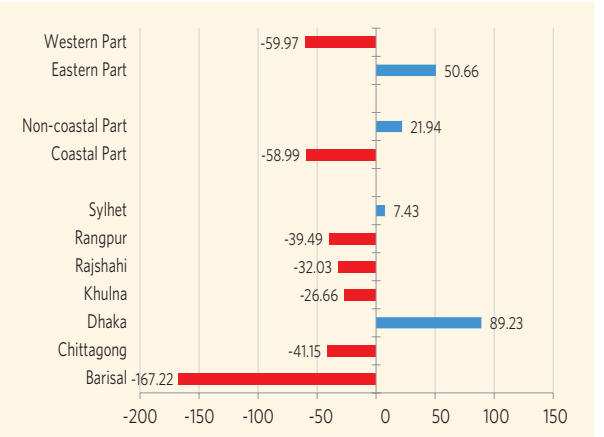
(a) Percentage Share of National Lifetime Out-migrants by Divion and Region (2001-2011)



(b) Percentage Share of National Lifetime In-migrants by Division and Region (2001-2011)



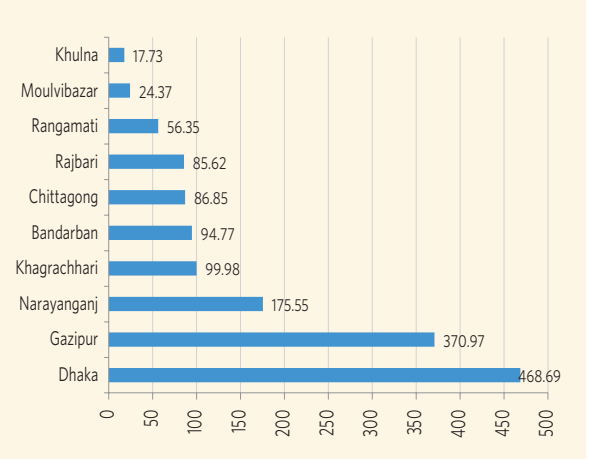
(c) Lifetime Net Migration Rate by Division and Region (2001-2011)



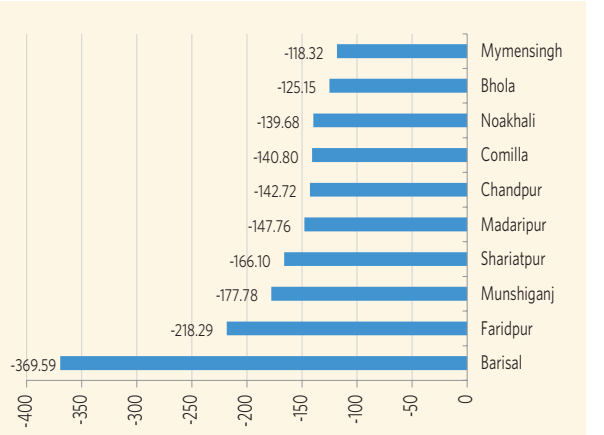
Source: Calculated from unpublished data supplied by BBS

Figure 4.2: Districts with highest positive and negative net migration rates 2001-2011

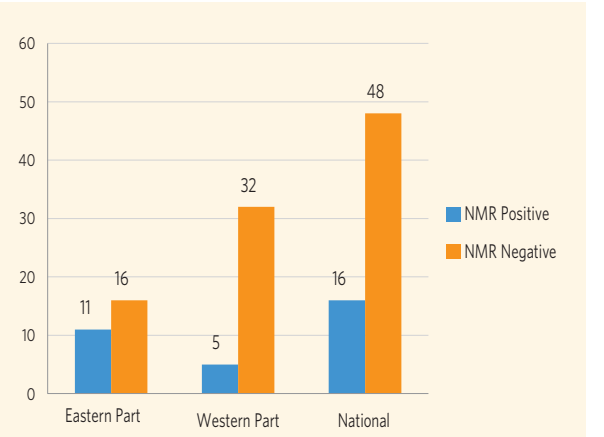
(a) Top 10 Net Migration Rate Districts (2001-2011)



(b) Bottom 10 Net Migration Rate Districts (2001-2011)



(c) Count of NMR Positive and Negative Districts by Region (2001-2011)



Source: Calculated from unpublished data supplied by BBS

Although some people in both the exposed coast and the interior coast clearly migrate due to extreme natural disasters such as coastal or river bank erosion or massive tidal surge due to cyclones, more slowly acting environmental factors may be more important, including salinity intrusion, which has led to transition of agricultural land to shrimp cultivation, resulting in extensive unemployment of agricultural labour.

Given the dominance of Dhaka Megacity as a destination for internal migration in Bangladesh, it is important to understand the patterns of migration to the megacity. This is done in Maps 4.7 and 4.8, which show the lifetime and recent migration flows into Dhaka Megacity (i.e. the districts of Dhaka, Gazipur and Narayanganj) from other districts.

Dhaka receives migrants from every corner of Bangladesh, but certain districts contribute disproportionately to this migration flow. Examining lifetime migration flows first, some of the districts which have contributed disproportionately to the flow, when compared with their share of total population, are located close to Dhaka, such as Mymensingh, Tangail, Kishoreganj, Munshiganj, Chandpur and Comilla, whose populations have fairly easy access to Dhaka. But there are other districts as well which are over-represented in the lifetime movement to Dhaka. Notable among these are districts in Barisal Division (particularly Barisal District, but also Bhola and Patuakhali districts), along with Rangpur and Noakhail districts. Turning to recent migration to Dhaka, the pattern is much the same, but with some notable differences. The importance of Mymensingh, Tangail, Sherpur and Rangpur increases, while the importance of Barisal decreases somewhat.

The importance of Barisal Division as a source of migrants to Dhaka is confirmed from another source – the 2013 Urban Health Survey. This showed that, although Barisal accounts for only about 6 percent of the national population, about 20 percent of female slum dwellers in Dhaka came from Barisal, and apparently much the same proportion of male slum dwellers (NIPORT et al., 2015: 23).

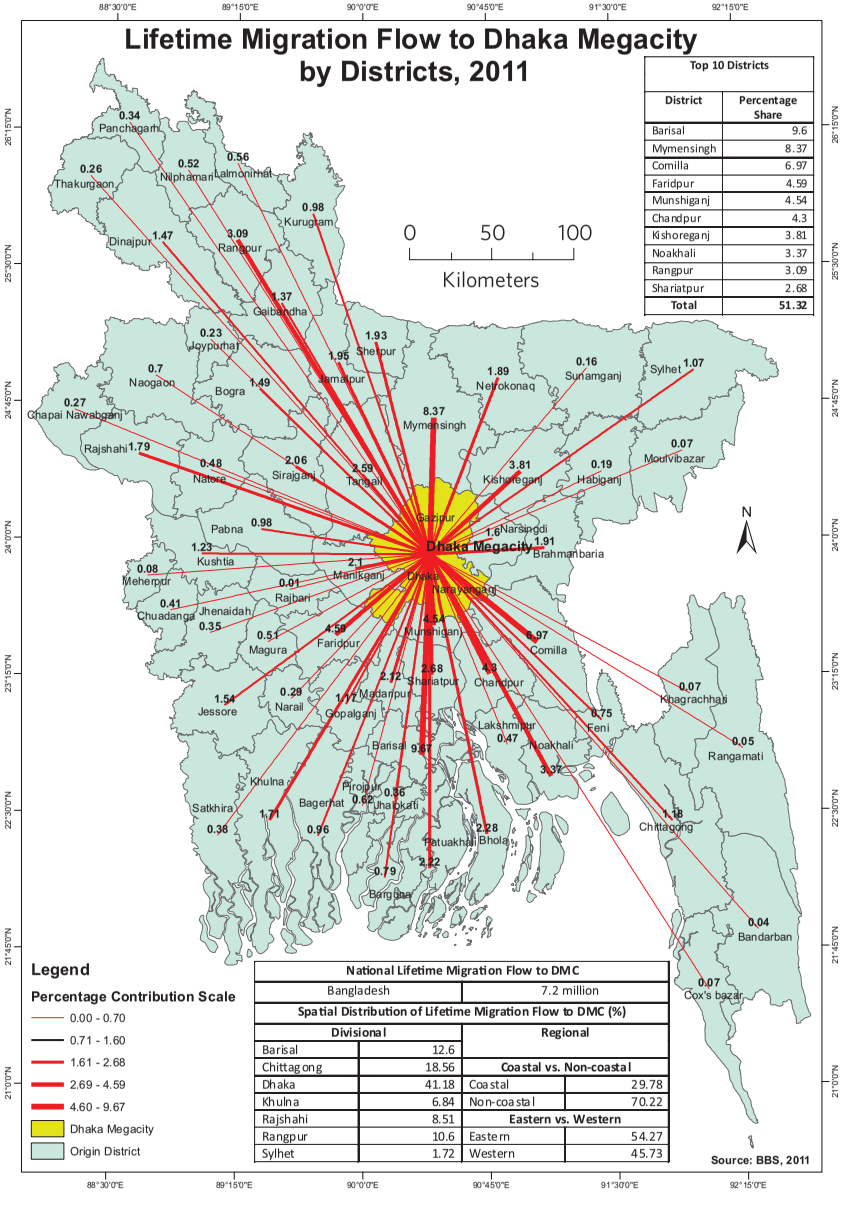
The discussion in this section will be complemented in a later section by a discussion of overseas migration patterns, because overseas migration, whether permanent or short-term contract labour migration, could modify the conclusions reached by considering only migration within Bangladesh. But before doing so, the internal migration patterns need to be analysed in more detail: in particular, gender differences and age structure differences between migrants and non-migrants.

c) Sex and age patterns of migration

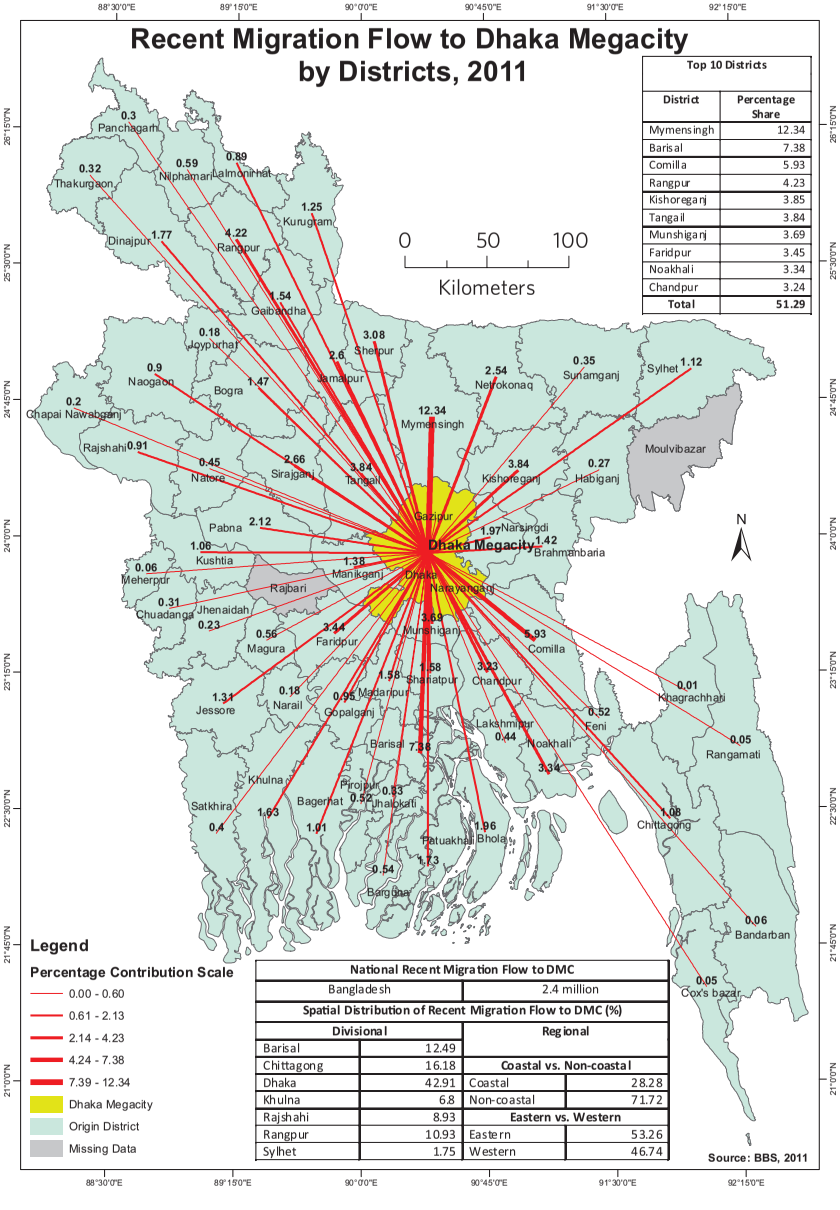
From the earlier discussion of the declining sex ratio of the urban population in Bangladesh, it could be expected that patterns of migration contributed to this change. The migration data do show a strong female dominance of movement to the urban areas, indeed an even stronger dominance than might have been expected from the overall trends in sex ratios. It must be stressed that the data on overall age-sex structures are from the full census, while the data on age-sex structure of migration flows are from the sample census, and are therefore not strictly comparable. Also, the change of urban definitions between the 2001 and 2011 censuses adds a further complication in comparing sex ratios.

The picture of migration in Bangladesh based on the 2011 Census is one in which females outnumber males, especially in rural-rural flows but not only in these flows. Females make up 58 percent of recent migrants to rural areas and 56 percent of recent migrants to urban areas; at ages 15-29, the female proportions are 68 percent and 64 percent respectively.

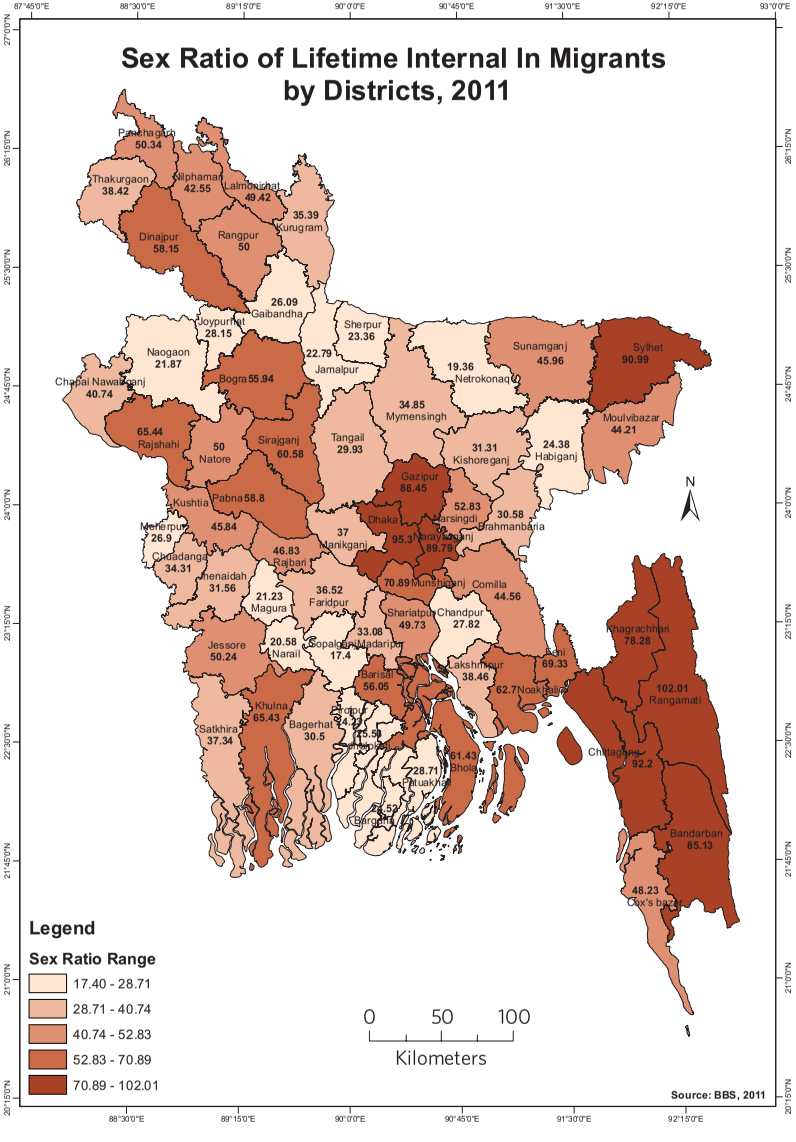
Maps 4.9 to 4.12 show the sex ratios of recent and lifetime in-migrants and out-migrants, by district. The dominance of females in most inter-district migration flows is clear. In fairly typical districts without a large city (e.g.Magura, Kishoreganj, Naogaon, Chandpur) there were three to five female in-migrants for every one male in-migrant. In many others (e.g. Jessore, Noakhali, Bogra, Cox's Bazar), the ratio was more like two to one. But only in the big cities of Dhaka Megacity and Chittagong did the ratio approach parity, and even there, females slightly outnumbered males among recent migrants.[12] The maps of recent internal out-migrants by district display fairly similar patterns.


Lifetime Migration Flow to Dhaka Megacity
by Districts, 2011
Top 10 Districts
District | Percentage Share
Barisal 9.6
Mymensingh 8.37
Comilla 6.97
Faridpur 4.59
Munshiganj 4.54
Chandpur 4.3
Kishoreganj 3.81
Noakhali 3.37
Rangpur 3.09
Shariatpur 2.68
Total 51.32
0 50 100
Kilometers
N
Dhaka Megacity
Legend
Percentage Contribution Scale
0.00 - 0.70
0.71 - 1.60
1.61 - 2.68
2.69 - 4.59
4.60 - 9.67
Dhaka Megacity
Origin District
National Lifetime Migration Flow to DMC
Bangladesh 7.2 million
Spatial Distribution of Lifetime Migration Flow to DMC (%)
Divisional
Barisal 12.6
Chittagong 18.56
Dhaka 41.18
Khulna 6.84
Rajshahi 8.51
Rangpur 10.6
Sylhet 1.72
Regional
Coastal vs. Non-coastal
Coastal 29.78
Non-coastal 70.22
Eastern vs. Western
Eastern 54.27
Western 45.73
Source: BBS, 2011

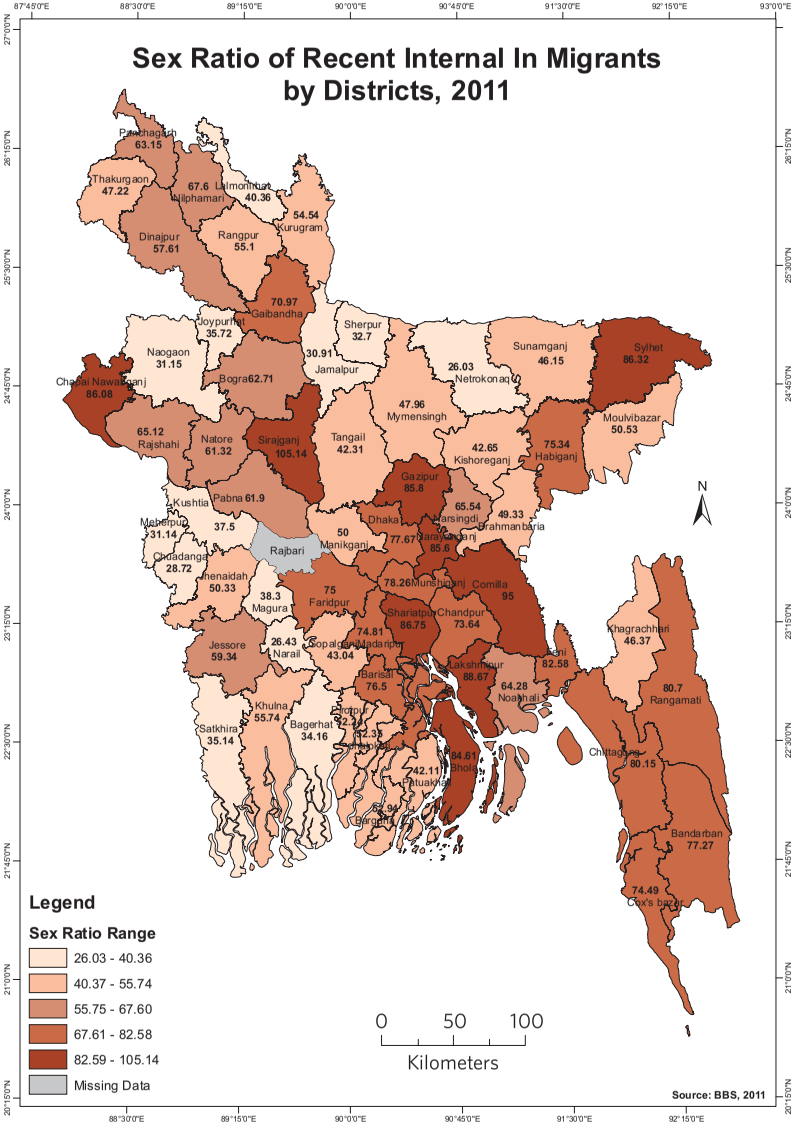
Map 4.7


Recent Migration Flow to Dhaka Megacity
by Districts, 2011
Top 10 Districts
District | Percentage Share
Mymensingh 12.34
Barisal 7.38
Comilla 5.93
Rangpur 4.23
Kishoreganj 3.85
Tangail 3.84
Munshiganj 3.69
Faridpur 3.45
Noakhali 3.34
Chandpur 3.24
Total 51.29
0 50 100
Kilometers
N
Dhaka Megacity
Legend
Percentage Contribution Scale
0.00 - 0.60
0.61 - 2.13
2.14 - 4.23
4.24 - 7.38
7.39 - 12.34
Dhaka Megacity
Origin District
Missing Data
National Recent Migration Flow to DMC
Bangladesh 2.4 million
Spatial Distribution of Recent Migration Flow to DMC (%)
Divisional
Barisal 12.49
Chittagong 16.18
Dhaka 42.91
Khulna 6.8
Rajshahi 8.93
Rangpur 10.93
Sylhet 1.75
Regional
Coastal vs. Non-coastal
Coastal 28.28
Non-coastal 71.72
Eastern vs. Western
Eastern 53.26
Western 46.74
Source: BBS, 2011

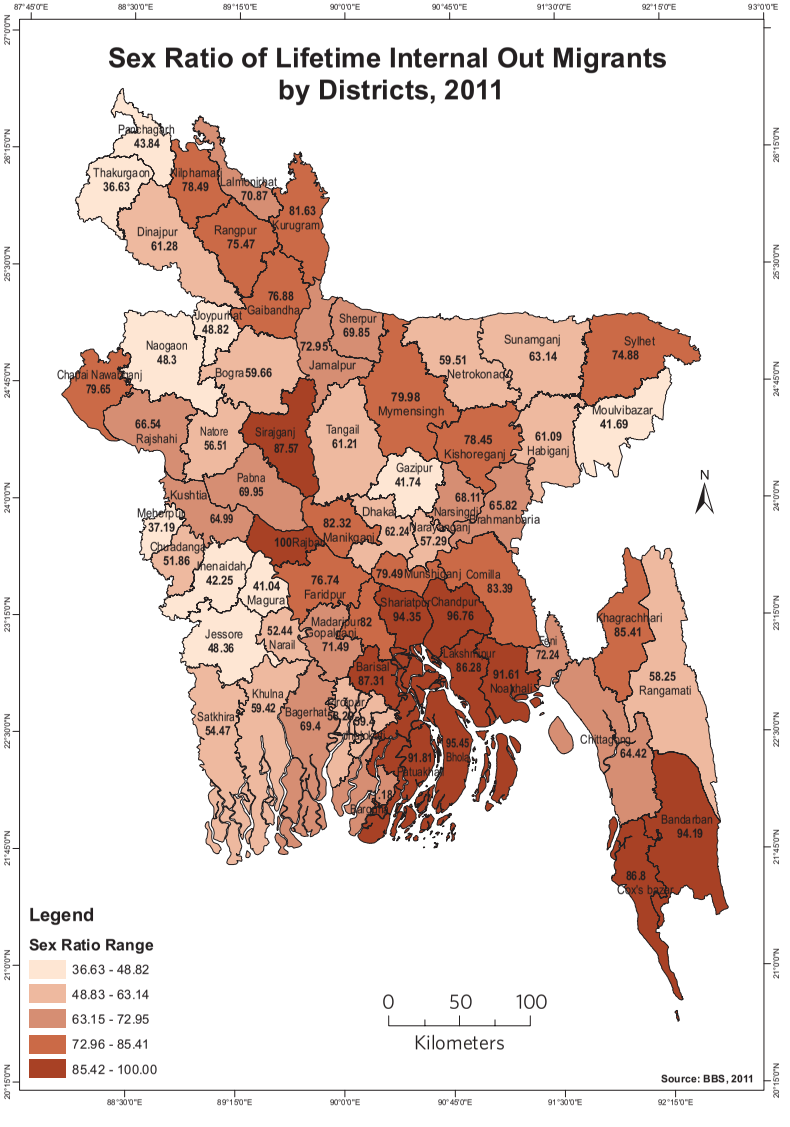
Map 4.8



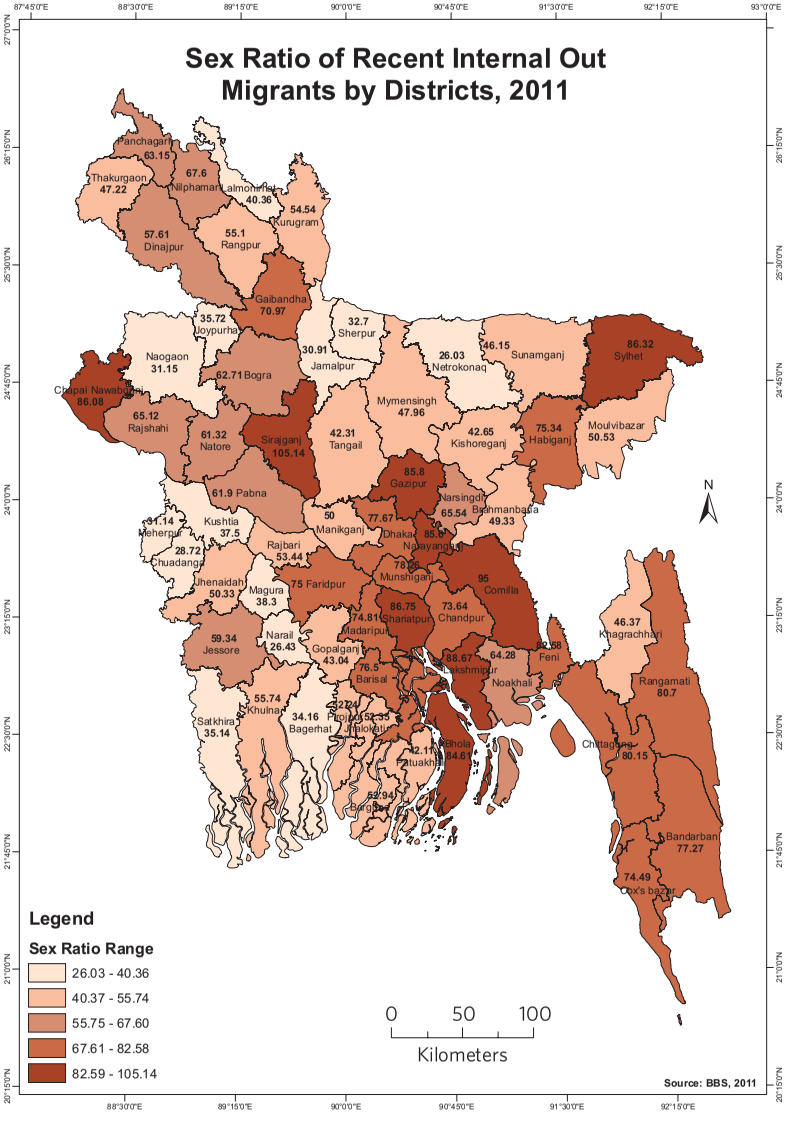
Map 4.9



Map 4.10



Map 4.11



Map 4.12

Focusing on migration to the mega-urban regions – Dhaka (including the districts of Dhaka, Gazipur and Narayanganj) and Chittagong (the district of Chittagong), what is observed is that the lifetime migration stream has a slight preponderance of females, with sex ratios in Dhaka District of 95 males per 100 females and around 90 per 100 females in Gazipur and Narayanganj. The stream to Chittagong has 92 males per 100 females. The stream of recent migrants shows a greater female predominance. The stream to Dhaka District has 78 males per 100 females, and to Gazipur and Narayanganj 86 males per 100 females. The stream to Chittagong has 80 males per 100 females. The increased feminization of city-ward migration streams revealed by comparing the lifetime migration data with the recent migration data is no doubt related to the increased work-related migration of women, but to focus more sharply on this, it is necessary to examine the sex ratio of the migration streams for different age groups.

The feminization of migration to the large cities of Bangladesh is one of the most striking findings of the 2011 Census. It represents a truly momentous change from the earlier, male-dominated patterns of migration to the cities. It must be kept in mind, of course, that many males who in earlier times might have migrated to large cities instead went abroad as labour migrants.

Interestingly, the only district where males predominated in the recent migration stream is Sirajganj, even though in the lifetime migration flow, there were only 61 males per 100 females. Other districts where changes occurred that are difficult to explain include Comilla (sex ratio of 44 among lifetime migrants but 95 among recent migrants), Bhola (sex ratio of 61 among lifetime migrants but 84 among recent migrants) and Lakshmipur (sex ratio of 38 among lifetime migrants but 88 among recent migrants).

Not only does the sex composition of migration flows differ from the sex composition of the total population, but the age composition of migration flows also differs sharply from that of the total population, not only in Bangladesh but throughout the world. As a result, wide differences are found in the age and sex composition of populations in the migrant sending and migrant receiving areas. The differences between urban and rural populations in Bangladesh in terms of age and sex have already been shown in Figure 3.1. What remains to be discussed is the extent to which these differences result from differentials in the age-sex composition of migration flows. Other factors causing differences in the age-sex composition of urban and rural areas could be differential fertility and mortality in urban and rural areas (and of course different patterns of age misstatement). A rough estimate of the effect of natural increase, migration flows and reclassification was shown in Chapter 2. Although it is clear that migration flows were the largest contributor to urban population growth over the 2001-2011 period, it is impossible to give a very accurate estimate of this because of the boundary changes of urban areas between the two censuses.

The difference in the age distribution of migrants and of the total population is shown in Figure 4.3. A much lower proportion of migrants than of non-migrants are in the childhood age groups, but a much higher proportion of migrants are in the age groups from 20 to 49.

Young women dominate the rural-rural migration stream, largely because of the pattern of marriage migration resulting from village exogamy, though

Figure 4.3: Age distribution of migrants and population, 2011

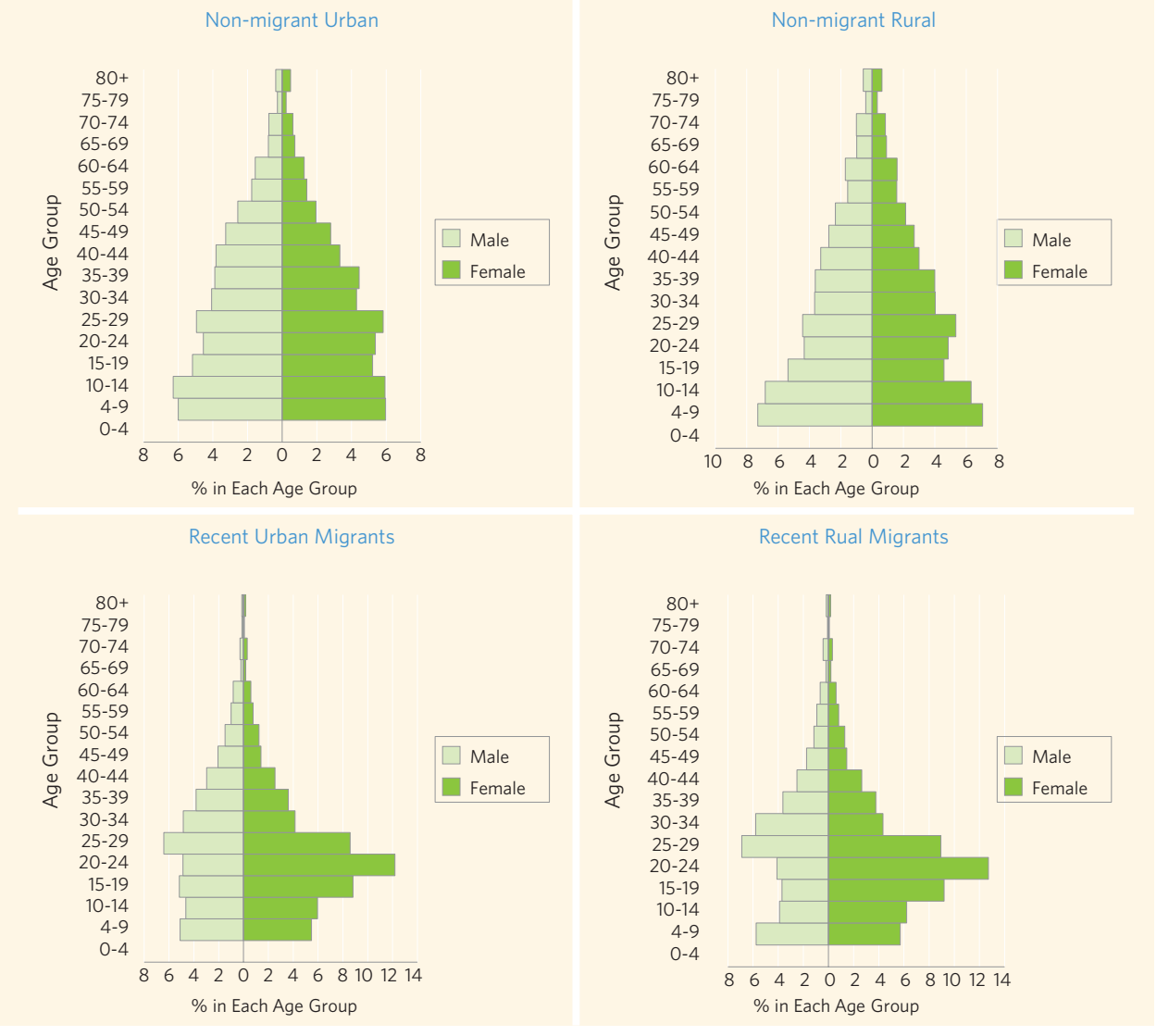
Source: 2011 Population Census Report

much of this migration is not captured in the census because it covers too short a distance, failing to cross the district (zila) boundary which would lead to its being categorized as migration. Though the role of young men becomes greater in the rural-urban migration flows, even in these flows, females have been playing an increasingly important role over time, and indeed now dominate the flow at ages 15-29. What is clear, though, is that for both males and females, there are disproportionately large numbers of young adults (aged 15-29) in the cities, and conversely, lower proportions of young adults in the rural areas.

The recorded age-sex pattern of migration to the cities is of course affected by the change in definition of the metropolitan areas which occurred between 2001 and 2011. To better capture the reality, much of the discussion in this section will focus on the broader mega-urban regions making up Dhaka, Chittagong, Khulna and Rajshahi, ignoring the official urban-rural designations within these mega-urban regions.

Firstly, the age-sex structure of recent migrants to all areas designated as urban is compared with the age-sex structure of the non-migrant urban population and the non-migrant rural population (see Figure 4.4). This comparison shows that

Figure 4.4: Age pyramids of migrant and non-migrant urban and rural populations, 2011



Source: Calculated from unpublished data supplied by BBS

there is a heavy female preponderance in the migration flow at ages 15-29 (or 10-29 in the case of migration to rural destinations). While the pattern of migration to rural destinations is in line with expectations, the pattern of migration to urban destinations is not. This will be discussed in more detail below.

To focus more intensively on the impact of the migrant flow to the major cities in Bangladesh, Table 4.2 shows the age-sex structure of migrants to the main destination areas – Dhaka Megacity and Chittagong District, compared with the age-sex structure of the non-migrant population of these megacities. In this exercise, the population of Dhaka Megacity is taken to include those living in the districts of Dhaka, Gazipur and Narayanganj. This of course considerably exaggerates the extent of the urban agglomerations of Dhaka and Chittagong, but it does have the merit of including all the migrant population who could be considered to have moved to these megacities, whether or not they are considered by the census as having moved to urban areas.

Table 4.2: Age composition and sex ratios of recent migrant and non-migrant populations of Dhaka Megacity and Chittagong District, 2011

	Dhaka Megacity		Chittagong District	
	Recent migrants	Non-migrants	Recent migrants	Non-migrants
% aged 15-29	48.2	31.8	44.0	32.7
% aged 30-39	16.6	17.6	17.6	14.7
Sex ratio, ages 15-29	57.7	84.2	66.5	90.1
Sex ratio, ages 30-39	128.2	95.6	107.0	93.1

Source: Calculated from unpublished data supplied by BBS

Note: sex ratio=males/femalesx100

Table 4.3 presents the information in a different way, highlighting the differences between males and females in the age structure of migration to Bangladesh's megacities. It shows that for both males and females, a higher proportion of recent migrants than of non-migrants are in the age group 15-29. But the preponderance of this age group is much more marked for females than for males. Indeed, in both Dhaka and Chittagong, more than 50 percent of female migrants are in this age group. The gender differentials reverse, however, in the higher age group 30-39. For males, this age group is over-represented among migrants (especially in Chittagong), whereas for females it is under-represented, especially in Dhaka Megacity. The broad picture, therefore, is that the female migration stream to big cities is concentrated heavily in the young adult ages 15-29, whereas the male migration stream has a broader age composition, with the entire age group 15-39 being over-represented. A corollary of this is that from ages 10 to 29 there is a strong female dominance; in this age range, for Dhaka Megacity, there are 167 female migrants for every 100 male migrants, and for Chittagong District, 166 female migrants for every 100 male migrants. This is a remarkable change from the traditional male dominance of rural-urban migration at these ages, both in Bangladesh and elsewhere in South Asia.

Table 4.3: Recent migrants and non-migrants concentration in different age groups by sex in Dhaka Megacity and Chittagong District, 2011

Age group	Non-migrants		Recent migrants	
	Males	Females	Males	Females
	Dhaka Megacity			
10-14	12.0	11.5	9.3	10.5
15-29	29.0	34.6	39.4	55.3
30-39	17.1	18.0	20.9	13.2
Total 10-39	**58.1**	**64.1**	**69.6**	**79.0**
	Chittagong District			
10-14	14.7	13.3	10.2	10.5
15-29	31.6	33.9	35.7	50.6
30-39	13.8	15.6	21.3	14.6
Total 10-39	**60.1**	**62.8**	**67.2**	**75.7**

Source: Calculated from unpublished data supplied by BBS

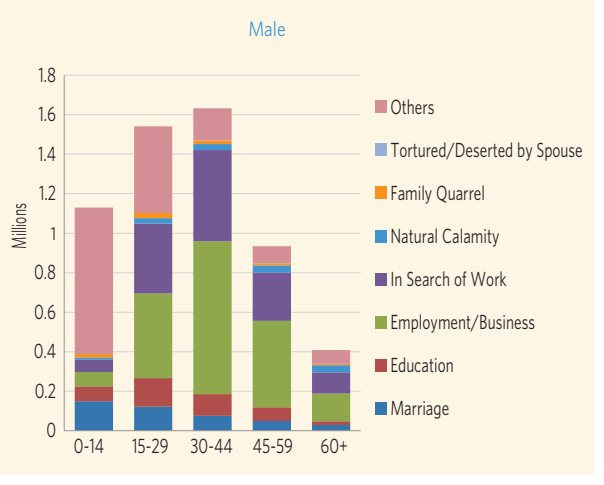
Similar patterns of age-sex composition are shown for lifetime migration, except that the concentration in the young adult ages is somewhat less. This is not surprising, given that even if earlier streams were dominated by this age group, the widening of the definition of

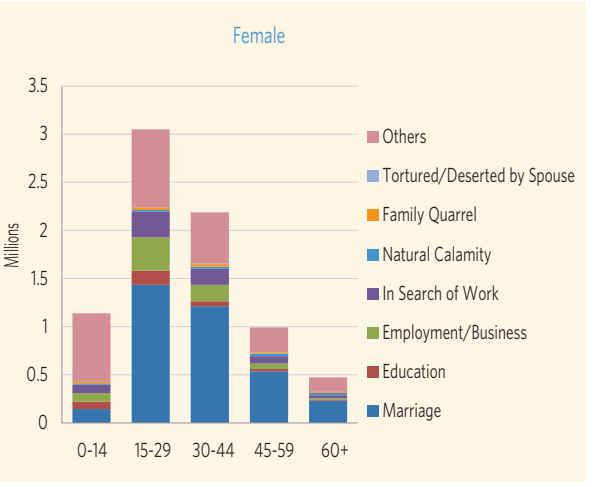
migration to a lifetime means that many migrants who came at a younger age, by the time of the 2011 Census, had moved into older age groups.

There was a question in the census about reasons for migration, which unfortunately can throw very little light on these reasons, because of the high proportion of respondents whose reason was "other". Even if answered well, these recorded reasons could only give a very broad idea of the complex set of factors that is often at play. For what it is worth, the reasons for male and female migration in Bangladesh, by broad age group, is shown in Figure 4.5.

The patterns of male and female migration are different, with the age group 30-34 being somewhat larger than the age group 15-29 for males, but considerably smaller than the 15-29 age group for females. The reasons why males migrate in these key age groups are also different from the reasons why females migrate. For males, education and the two reasons related to employment – "employment, business" or "in search of work" are by far the most important, whereas for females, marriage is the dominant reason. Unfortunately, for both males and females, the large group of "other" makes interpretation difficult.

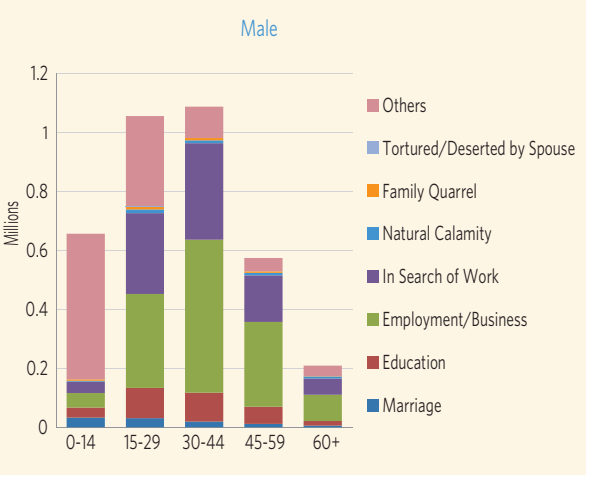
Figure 4.5: Reasons for male and female migration in Bangladesh by age group, 2011

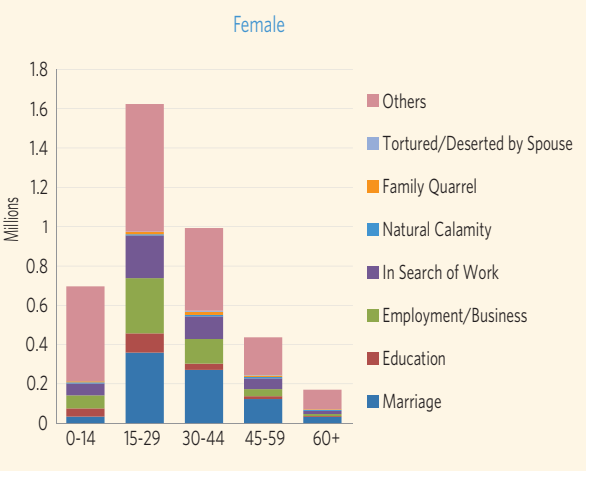




Source: Calculated from unpublished data supplied by BBS

Figure 4.6: Reasons for male and female migration to Dhaka Megacity by age group, 2011





Source: Calculated from unpublished data supplied by BBS

Female RMG workers. *Photo: Drik*

However, when the comparison is restricted to migrants to Dhaka Megacity, the data on reasons for migration gives a different picture. It is widely recognized that a major reason for the increasing flow of young female migrants to the cities is the expanded work opportunities for women in cities, particularly in the RMG industry, though a long-standing reason for such migration which continues to be important is family related, particularly marriage migration. The data for lifetime migrants to Dhaka Megacity are presented in Figure 4.6 and Table 4.4, for three broad age groups. As expected, a much higher proportion of females than of males gave "marriage" as the reason for moving, while the majority of males gave "employment/business" or "in search of work". Unfortunately, 40 percent of women aged 15-29 answered "other", but the proportion answering "employment/business" or "in search of work" did total 30.7 percent, well above the 22.1 percent answering "marriage", but well behind the 56 percent of males in this age group who gave these work-related reasons.

The economic motivation for much female migration to Dhaka, then, comes through to some extent, but the "reasons for migration" question failed to give a clear picture of the motivation of females migrating to the mega-urban region. The high proportion answering "other" (much higher than for males) probably reflects the confusion many women feel when asked to give one reason for their move.

Table 4.4: Reasons for migration (lifetime migrants in Dhaka Megacity), 2011

Age/sex	Marriage	Education	Employment/ business	In search of work	Natural calamity	Family quarrel	Other	Total
	MALES							
15-29	2.9	9.7	30.2	26.0	1.2	1.0	29.0	100
30-44	1.8	8.9	47.7	30.0	0.9	0.7	10.0	100
45-64	2.3	9.7	49.2	27.6	1.8	0.7	8.7	100
	FEMALES							
15-29	22.1	6.0	17.3	13.4	0.3	0.8	40.1	100
30-44	27.3	3.2	12.6	11.6	0.8	1.5	43.0	100
45-64	26.6	3.7	8.1	12.1	2.0	1.6	45.9	100

Source: Unpublished data from 2011 Census provided by BBS

Given that the census data on reasons for migration is limited in value, a brief summary will be given of other studies conducted on rural-urban migration in Bangladesh. These are rarely based on statistically representative samples, and if they are, they are not based on recent census or survey data (e.g. Afsar 2000). Most studies are based on small samples and case studies. These can be useful and insightful, but are not statistically representative of the overall migration situation. Most use the somewhat artificial division of reasons for migration into push and pull factors, which does not greatly help in understanding the process in general, or in the particular case of female migration. Push factors typically come to the fore among those mentioned by respondents in surveys (Farhana, Rahman and Rahman, 2012; Uddin and Firoj, 2013). Uddin and Firoj questioned respondents (migrants to Chittagong) about the four most important reasons for migration, and found that push factors were of overwhelming importance. In descending order of importance, these were searching for work, extreme poverty, homelessness, landlessness, river erosion, natural disasters, marital factors, too many family members, loss of income source and failure to repay loans. There is likely to be considerable overlap across some of these factors. While no pull factor ranked as high as any of these push factors, "easy access to informal sector", "easy access to slum area" and "higher income probability", could be seen as the other side of the coin, factors which perhaps tend to be downplayed when giving responses to questions about the reasons for migration.

Another study (Rashid 2013), which gives no details about the way the sample was drawn, concludes that "unemployment in the village" is the main cause of migration (78.4 percent), followed by losing homestead and cultivable lands due to riverbank erosion (7.8 percent) and other push factors including domestic violence, early marriage, polygamy, dowry, social insecurity, low yield of agricultural lands, decreasing labour productivity in the agricultural sector, moneylender issues, pressure to repay loans from some NGOs, food insecurity, etc.

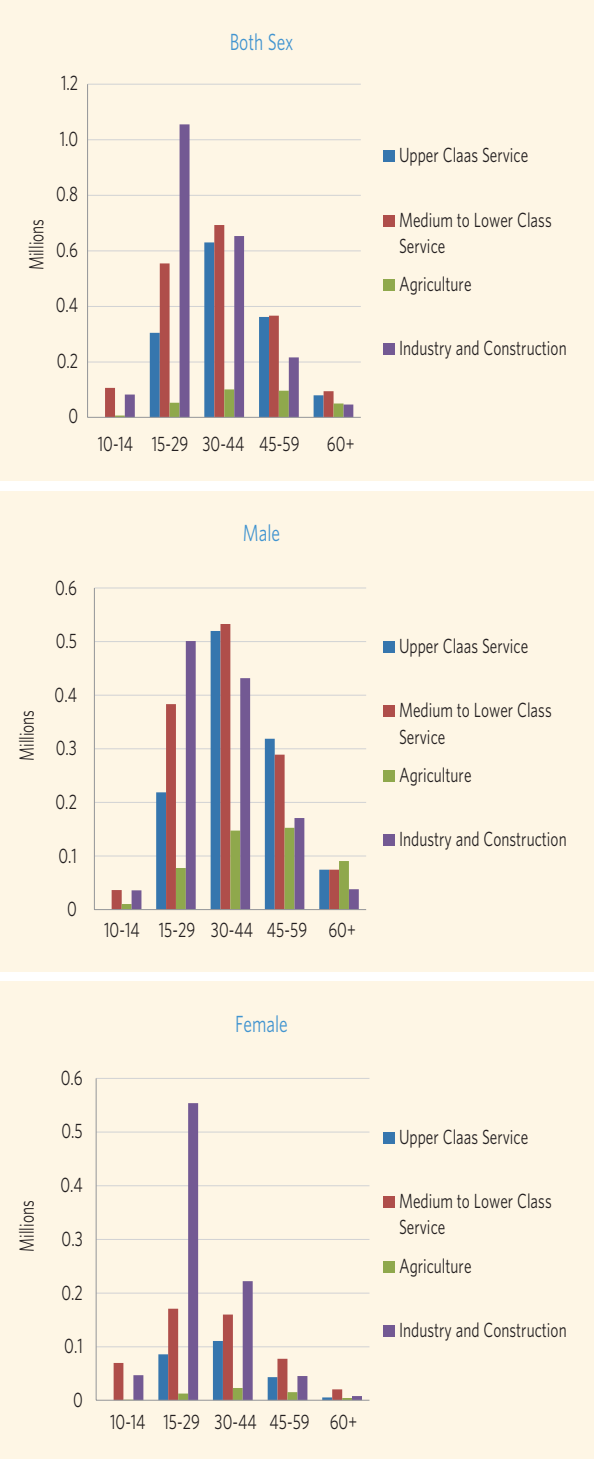
What studies of this kind seem to be showing is that push factors predominate in decisions to migrate, but that there is often a complex web of causes, in which it is hard to prioritize individual factors through the survey research techniques employed. But social and family issues, and issues related to violence and insecurity at the village level, surely need to be included among these factors.

Based on all available evidence, what is the summary explanation for the gender pattern of inter-district migration in Bangladesh? In most districts, inter-district migration is quite limited, and in such districts, the migration patterns are dominated by marriage migration, where according to Bangladeshi custom, females move to their husband's place of residence. In such districts, the sex ratio (males/100 females) among migrants is very low. However, in the districts with heavy in-migration (Dhaka, Gazipur, Narayanganj, Chittagong) the sex ratio of migrants is fairly evenly balanced, no doubt because many males are migrating in search of work, and females are migrating both for family reasons (marrying, following husband) and increasingly, also in search of work. Nevertheless, even in these districts, females do outnumber males in the migration flow, and especially in the young adult ages in which people typically move for work- or education-related reasons, or to marry. This may seem somewhat surprising in view of the fairly high sex ratio among the overall population of these districts; however, it is consistent with the fact that the sex ratios have been declining over time, no doubt largely because of the effect of the female predominance among recent migrants.

d) Effect of migration on education structure and employment in urban and rural areas

Migration affects not only the age-sex structure of urban areas, but also its educational composition. Moreover, migrants tend to be more heavily concentrated in certain industries and occupations than the non-migrant population. Figure 4.7 shows the overall occupational structure of those migrants who are in the labour force, by age group. There is a very different pattern for males and females.

Figure 4.7: Occupation of migrants in Bangladesh by age group, 2011



Source: Unpublished tabulations supplied by BBS

First, the male pattern shows that a majority of those aged 15-29 are employed in industry and construction, while many are also employed in medium to lower class service activities. However, in the age group 30-44, both upper class services and medium to lower class services exceed employment in industry and construction.

The female employment pattern is dominated by industry and construction, particularly at ages 15-29. This reflects the dominance of the RMG industry in women's employment in Bangladesh, particularly for migrant women.

Table 4.5 shows that in the Dhaka Megacity region, agriculture and fishing are clearly more important occupations for local born males than for migrant males, while "food processing, wood working, garment and other trades workers" and "drivers and mobile plant operators" are more important occupations for migrant males. For females, both local born and migrants are more concentrated in a smaller range of occupations than are males, though there are wide differences between local-born and migrant females. Particularly striking is the heavy concentration of local-born females in teaching occupations, and

Table 4.5: Occupation by migration status, male and female working population aged 15-29 in Dhaka Megacity (percentage distribution)

Occupational group	Males		Females	
	Non-migrants	Migrants	Non-migrants	Migrants
Hospitality retail and other services managers	15.1	10.0	3.6	1.2
Teaching professionals	2.7	2.6	13.0	3.4
General and keyboard clerks	3.3	2.9	3.6	2.1
Personal service workers	2.0	2.5	6.3	11.3
Sales workers	11.2	9.2	3.6	1.5
Subsistence farmers, fishermen etc	6.5	0.7	1.6	0.0
Metal machinery and related trades workers	3.9	2.2	0.0	0.4
Food processing, wood working, garment and other trades workers	11.0	20.4	27.3	39.7
Drivers and mobile plant operators	7.8	13.5	0.9	0.8
Labourers in mining, construction, manufacturing and transport	13.9	15.5	18.7	20.9
All other occupations	22.6	20.5	21.4	18.7
TOTAL	**100**	**100**	**100**	**100**

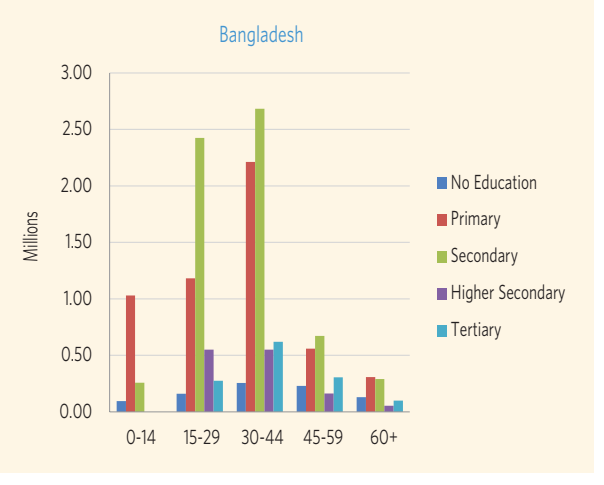
Source: Unpublished tabulations supplied by BBS

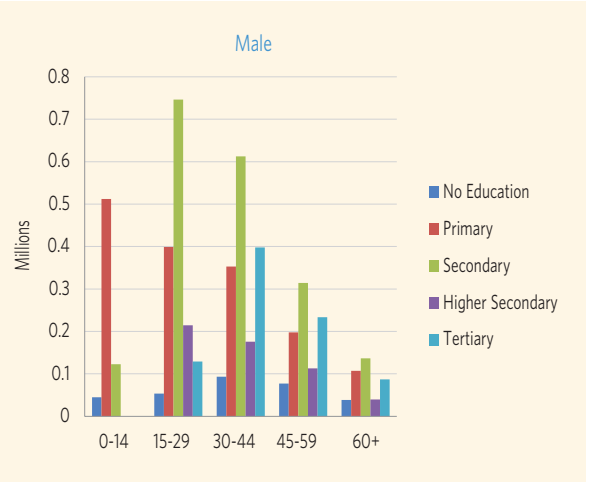
(compared with males), the heavy concentration of both local-born and migrant females in "food processing, wood working, garment and other trades workers". The concentration of female migrants in these industries is particularly striking, and no doubt reflects the heavy concentration of migrant females in the garment industry.

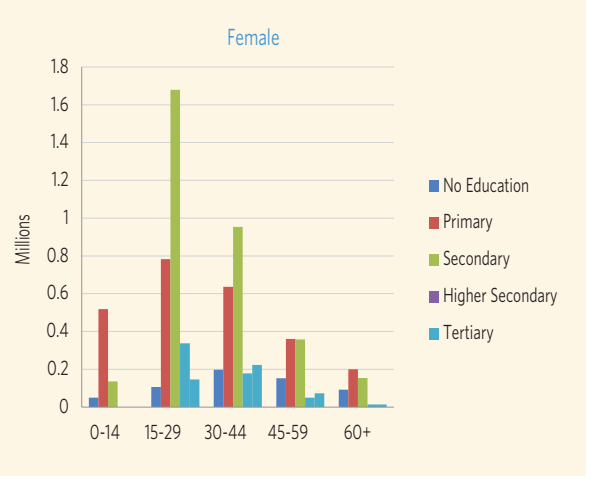
Turning to the educational attainment of migrants, in Bangladesh as a whole, Figure 4.8 shows that the migrants are mostly educated, though, majority of them attained primary to secondary levels; the number of migrants with no education at all seems to be insignificant for both male and female migrants. However, compared with younger age groups, older aged migrants recorded higher number of uneducated members. It is also evident that male migrants are concentrated at both ends of the educational range whereas the number of females having higher education (higher secondary and tertiary levels) found to be relatively low.

Given the importance of Dhaka Megacity as a destination area for migrants, it is important to understand the relative educational level of migrants and non-migrants in this megacity. Table 4.6 shows that in the key ages for lifetime migration – 15-29 – male migrants are slightly more concentrated at both ends of the educational spectrum – in other words, with little or no education, and with tertiary education – than male non-migrants. But the differences are not very pronounced. As for females, the tendency for the poorly educated to be over-represented among migrants than among non-migrants is a little stronger than in the case of males.

Figure 4.8: Educational attainment of migrants by age group, 2011







Source: Unpublished tabulations supplied by BBS

Table 4.6: Educational attainment of migrants and non-migrants by age and sex in Dhaka Megacity

Educational attainment	Non-migrants			Migrants		
Age group	15-29	30-44	45-59	15-29	30-44	45-59
	MALES					
Never studied	2.5	7.8	9.1	3.5	5.7	9.0
Primary	22.2	27.4	31.3	26.7	21.8	19.7
Junior secondary	24.6	17.2	17.7	22.6	15.8	12.5
Secondary	43.8	31.8	31.3	39.0	31.6	29.8
Tertiary	6.8	15.8	10.7	8.2	25.1	28.9
TOTAL	100	100	100	100	100	100
	FEMALES					
Never studied	2.2	11.6	24.3	4.3	12.0	17.9
Primary	19.9	28.6	31.4	27.8	26.6	26.8
Junior secondary	24.3	21.9	17.8	25.2	15.7	13.7
Secondary	47.2	27.5	18.9	36.9	31.0	28.4
Tertiary	6.4	10.3	7.6	5.7	14.7	13.3
TOTAL	100	100	100	100	100	100

Source: Unpublished tabulations supplied by BBS

Inside an RMG factory. *Photo: Drik*

At older age groups, the educational differences between migrants and non-migrants are a little more pronounced. For both males and females, at ages above 30, a much higher proportion of migrants than of non-migrants have tertiary education. For females, the migrant-non migrant differential is also apparent in the next lower educational category – completed secondary education. It is important to note that for females, there is a different pattern of migrant-non migrant educational differentials for the young adult group than for the age groups above 30: at the younger ages, the poorly educated are over-represented among migrants, whereas at ages above 30, the highly educated are over-represented. It is likely that this reflects the changing employment opportunities over time, with garment industry employment available in more recent times for women without completed secondary schooling.

3. Patterns of International migration

Though estimates of the number of Bangladeshis who have moved abroad on a permanent basis vary, the numbers-perhaps 1.4 million to 2 million (UNFPA, 2015: 74)[13]-are quite small relative to the numbers engaged in contract labour migration and also represent only a small proportion (not much over one percent) of the total Bangladesh population. On the other hand, the flow of contract labour migrants is considerable, yielding figures of between 6.5 million and 9 million workers abroad at any one time, which if correct for 2010 would mean that between 10 and 16 percent of Bangladesh's labour force was working abroad (UNFPA, 2015: 74).

International migration has become very important for Bangladesh, for a number of reasons: it widens employment opportunities; it enables some Bangladeshis to access work with much higher wages than is likely to be found in Bangladesh; it leads to large remittance payments which both greatly assist the Bangladesh economy and enable many individual families to improve their economic situation; it exposes workers to other countries and cultures; and possibly it leads to some skill upgrading. The majority of Bangladeshi

overseas contract workers, however, are in the less skilled and semi-skilled categories (UNFPA, 2015: Figure 2.13). The likelihood of significant skill transfers would be higher if more of them were in the professional and skilled categories, and worked in occupations where skill transfer was feasible.

Table 4.7 shows the pattern of international labour migration from the different districts of Bangladesh over the period 2005 to 2015.[14] It is clear that the districts that are strongly over-represented in labour migration in comparison with their share of the Bangladeshi population are concentrated in Chittagong and Dhaka divisions (13 of the 15 most over-represented districts are from these two divisions), and to a lesser extent in Sylhet Division, while the districts that are strongly under-represented in labour migration are mainly in the Rangpur and Rajshkahi divisions. The heaviest under-representation is from Rangpur Division. Though Chittagong Division overall is strongly represented, three of its districts are strongly under-represented, all of them from the Chittagong Hill Tracts.

The strong representation of Chittagong and Dhaka divisions in overseas labour migration is probably related in part to (1) greater economic development in these divisions, enabling a larger proportion of families to finance labour migration (Rahman, 2011). It is probably also related to (2) the more ready access to overseas sea and air transportation; and (3) more ready access to brokers who arrange overseas labour contracts. Likewise, the under-representation of Rangpur and Rajshahi in the labour migration no doubt relates to their negative scores on (1), (2) and (3), but could also be related to their proximity to India (West Bengal), and therefore some unrecorded movement across the border. Such unrecorded movement is a sensitive political issue between Bangladesh and India, but more in relation to movement into Assam than into West Bengal.

Until 2003, Bangladesh government policy prevented the international labour migration of women (Islam 2010). After these restrictions were lifted, the number of female labour migrants increased, with a strong surge after 2011. This surge is continuing unabated, and the numbers reached 104,000 in 2015 (see Figure 4.9),

Table 4.7: Over-representation and under-representation of districts in overseas employment, 2005 to 2015

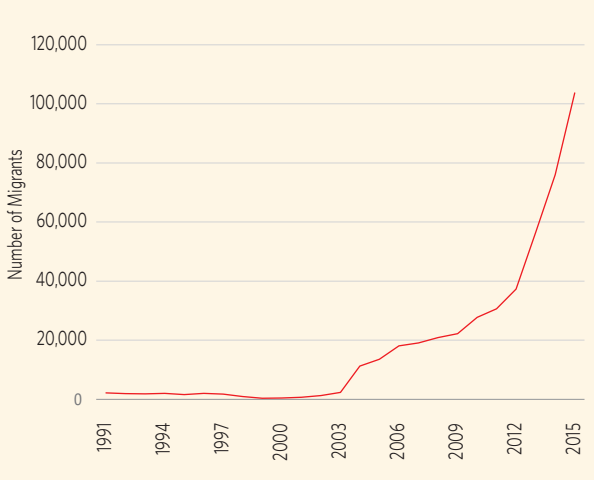
District	Division	Index of over- or under-representation	District	Division	Index of over or under-representation
Munshiganj	Dhaka	3.06	Cox's Bazar	Chittagong	0.69
Comilla	Chittagong	2.93	Sunamganj	Sylhet	0.69
Feni	Chittagong	2.76	Jessore	Khulna	0.68
Brahmanbaria	Chittagong	2.65	Pirojpur	Barisal	0.67
Chandpur	Chittagong	2.48	Chuadanga	Khulna	0.63
Bagerhat	Khulna	2.28	Mymensingh	Dhaka	0.63
Barisal	Barisal	2.26	Barisal	Barisal	0.61
Manikganj	Dhaka	2.22	Jamalpur	Dhaka	0.56
Tangail	Dhaka	2.06	Bogra	Rajshahi	0.54
Lakshmipur	Chittagong	2.04	Dhaka	Dhaka	0.54
Noakhali	Chittagong	1.86	Natore	Rajshahi	0.41
Narsingdi	Dhaka	1.82	Naogaon	Rajshahi	0.40
Chittagong	Chittagong	1.81	Patuakhali	Barisal	0.37
Shariatpur	Dhaka	1.70	Jaipurhat	Rajshahi	0.36
Madaripur	Dhaka	1.68	Sirajganj	Rajshahi	0.35
Moulvibazar	Sylhet	1.60	Satkhira	Khulna	0.34
Meherpur	Khulna	1.59	Netrakona	Dhaka	0.29
Faridpur	Dhaka	1.53	Khulna	Khulna	0.29
Habiganj	Sylhet	1.21	Rajshahi	Rajshahi	0.27
Narayanganj	Dhaka	1.21	Gaibandha	Rangpur	0.26
Kishoreganj	Dhaka	1.13	Sherpur	Dhaka	0.22
Sylhet	Sylhet	1.05	Khagrachari	Chittagong	0.21
Rajbari	Dhaka	0.99	Rangpur	Rangpur	0.18
Gazipur	Dhaka	0.98	Bandarban	Chittagong	0.15
Nawabganj	Rajshahi	0.94	Rangamati	Chittagong	0.15
Kushtia	Khulna	0.80	Kurigram	Rangpur	0.15
Jhalokati	Barisal	0.77	Nilphamari	Rangpur	0.14
Narail	Khulna	0.77	Thakurgaon	Rangpur	0.14
Gopalganj	Dhaka	0.75	Dinajpur	Rangpur	0.13
Bhola	Barisal	0.74	Lalmanirhat	Rangpur	0.10
Magura	Khulna	0.70	Panchagarh	Rangpur	0.09

Source: Calculated from figures supplied by the Bureau of Manpower, Employment and Training website: http://www.bmet.gov.bd/BMET/viewStatReport.action?reportnumber=33

Note: Over- or under-representation is calculated as the percentage of total overseas employment from the district divided by the district's share of Bangladesh's 2011 population. A figure of more than 1 means the district is over-represented in overseas employment; a figure of less than 1 means it is under-represented.

representing 19 percent of all labour migrants abroad in that year. Almost all of these female labour migrants (94 percent) went to countries in the Middle East. The implications of this very significant increase in women's overseas migration for women's status, roles and wellbeing needs to be investigated.

Figure 4.9: Overseas employment of female workers, 1991-2015



Source: Bureau of Manpower, Employment and Training website: http://www.bmet.gov.bd/BMET/viewStatReport.action?reportnumber=39

How do the patterns of overseas labour migration link with the patterns of internal migration? It is important to consider this question, because in many parts of Bangladesh, a person considering the options of seeking work in another place is likely to assess the relative possibilities and benefits of moving to another part of Bangladesh (probably a big city) or alternatively of seeking work abroad. Of course, the latter option is a much more difficult one for most people, requiring the raising of enough money to cover the costs of arranging a labour contract overseas, as well as requiring more knowledge about how to proceed with this option.

What the patterns of migration reveal is that overseas labour migrants are drawn much more from the Dhaka and Chittagong divisions than from other parts of the country. The figures could possibly also be obscuring a tendency for some of the labour migrants to actually originate from areas other than the big cities, if indeed some of them moved to the cities to work and later arranged overseas labour contracts from their new base in the city.

Aside from the districts in Dhaka and Chittagong divisions, Bagerhat and Barisal districts are also over-represented in overseas labour migration. In the case of Barisal, and to a much lesser extent Bagerhat, this strong representation in overseas labour migration is parallel to a strong representation in migration to Dhaka.

The figures on internal and international migration suggest that the two kinds of movement are largely dealing with different groups of people. Internal migration is largely to Dhaka and Chittagong areas, from all over the country but with particular concentrations from Barisal, Rangpur and a number of districts relatively close to Dhaka. Overseas labour migration is largely from Dhaka and Chittagong and areas in close proximity to these cities, although Barisal and Bagerhat are strongly represented in both migration flows. Barisal is clearly a particular case, and it is generally agreed that the out-migration from this district reflects severe environmental pressures creating crisis conditions for many workers there (Walsham, 2009).

4. Migration Patterns and Women's Wellbeing

The changing gender balance in internal migration has already been discussed. It is one of the most remarkable findings of the 2001 Census. Some of the implications for women's wellbeing will be discussed in this section.

Historically, males were far more prominent than females in migration flows to urban areas of Bangladesh (Chaudhury, 1980; Islam, 1996: 59-60; Afsar, 2000). This was because of the very poor living conditions awaiting the migrants in urban areas, thus favouring migration of males without their family; and the nature of much of the migration, which was often crisis-induced or poverty-induced. Accompanying females were unlikely to work in the city, and therefore generally stayed back in the source

area. Independent migration of women, other than as accompanying family members, was culturally unacceptable. Thus the literature of the time, considering female migrants as "passive movers" migrating for marriage or following the male head of household, was probably largely correct. However, not only in Bangladesh but also in neighbouring India, there has been a tendency for commentators to over-emphasize the male dominance in rural-urban migration, though the statistics over recent decades do not actually show such dominance.

Table 4.8 shows relevant data for India, Bangladesh's large neighbour, over the 1991-2001 period. Females dominated rural-to-rural migration, especially among intra-state migrants, lending support to the much-stressed importance of marriage migration. However, among rural-urban migrants, though women were behind men in inter-state migration flows, they were ahead of them in intra-state migration flows. When intra-state and inter-state migration was combined, the numbers of men and women among rural-to-urban migrants were identical.

Table 4.8: Number and sex ratio of different categories of migrants in India, 1991-2001

Migration streams	Number of migrants (in million)	Percentage distribution	Sex ratio (males per 1000 females)
	INTRA-STATE		
Rural to rural	48.8	60.6	257
Rural to urban	14.2	17.6	842
Urban to rural	5.2	6.5	651
Urban to urban	9.8	12.1	796
	INTER-STATE		
Rural to rural	4.4	26.6	648
Rural to urban	6.3	38.2	1480
Urban to rural	1.0	6.0	984
Urban to urban	4.4	26.7	970
	ALL MIGRATION		
Rural to rural	53.2	56.5	282
Rural to urban	20.5	21.7	1000
Urban to rural	6.2	6.6	697
Urban to urban	14.2	15.1	846

Source: Derived from Bhagat and Mohanty, 2009

Much the same seems to be the case in Bangladesh, although in Bangladesh the interpretation of the figures is complicated by the artificial attribution of rural status to many urbanized areas in the 2011 Census. The census figures, for what they are worth, give the following division between recent migration streams: rural-rural – 42.9 percent; rural-urban-34.6 percent; other – 22.5 percent. In Bangladesh the situation changed in major ways with the growth of the RMG industry from the late 1970s onward, and females came to play a much more important role in rural-urban migration (see Maps 4.9 and 4.10).

The female domination of the recent migration streams to the big cities in age groups 15-29 has already been discussed. Have the emerging patterns of female migration been able to play a positive role in freeing women from some of the restrictions they face in Bangladeshi family and society, widening their opportunities for personal development and enabling them to play a broader role in Bangladesh's development?

In a country where women traditionally did not work in formal employment and entered arranged marriages soon after puberty, the decision to delay marriage for garment industry work involved radical social change. Not only this, but "entry into garment work involves rural to urban migration for most workers, which ... poses some independent challenges and introduces additional complexity to the process" (Naved, Newby and Amin, 2001: 91). The labour force demands of the RMG industry favoured exactly the group of women who traditionally were not engaged in rural-urban migration, i.e. young, unmarried women. A 1996 study on garment workers in Dhaka City emphasized that a recent trend of young girls aged 13-17 coming to the city to work in the formal sector was a major departure from traditional social norms confining girls to domestic work (Blanchett, 1996).

The Chittagong study by Uddin and Firoj (2013) shows an almost total change in employment

status of women migrants before and after migration. Only 5 percent of women migrants in the sampled households were employed before migration but more than 90 percent were employed after migration (67 percent in the garment and manufacturing industry, 13 percent as domestic servants, 8 percent as petty traders and 5 percent as garbage pickers). This appears to reflect the changing circumstances of the Bangladesh macro-economy, and the importance of the RMG sector, along with a significant widening of the boundaries earlier imposed on acceptable reasons for women's migration.

A number of studies have investigated the wider social ramifications of the dramatic increase in women's employment in the RMG industry. As summarized by Khosla, 2009,

> The existing research appears to conclude that employment in this industry, although exploitative, offers women an income and may enable them to postpone marriage and childbearing since their income is valued by their families. Positive changes in other aspects of women's lives have been mentioned but do not appear to have been evaluated as strongly.

However, Khosla argues that by expanding the focus of investigation to include social, political and economic exclusion of women, the impact of the RMG industry on women's lives may be more significant than previously thought. She argues that to varying degrees, garment industry work has contributed to the relaxation of norms regarding purdah, a boost for girls' education, a delay in marriage and child bearing, reduction in family size and the changing role of women in society, and that while these changes are most evident for women who actually work in this industry, the change in social norms benefits women outside the industry as well. Amin et al. (1998) argue that "Women themselves value the modern nature of their work, consider garment work to be a lesser hardship than most forms of agricultural labour, and value the autonomy and independence that come with earning an income".

On the effect of female rural-urban migration on marriage, another study made the following observations:

> There is a mechanical effect that delays marriage because the girl is not seen around the village, opportunities for potential grooms to see and meet her are reduced. So, too, are opportunities for parents to arrange meetings with prospective grooms and parents-in-law when a girl is absent from the village for much of the year.
>
> A second consideration is that many parents of prospective grooms, and the men themselves, view employment of young women in urban areas, especially in factories, as stigmatised and undesirable. This can result in higher than average dowry payments being demanded for the marriage of young women who have been, or are, working in urban factory jobs. (Streatfield et al., 2015: 107)

The study goes on to observe that one result is that unmarried female factory workers are typically saving from their earnings for their dowries. Another observation is that longer schooling of girls, followed by factory work, makes it hard for the traditional seven or eight year gap in age between husbands and wives to be maintained, and this is tending to lead to a narrowing of the age gap. At the same time, extended education for girls means that, contrary to past custom, more girls are now marrying men with lower educational attainment than themselves. Also, girls are said to be more confident in expressing their opinions, and expecting to be consulted, at least to some extent, about potential husbands (World Bank, 2007). Clearly, many changes are taking place in gender relations, the changes tend to be more marked in urban areas, and migration to urban areas is playing a role in these changes.

Many negative consequences of women's employment in the RMG sector can be listed. Sexual harassment, unequal treatment of women and unsafe working conditions persist in this industry. The litany of problems facing women garment industry workers reflects the lack of sophistication of many of those migrating to the urban areas, and their powerlessness in the face of cultural norms of submission to male authority they have been socialized into. The systematic

exploitation they face as a consequence of this in described in a number of studies (e.g. Rashid, 2013). The gains through employment in the industry have been made in the face of deep seated inequalities in society, and have to be seen as just one partial success in the struggle against these deep-seated inequalities. More broadly, there is no evidence that violence against young unmarried women is less in urban than in rural areas (Vander Ende et al., 2014), or that the conditions facing young women in the slums of Dhaka are any less hazardous than in rural areas. It is probable that the findings of a study in Delhi slums in India – that many young women in slums were married off young as a protection against the very prevalent sexual harassment and indeed, danger, that young women experienced (Grover, 2011) was also a factor in continuing young age at marriage in Dhaka's slums. Thus rural-urban migration must be assessed realistically as having contributed to improvements in women's conditions in Bangladesh but in a context in which deep-seated cultural norms adversely affecting women's lives remain strong.

Migration, then, has undoubtedly played an important role in changing women's situation in Bangladesh's economy, society and family. The work opportunities opened up in the cities, particularly in the RMG industry, have led to some remarkable results in terms of women's roles and status. At the same time, they have exposed women to many new dangers and challenges. Migration has played a key role in enabling many women living in very constrained circumstances to access these opportunities. The changes are not something that can be turned back; the genie is out of the bottle, and women will continue to play an increased role in economy and society.

The sharp increase in the share of females in the international labour migration flow since 2013 also has important implications for women's wellbeing. Whereas overseas labour migration of males was more varied in destination (although most went to the Middle East, 10 percent went to Singapore and Malaysia in 2015), 94 percent of female migrants went to the Middle East. They are predominantly employed as housemaids, meaning that once at their destination, they are largely secluded in the home of their employer, with their passport normally confiscated by the employer or the agent; thus their wellbeing is totally in the hands of the employer. Long hours of work, no day off, and verbal, physical and sexual abuse are unfortunately common (Priesner, 2012: 41; OKUP 2014). Careful monitoring of this situation is clearly needed.

5. The Impact of Migration on Bangladesh's Economy, Regional Disparity, and Poverty Alleviation

In the Bangladesh context, the well-known Lewis model of the labour-surplus economy (and its further development in the work of Fei and Ranis, 1964) is clearly highly relevant to the structural changes that have been taking place in the economy. The flow of workers from the agricultural sector to the higher-productivity non-agricultural sectors feeds the process of structural change and economic expansion. Eventually, the rural labour market begins to tighten, reflecting the slower growth in potential workers (evident in Bangladesh as a result both of movement of workers to the cities and continuing declines in birth rates) and increases in agricultural productivity. This should eventually result in an increase in agricultural wages. This appears to have been happening since around 2008 (UNFPA, 2015, Figure 2.1), and is an encouraging sign that the growth in employment resulting from sustained economic growth of more than 6 percent per annum over the past decade and a half is managing to more than keep pace with the growth of the workforce. Migration to urban areas is a crucial component of this process.

In assessing the impact of migration on the economy, regional disparity and poverty alleviation, it is necessary to keep in mind the various reasons why people move. Basically, people move to seek a better life, whether it be because they have lost their source of livelihood through natural disasters, or because they expect to find work yielding them a better income than in their present situation, or because of a host of

personal factors affecting their satisfaction with their present situation. Marshall and Rahman (no date) apply some rough tests to the hypothesis that migration flows in Bangladesh are driven by three different factors: livelihoods and economy, the quality of public services and the presence of challenging environmental conditions. They find strong support for the first factor, no support for the second, and mixed support for the third, (though the support is quite strong in the case of the coastal zone). Overall, the primacy of economic motivations for migration is supported, though challenging environmental conditions also play an important role in some areas.

From a macro-economic point of view, migration is usually seen as an equilibrating force, with positive effects on overall economic wellbeing, lessening of regional disparities and alleviation of poverty. There are benefits to the economy as a whole when bright students from rural backgrounds where they cannot access quality education are able to enrol in better quality urban schools, or find more productive urban jobs. As individuals, they gain greatly from these opportunities; viewed from a macro-economic perspective as well, this has important benefits in upgrading Bangladesh's human capital and productivity.

This benign assessment, however, can be challenged; for example, the loss of the "best and the brightest" from areas with poor educational facilities can leave outmigration areas struggling in the face of an ageing population and a poorly educated remaining youth population. From a regional development perspective, the results of outmigration can be quite adverse, and the theoretical possibility of cross-subsidizing such areas from the increased national product resulting from the movement of their bright young people to the city may not be realized in practice. Policy should stress improvement in the quality of education in disadvantaged areas to lessen this particular motivation to leave.

The move to an urban area is clearly of major benefit to many poor rural dwellers, notwithstanding the poor conditions they face in the urban slums. While in Bangladesh, as in many developing countries, the prospect of growing slum populations is feared by urban residents and officials, this fear cannot justify neglect of basic service delivery to slum dwellers as a disincentive to rural-urban migration.

Special aspects of the Bangladesh situation need to be kept in mind. Disaster migration can be seen as a survival mechanism rather than a plan for economic betterment. But while some of the migratory movement in Bangladesh is triggered by riverbank erosion, flooding and water-logging, it is hard to say how much of the overall volume of migration this accounts for. The 2011 Census data on reasons for migration shows very low proportions attributing their move to natural calamities (see Figure 4.5). Likewise, the 2013 Urban Health Survey showed negligible proportions attributing their movement to the city to river erosion (about 3 percent of those moving to slum areas and half that proportion of those moving to non-slum areas). However, that report mentioned that on probing, environmental reasons account for about 7 percent of all migration to city slums (NIPORT et al, 2014: Figure 4.6 and p. 28).

Overseas labour migration is also playing a role in poverty alleviation in rural areas and in supporting economic development through remittances and – less certainly – transfer of technology learned overseas.[15] This migration has no doubt contributed to poverty alleviation for many Bangladeshi families, as well as contributing to national economic growth through the flow of remittances. However, the argument of Marshall and Rahman (no date: 6) that internal migration has a stronger impact on poverty reduction than overseas labour migration, because it is potentially more growth-enhancing and its distributional aspects more equitable, is probably correct. They argue that "internal migration has a broader income effect whereby smaller sums of money are more evenly distributed across areas and poor families", that

it generally involves (even) poorer people from (even) poorer regions, and that it is an important driver of growth in many sectors. Our findings that Dhaka and Chittagong and their surrounding areas are over-represented in international labour migration lend support to the argument that this kind of migration requires better access to capital and to information networks and hence is under-representing the poorest of the poor. The demonstrated need for many labour migrants to incur large debts and risk personal savings and family assets in order to engage in this kind of migration (Rahman 2011) serves to underline the conclusion that it is not the kind of migration generally undertaken by the poorest of the poor.

The assessment of the impacts of migration is clearly a very complex matter, requiring ongoing investigation. "Migration does not just have different meanings in different contexts, but its implications for both educational choices and gender relations are likely to vary depending on the nature of migration and the opportunities it offers for social mobility" (Rao, 2009: 63).

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[10] The census uses a residence cut-off of 6 months to be recorded as a migrant, except in the case of marriage migrants, for which no time cut-off is used.

[11] Both of these studies make a valuable contribution, but both of them fail to recognize that the shrinkage of some key urban boundaries (and the near-complete failure to expand other urban boundaries) in the 2011 Population Census leads to distortion of measured migration patterns, in particular serious exaggeration of rural-rural migration and understatement of rural-urban migration.

[12] There are some individual cases of relatively high sex ratios among in-migrants in districts without large cities (e.g. Lakshmipur, Bhola, Sirajganj, Shariatpur), where some particular local circumstances may explain the pattern.

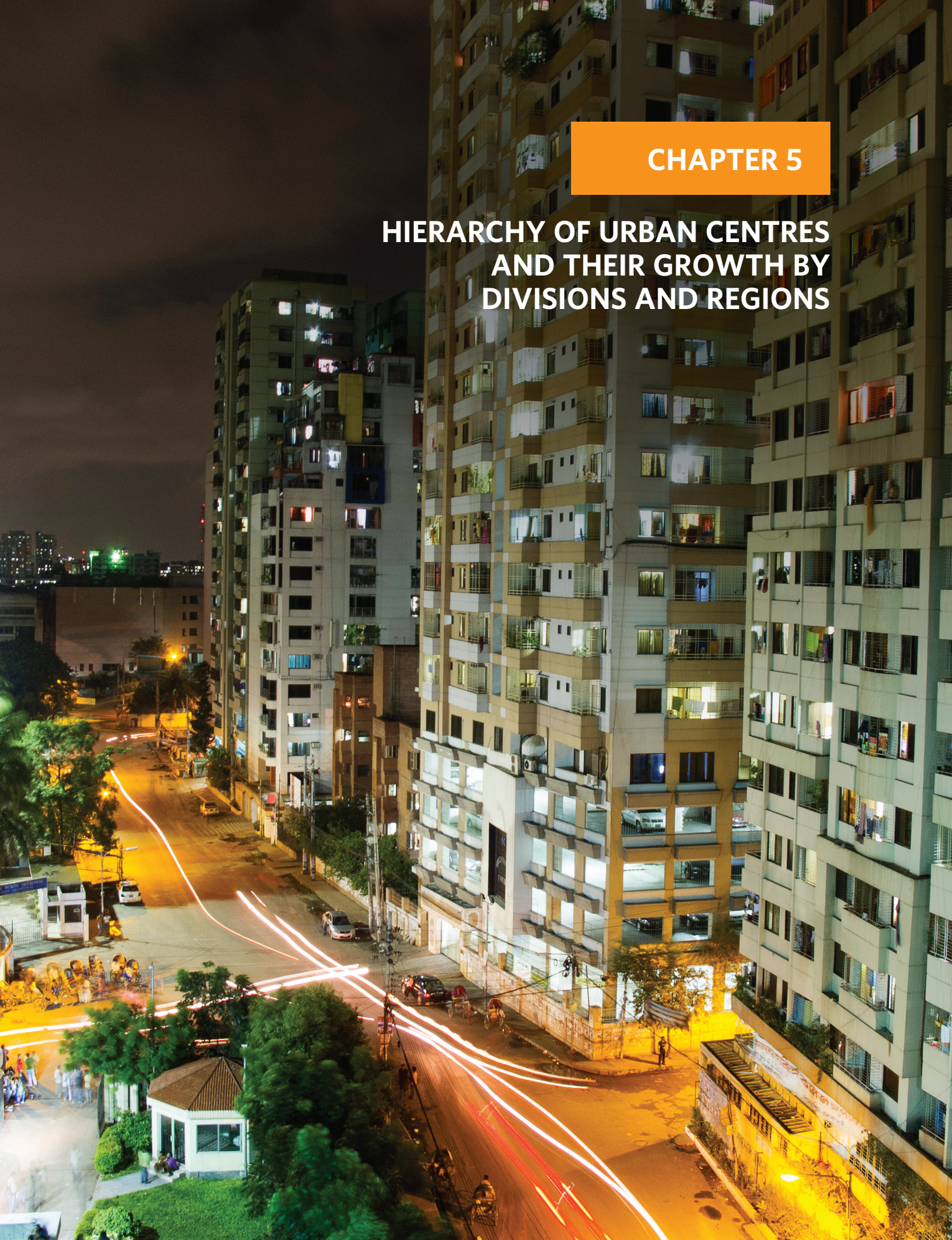
[13] These figures exclude persons of Bangladeshi origin living or working temporarily or permanently in India. Estimates of such numbers vary widely, and often appear to be influenced by political considerations.

[14] For related data from the 2011 Population Census, see BBS 2015c, Table 3.3. The figures in that table are closely consistent with those in Table 4.7 except for Bagerhat and Barisal, which both appear to have much lower proportions overseas, and Maulvibazar, which appears to have a much higher proportion overseas, than are shown by Table 4.7.

[15] One example of the effect of technology transfer appears to be the growth of a shipbreaking industry near Khulna, developed by Bangladeshis who had worked in the Singaporean shipbreaking industry.

6. Key Points – Chapter 4

- From the earlier discussion of the declining sex ratio of the urban population in Bangladesh, it could be expected that patterns of migration contributed to this change. The migration data do show a strong female dominance of movement to the urban areas, indeed an even stronger dominance than might have been expected from the overall trends in sex ratios.
- Data on internal migration in the 2011 Census is based on the sample census questionnaire, which covered only 168,000 respondents. The small sample size could adversely affect the representativeness of the data.
- The contraction in the area of the largest cities in the 2011 Census explains the strange finding that enormous numbers of rural to rural migrants went to Dhaka, Gazipur and Narayanganj districts.
- The census data does not capture commuting, seasonal and short-term migration.
- Remarkably, the two major urban agglomerations of Dhaka and Chittagong received almost two thirds of all inter-district migrants, whether measured as lifetime migrants or recent migrants.
- The great majority of Bangladesh's districts (48 out of 64) are net outmigration districts.
- Dhaka receives migrants from every corner of Bangladesh, but disproportionately from some districts located close to Dhaka, as well as from districts in Barisal, along with Rangpur.
- The feminization of migration to the large cities of Bangladesh is one of the most striking findings of the 2011 Census.
- A much lower proportion of migrants than of non-migrants are in the childhood age groups, but a much higher proportion of migrants are in the age groups from 20 to 49.
- Young women dominate the rural-rural migration stream, largely because of marriage migration. But they also dominate the flow to urban areas at ages 15-29.
- The female migration stream to big cities is concentrated heavily in the young adult ages 15-29, whereas the male migration stream has a broader age composition.
- The usefulness of census data on reasons for migration is limited because of high proportions of reasons listed as "other".
- International labour migration is very important for Bangladesh. Districts in Dhaka and Chittagong divisions are strongly over-represented among labour migrants, while those in Rangpur and Rajshahi divisions are strongly under-represented.
- The number of female labour migrants has surges since 2013; in 2015 females were 19 percent of all labour migrants abroad.
- Internal migration may well have broader impact on poverty reduction than international labour migration, because it distributes smaller sums of money more broadly, involves, on the whole, poorer people, and helps drive growth in many sectors.
- Migration has undoubtedly played an important role in changing the lives of women in Bangladesh. Work opportunities, particularly in the RMG industry, have led to some remarkable results in terms of women's roles and status. At the same time, they have exposed women to many new dangers and challenges.



CHAPTER 5

HIERARCHY OF URBAN CENTRES AND THEIR GROWTH BY DIVISIONS AND REGIONS

CHAPTER 5: HIERARCHY OF URBAN CENTRES AND THEIR GROWTH BY DIVISIONS AND REGIONS

1. The Urban System in Bangladesh

Bangladesh is a compact country, supporting a dense rural population, with its capital city – Dhaka – strategically located in the centre of the country with transportation routes radiating out from it. Bangladesh is unique in respect of its high population density. However, in terms of compactness and strategic central location of its capital city, it is similar to countries such as Uruguay in South America, Hungary, Czech Republic and Poland in Europe, and Thailand in Asia, rather than to countries such as Vietnam (a highly elongated country) or Indonesia and the Philippines (archipelagos with thousands of islands and a number of major large islands). It is also far smaller in land area than China, India or the USA, and it has been noted that in very large countries, it is harder for one city to dominate the urban hierarchy (Jones and Visaria, 1997: 6-8).

One way of examining the extent to which one city is dominant in a nation or a region is to calculate the 4-city primacy index – i.e. the total population of the largest city divided by the sum of the populations of the three next largest cities. The 4-city primacy indices for the countries just mentioned are shown in Table 5.1.

Table 5.1: 4-city primacy indices, selected countries

Country	Land area ('000 sq. km)	Population ('000) (2010)	4-city primacy index
Bangladesh	147,570	151.6	2.6
Uruguay	176,200	3.4	4.8
Hungary	93,030	10.0	3.8
Czech Republic	78,866	10.5	1.5
Poland	312,685	38.6	0.8
Vietnam	329,569	88.4	1.4
Indonesia	1,919,317	238.5	1.6
Philippines	300,000	93.8	3.8
Thailand	513,120	66.7	7.6
China	9,326,410	1,341.0	0.5
India	2,973,193	1,231.0	0.5
USA	9,147,593	309.9	0.7

Source: UN Population Division, World Urbanization Prospects (adjusted in the case of Thailand); other sources (Wikipedia)

Given its natural setting, it is hardly surprising that Bangladesh's urban system is dominated by the capital city, whose population is 2.6 times that of the next three cities combined.[16] Even higher primacy indices are shown for two other compact countries – Uruguay and Hungary, and for a relatively compact country, Thailand.[17] In the case of Vietnam, a very elongated country, and Indonesia, an archipelagic country, the primacy index is fairly low. It is very low as well in three very large countries – China, India and USA. These examples lend support to the argument that geography has a major role to play in determining the urban hierarchy that develops in any country, and the degree of dominance of the largest city.

However, other examples in Table 5.1 raise questions about the importance of compactness in leading to the dominance of one city. Two compact countries-Poland (especially) and the Czech Republic, show low levels of primacy. And the Philippines, an archipelagic country, shows high primacy. It appears, then, that other factors also come into play in determining the degree of dominance of one city. The economic and political systems followed may be crucial – for example, the extent to which key decisions determining industrial location are made centrally, and therefore provide a reason for key economic actors and the industries they head to cluster at the seat of power. The way policy decisions are made, and the nature of the decisions themselves, no doubt have an important bearing on the urban structure that develops.[18]

2. Urban Primacy at the Divisional Level

When primary indices are calculated at the divisional level, there is a wide range of variation (see Table 5.2). Dhaka is extremely dominant in Dhaka Division, not surprising in view of its national dominance. Chittagong is also dominant in Chittagong Division, and Sylhet, Barisal and Khulna are quite dominant in their respective divisions. However, in Rajshahi and Rangpur divisions, the primacy index is below 1, indicating

Collecting drinking water from standpipe. *Photo: Drik*

that the largest city in each of these divisions – Rajshahi and Rangpur respectively-is not so dominant in terms of population size compared with the next three cities.

Table 5.2: 4-City primacy index for Bangladesh and for each division

Division	Index	Index (adjusted)
	(1)	(2)
BANGLADESH	**1.9**	**2.6**
Dhaka	6.4	19.1
Chittagong	3.2	4.6
Rajshahi	0.6	0.9
Rangpur	0.7	-
Khulna	1.4	2.2
Sylhet	2.5	-
Barisal	1.8	-

Source: 2011 Population Census Report, Vol. 3 - Urban Area Report

Note: Column (1) for each division is based on the City Corporation populations for Dhaka, Chittagong, Khulna and Rajshahi. Column (2) is based on Dhaka Megacity and SMA populations for the other three cities. In the case of Dhaka, the second to fourth cities in column (1) are part of the Dhaka Megacity, so in calculating column (2) the second to fourth cities used in calculating the index are the largest cities in the division that are not part of Dhaka Megacity (i.e. Mymensingh, Narsingdi and Tangail).

3. Distribution of Bangladesh's Urban Population Across Different City Sizes

In Chapter 2, section 2, information was provided about the number of localities with urban status in the different censuses between 1981 and 2011. In the present section, the distribution of population between the different size classes of urban areas in 2011 will be discussed. The basic information is provided in Table 5.3, not only for the country as a whole, but also separately for its different divisions. Comparability is, of course, seriously complicated by the contraction in the areas of many cities and paurashavas between 2001 and 2011, which has undoubtedly resulted in slower growth for many of them than would have been registered had the 2001 boundaries been used, and for some of them, actual declines in recorded population.

In calculating Table 5.3, the unadjusted 2011 census figures were used for Dhaka, Chittagong, Khulna and Rajshahi. If adjusted figures had been used, it would not have been possible to determine the population in the smaller size classes, because

some of the smaller cities and towns are included in the adjusted megacity. This is particularly the case for Dhaka, where substantial cities (e.g. Ghazipur and Narayanganj) as well as a total of 5.8 million peopleliving in "other urban areas" are included in the adjusted megacity. However, the disadvantage of not using the adjusted figures is that Table 5.3 greatly underestimates the percentage of the urban population living in very large cities. While Table 5.3 indicates that cities of more than 1 million people make up 28.5 percent of Bangladesh's urban population, if we use the adjusted mega-urban region populations of Dhaka, Chittagong and Khulna, this proportion rises to 45 percent of Bangladesh's urban population, and the proportion living in smaller urban areas – particularly those with populations below 100,000 – falls correspondingly.

Table 5.3: Urban population of Bangladesh by size class and Division, 2011 (%)

Size class	Bangladesh	Dhaka	Chittagong	Khulna	Rajshahi	Rangpur	Barisal	Sylhet
1 million +	28.5	44.1	37.4	-	-	-	-	-
500,000-1 mill	3.6	-	-	23.5	-	-	-	36.3
200,000-500,000	12.6	11.8	9.2	8.4	25.6	14.6	24.9	-
100,000-200,000	10.9	9.4	11.4	16.3	19.4	15.4	-	-
50,000-100,000	8.9	5.2	10.7	6.5	14.0	19.4	13.1	13.1
<50,000	35.5	29.5	31.3	45.3	41.0	50.6	62.0	50.6
TOTAL	100	100	100	100	100	100	100	100
N ('000)	33,563	15,585	6,905	2,822	3,317	2,109	1,362	1,463

Source: 2011 Population Census Report, Vol. 3 - Urban Area Report

The share of large cities in the total urban population varies greatly across the seven divisions. Given that Dhaka dominates the urban structure of the whole of Bangladesh, it is not surprising that it is even more dominant in the urban hierarchy of the Dhaka Division, holding 45 percent of its urban population, according to the unadjusted urban figures (and much higher according to the adjusted figures). Among other divisions, in Chittagong and Sylhet a fairly high proportion of the urban population live in cities of over half a million. Rangpur and Barisal, however, have no cities of over half a million, and a high proportion (70 percent and 75 percent respectively) of their urban population live in urban localities with fewer than 100,000 population.

For Bangladesh as a whole, towns with populations below 100,000 account for a substantial share of the urban population – 44.4 percent, and towns with populations below 50,000 make up more than a third of the urban population, according to the unadjusted figures. It should be kept in mind, though, that many of these small towns are in fact located within the extended areas of larger towns and cities, including the MURs.

Table 5.4: Comparative statistics on population growth (enumerated) of different urban centres; 1991, 2001 and 2011

Locality	No. of centres	Population 2011 ('000)	1991-2001	Average annual growth rate	
				2001-2011	1991-2011
Bangladesh		144,044	1.57	1.47	1.52
Urban*		39,848	3.38	3.09	3.24
Rural		104,196	1.07	0.91	0.99
Dhaka Megacity	1	14,172	3.99	3.82	3.91
Dhaka Metropolitan	1	8,906	4.33	3.18	3.76
Statistical Metropolitan Areas (SMAs)	4	19,622	3.71	3.03	3.37
City Corporations (CC)	6	11,474	3.61	2.47	3.04
Municipalities	316	27,280	4.63	3.66	4.15
Non Municipal Towns**	167	2,290	2.12	0.67	1.40
C 4 (1-5 million population)***	1	2,592	3.73	2.47	3.11
C 3 (500,000-999,999 population)***	2	1,196	3.20	0.96	2.08
C 2 (200,000-499,999 population)***	14	4,317	3.09	3.93	3.51
C 1 (100,000-199,999 population)***	25	3,618	3.73	2.71	3.22
Large Towns (50000-99999 population)***	62	4,175	3.94	2.10	3.02
Medium Size Towns (25000-49999 pop.)***	161	5,672	4.74	2.67	3.71
Small Towns (below 25000 population)***	239	3,143	3.30	1.78	2.54

Source: Calculated from 1991, 2001 and 2011 Population Census Reports

* The total number of urban population of 2011 was calculated including SMA by following the old definition of urban area of 2001 and 1991.

** The number of common non municipal town (in the period of 1991-2011) is 167. Only these non- municipal towns were taken into account to determine Population Growth.

*** City size class (C1, C2, C3, C4) and Town size class (Large Town, Medium Size Town and Small Town) are based on the population size in 2011.

Not only is the distribution of cities and towns across different size classes important, but also the relative growth of cities and towns in these different categories. This was discussed in the earlier report on population and development in Bangladesh (UNFPA 2015); a revised version of the relevant table from that report presented as Table 5.4. (For more detailed information, see Appendix Table 5.1). Information on the urban populations in 2011 and their growth rates since 1991 were also provided in Map 1.2. The key findings from the table and the map are summarized below.

4. Increasing Concentration of Urban Population in Large Cities

Both the number of urban centres and the total urban population are becoming increasingly concentrated in the vicinity of the capital city, Dhaka, which is centrally located. In 2011, Dhaka Megacity, had a population of 14.2 million or 34 percent of the country's urban population. For one megacity to have more than one third of the urban population shows a high degree of urban concentration. By contrast, in Indonesia, the Jakarta mega-urban region had 14 percent of the nation's total urban population, and in Thailand, which is considered to have a high concentration of urban population in the capital city, Bangkok megacity's share of the urban population was about 33 percent, roughly the same as in Bangladesh. The level of primacy of Dhaka Megacity has been increasing over time. In the 1991 Census it had 31 percent of the country's urban population, but this had climbed to 34 percent in the 2011 Census (using the adjusted urban figures). Between 1991 and 2011, Dhaka Megacity more than trebled in population, a growth that was fuelled, as discussed in Chapter 4, by massive migration.

This is not to say that Dhaka has completely dominated the growth of Bangladesh's urban population. The second city, and the only other city in Bangladesh that can really claim to be a megacity – Chittagong – also grew very rapidly between 1991 and 2011. Its share of Bangladesh's urban population appeared to decline from 10.5 percent to 8.9 percent over the period, but the reliability of this estimate is in some doubt. The analytical report on the 2001 Census gives two sets of figures for the populations of Dhaka Megacity and the SMAs in 1991 and 2001 (see 2001 Census, Vol. 1, Analytical Report, Tables 4.9 and 4.10). In the case of Dhaka, the figure chosen makes little difference to the percentage. In the case of Chittagong SMA, however, the gap between the adjusted and unadjusted figures is wider. The unadjusted figure is 1,771,404 and the adjusted figure is 2,348,428. The estimate that Chittagong's share of the urban population declined between 1991 and 2011 is based on the higher, adjusted, figure for 1991. If we use the lower figure, Chittagong's share of the total urban population in 1991 was 8.5 percent, and therefore increased slightly by 2011. Unfortunately, it is not clear from the 2001 Census report which figure should be used for Chittagong in 1991.

Table 5.4 shows that most classes of cities and towns recorded quite rapid growth over the entire 1991-2011 period. The highest growth was in Dhaka and in many of the cities and towns close to Dhaka. Between 1991 and 2011, Dhaka Megacity grew the most rapidly (by 3.91 percent per annum), the growth of cities in the 200,000 to 500,000 category was also very rapid (3.51 percent per annum), and towns in the 100,000-200,000 category also grew quite rapidly (by 3.22 percent per annum). Among smaller towns, those in the population range of 25,000 to 50,000 also grew quite rapidly – by 3.71 percent per annum. If we restrict the comparison of growth rates to the 2001-2011 period, these same city size categories also record the fastest growth.

Three smaller cities proved to be standouts in terms of growth rates: Feni (8.3 percent per annum growth), Cox's Bazar (9.5 percent growth) and Savar (6.7 percent growth). Possible reasons for this rapid growth in the case of Feni were its strategic location in the Dhaka-Chittagong growth belt, and a large infusion of investment funds for political reasons; in the case of Cox's Bazar, it was more related to tourism development, and in Savar its location on the fringes of the Dhaka Megacity growth area, with many factories being set up in the area.

The relatively high rate of growth of most class sizes of cities in Bangladesh shown in Table 5.4

underlines an important point. Although some cities and towns are standouts in terms of rapid growth, Bangladesh's urban hierarchy has shown considerable stability, and is unlikely to change dramatically in future; virtually all cities will grow, and while there will be marked differences in growth rates between individual cities, the relative proportions in different size categories are likely to remain more or less the same. The same point can be made for other South Asian countries (Ellis and Roberts, 2016: 64).

5. Regionally Unbalanced Urbanization

If Bangladesh is divided into the eastern part (Dhaka, Chittagong and Sylhet divisions) and the western part (Barisal, Khulna, Rajshahi and Rangpur divisions), the development of urban settlement is highly concentrated in the eastern part of the country. More than two thirds (69 percent) of the urban population is concentrated in the eastern part of the country where the capital (Dhaka) and main port city (Chittagong) are located, along with one of the most rapidly growing cities, Sylhet. As noted in Chapter 2, in the Eastern part of the country, 34 percent of population lives in urban areas, compared with 17 percent in Western areas.

What is responsible for this concentration in eastern areas? "Compared with the western region, the eastern part is much better provided with certain vital urban facilities such as natural gas, electricity, transport, credit and markets. As a result, over the decades, major non-agricultural activities such as manufacturing, transportation, health, education and other service sectors have been concentrated in cities in the eastern region. This has attracted millions of rural-urban migrants (temporary or permanent) to cities in the eastern region as their destination for earning a livelihood" (UNFPA, 2015: 42-3).

None of the western divisions has reached an urbanization level of 20 percent. Using the unadjusted figures for urban areas in 2011, the levels in Barisal, Khulna, Rajshahi and Rangpur were 16.4 percent, 18.0 percent, 17.9 percent and 13.4 percent respectively. By contrast, in Dhaka and Chittagong divisions, the level of urbanization was 32.9 percent and 24.3 percent respectively. (Sylhet, though, had a very low level of urbanization, at 14.8 percent). The contrast between eastern and western regions would be even greater if the adjusted figures for urban populations were used, because it is especially in the Dhaka and Chittagong divisions that urban populations are greatly increased by using these figures. Approximate figures for the adjusted levels of urbanization in these two divisions are 42 percent and 27 percent respectively, whereas such adjustments would not make much difference to the levels of urbanization measured in the western divisions.

Cities and towns in the western part of the country are not only smaller but are also growing more slowly than those in the eastern part of the country. The three cities which exceeded 300 percent growth over the 1991-2011 period are all located in the eastern part of the country. Among the top 43 cities, including Dhaka Megacity and the three SMAs, only 15 are located in the western region and the average growth of these cities was 140 percent. By contrast, 28 cities in the eastern part recorded a 212 percent growth rate (see UNFPA, 2015: Table 1.5).

What is responsible for this concentration in eastern areas? "Compared with the western region, the eastern part is much better provided with certain vital urban facilities such as natural gas, electricity, transport, credit and markets. As a result, over the decades, major non-agricultural activities such as manufacturing, transportation, health, education and other service sectors have been concentrated in cities in the eastern region. This has attracted millions of rural-urban migrants (temporary or permanent) to cities in the eastern region as their destination for earning a livelihood" (UNFPA, 2015: 42-3).

The location of Bangladesh's capital city, Dhaka, in the eastern region greatly affects the urban growth figures for the eastern region as a whole, given that Dhaka has one third of Bangladesh's urban population and is growing rapidly. The location of the major port, Chittagong, in the eastern region also provided an impetus for more rapid urban growth throughout the region. The connectivity between Dhaka and Chittagong was greatly improved by the construction of the Meghna Bridge as part of the Dhaka-Chittagong highway in 1991, facilitating the linear urban

development between Dhaka and Chittagong, which has seen the rapid growth of cities along the route, notably Comilla and Feni.

As far as slow urban growth in the west is concerned, a key factor is the poor socio-economic condition of the hinterland of urban centres in the west. In turn, this is related to the poorer transportation connectivity with the more dynamic eastern part of the country. The construction of the Bangabandhu Bridge (completed in 1998) provided an important link between the northwest parts of the country and the eastern parts. However, there is still no bridge link between the southwest of the country and the eastern part. The Padma Bridge, once completed in 2019, will make a major difference, dramatically increasing the connectivity between Dhaka and the southwestern parts of the country. However, in the meantime to travel by road from Khulna to Dhaka through Mawa-Kaurakandi takes at least 5-6 hours, because of the need to take a vehicular ferry (or launch or speedboat for those travelling without a vehicle) across the river. Lorries take longer – perhaps 8-9 hours- and perishable goods can be delayed by truck queuing, with sometimes disastrous results. Once the Padma Bridge is completed, this will cut road travel time from Khulna to Dhaka to about 4 hours, the uncertainty about crossing delays for perishable goods will be resolved, and the train journey will be cut significantly from the current 8-10 hours.

The decline of the jute industry had a major role in stifling urban growth in Khulna. Another political factor disadvantaging the southwestern part of the country was that before the partition of India, towns such as Khulna and Jessore were closely linked to the megacity of the region, Kolkata. Jessore is only about 120 km. from Kolkata by road, and Khulna well under 200 km. While political links with India have been better since the formation of Bangladesh, the complications arising from the presence of an international border still serve to restrict contact. Nowadays, there is a rail link from Jessore to Kolkata, but it does not seem to be given high priority by either Indian or Bangladeshi railway officials. Similarly, in the north-western parts of Bangladesh, proximity to very populous parts of Bihar does not advantage the region because Bihar is one of the poorest states in India, offering little scope for sale of Bangladeshi goods. Moreover, there is a lack of efficient transportation linkages or of efforts to take maximum benefit from development of commercial and trade links.

6. The Dhaka - Chittagong Growth Corridor

One of the most outstanding features of trends in urbanization in Bangladesh is the emergence of the Dhaka-Chittagong growth corridor. This is a natural outcome of the need for close interaction between the nation's largest city, Dhaka, and its key port, Chittagong. Transportation developments played an important role in the development of the growth corridor; rail links between Dhaka and Chittagong were available from 1937 with the completion of a bridge over the Meghna River.[19] The opening of the Meghna Bridge in 1991 enabled the travel time between Dhaka and Chittagong on the Dhaka-Chittagong highway to be greatly reduced. This increases the incentive to locate industries along this route, and helps explain the relatively dynamic growth of manufacturing industry in the towns of Comilla and Feni.

The importance of the Dhaka-Chittagong corridor in urban development in the country is clear. As discussed in the previous chapter, the Dhaka Megacity and Chittagong SMA and some other areas in Chittagong have been the main destinations for migrants from all over the country. Another important indicator of the growth of the corridor is the rapid overall population increase in the districts making up the Dhaka Megacity, the Chittagong SMA and the areas lying in between. This is clearly apparent from Table 2.6. All of the 10 most densely populated districts in Bangladesh are located in the extended mega-urban regions of Dhaka or Chittagong, or located along the road and rail routes connecting the two cities.[20] Moreover, the most rapid population growth between 2001 and 2011 was heavily concentrated in this growth corridor. There were 16 districts in Bangladesh which grew by 15 percent or more over this period. Seven of them were located in the Dhaka-Chittagong growth corridor region. But many of the others had relatively small populations.

Of the total population of districts with growth rates 15 percent and above, 65 percent was in the Dhaka-Chittagong growth corridor.

7. Trends in Megacity Growth, and Megacity Share in National and Urban Population

A recent study (ESCAP and UN Habitat 2015) has compared Asian countries with megacities (defined as those with populations above 10 million) in terms of the share of megacities in their urban and total population. The study stresses that in the ESCAP region as a whole, megacities only accommodate a little over 10 percent of urban dwellers and 7 percent of the total population. While this is true for the region as a whole, the figures are low partly because many countries do not have a megacity. If the comparison is restricted to countries with a megacity, the share of megacities in the total and urban populations is considerably higher (see Table 5.5). Moreover, among these countries, Bangladesh stands out as having the highest share of its urban population (32 percent) living in one megacity. While Japan has a higher share of its urban population living in megacities, this is because there are two megacities in Japan (Tokyo and Osaka-Kobe). Their combined share is higher than that of Bangladesh's one megacity, but neither of them has an individual share as large as that of Dhaka.

Table 5.5: Megacity populations in Asian countries, 2014

Country	No. of megacities	Population)'000)			Megacity population share of all urban	Megacity population share of total pop.
		All megacities	Total urban	Total population		
China*	6	88,810	758,360	1.393,784	12	6
Japan	2	57,956	118,136	126,981	49	46
India**	3	60,460	410,204	1,267,402	15	5
Bangladesh	1	16,982	53,127	158,513	32	11
Pakistan	1	16,126	70,912	185,133	23	9
Turkey	1	13,954	55,279	75,837	25	18
Philippines	1	12,764	44,531	100,096	29	13
Indonesia	1	26,148	118,345	237,641	22	11

Source: revised from ESCAP/UN Habitat, 2015, Table 1.108; Indonesia calculated from Jones and Mulyana 2015 (figures refer to 2010)

* Beijing, Shanghai, Chongquing, Guangzhou, Tianjin, Shenzhen

** Delhi, Mumbai, Kolkata

Dhaka therefore stands out in the Asian region as the most dominant megacity in relation to its country's total urban population. However, if the comparison is widened to include the largest city in countries that lack a city with a population of over 10 million, Dhaka's unique status disappears. The largest city in a number of other countries in the region is even more dominant in the urban structure than is Dhaka. Examples are Cambodia and Afghanistan, where the cities of Phnom Penh, and Kabul account for 52 percent and 57 percent, respectively, of the total urban population (ESCAP and UN Habitat, 2015, Table 1.13). In Thailand, the Bangkok agglomeration's share of total urban population is much the same as Dhaka's in Bangladesh: 32 percent in 2010 (it used to be higher).

Although Dhaka is Bangladesh's only megacity (using a cut-off of 10 million for a megacity's population), the other Statistical Metropolitan Areas (SMAs) also play a very important role in the urban hierarchy, and an analysis of their growth and characteristics is needed. In Table 5.6, some basic information about the population growth, population density and sex ratios is given for these SMAs.[21] Clearly, the growth rate of Dhaka Megacity was considerably faster than that of any of the others in the 2001-2011 period, and indeed the two SMAs in the western part of Bangladesh had a decline in population (Khulna) and essentially no growth (Rajshahi). Population density in Dhaka Megacity more than doubled between 1991 and 2011, and it is now much higher than that of Chittagong and Khulna SMAs, which in turn are much higher than Rajshahi. In all of these SMAs, the sex ratio of the population has declined over time, the greatest declines being recorded in Chittagong and Khulna. In the cases of Dhaka and Chittagong, sex ratio changes were greatly affected by the sex composition of the migration flow, already discussed in Chapter 4, which compared the age groups most subject to migration flows, i.e. ages 15-29. The dominance of females in the migration inflow at ages 15-29 is very striking (see Table 4.3).

The other key aspect of the growth dynamics of Bangladesh's largest cities to consider is the relative growth rates in the city proper and in

the zone outside the city proper. The trends in this respect have differed between Dhaka and Chittagong (see Maps 5.1, 5.2 and 5.3). In Dhaka Megacity, over the entire 1991 to 2011 period the growth in the city core (the City Corporation) was very rapid (3.33% per annum), but it was even more rapid in the zone outside the core (4.55% per annum). In the most recent period (2001-2011), rapid growth has spilled over into the remaining parts of the three districts that make up Dhaka Megacity – Dhaka, Gazipur and Narayanganj. These outer areas experienced an annual growth rate of 3.28 percent over the 2001-2011 period.

In Chittagong, the pattern was different. Over the entire 1991-2011 period, the growth rate in the core (3.11 percent per annum) was more rapid than in the zone outside the core (2.50 percent per annum), and this faster growth in the core also characterized the 2001-2011 period. The next two largest cities, Khulna and Rajshahi, also showed contrasting patterns of growth (and decline). In Khulna, the growth outside the core was more rapid, and indeed the core suffered a loss of population. In Rajshahi, growth (such as it was) was concentrated in the core, and the zone outside the core actually lost population in the 2001-2011 period.

8. Secondary Cities: Growth, Role and Constraints

What has been the growth experience of secondary cities in Bangladesh, and what can be expected of them in future? First, we need to define a secondary city. The term has been used to refer to cities with a wide range of populations: from 100,000 to 500,000 range (UN Habitat, 1996: 13), from half a million to one million, from 100,000 to 750,000 (World Bank, 2009: 51) and from 100,000 to 3 million (Song, 2013). In the current study, we will include all Bangladeshi cities with populations above 100,000 except the four largest – Dhaka, Chittagong, Khulna and Rajshahi. That means that the population size of the secondary cities we are considering is between 100,000 and just over 500,000.

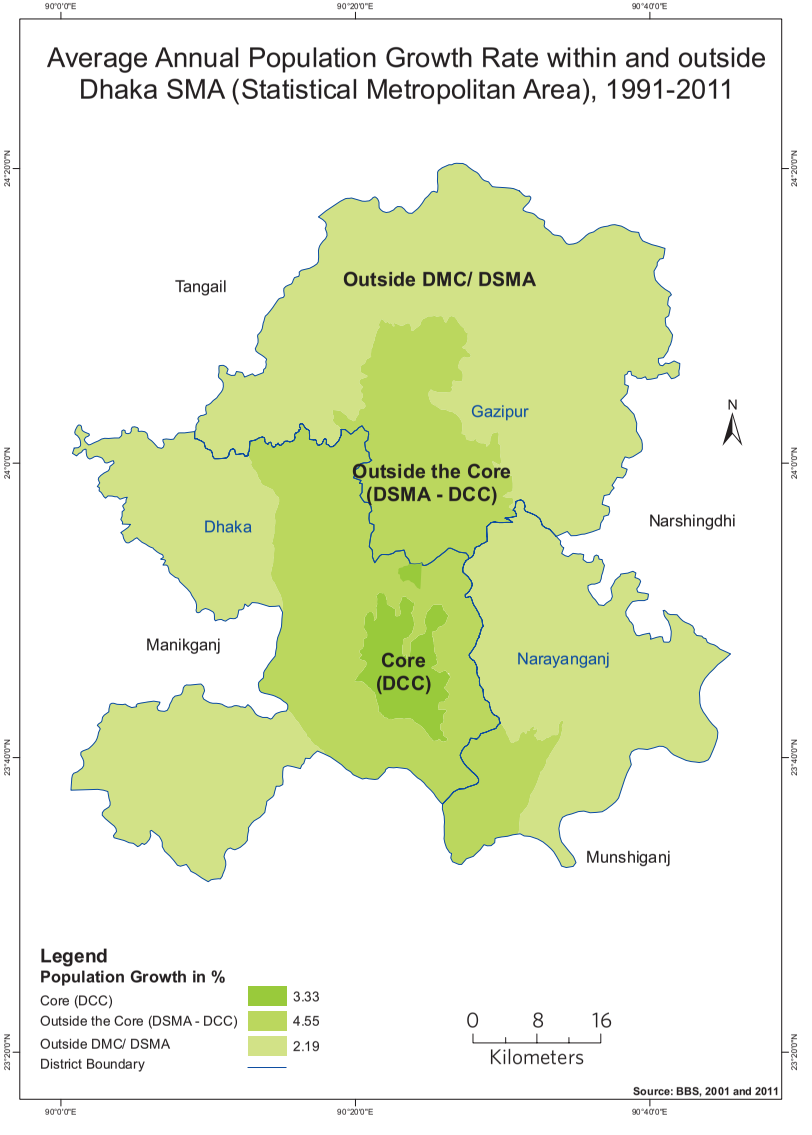
Population size is only one feature of secondary cities. Secondary cities have certain functions and characteristics that set them apart from the megacities – in the Bangladesh case, from Dhaka and Chittagong. According to Roberts (2014: 37) "a secondary city generally falls into one of three types:

(a) Subnational urban centres of administration, manufacturing, agriculture or resource development

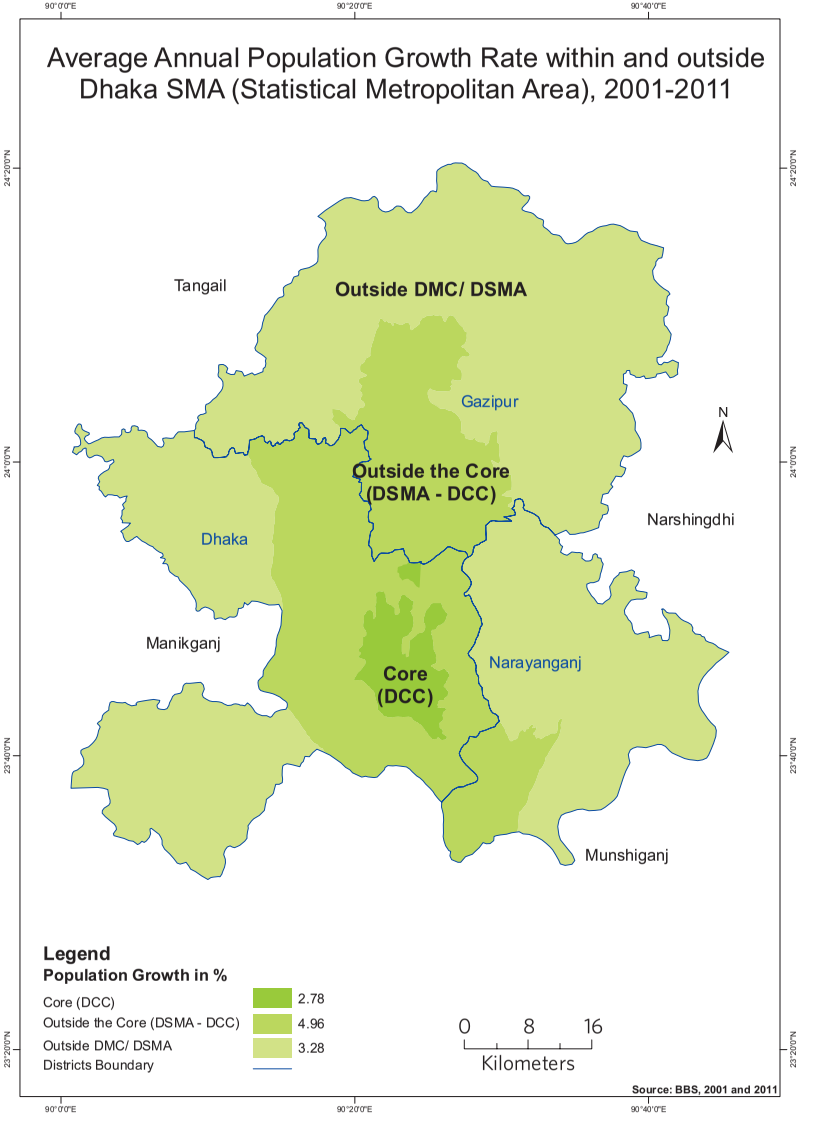
Table 5.6: Population growth, density and sex ratio in Statistical Metropolitan Areas (SMAs)

SMA	Population ('000)			Density (per sq. km.)			Average annual increase		Sex Ratio (M/F*100)		
	1991	2001	2011	1991	2001	2011	1991-2001	2001-2011	1991	2001	2011
Dhaka Megacity	6487	9673	14172	4,795	7,055	10,336	3.99	3.82	126	125	121
Chittagong SMA	2080	2992	3724	2,109	2,863	3,564	3.63	2.19	132	121	109
Khulna SMA	921	1173	1046	3,445	4,386	3,913	2.41	-1.14	118	114	107
Rajshahi SMA	507	651	680	1,346	1,726	1,803	2.49	0.43	109	113	106
Dhaka SMA core	3613	5327	7033	23,484	34,629	55,668	3.88	2.78	131	131	126
Dhaka SMA outer	2875	4345	4913	2,397	3,570	5,735	4.13	4.96	120	119	117
Chittagong SMA core	1393	2023	2592	6,643	12,040	16,682	3.73	2.48	143	126	112
Chittagong SMA outer	687	968	1132	885	1,104	1,273	3.43	1.56	113	112	105
Khulna SMA core	663	770	665	9,464	10,993	13,134	1.50	-1.48	121	115	109
Khulna SMA outer	258	402	382	1,308	2,039	1,760	4.44	-0.53	110	110	103
Rajshahi SMA core	294	389	451	3,042	4,022	4,628	2.79	1.49	111	116	107
Rajshahi SMA outer	213	262	228	761	935	816	2.06	-1.38	107	105	100

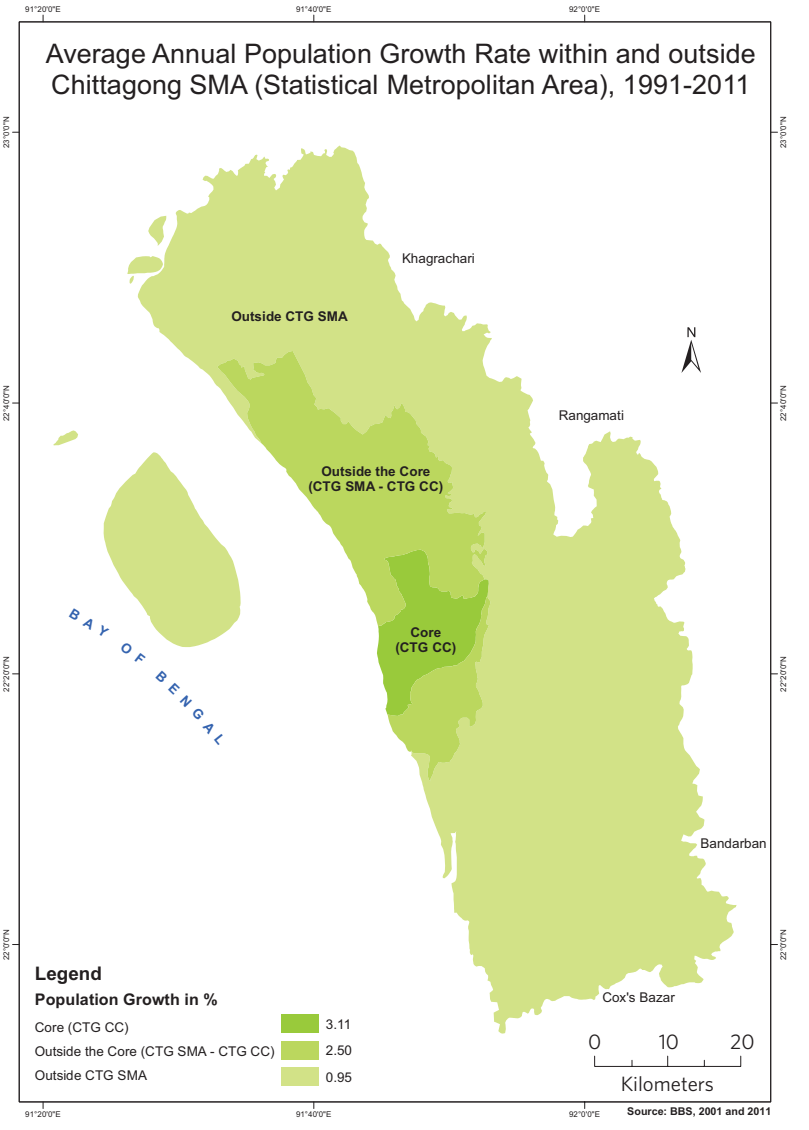
Source: 1991, 2001 and 2011 Population Census Reports


Average Annual Population Growth Rate within and outside Dhaka SMA (Statistical Metropolitan Area), 1991-2011
Tangail
Outside DMC/ DSMA
Gazipur
Outside the Core (DSMA - DCC)
Dhaka
Narshingdhi
Manikganj
Core (DCC)
Narayanganj
Munshiganj
N
Legend
Population Growth in %
Core (DCC) 3.33
Outside the Core (DSMA - DCC) 4.55
Outside DMC/ DSMA 2.19
District Boundary
0 8 16
Kilometers
Source: BBS, 2001 and 2011

Map 5.1


Average Annual Population Growth Rate within and outside Dhaka SMA (Statistical Metropolitan Area), 2001-2011
Tangail
Outside DMC/ DSMA
Gazipur
Outside the Core (DSMA - DCC)
Dhaka
Narshingdhi
Manikganj
Core (DCC)
Narayanganj
Munshiganj
N
Legend
Population Growth in %
Core (DCC) 2.78
Outside the Core (DSMA - DCC) 4.96
Outside DMC/ DSMA 3.28
Districts Boundary
0 8 16
Kilometers
Source: BBS, 2001 and 2011

Map 5.2



Map 5.3

(b) Metropolitan clustered secondary cities, which develop on the periphery of metropolitan or urban regions and take the form of new towns, spillover growth centres and linear cities

(c) Corridor secondary cities, which develop as growth poles along major transportation "corridors"

In this study, we will not focus very much on (b) category secondary cities (such as Savar City or Tongi), because we include them in analysis of the greater mega-urban region of which they are a part.

What has been the growth experience of Bangladesh's secondary cities over the past 20 years? Their growth on average has been quite rapid, though certainly not as rapid as that of the Dhaka mega-urban region (see Appendix Table 5.1 for details). The most impressive growth has been in cities with populations in the 200,000 to half a million range, which increased in population by more than 3.5 percent per annum over the entire 19991-2011 period. As with other aspects of the analysis in this report, it is not possible to be fully confident in analyzing trends, because of the expansion or contraction of boundaries that

Monsoon water-logging in urban neighbourhood. *Photo: Drik*

have contributed to very rapid growth (e.g. in the case of Bogra and Barisal), or to slow growth or decline (e.g. in the case of Pabna and Rangpur).

In summarizing the development experience of secondary cities in Asia, Roberts (2014: 147) states:

> The business environment in many smaller cities is unattractive to all but locally based service industries, undermining their economic sustainability. The result is slow employment growth, particularly in the formal economy, weak city government revenues, growing urban poverty and slum settlements, and diseconomies of agglomeration, with growing traffic congestion, water and air pollution, and watershed mismanagement. Land management – land release and development – in peri-urban areas is a particular problem, with confusion between urban and rural responsibilities and the growth of slums and other informal settlements on the periphery of cities. ... The end result is cities with large infrastructure and service shortfalls, poor economic growth opportunities and growing urban poverty.

In a much earlier analysis of secondary cities, Rondinelli (1983) argued that the economies of secondary cities tend to be dominated by commercial and service activities, with manufacturing industries and employment playing a lesser role than in larger cities and concentrated primarily in the small scale industrial sector. They also have poorer quality of services and facilities than the largest cities.

Much of this description would seem to apply to the Bangladesh case. However, the fact that Bangladesh's secondary cities overall have been able to retain their growing populations and attract at least some migration suggests that they have been able to profit to some extent from the agricultural diversification and productivity increases that have been taking place. Their prospects for absorbing a substantial part of the projected increase in Bangladesh's urban population over the next few decades will be discussed in the final chapter.

9. Summary: Perspectives on Primacy and the Benefits and Costs of Urban Agglomeration

Bangladesh faces important issues in relation to urban primacy. By Asian standards, its largest mega-urban region, focused on Dhaka, has a very high share of its urban population. Formulation of appropriate policies to address the growth of cities of different size requires a judgement about the agglomeration effects of the growth of very large cities. Offsetting aspects of agglomeration are likely to include (on the positive side) concentration of skills and intellectual and technical resources, and economies of scale in the provision of infrastructure and services; and (on the negative side) crowding, traffic jams, pollution, and whatever diseconomies of scale are linked to the provision of infrastructure in large cities. Some of the diseconomies, however, can probably be ameliorated by a poly-nucleation process within the mega-urban region (Lowry, 1990: 166).

The World Bank (2009) has argued that urban agglomeration has considerable advantages, given that the "peaks" of productivity tend to be located in the largest agglomerations, which produce a far larger share of the national output than their share of the national population. In the case of Bangladesh, Dhaka and Chittagong metropolitan areas, which hold about 14 percent of the population, contribute 47 percent of its GDP (Muzzini and Aparicio, 2013: 22). However, diseconomies of agglomeration are certainly making themselves felt in regard to the RMG industry in Dhaka, leading to dispersal of garment factories to the urban fringe, though diseconomies of proximity to Dhaka are also felt there. It is very hard in fact to determine the optimal level of primacy in any particular country. Not only geographic and strictly economic considerations come to the fore, but also what might be referred to as political economy factors. In a country such as Bangladesh, the heavy concentration of political power, infrastructure and an educated workforce in the two megacities – Dhaka and Chittagong – gives them enormous drawing power for any industry relying on a reasonably well educated workforce, a reliable power supply, and proximity to suppliers, subcontractors, machine repair technicians and support businesses, not to mention to buyers, especially those from international firms. Such business people like to cluster at the power centre, with access to the main suppliers and better living facilities.

The diseconomies of agglomeration that are now so starkly evident in Dhaka relate to severe traffic congestion, relatively poor access to a port (compared to Chittagong), and even poor access to an airport for many firms, given Dhaka's traffic congestion. Limited availability and high prices of land and housing and a generally deteriorating urban environment complete the list. The Economist Intelligence Unit's Liveability Ranking and Overview[22] ranked Dhaka as the least liveable city in the world in 2012, and the second least liveable in 2014, ahead only of war-torn Damascus.

Chittagong is a much smaller urban agglomeration, and has the decided advantage of access to Bangladesh's main port. It is considered by garment firms as "the best performing location for the availability and cost of land, buildings, and housing for workers. They also rate it as the top location for access to the port, airport, highway and urban mobility" (Muzzini and Aparicio, 2012: 7). However, it has not made best use of its advantages, and it holds a smaller proportion of garment firms and garment workers than might have been expected, given its locational and other advantages. In explaining this, the World Bank makes much of the inefficiency of Chittagong port (Muzzini and Aparicio, 2012: 7), but this emphasis seems misplaced, as the inefficiency of Chittagong Port affects all goods exported from there, whether they originate in Chittagong, Dhaka or elsewhere.

With regard to the disadvantages of secondary cities, it seems that they are essentially "off the radar" of garment firms, which are concerned about poor access to markets and skilled labour.

As transportation links develop, they will have greater potential to develop as industrial locations, but they are not likely to prosper as such without development of local entrepreneurship to tap their potential and find their comparative advantages.

It is possible that the further development of the Mongla river port in Bagerhat District would increase the potential for industrial development in cities such as Khulna and Jessore, as would the development of more dynamic trade links with India, especially with the city and port of Kolkata.

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[16] For analysis of where Bangladesh stands in relation to another indicator of urban primacy – the rank-size rule – see Bangladesh Bureau of Statistics 2015: 31-33.

[17] Thailand is compact if its southern peninsula, which holds only 13 percent of its population, is ignored.

[18] One study found that primate cities that are national capitals are 45 percent larger on average than primate cities that are not (Glaeser, 1995).

[19] However, the share of the railway sector in passenger traffic declined from 50% in the 1960s to 12% in the 1990s, and in freight from 40% to 7% over the same period. http://en.banglapedia.org/index.php?title=Railway

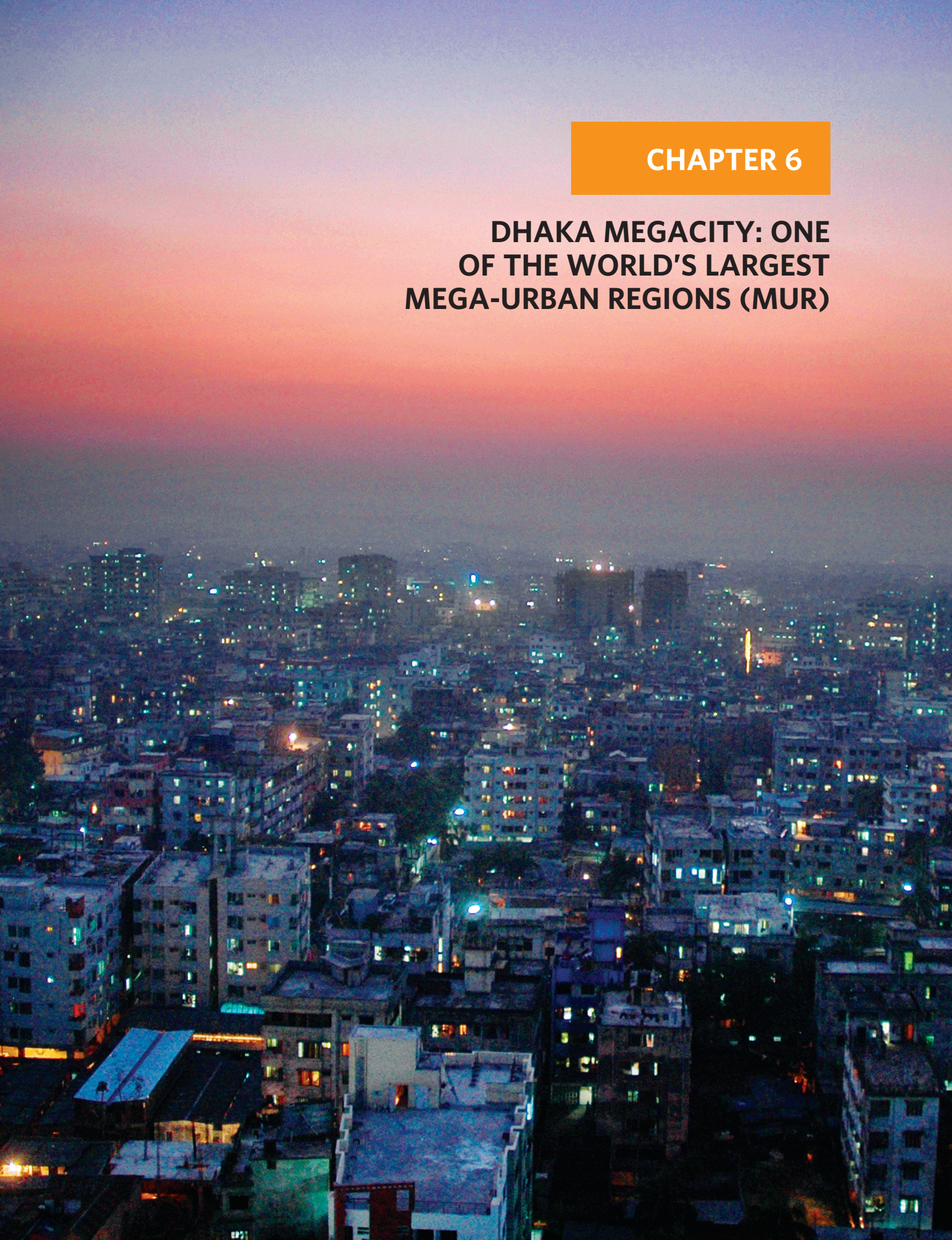
[20] Chandpur could perhaps be considered an exception, though it is linked by rail to the main Dhaka-Chittagong line and has good road connections to the Dhaka-Chittagong highway.

[21] The figures in Table 5.6 differ significantly from the figures for the growth of these cities given in Table 9.4 of the chapter on Urbanization Strategy in the 7th 5-Year Plan document (Bangladesh Ministry of Planning 2016). That table shows Khulna's growth in the 2001-2011 period to be 3.60 percent, compared with -1.14 percent in our table; and it shows Rajshahi's growth to be 5.08 percent, compared with 0.43 percent in our table. The source of the table in the 7th 5-year plan document is simply listed as "BBS".

[22] This index assesses cities on their performance across five dimensions of a "livable city": stability, health care, culture and the environment, education and infrastructure.

10. Key Points – Chapter 5

- As Bangladesh is a compact country, it is not surprising that Dhaka Megacity, with its central and strategic location, has 2.6 times the combined population of the next three largest cities.
- Using the unadjusted census figures, 28.5 percent of Bangladesh's urban population lives in cities of more than one million population, and 35.5 percent in towns of less than 50,000. However, using the more realistic adjusted populations of Dhaka, Chittagong and Khulna, the proportion living in cities of more than one million rises to 45 percent, and the proportion living in smaller towns falls correspondingly.
- While on the whole, the growth rates of Bangladesh's cities and towns are positively related to their size, most classes of cities and towns recorded quite rapid growth over the 1991-2011 period.
- While some individual towns and cities have grown much faster than others, Bangladesh's overall urban hierarchy has shown considerable stability.
- However, urban growth has been regionally unbalanced, with the level of urbanization twice as high in the eastern part of the country (east of the Jamuna-Padma-Meghna River) than in the western part.
- Cities and towns in the western part of the country are not only smaller but are growing more slowly than in the eastern part.
- One of the most outstanding features of trends in urbanization in Bangladesh is the emergence of the Dhaka-Chittagong growth corridor, linking the two largest cities and stimulating growth of urban areas and industries along the corridor between them.
- In Dhaka Megacity, the growth rate of the core (the City Corporation) was very rapid over the whole 1991-2011 period, but it was even more rapid in the zone outside the core.
- In Chittagong, the growth pattern was different. The core grew more rapidly than the zone outside the core.
- In Khulna, the core actually lost population, and the zone outside grew, whereas the reverse happened in Rajshahi.
- Secondary cities in Bangladesh (those with populations between 100,000 and 500,000) are considered to be "off the radar" of garment manufacturing firms. However, on average their growth has been quite rapid, suggesting that they have been able to profit to some extent from diversification and productivity increases in agriculture, and from growth opportunities in other sectors.
- As transportation links develop, secondary cities will have greater potential to develop as industrial locations, but local entrepreneurship is needed to tap their potential and find their comparative advantage.



CHAPTER 6

DHAKA MEGACITY: ONE OF THE WORLD'S LARGEST MEGA-URBAN REGIONS (MUR)

CHAPTER 6: DHAKA MEGACITY: ONE OF THE WORLD'S LARGEST MEGA-URBAN REGIONS (MUR)

1. Introduction

It has been clear throughout this study that Dhaka, one of the world's largest megacities, dominates the urban pattern and development of Bangladesh. Over one-third of the country's urban population live in this one urban agglomeration. The city has been experiencing rapid and uncontrolled urbanization caused by an explosive growth of population along with very fast physical expansion over the last three decades. In some suburban areas, population growth exceeded 20 percent per annum. According to United Nations Population Division (2014) projections, Dhaka's growth is unlikely to slow appreciably over the next 15 years. Their projections show its population rising from 15 million in 2010 to 27 million in 2030 – an increase of 80 percent. By 2030, according to these projections, Dhaka would be the 6th largest urban agglomeration in the world. It would have run ahead of Karachi by then and caught up with Mumbai.

The Dhaka mega urban region currently contains four city corporations, three big paurashavas (municipalities) and a vast and rapidly expanding suburban area. As a centrally located capital city, Dhaka Megacity has by far the country's largest concentration of population, education, health and cultural activities, industries, commerce, construction, transportation and even informal activities.

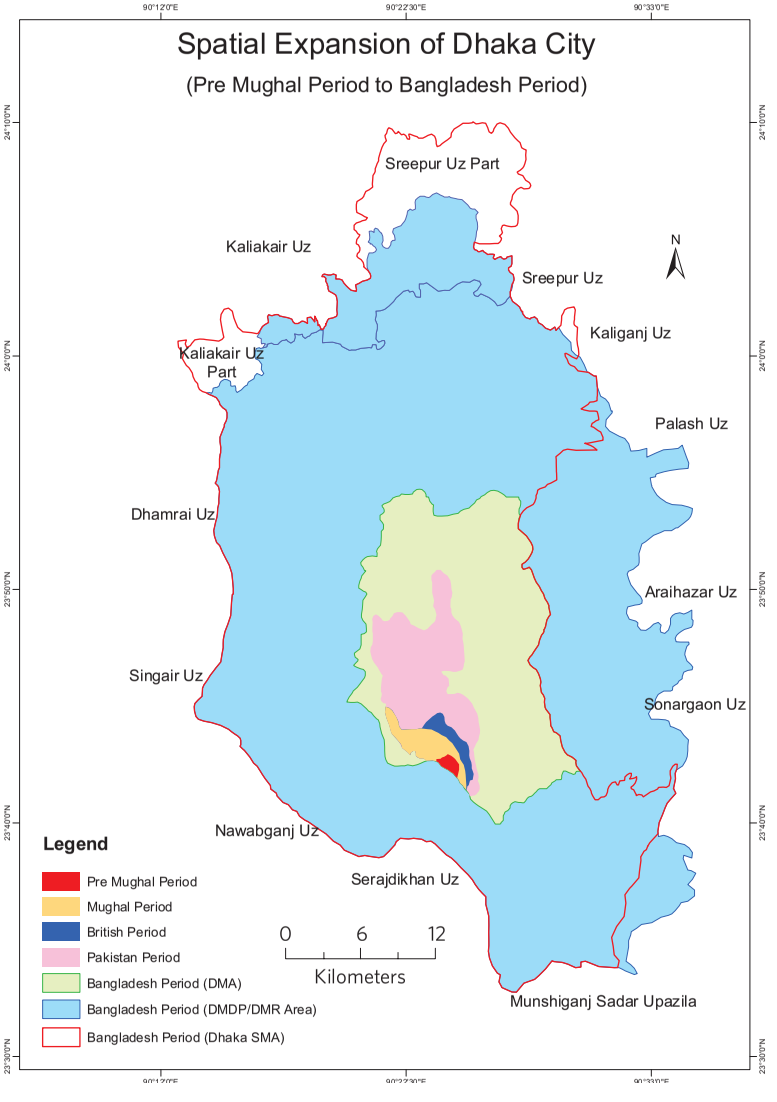
To accommodate the massive numbers of in-migrants as well as the natural increase of the megacity's population, flood- or water-logging-prone low-lying areas including some permanent wetlands are being indiscriminately filled in, mostly by digging soil (sediments) from nearby riverbeds. The uncontrolled movement of rural people towards this capital city has created a chaotic cluster of demographic, economic, social and environmental issues such as overcrowding, poverty, traffic congestion, rising unmet demands for basic urban utilities, and wide spread eruption of environmental hazards such as air pollution, water-logging, flood, fire, and epidemic diseases. This chapter will briefly discuss Dhaka's growth pattern and some of the resultant problems, and in the final chapter some ideas or solutions will be proposed to overcome these challenges and make this mega urban region planned, healthy and sustainable.

2. Spatial Expansion and Dimensions of Dhaka Megacity

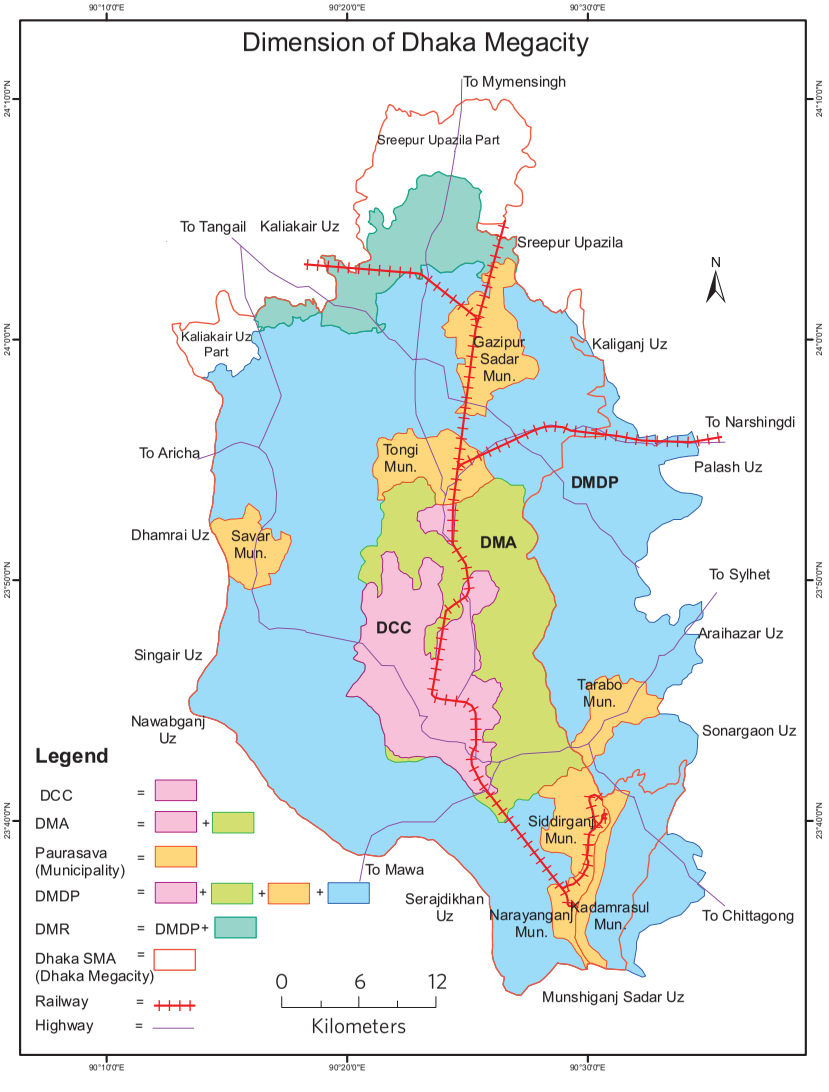
Dhaka is a fairly old city which dates back to the 7th and 8th centuries. The city had been governed by the Buddhists, Hindus, Muslims (Turks, Pathans, Mughals), and finally Christians during the British colonial period (Islam 1996). At the end of British colonial rule in India (in 1947), Dhaka under the Pakistan regime (1947-1971) became the provincial capital of the then East Pakistan and the city began to exhibit rapid spatial and demographic growth. However, after the independence of Bangladesh in 1971, Dhaka as the capital of a densely populated country began to transform from a city into one of the world's rapidly growing megacities.

The physical or spatial expansion of the city during various periods or regimes is shown in Map. 6.1. Most of the spatial extension of the city took place during the recent Bangladesh period, when Dhaka as the capital of a new born nation attracted thousands of entrepreneurs (native and foreign) to establish business and industries in or close to this city, as well as millions of rural-urban migrants to take advantage of the emerging opportunities.

Because of so many different terminologies to refer to the Dhaka Megacity, it is important to be clear about the entity that is being discussed in this chapter. Dhaka Megacity (DMC) is a polycentric metropolitan area comprising the Dhaka City Corporation, plus six municipalities (Paurashavas) - Kadamrasul, Gazipur, Narayanganj, Siddirganj, Savar and Tongi, and 68 adjacent unions that are termed other urban


Spatial Expansion of Dhaka City
(Pre Mughal Period to Bangladesh Period)
Sreepur Uz Part
Kaliakair Uz
Sreepur Uz
Kaliganj Uz
Kaliakair Uz Part
Palash Uz
Dhamrai Uz
Araihazar Uz
Singair Uz
Sonargaon Uz
Nawabganj Uz
Serajdikhan Uz
Munshiganj Sadar Upazila
N
Legend
Pre Mughal Period
Mughal Period
British Period
Pakistan Period
Bangladesh Period (DMA)
Bangladesh Period (DMDP/DMR Area)
Bangladesh Period (Dhaka SMA)
0 6 12
Kilometers

Map 6.1


Dimension of Dhaka Megacity
To Mymensingh
Sreepur Upazila Part
To Tangail
Kaliakair Uz
Sreepur Upazila
Kaliakair Uz Part
Gazipur Sadar Mun.
Kaliganj Uz
To Narshingdi
To Aricha
Tongi Mun.
Palash Uz
DMDP
Dhamrai Uz
Savar Mun.
DMA
To Sylhet
DCC
Araihazar Uz
Singair Uz
Tarabo Mun.
Nawabganj Uz
Sonargaon Uz
Siddirganj Mun.
To Mawa
Serajdikhan Uz
Narayanganj Mun.
Kadamrasul Mun.
To Chittagong
Munshiganj Sadar Uz
N
Legend
DCC =
DMA = +
Paurasava (Municipality) =
DMDP = + + +
DMR = DMDP+
Dhaka SMA (Dhaka Megacity) =
Railway =
Highway =
0 6 12
Kilometers

Map 6.2

areas. They are administrated by a number of bodies including DCC (Dhaka City Corporation) under a mayor, DMA (Dhaka Metropolitan Area) under the police administration, DMDP (Dhaka Metropolitan Development Plan) or a more recently created body-DMR (Dhaka Metropolitan Region) under the jurisdiction of RAJUK (Rajdhani Unnayan Katripakkha i.e. Capital Development Authority). Paurashavas (municipalities) are headed by the mayor of the respective municipality (see Map. 6.2). Beside these authorities, the Cantonment Board under the defense ministry also administers all cantonment areas located at four places within the DMC. All these bodies or organizations as mentioned above usually rule either a part or whole of the DMC area and they work separately without having any effective cooperation or coordination.

Dhaka SMA (Statistical Metropolitan Area) is another spatial unit which was created by the census authority of BBS (Bangladesh Bureau of Statistics) in 1980 for smooth conduct of the population census and generation of demographic and socio-economic data for the DMC area. However, this spatial unit i.e. Dhaka SMA is slightly different from RAJUK's Dhaka Metropolitan Region (DMR) as seen in Map. 6.2. Dhaka Structural Plan 2016-2035 for DMR carried out by RAJUK covers a total area of 1528 km^2 which is 96 km^2 larger than the area of DMDP (RAJUK 2015). On the other hand, Dhaka SMA under the BBS census comprises an area of 1371 km^2. In this chapter the entire analysis of data for DMC actually uses data for Dhaka SMA because in Bangladesh, BBS is the sole authority to collect, process and publish demographic data.

A megacity is defined by the United Nations as a metropolitan area having 10 million inhabitants or more. But in Bangladesh, BBS defines a megacity as a metropolis with 5 million or more people. Based on this definition, up to and including the 2011 Census Bangladesh had only one megacity i.e. Dhaka SMA. In the 2011 Census, DMC (i.e. Dhaka SMA) with an area of 1371 km^2 had 14.17 million people and it comprised one city corporation (DCC), DMA and a vast peri-urban zone, mostly under DMDP or DMR (Map. 6.2). However, currently (after the 2011 Census) the administration of DMC has been rearranged forming DCC into two city corporations (DCC-North and DCC-South) and establishing two more city corporations under DMC namely-Narayangonj and Gazipur.

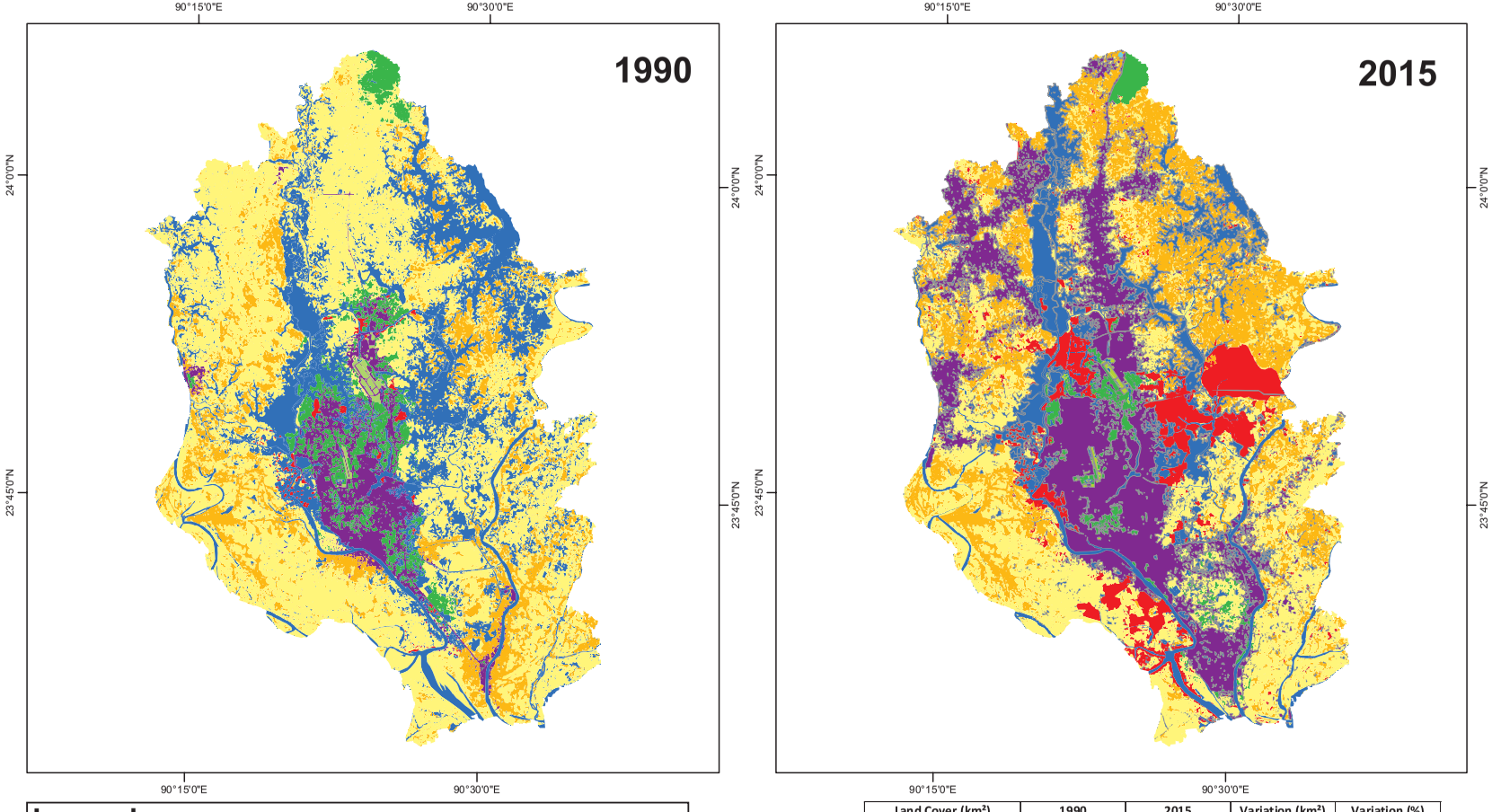
It should be noted that the core of the DMC-Dhaka City Corporation-has an area of only 126 sq. km. However, while it contains less than 10 percent of Dhaka Megacity's area, it contains half the population of the entire megacity.

3. Physical Settings of Dhaka Mega Urban Region

Bangladesh being a riverine country located within the Ganges Delta, the biggest delta on earth, the landscape and land cover of DMC and its surroundings is highly affected and shaped by rivers, canals and floodplains. Geographically DMC is located at the centre of this deltaic country and a number of rivers-Buriganga, Sitalakha, Dhaleshwari, Balu, Tongi etc. are flowing within this rapidly growing mega urban region. At the eastern margin of this megalopolis, Old Brahmaputra and Meghna rivers also have an effect on DMC's physical setting and development. In fact, the sustainable growth or expansion of the city's built up area, drainage and retention of storm water(mainly monsoon rain water) and protection of the megacity from environmental hazards or risks (e.g. flood, water-logging, depletion of ground water and related health risks) all greatly depend on the proper management of rivers, lowlands, wetlands and associated landforms.

Map 6.3 displays a vivid picture of the land cover changes within DMC over the last 25 years (from 1990-2015). Since 1990, Dhaka's built up area has increased almost 3 times (from 84 km^2 to 332 km^2) and lowlands and water bodies have contracted by nearly one third (31.2%) or nearly 120 km^2. Similarly the city's scarce open space has reduced by 37.9% i.e. from 5.36 km^2 to 3.33 km^2 and green coverage or vegetation has contracted by 53.4% or 43.35 km^2. The rapid expansion of

Dhaka Metropolitan Region (DMR): Land Cover Change, 1990-2015



Legend

- Agriculture
- Builtup
- Landfill
- Lowland/Waterbodies
- Open Space
- Settlements within Urban Fringe
- Vegetation

N

0 5 10
Kilometers

Land Cover (km²)	1990	2015	Variation (km²)	Variation (%)
Agriculture	736.35	438.65	-297.7	-40.43
Builtup	84.44	332.1	+247.66	+293.30
Landfill	7.3	124.1	+116.8	+1600.00
Lowland/Waterbodies	378.19	259.72	-118.47	-31.33
Open Space	5.36	3.33	-2.03	-37.87
Settlements within Urban Fringe	240.81	337.9	+97.09	+40.32
Vegetation	81.15	37.8	-43.35	-53.42
Total Land Cover	1533.6	1533.6	-	-

(+) Areal Increase (-) Areal Decrease

Source: Urban Studio. Department of Geography and Environment, University of Dhaka (2016)

Map 6.3

urban built up areas in different locations of the city was only possible at the expense of losing environmentally valuable lowlands and water bodies and fertile agricultural lands. During the last 25 years, settlements within the vast fringe zones of DMC have rapidly been developed through the conversion of agricultural lands into housing and associated infrastructure. Over one-third (40.3%) of 736.35 km^2 agricultural land (i.e. 297.7 km^2) was brought under fringe settlements from 1990 to 2015. The conversion of lowlands, water bodies and fertile farmlands into built up area within different zones of the DMC was usually done through a land filling process which has been rapidly spreading. In 2015, the total landfill area was 124.10 km^2 as against only 7.30 km^2 found in 1990, meaning that during the last 25 years, landfill areas within the DMC increased by 16 times. Map 6.3 depicts this clearly. In 2015, landfill activities can be seen on a large scale in vast areas in different regions of DMC such as at Purbachal, Khilkhet, Rupgonj, Uttara, Keranigonj and near Amin Bazar. It has been generally observed that reduction of the city's lowlands and wetlands through landfill has reached an alarming condition and if this rate of landfill persists, DMC will have to face severe environmental consequences.

4. Population Size, Urban Primacy and Density of Population

Dhaka was established as a municipality on 1 August 1864 and the first official census was taken in 1872 when the city had a population of 69,212 (Islam 1996). Table 6.1 provides an account of the population size of Dhaka City and Dhaka SMA from 1901-2011. In 1901, the city had 129,000 residents and the figure increased to 557,000 in 1961. Dhaka became a million population city after the partition of the country from Pakistan (in 1972) and since then the city began to show explosive growth of population. From 1974 to 2011, population of DMC increased 7 fold (from 2.0 million to 14.2 million).

Table 6.1: Population size, annual average growth and percent of total urban population in Dhaka Megacity, 1901 – 2011

Census Year	Population (in '000') for DMC	Growth rate per annum for DMC	% of national urban population	National urban population growth rate
1901	129	--	18.4	--
1911	154	1.8	19.1	1.39
1921	169	0.9	19.2	0.85
1931	196	1.5	18.2	2.00
1941	296	4.2	19.2	3.59
1951	336	1.3	18.5	1.69
1961	557	5.2	21.1	3.75
1974	2,004*	10.4	31.9	6.62
1981	3,454*	8.1	26.1	10.63
1991	6,487*	6.3	28.9	4.56
2001	9,673*	4.0	31.1	3.15
2011	14,172*	3.8	35.6	3.09

Source: UN 1987, BBS 2011

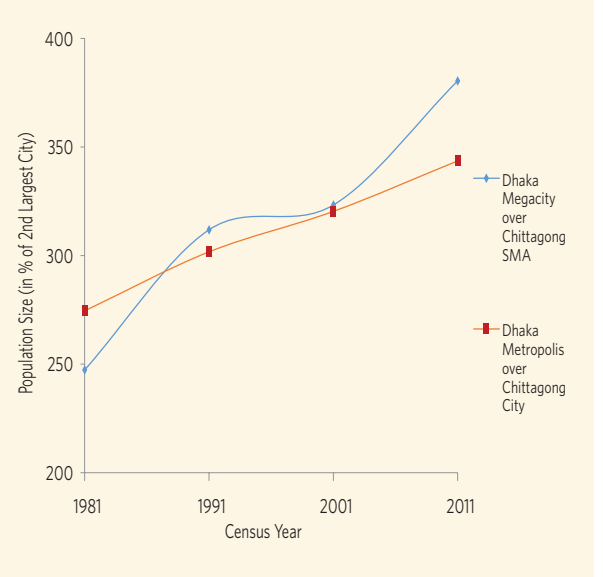
* Census adjusted figure

Note: Population figures for 1901 – 1961 refer to Dhaka City, for 1974 refers to DMA and for 1981—2011 refer to Dhaka SMA or Dhaka Megacity (DMC)

a) Primacy of DMA and DMC

Some aspect of Dhaka's primacy were already discussed in Chapter 5. Dhaka Megacity (DMC) enjoys a unique single city primacy level among Asia's megacities, comprising 35.6% of Bangladesh's total urban population in 2011 (Table 6.1). A 'primate city distribution' has one very large city with many much smaller cities and towns, and no intermediate-sized urban centres, in contrast to a linear 'rank-size distribution'. In terms of population size, DMC (i.e. Dhaka SMA) is 3.8 times bigger than Chittagong SMA, the country's second biggest urban agglomeration. DMC's population with respect to the second largest city, Chittagong SMA, has risen from 2.47 times in 1981 to 3.80 times in 2011. Fig. 6.1 and Tables 6.2 and 6.3 demonstrate an increasing primacy of DMC and DMA (Dhaka Metropolitan Area) over the Chittagong SMA and Chittagong City respectively. The level of primacy of DMC as well as DMA (Dhaka Metropolitan Area) has been significantly increasing over time.

Figure 6.1: Increasing primacy of Dhaka Megacity and DMA (Dhaka Metropolitan Area)



Source: 1981, 1991, 2001 and 2011 Population Census Report

Table 6.2: Increasing primacy of DMC (Dhaka Megacity) over Chittagong SMA, 1981-2011

Census Year	Largest City by Population Dhaka Megacity (p1)	2nd Largest City by Population Chittagong SMA (p2)	Population % of p1 (p1/p2)*100	Rank Size Population % would be
1981	3440147	1390684	247.37	200
1991	6487459	2079968	311.90	
2001	9672763	2991723	323.32	
2011	14171567	3724433	380.50	

Source: 1981, 1991, 2001 and 2011 Population Census Report

Table 6.3: Increasing primacy of DMA (Dhaka Metropolitan Area) over Chittagong City, 1981-2011

Census Year	Largest City by Population Dhaka Metropolitan (P1)	2nd Largest City by Population Chittagong City (P2)	Population % of p1 (p1/p2)*100	Rank Size Population 1 % would be
1981	2816805	1025846	274.58	200
1991	4202996	1392860	301.75	
2001	6482877	2023489	320.38	
2011	8906039	2591681	343.64	

Source: 1981, 1991, 2001 and 2011 Population Census Report

The primacy of DMC or DMA is reflected not only in terms of its share of population but also in terms of disproportionate concentration of many activities and services such as industries, trade and commerce, transport and construction works, informal activities and services like administration, education, health, finance and banking, and international commerce and business. Migrants with managerial positions and from the middle class usually prefer to live in cities where quality education (mainly school education) and health services are available and in this respect they mostly prefer Dhaka City. Rapid geo-demographic growth and primacy of Dhaka capital city can also be explained by its unique central location with better or superior accessibility to all district headquarters.

b) Population Density

Dhaka City is one of the most densely settled cities on earth. Table 6.4 illustrates the density patterns of different zones of the city from 1991 to 2011. Inner zones such as DCC and DMA are the most crowded parts of the city. In 2011, DCC recorded 55,668 citizens per km^2 followed by DMA, with 28,185 persons per km^2. The average density for DMC in 2011 was 10,336-three times higher than the national average urban density. Because of rapid population increase, the trend of density population increase, the trend of density increase over the inter-censal period was also very high. Over the 20-year period 1991-2011, density in all zones of DMC increased by over 200%.

Table 6.4: Increasing urban population density (persons per km^2) of DCC, DMA, DMC and Bangladesh, 1991-2011

City region/Bangladesh	1991	2001	2011
DCC (Dhaka City Corporation)	23,484	34,629	55,668
DMA (Dhaka Metropolitan Area)	13,392	21,652	28,185
DMC (Dhaka Megacity i.e. SMA)	4,795	7,055	10,336
Bangladesh	2,179	2,75 6	3,785

Source: BBS, 2011 and 2001

Compared with other megacities of Asia, Dhaka ranks high in terms of population density. In the year 2000 (the most recent for which comparable figures are available) its core area, DCC, was almost as densely populated as those of Mumbai and Kolkata, and slightly more densely populated than the core areas of Jakarta, Manila and Shanghai. The remainder of Dhaka Metropolitan Area was less densely populated than the equivalent areas of Mumbai and Kolkata but much more densely populated than the

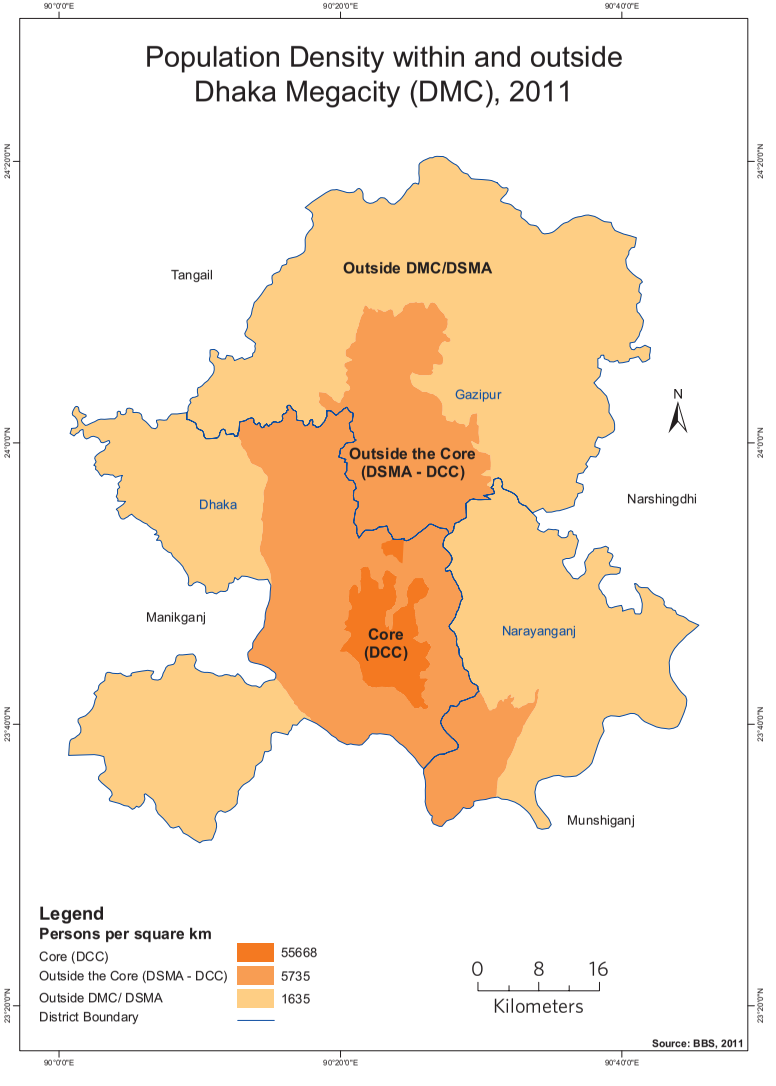
Vulnerable slums beside railway track. *Photo: Drik*

equivalent areas of Jakarta, Manila, Shanghai and Bangkok (Bhagat and Jones, 2016).

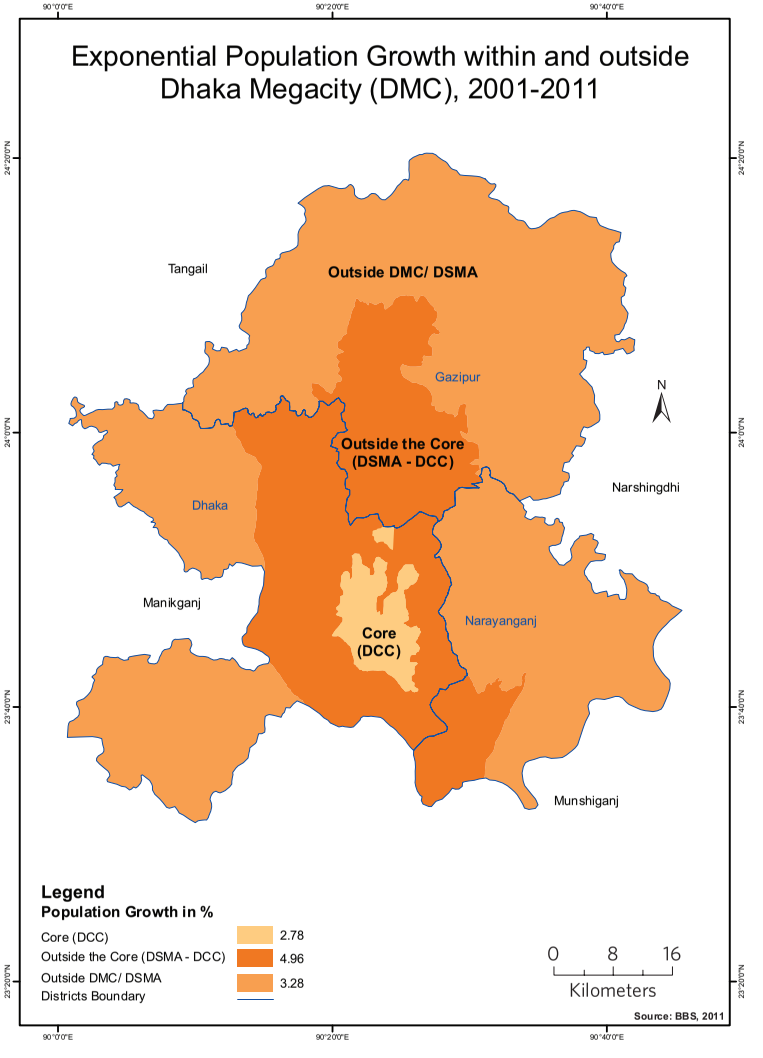
Map 6.4 shows the relative density of population within and outside the DMC/SMA. Within DMC, the core area (DCC) exhibits a very high density-55,668 person per km^2 and outside the core, 5,735 people per km^2. The overall density outside DMA/SMA was only 1625 per sq. km. as most of the outer reaches of Dhaka, Narayangonj and Gazipur districts are rural.

Population density is extremely high (well over 100,000 persons per km^2) in some parts of Dhaka City (at ward or thana level). Indeed, a study on slums in 6 divisional cities of Bangladesh (Angeles, et. al 2009) in 2005, recorded an exceptionally high density (220,246 persons per km^2) in slum areas of Dhaka City as against non-slum areas where density was far less. The extremely high population density in Dhaka's inner and slum areas is related to the strong association between living arrangements and work opportunities. All types of work opportunities remain strongly centralized, and this inertia of the urban structure has strongly affected the living arrangements of the urban poor and the location of slum areas. Given that the poor find it difficult to afford the cost of public transport, their normal means of getting to work is on foot; thus they face a strong incentive to live close to inner city areas where there is a high density of informal sector jobs,[23] located close to economic activities in the formal sector. Thus most informal (slum) settlements are located in the inner part of the city, along the rail line or the flood protection embankment (Ahmed et al., 2014: 37).

Given the hyper-density of population in Dhaka's urban core, existing physical and social infrastructure – and indeed, the political and economic system itself-make it almost impossible for many citizens, especially the poor, to lead a minimally comfortable life. The city has grown spontaneously without considering the poor's access to housing, though the slum population makes up at least one-third of the city's total inhabitants. Slum dwellers have been compelled to crowd into the city's vulnerable zones such as flood prone lowlands, embankment slopes, along the railway tracks, temporary open space and thousands of very tiny plots owned by the middle


Population Density within and outside
Dhaka Megacity (DMC), 2011
Tangail
Outside DMC/DSMA
Gazipur
Outside the Core
(DSMA - DCC)
Dhaka
Narshingdhi
Manikganj
Core
(DCC)
Narayanganj
Munshiganj
N
Legend
Persons per square km
Core (DCC) 55668
Outside the Core (DSMA - DCC) 5735
Outside DMC/ DSMA 1635
District Boundary
0 8 16
Kilometers
Source: BBS, 2011

Map 6.4


Exponential Population Growth within and outside
Dhaka Megacity (DMC), 2001-2011
Tangail
Outside DMC/ DSMA
Gazipur
Outside the Core
(DSMA - DCC)
Dhaka
Narshingdhi
Manikganj
Core
(DCC)
Narayanganj
Munshiganj
N
Legend
Population Growth in %
Core (DCC) 2.78
Outside the Core (DSMA - DCC) 4.96
Outside DMC/ DSMA 3.28
Districts Boundary
0 8 16
Kilometers
Source: BBS, 2011

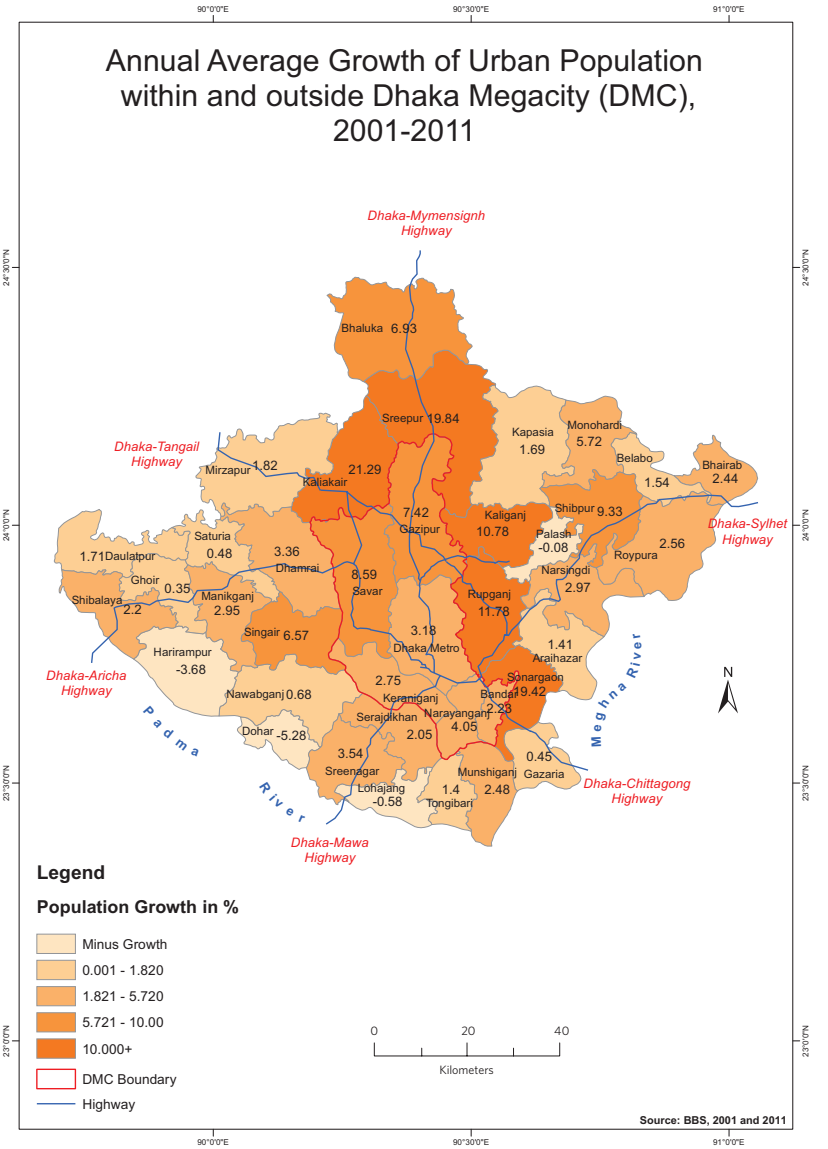
Map 6.5

Box: Slums and Slum-Dwellers in Dhaka Megacity

In many densely populated and rapidly growing cities in developing countries in Asia, Africa and Latin America, proliferation of slums and slum dwellers has become an inseparable part of urbanization. After independence, Bangladesh's big cities like Dhaka, Chittagong, and Khulna were confronted with the problems of a sudden influx of rural migrants, most of them landless, poor and un/underemployed, arriving from across the country in search of livelihood (Arifeen and Mahbub 1993; CUS 1996; BBS 2014). Given the inability of public or government housing markets to respond with affordable formal housing, most of those poor rural migrants have been forced to live in highly congested slums and squatter settlements with very limited utility services. Dhaka, as a centrally located capital city, with the country's largest agglomeration of industries, commerce, construction and transport works, informal activities etc. had great attraction for poor rural migrants, ultimately making it one of the densest and fastest growing megacities on earth. A study in 2005 (CUS et al., 2006;) identified 4,966 slum clusters in Dhaka, with a population of 3.42 million-37% of DMC's population. A more recent study by the BBS (2014) revealed that DMC accounted for 39% of all slum dwellers of Bangladesh. Since independence, both slum and non-slum populations have been rapidly increasing in Dhaka Megacity. A comparison of 1996 and 2005 slum survey results indicated that the total population living in the slums of Dhaka City tripled, while the number of slum communities (i.e. slum clusters) increased by roughly 70% (Angeles, et. al 2009, p.12).

There is a high concentration of Dhaka's slum population in a few large slums, together with a large number of small slums dispersed throughout the city. While 5.7% of the slum population lived in 2,483 slums (50% of all slums in the city in 2005), 50% of the slum dwellers were concentrated in only 3.7% of slums i.e. 185 slums (Angeles, et. al 2009, p.9). Unlike in many cities in other countries, over 80% of slum settlements in Dhaka City were built on private land, as the city's lands are mostly owned and controlled by hundreds and thousands of private landowners, whereas government owns only a very small amount of the city's total land. Given this situation, Dhaka's slum dwellers have been paying a very high rent, compared to many cities in Asia and elsewhere (Mahbub, 1994). In fact, in the fringe areas of DMC renting housing to slum dwellers became a low risk and highly profitable business for many land owners. To get more and more income from house renting, slum land owners have improved the quality of housing by changing *kutcha* houses into *pucca* structures (i.e. from poor and less durable to strong and more durable house), providing electricity, gas and water to the dwellers and installing sanitary toilet facilities. It has been argued that Dhaka's slum areas might have better environmental conditions and services than many third world cities (Angeles et al., 2009: 11). Slum settlements in Dhaka City are not just poor tenants' colonies; rather they are characterized by a three tier tenancy structure- including landowners, intermediaries (corrupt government officials who are in charge of providing electricity, gas and water supply) and tenants (Mahbub, 1994). This complex tenancy structure makes the provision of services sometimes difficult and always protects the interest of land owners and intermediaries. Therefore, any progressive intervention regarding house rent and safe shelter must address this complex problem and prescribe policies in favour of the poor tenants.

The poor communities in Dhaka City, particularly the slum dwellers, are not receiving due attention and services from the government and other organizations. The existing administrative, financial and technical facilities of the city are heavily biased in favour of the urban elites and rich communities. Through government (mainly RAJUK) initiative a significant portion of Dhaka's good quality residential lands along with all kinds of residential facilities and amenities in Dhanmondi, Banani, Gulshan, Baridhara, Uttara and most recently at Purbachal have already been given to those privileged groups at subsidized prices. The poor majority, on the other hand, are deprived of their due share in urban land and amenities. Unless the issue of housing for the slum dwellers and other urban poor is brought to the centre of urban management, a healthy and harmonious growth of this densely inhabited capital city can never be materialized. Neglecting the health and environmental facilities of the city's poor communities will not only endanger the life of the poor but also of the other citizens.



Map 6.6

and upper-middle class households. Unlike in many other countries, almost all slum dwellers in Bangladesh pay a reasonably high rent.

5. Spatio-temporal Patterns of Population Growth within and around DMC

The growth of urban population in Bangladesh is inherently linked with the growth and development of the capital city Dhaka. Before independence, the contributions of migration and urbanization were not very significant. Urbanization gained momentum after Bangladesh's independence in 1972, when millions of migrants from rural areas flocked to the capital city with a view to finding employment and shelter (Table 6.1). Within a span of 37 years (i.e. 1974-2011) Dhaka's population grew by 7 fold as against 5.7 fold recorded for the country. Since independence, DMC has persistently shown a more rapid growth of population than for the national population (Table 6.4) and in 2001-2011 growth in this mega urban region was ahead of almost all regional urban population growth rates (Table 6.5). Due to this higher growth rate, Dhaka's share of Bangladesh's total population as well

as total urban population has been steadily increasing. In 2011, DMC accounted for over one-third of national urban population and 10% of the country's population.

Table 6.5: Comparative statistics on population size and growth by region, 2001-2011

Areal unit	Total population 2011	Growth per annum	% of total urban population
National Population	144043697	1.47	--
National Urban Population (N= 506)	41943532	3.00	100
National Rural Population	102100165	0.81	--
Dhaka Megacity (DMC)	14171567	3.82	33.79
Dhaka Metropolitan Area (DMA)	8906039	3.18	21.23
Dhaka City Corporation (DCC)	6970105	2.78	16.62
Eastern Part Urban Population (N=243)	29974255	4.22	71.46
Western part Urban Population (N= 262)	11044935	1.41	26.33
Coastal Region (N=141)	8585936	2.02	20.47
Non Coastal Region (N= 364)	25032205	2.96	59.60
Big Town (50-below 100K) N=62	4174827	2.10	9.95
Medium sized towns (25-below 50K) N=161	5672123	2.67	13.52
Small towns (below 25K) N= 239	3143027	1.78	7.49
Municipalities (N=316)	27279735	3.66	65.04
Non Municipal Towns(N=167)	2290001	0.67	5.46

Source: Calculated from 2011 Population Census Report, Vol. 3, Urban Area Report

N= No of cities/towns

K= 1000 population

Map 6.5 exhibits the annual growth of urban population between 2001 and 2011 within and outside the megacity of Dhaka. The core area of DMC recorded 2.78% growth per annum whereas the periphery region registered a very high growth rate (4.96%), almost double the rate of the core. Average urban population growth rate in the areas of the three districts of Dhaka, Gazipur and Narayanganj which lie outside the DMC (3.28%) was much higher than the core area. The spatial pattern of growth within and outside DMC certainly indicates that Dhaka, one of the fastest growing megacities in Asia, will continue to expand rapidly.

Areal expansion of Dhaka since the 1990s has been particularly towards the north, northwest and northeast, and to some extent to the southeast, and particularly into arable and wetland areas mainly adjacent to the existing urban periphery. The south and south-west are primarily low-lying and marshy lands, and this has constrained development in this direction, because of the high cost of landfill projects and dealing with recurrent flooding that such infill exacerbates (Dewan and Corner, 2014: 105-109).

The growth rates can be examined more closely from Map 6.6, which shows that population growth rates outside the border of DMC or SMA differed remarkably, with some areas increasing by more than 20 percent per annum, and others actually declining in population. The areas with extraordinarily rapid growth are those immediately to the north, northwest, northeast and east of the Dhaka SMA – in Kaliakair, Sreepur, Kaliganj, Rupganj and Sonargaon sub-districts. All of them had rates of population increase exceeding 10 percent per annum – indeed, 20 percent per annum in Kaliakair, Sreepur and Sonargaon. This clearly reflects "spillover" urbanization of these sub-districts. Savar and Gazipur, attached to DMA also exhibits a rapid growth. Some other sub-districts a little further out, but with good road linkages, also had quite rapid growth – Baluka to the north, Singair to the west and Shibpur to the east – all with above 6 percent per annum growth.

Yet many sub-districts quite close to Dhaka had little or no growth of population, or even showed a decline. The sub-districts to the south-west of Dhaka that showed a decline in population (Harirampur, Dohar and Lohajang) are largely low-lying and marshy lands, located on the edge of the Padma River, facing riverbank erosion, and are therefore lacking in any growth-inducing features. Others with growth rates below their rates of natural increase, located to the west of Dhaka (Nawabganj, Ghior and Saturia) share much the same characteristics.

Dewan and Corner (2014, Chapter 6) conducted an analysis of the urban growth of Dhaka Megacity between 2001 and 2011, using the smallest spatial unit for which census data are available, the census tract, to integrate population data with satellite information. They found that the built up area increased, overall, from 14,641 ha to 19,556 ha, i.e. a 33 percent increase. Over the period, population density increased in all

Floating bamboo walkway in slum area. *Photo: Drik*

parts of Dhaka Megacity, in contrast to some of the world's megacities, where density in the city core is sometimes found to have decreased (for example, in parts of Jakarta, Manila and Shanghai – see Jones and Douglass, 2008: 53). In Dhaka, density in Zones 1 and 2 (old Dhaka and areas within about 5 km. of Motijheel, the urban core) increased from around 40,000 per sq. km. in 2001 to well over 50,000 in 2011, and population densities in other zones, though lower, increased substantially in all cases (see Dewan and Corner, 2014, Figure 3.1 and Table 6.3). Nevertheless, in this expanded built-up area, the proportion settled at high density declined from 80.1 percent to 76.5 percent, indicating some decline in the compactness of urban settlement over time. This resulted from the expansion of the built-up areas into less densely populated areas, which although they were growing rapidly, pulled down somewhat the proportion of the overall area settled at high density.

Further observation shows that busy national highways and railways are usually passing through the high growth zones. Dhaka-Mawa and Dhaka-Aricha/Daulatdia highways are relatively less busy and along these two routes railway connection has not been installed. After the installation of Padma Bridge (both road and railway) population growth along the Dhaka-Mawa route will increase rapidly.

Besides transport accessibility, the reasons behind the hyper-growth of population adjacent to the eastern and NNW borders of DMC is the availability of residential land and house rent at a cheaper rate compared with urban built up areas within DMC. It has been observed that thousands of rural migrants originating from middle and lower income groups usually prefer to stay in those places (e.g. Kaliakoir, Sripur, Kaligonj, Rupganj and Sonargaon etc.) which they can afford because land price and house rents are relatively reasonable. Land prices and house rents are extremely high within and adjoining the core of the Dhaka Megacity. Affordable land price within or near the city margin also attracted many entrepreneurs to set up industries and businesses which in turn attract more migrants to settle and work in those places. All these

factors, therefore, have been influential in raising the population growth rate to a very high level.

When Dhaka Megacity is compared with the other largest megacities in Asia and the world, Dhaka is one of the fastest growing. Within the SAARC countries, in recent times Dhaka's population has grown much more rapidly than that of the other megacities like Mumbai, Delhi, Kolkata and Karachi. As a primate city in one of the most populous countries in the world, with a still low level of urbanization, moderately rapid economic growth and strong environmental and economic factors pushing migrants from rural areas, it can be expected that Dhaka's growth will remain high for many years to come.

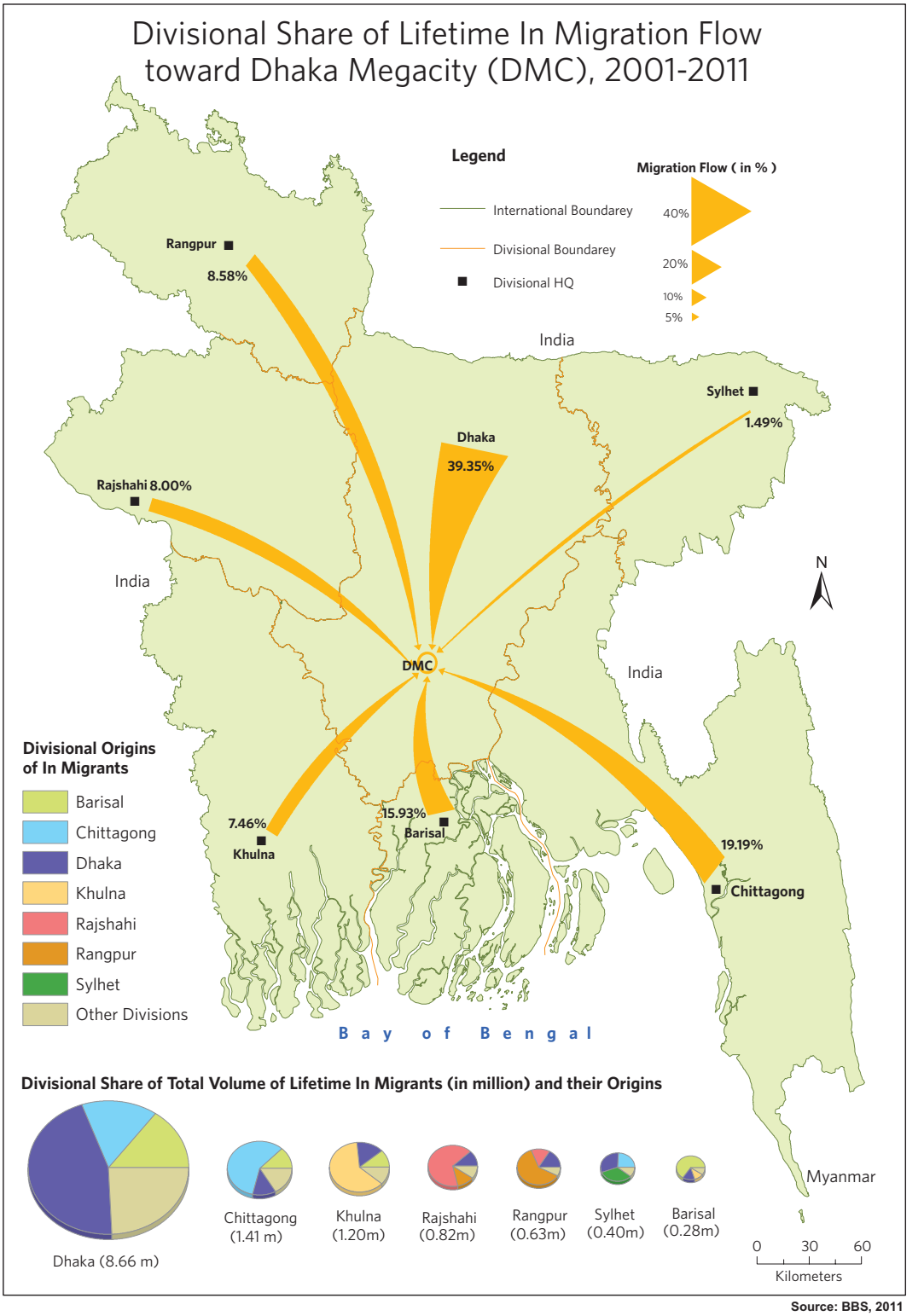
6. Migration Patterns and their Role in Population Change

Much of Dhaka's growth is, in fact, the result of massive migration of rural people since the early 1970's; the flow is still continuing. Dhaka is the "mecca" for migrants in a densely populated country. Having only one percent (0.93%) of the country's total territory, DMC alone accounts for over one-third of the total urban residents, one-tenth of the country's total population and produces one-third of the total GDP of the country. Massive in-migration for a prolonged period resulted in an extremely high density of people, buildings, and industries along with other activities and facilities, putting immense pressure on the healthy growth of Dhaka City. Unplanned and uncontrolled urbanization and migration brings with it a wide range of natural and man-made risks. The city has already exhibited severe environmental/physical problems (air pollution, drainage overflow, flood and water-logging, traffic congestion, unmanaged garbage and sewage etc.) and social problems (mass poverty, urban crime, social inequalities, poor health services, poor governance). This section of the monograph deals with in-migration pressures on DMC and briefly discusses possible options for proper management of migration at urban as well as rural ends.

As already discussed in Chapter 4, the pattern of internal migration in Bangladesh cannot be analysed realistically due to lack of adequate and appropriate data published by the BBS. Probably millions of migrants who are short-term and also short-distance were not counted during the census survey, for definitional reasons. Migration data counted only those persons who left their residence for periods of 6 months or more and crossed district boundaries. Data used in this report are based on this definition. Moreover, BBS counted lifetime migration based on the district unit only, and as a result, specific city-based migration patterns cannot be presented here. However, to partly overcome this difficulty, in discussing lifetime internal in-migration to DMC we use aggregate lifetime migration data for Dhaka, Narayangonj and Gazipur districts within which DMC is located.

Lifetime in-migration patterns as shown in Fig. 6.2 clearly indicate that almost two-thirds of all migrants in Bangladesh had chosen Dhaka Division as their destination. Of the total 13.4 million migrants, Dhaka Division received 8.6 million or 65% and Dhaka, Narayangonj and Gazipur districts within which the DMC is located received 7.2 million. If we add inter district lifetime in-migrants between Dhaka, Narayangonj and Gazipur districts (which were 310,430) to 7.2 million, then the actual volume of lifetime in-migrants who came to DMC would be 7.5 million. That means about 56% (well above half) of the total lifetime in-migrants counted by the BBS in 2011 Census migrated to Dhaka Megacity.

For the district- wise flow patterns of lifetime in-migrants to DMC, the reader is referred to Map 4.7 in Chapter 4. The patterns as shown in the map indicate that the top 10 districts supplying migrants to DMC contributed over half (51.3%) of the Dhaka-bound migrants and the top 3 districts namely, Barisal, Mymensingh, and Comilla accounted for one-fourth (24.9%). Districts under Dhaka Division supplied 41.2% of the total migrants whereas 18.6% of Dhaka – bound migrants came from Chittagong Division. It is also noted that 50% of the lifetime in-migrants who came to DMC originated from 15 neighbouring districts. This finding certainly indicates that a large number of the migrants are in fact short distance migrants. Similar findings can be drawn from Map 6.7, which shows that 39% of lifetime in-migrants to DMC came from within Dhaka Division. In the case of Chittagong, 60% of migrants came from within Chittagong

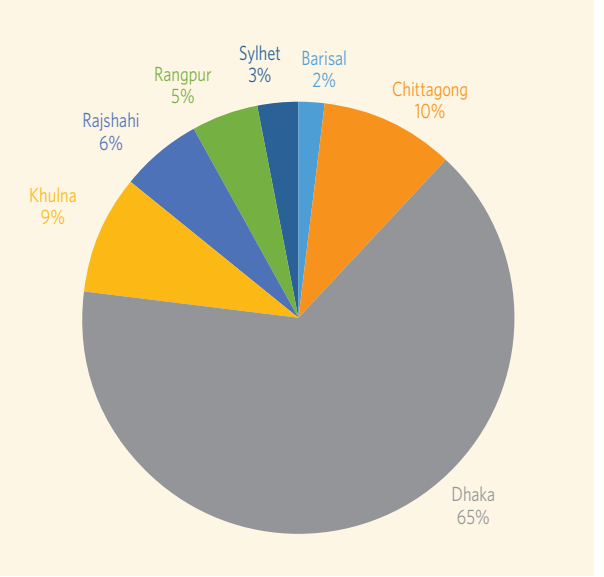


Source: BBS, 2011

Map 6.7

Division. Similarly 68% of the Rangpur Division-bound lifetime in-migrants originated from Rangpur Division. Except Sylhet and Dhaka divisions, all other divisions attracted most of their lifetime in-migrants (over 60%) from the respective divisions. The pattern of recent migration flows to DMC showed more or less the same results as for lifetime migration.

Figure 6.2: Divisional share of lifetime internal in-migrants, 2001-2011



Source: Calculated from unpublished data supplied by BBS

7. Employment Patterns and Trends

In Bangladesh, the largest concentration of all non-agricultural activities is located in and around Dhaka City. Although a sizeable area of land within DMC is still shown under agricultural use (see Map 6.3), only a very small share of employment (2.7%) is linked with agricultural activities, in which female participation is insignificant (only 5.8%). On average, 97.3% of all employment within DMC is in non-agricultural activities, varying from 91% to 98% (Map 6.8). In some upazilas adjacent to DMC such as Rupganj, Sonargaon and Kaliakoir, non-agricultural activities accounted for over 80% of the total employment.

Industry and service sector employments account for 36.2% and 61.1% respectively of total employment (Table 6.6). In both sectors, males are predominant (70.7 % and 81.5% respectively). However, this means that nearly one out of three industrial workers and one out of five service sector employees were female in 2011 Census survey. The areal concentration of industrial and service sectors employment is shown in Map 6.9 and Map 6.10 respectively. Industry sector employment within DMC is highly concentrated in Gazipur, Savar and Narayangonj areas. The share of industrial employment in the heart of the DMC (i.e. within Dhaka Metropolitan Area- DMA) is relatively low (only 24.8%) when compared with Gazipur, Savar and Narayangonj (Map 6.9). On the other hand, service sector employments are highly concentrated within the DMA where three out of every four employees (74.2%) depend on service sector jobs. In Gazipur and Savar- the two main industrial areas of DMC – the service sector provides 32.8% and 39.4% of all jobs, respectively (Map 6.10).

Table 6.6: Sector of employment of population (10 years and above) by gender within DMC, 2011

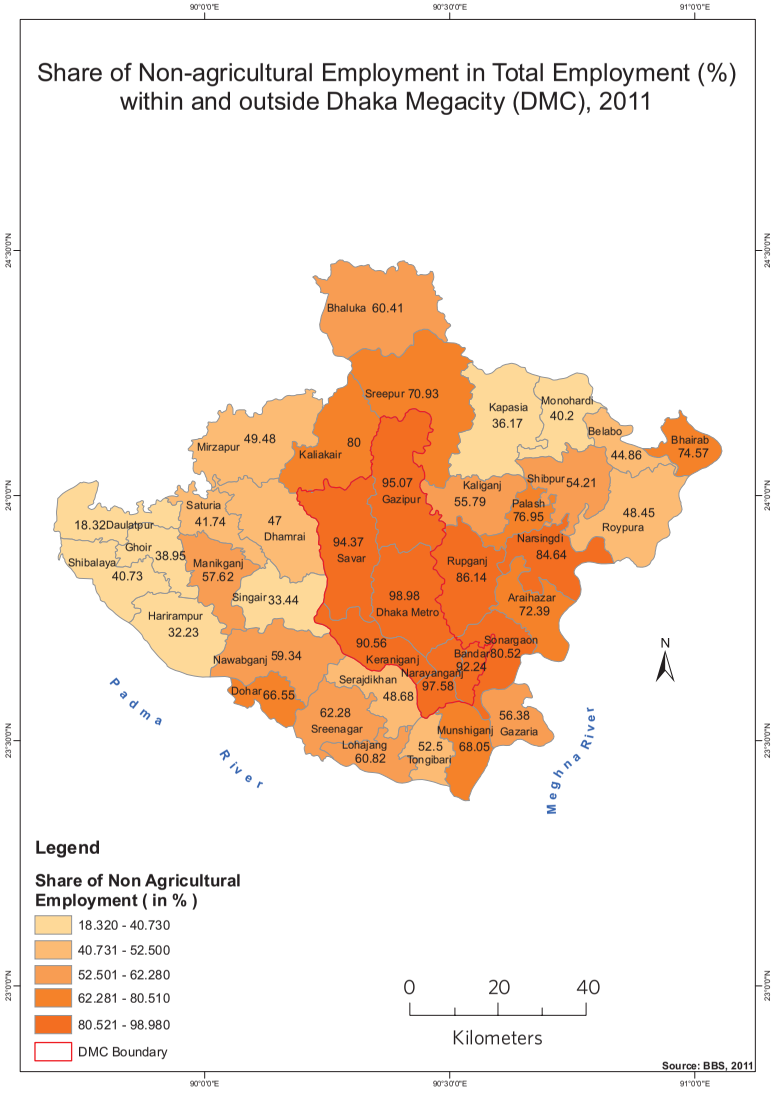
Fields	Total			Percentage		
	Both Sexes	Male	Female	Male	Female	Total
Agriculture	172,509 (2.7)	162,586	9,923	94.3	5.7	100
Industry	2,328,821 (36.2)	1,646,890	681,931	70.7	29.3	100
Services	3,932,808 (61.1)	3,206,192	726,616	81.5	18.5	100
TOTAL	**6,434,138 (100)**	**5,015,668**	**1,418,470**	**78.0**	**22.0**	**100**
Non Agriculture (Industry + service sectors)	**6,261,629**	**4,853,082**	**1,408,547**	**77.5**	**22.5**	**100**

Source: Calculated from unpublished data supplied by BBS

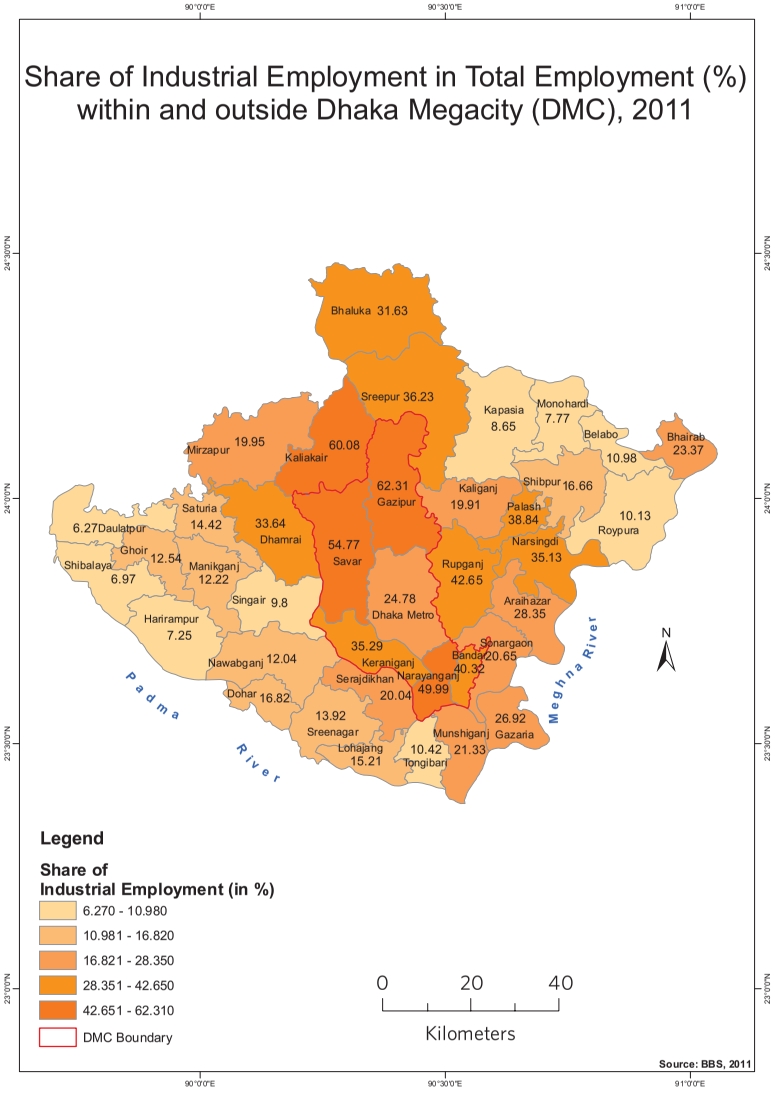
Note: ( ) parenthesis indicates percent of total employments

Female industrial workers are mostly concentrated in the northern part of DMC, where the industries, especially the RMG's (Ready Made Garments) are rapidly growing within and adjacent to the DMC boundary (Map 6.11). Two busy national highways, namely Dhaka-Mymensingh and Dhaka-Tangail highways, pass through this dense industrial agglomeration.

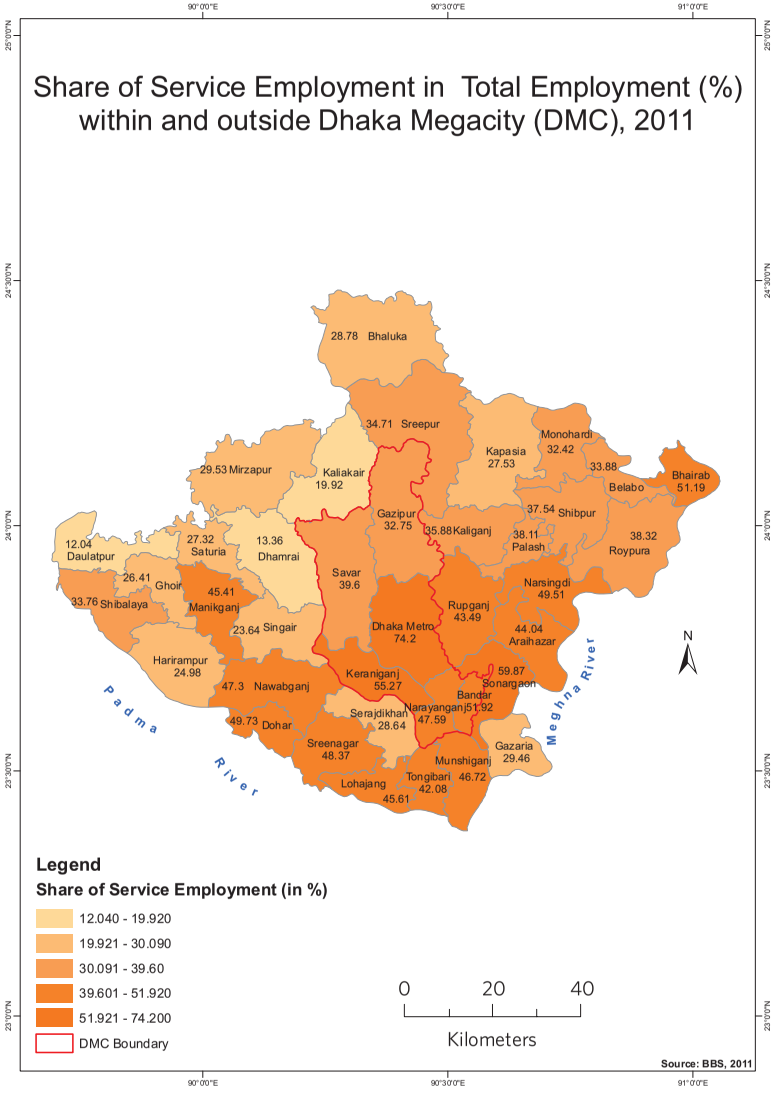
Five important upazilas where over 60% of females are working in industries are Kaliakoir (83.1%), Gazipur (77.1%), Savar (71.4%), Bhaluka (68.8%), and Sreepur (61.7%). Other important concentrations of female industrial labour are Narayangonj (64.4%) located in the southern part of DMA and Rupganj (63.8%) on the eastern margin of DMC.


Share of Non-agricultural Employment in Total Employment (%) within and outside Dhaka Megacity (DMC), 2011
Bhaluka 60.41
Sreepur 70.93
Kapasia 36.17
Monohardi 40.2
Belabo
Bhairab 74.57
Mirzapur 49.48
Kaliakair 80
44.86
95.07 Gazipur
Kaliganj 55.79
Shibpur 54.21
Palash 76.95
48.45 Roypura
Saturia 41.74
47 Dhamrai
18.32 Daulatpur
Ghoir 38.95
Shibalaya 40.73
Manikganj 57.62
94.37 Savar
Rupganj 86.14
Narsingdi 84.64
Singair 33.44
98.98 Dhaka Metro
Araihazar 72.39
Harirampur 32.23
90.56 Keraniganj
Sonargaon
Bandar 80.52
92.24 Narayanganj
Nawabganj 59.34
Serajdikhan 48.68
97.58
Dohar 66.55
62.28 Sreenagar
56.38 Gazaria
Munshiganj 68.05
Lohajang 60.82
52.5 Tongibari
Padma River
Meghna River
N
Legend
Share of Non Agricultural Employment (in %)
18.320 - 40.730
40.731 - 52.500
52.501 - 62.280
62.281 - 80.510
80.521 - 98.980
DMC Boundary
0 20 40
Kilometers
Source: BBS, 2011

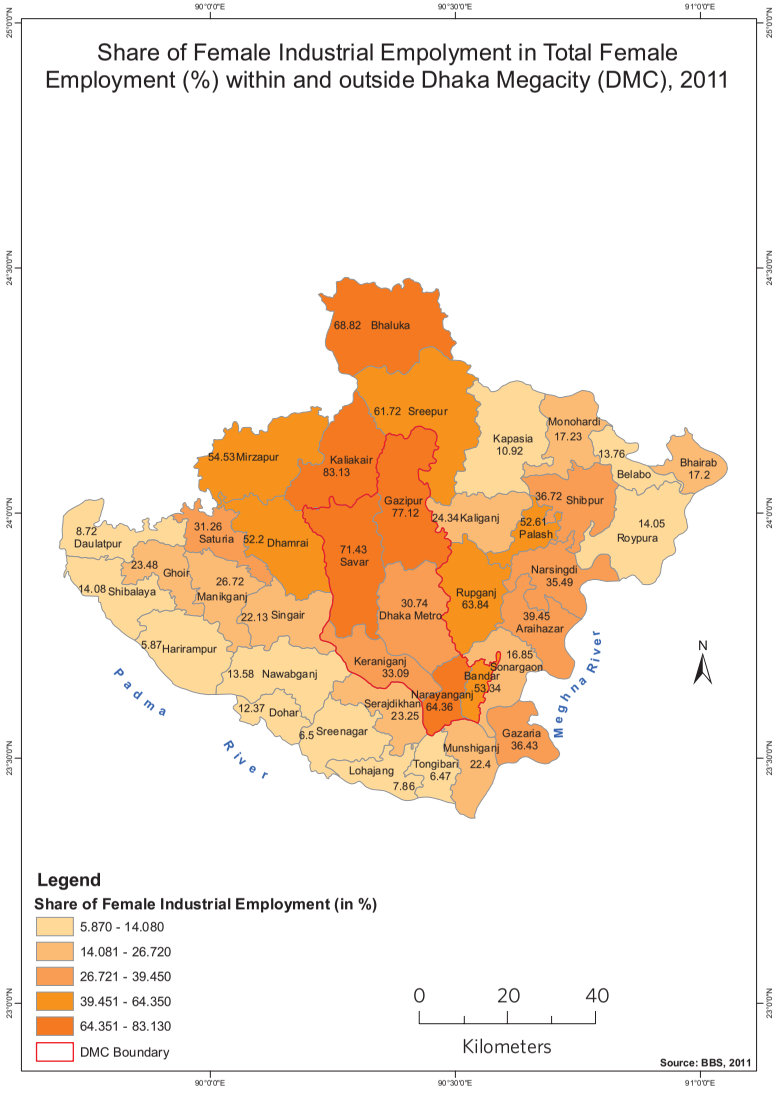
Map 6.8


Share of Industrial Employment in Total Employment (%) within and outside Dhaka Megacity (DMC), 2011
Bhaluka 31.63
Sreepur 36.23
Kapasia 8.65
Monohardi 7.77
Belabo
Bhairab 23.37
Mirzapur 19.95
Kaliakair 60.08
10.98
62.31 Gazipur
Kaliganj 19.91
Shibpur 16.66
Palash 38.84
10.13 Roypura
Saturia 14.42
33.64 Dhamrai
6.27 Daulatpur
Ghoir 12.54
Shibalaya 6.97
Manikganj 12.22
54.77 Savar
Narsingdi 35.13
Rupganj 42.65
Singair 9.8
24.78 Dhaka Metro
Araihazar 28.35
Harirampur 7.25
35.29 Keraniganj
Sonargaon
Banda 20.65
40.32
Nawabganj 12.04
Serajdikhan 20.04
Narayanganj 49.99
Dohar 16.82
13.92 Sreenagar
26.92 Gazaria
Munshiganj 21.33
Lohajang 15.21
10.42 Tongibari
Padma River
Meghna River
N
Legend
Share of Industrial Employment (in %)
6.270 - 10.980
10.981 - 16.820
16.821 - 28.350
28.351 - 42.650
42.651 - 62.310
DMC Boundary
0 20 40
Kilometers
Source: BBS, 2011

Map 6.9



Map 6.10



Map 6.11

Garbage dump in Dhaka. *Photo: Drik*

8. Sex Ratio Differentials Across the Megacity

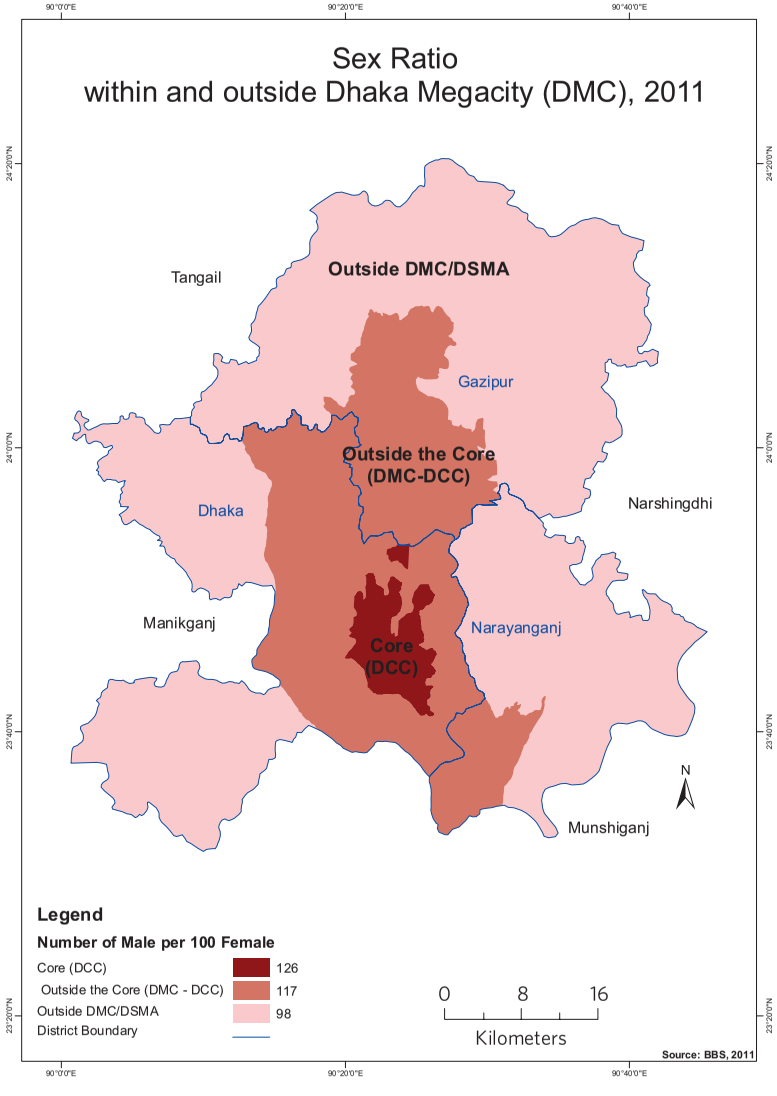
In the 2011 Census, Bangladesh had a very balanced sex ratio, 100.3 males against 100 females but DMC indicated a clear masculinity, recording 121 males over 100 females. However, this sex ratio had been narrowing over time – from 137 in 1974, to 126 and 125 in 1991 and 2001 respectively.

Maps 6.12 and 6.13 show sex ratios within DMC and in adjacent areas. At the core of DMC the sex ratio remains significantly higher than in the fringe zones. DCC and DMA recorded 126 and 124 males per 100 females. In the fringe areas of DMC, the sex ratio reduced to 109-116 and outside the DMC border it narrowed further to between 101 and 109 on the eastern side of the DMC border and between 96 and 106 on the western side (Map 6.13).

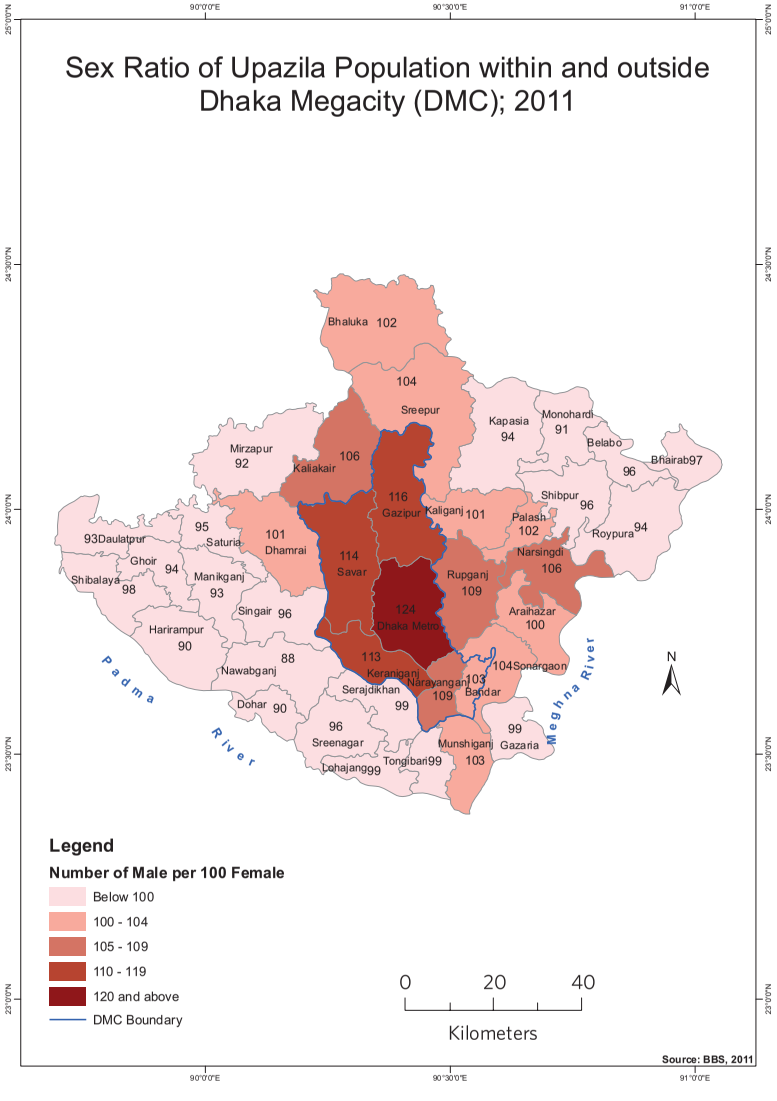
High masculinity at the centre of DMC (i.e. within DCC and DMA) is related to the employment structure. Compared to the fringe areas, concentration of industries, particularly RMGs where workers are predominantly female, is low. A high concentration of male dominated work such as rickshaw pullers, construction labourers, brick field labourers, hawkers, drivers, businessmen and salesman, can be found within the core area, as well as a sizeable number of armed forces, police, RABs and a wide variety of office employees who are mostly males.

The main reason for relatively lower masculinity within and close to the DMC fringes is undoubtedly the rapid growth of industries during the last two decades, particularly the concentration of RMGs where a large majority of workers are females. Further analysis of sex ratios in the main working age groups is required to give a clearer picture of the effect of the gender balance of employment on the sex ratios of the resident population.

[23] Such informal sector jobs include activities such as salesmen, shopkeepers, daily vendors of vegetables, fish, clothes, etc., day labourers, rickshaw pullers, auto rickshaw drivers, taxicab drivers, house maids and beggars.



Map 6.12



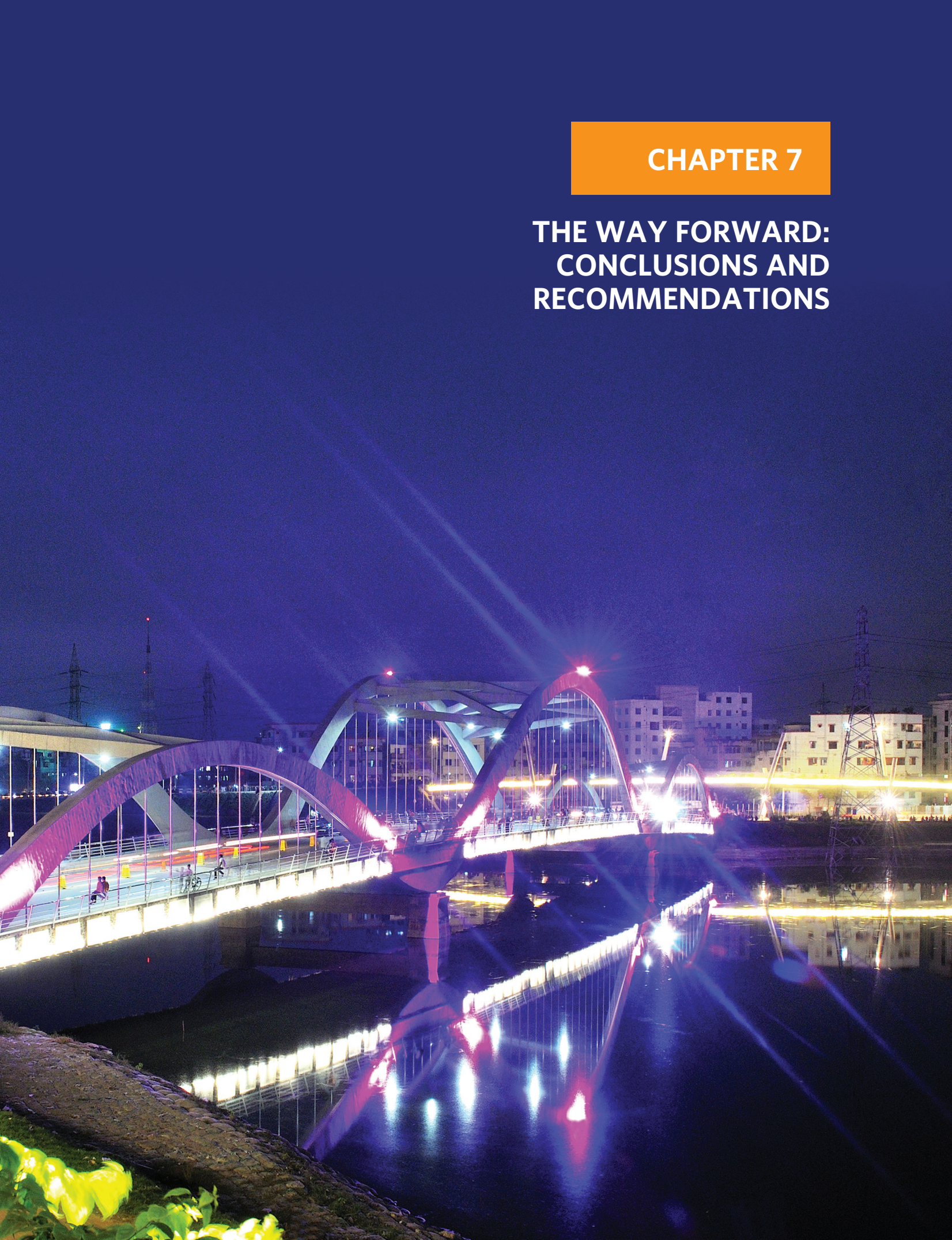
Map 6.13

9. Key Points – Chapter 6

- Dhaka is already one of the world's largest megacities, and its rapid growth is expected to continue.
- Dhaka's population grew 7-fold between 1974 and 2011, from 2 million to 14.2 million.
- Dhaka Megacity is a primate city; it holds over one third of Bangladesh's urban population. Compared with that of Bangladesh's second largest city, Chittagong SMA, its population has risen from 2.47 times in 1981 to 3.80 times in 2011.
- Dhaka Megacity faces crises on many fronts – environmental, social, economic and political, all of them linked to its rapid population growth in an ecologically fragile environment and difficult planning and administrative challenges.
- The bodies responsible for administering different entities within the Dhaka Megacity work separately without any effective cooperation or coordination.
- The sustainable growth or expansion of the city's built up area, and its protection from environmental hazards, depends on the proper management of rivers, lowlands, wetlands and associated landforms.
- Since 1990, Dhaka's built up area has increased almost 3 times. Its open space has contracted by 38% and its vegetative cover by 53%. The rapid expansion of built up areas was only possible at the expense of reducing environmentally valuable lowlands and water bodies and fertile agricultural lands. The rate of landfill is alarmingly high and will have severe environmental consequences.
- Expansion of Dhaka since the 1990s has been particularly towards the north, northwest, northeast and east. Rates of population growth exceeded 10 percent per annum (even 20 percent per annum in some cases) in these sub-districts.
- The south and south-west are primarily low-lying and marshy lands, constraining development in this direction.
- High growth zones around Dhaka are mostly located close to busy highway and railway routes, indicating the importance of accessibility to transport.
- Much of the lifetime migration to Dhaka was relatively short-distance. Dhaka Division supplied 41% of total migrants; 50% of total lifetime migrants to Dhaka originated from 15 neighbouring districts.
- Nevertheless, Dhaka attracted migrants from every corner of Bangladesh.
- There are major differences in employment structure across the megacity, with employment in the service sector concentrated in the DMA, while the share of employment in industry is much higher in Gazipur, Savar and Narayanganj.
- Dhaka's continued growth poses many urgent policy issues. Some of these will be discussed in the final chapter.

CHAPTER 7

THE WAY FORWARD: CONCLUSIONS AND RECOMMENDATIONS



CHAPTER 7: THE WAY FORWARD: CONCLUSIONS AND RECOMMENDATIONS

1. Introduction

Urbanization lies at the very heart of Bangladesh's development future. The level of urbanization, though increasing, remains relatively low – officially 28 percent in 2011, though in reality probably more like 31 percent. At the present time – 2016-it may well have increased to 35 percent or so. International analysis indicates that levels of urbanization in the 30-40 percent range generally are at an inflexion point on a logistic curve – where urbanization accelerates as countries move into middle income status, fuelled by increasing industrialization and service sector growth. The total population of Bangladesh is likely to increase by some 39-53 million over the next 30 years (by 2046).[24] The United Nations Population Division projects that the rural population will not increase at all over this period; in other words, the entire increase in population over this period will have to be absorbed in urban areas. This will lead to a substantial increase in the level of urbanization – to about 50 percent by 2046[25] – and to real issues about where these vast numbers of additional urban dwellers are to live.

What are the options?

First of all, there will certainly be further massive growth in Bangladesh's two major mega-urban regions-Dhaka and Chittagong.

Second, growth prospects for the other major cities vary; population decline in Khulna and sluggish growth in Rajshahi over the 2001-2011 period do not necessarily foreshadow what the future holds.

Third, many of Bangladesh's secondary cities grew rapidly over the 2001-2011 period, and others most favourably placed for development should witness rapid growth in future.

Fourth, some of the urbanization taking place will be "in situ" urbanization, not requiring massive movement of people.

This chapter will look in more detail at the options and related issues, and give some recommendations about the way forward.

2. A Balanced Pattern of Urban Development?

In assessing prospects for urban growth, regional science theorists argue that certain locational factors will play a role, as will certain features of "path dependency". The dominance of Dhaka in the Bangladesh urban scene illustrates both. It is centrally located, with relatively good road, rail and river connections to other parts of the country, and air connections to other countries. And once it became the capital of a new nation, it was able to attract industry, governmental and service sector activities in a way that enabled it to increasingly dominate the urban hierarchy. Quality educational and health services concentrated there. Before the division of British India into India and Pakistan, Dhaka was far smaller and less significant economically than Kolkata. But political events gave it a monopoly situation in what is now Bangladesh. While Kolkata languished, Dhaka thrived, and now exceeds Kolkata in population.

As discussed earlier in this report, Dhaka megacity has a high degree of primacy by Asian standards, but this is perhaps not surprising given the compact geography of Bangladesh and Dhaka's strategic location. Looking ahead, further substantial growth of this mega-urban region is certain, but its overwhelming dominance of Bangladesh's urban structure is likely to diminish somewhat, as a result of diseconomies of agglomeration and the role of transportation developments in fostering growth of other cities.

There has been rapid growth of some secondary cities (see Table 2.6). Urban areas increasing rapidly included Sylhet, Bogra, Chandpur, Cox's Bazar, and two of the cities in the Dhaka-Chittagong corridor–Comilla and Feni. Secondary cities most favourably placed for development should witness rapid growth; the need is to discern those factors that would single out a city as "favourably placed for development". International experience indicates that singling out particular regions or cities as "growth poles"

rarely succeeds unless there are underlying advantages that can be built on through policy measure.

In the 1970s and 1980s, claims of "over-urbanization" and urban bias in policy were frequently made (see Lipton, 1977; Varshney, 1993). These claims were controversial, even at that time, but anti-urbanization attitudes were prevalent in many planning offices in developing countries. More recently, a much more favourable attitude towards urbanization and big city growth has been adopted by many analysts and promoted by the World Bank (World Bank, 2009), leading to a generally more favourable attitude to big city growth in planning circles. The World Bank's argument (well summarized by Montgomery, 2009: 197) is basically that,

> it is efficient, both in the medium and long term, for economic production to be spatially concentrated in what initially would be a small set of cities and towns. Spatially clustered firms benefit in multiple ways: they are able to exploit economies of scale, enjoy cost savings from proximity to input suppliers and consumers, take advantage of the specialization that is facilitated by local market size and diversity, and identify and test new modes of production, pricing and management. These agglomeration economies lay the foundation for economy-wide technological change and endogenous economic growth. In the view of the report's authors, governments should not resist spatial concentration by seeking to target investment and policy attention to the lagging areas of their countries, but rather should adopt a neutral stance on where development takes place, patiently waiting to make judicious investments in transport and communication, so that disadvantaged areas become connected to the sites of growth.

Given the increasing consensus around this issue, a favourable attitude toward further concentration of Bangladesh's population in the two mega-urban regions (Dhaka and Chittagong), and in the Dhaka-Chittagong corridor, may be appropriate. At the same time, the special circumstances of these mega-urban regions, and of the urban situation of Bangladesh more generally, need to be taken into account. Writing more generally about low income countries, Montgomery (2009: 198) in reviewing the World Bank's 2009 report, argued that inadequate urban management and governance may prevent firms from realizing agglomeration economies. "Private-sector scale economies may simply fail to materialize when the public sector cannot provide firms with adequate and reliable supplies of electricity and water, and when the urban transport system is ill-managed, congested and chaotic". He could well have been describing Dhaka, where one transportation study found that at busy times, the trip from Abdullahpur to Sydabad, the most important public transport route in the eastern part of the city, takes two and a half to three hours, and in the reverse direction three and a half hours, to cover a distance of 26 kilometers (Mahmud, 2012: 187).

Herein lies the dilemma for Bangladeshi planners. Dhaka Megacity produces a very substantial proportion of Bangladesh's GDP (about 36 percent). Yet the losses to productivity from transportation congestion are immense. Other woes of Dhaka Megacity have been outlined in Chapter 6. The issue is whether vast investments in public transportation systems, sewerage and waste disposal systems for Dhaka will enable it to prevent the diseconomies of agglomeration from outweighing economies of agglomeration as the city grows ever larger, and even if so, whether the same sums invested in smaller cities in Bangladesh would contribute more to national production.

Transportation developments are likely to play a key role in the channelling of urban growth. In the past, the transportation barrier posed by the mighty Jamuna-Padma-Meghna River, crossable only by ferries, seriously hindered economic development to the west of this barrier. The construction of the Bangabandhu Bridge over the Jamuna River (opened in 1998) boosted development in the northwest of Bangladesh. The opening of the Padma Bridge over the Padma River (scheduled for 2019) is likely to have a similar result for the development of the southwest of the country. Indeed, it is likely to have an even more significant impact, given that it will greatly shorten travel time, not only to the Khulna and Barisal Divisions, but also through to Kolkata, the metropolis of northeast India.

The key arguments of a recent World Bank study (Muzzini and Aparicio 2013) are worth

summarizing. The study argues that Bangladesh's urban space has exceptionally high population density but relatively low economic density (i.e. output per unit area). The "economic mountains" in Dhaka and Chittagong, though towering above the rest of the country, need to be raised higher. Specialization in low-value-added garments has served Bangladesh well to date, but serves as a constraint on the transition to middle-income status. There is a need to diversify and increase the sophistication of Bangladesh's exports. The RMG industry is concentrated in Dhaka, in peri-urban areas in the vicinity of Dhaka, and in Chittagong, where it is still concentrated in the city proper. Peri-urban areas of Chittagong, and nonmetropolitan municipalities, have a small but expanding manufacturing base, with a competitive advantage in cotton textiles.

The World Bank study argues that both Dhaka and Chittagong face major issues in further expanding the RMG industry and moving up the value chain in this industry. Dhaka has best access to skilled labour and power supply, and proximity to suppliers, subcontractors, machine repair technicians and support businesses. However, it is facing increased congestion costs, traffic bottlenecks affecting access to the airport and port, and limited availability and high price of land and housing. Firms are losing workers due to housing shortages, high cost of living and deteriorating urban environment, while inadequate access to land and transport infrastructure is leading to firm relocation to peri-urban areas (Muzzini and Aparicio, 2013: 5-7).

The World Bank study looked in depth at Bangladesh's key industry – ready made garments (RMG). It found that the growth of garment firms in Dhaka's peri-urban areas is more through establishment of new firms than through relocation, but those firms that do relocate cite avoidance of Dhaka's congestion and desire to gain better access to transport infrastructure as the main reason for relocating. Peri-urban garment firms tend to be more land intensive and vertically integrated than those in Dhaka City, which equips them better to compete internationally. These peri-urban firms have good access to skilled labour but still suffer from Dhaka's congestion, and are less well placed than Dhaka firms in access to markets, subcontractors, support businesses, etc.

Chittagong City is a lower-productivity, lower-cost location for garment firms relative to Dhaka. It has better availability of land, buildings and housing for workers, good access to port and airport and better urban mobility. However, it cannot capitalize as much as it should from this comparative advantage because Chittagong port is one of the most inefficient in Asia, with slow turnaround times (Muzzini and Aparicio, 2013: 7).

The World Bank's policy recommendations include the need for the Dhaka metropolitan area "to evolve into a diversified economy with highly skilled human resources and an innovation capacity fuelled by the cross-fertilization of ideas that characterizes large metropolitan areas. It also needs to be better connected internally and with its peri-urban areas" (Muzzini and Aparicio, 2013: 8). It also needs to improve infrastructure "to leverage Dhaka's productivity advantage while enhancing accessibility to manage the growing diseconomies of agglomeration; and upgrading peripheral infrastructure in order to transform peri-urban areas into globally competitive manufacturing centres" (Ibid: 9).

One of the key issues facing the Dhaka mega-urban region is the environmental challenge of further expansion of one of the world's largest megacities in a fragile environment with large flood-prone areas. Among the litany of environmental concerns, one of the key issues is the high proportion of flood-prone areas in Dhaka's surrounds. These flood-prone areas, largely still used for agriculture and ponds, are potentially extremely profitable if filled for the construction of factories and housing estates. Earth filling for this purpose is going on apace in many areas surrounding Dhaka. The dilemma is that this worsens the flooding and drainage issues suffered throughout the megacity, but under the prevailing political system, those with influence can frequently bypass zoning regulations and profit from developments with serious implications for the community generally (Haque, 2012).

Dhaka University graduates are celebrating in convocation. *Photo: Drik*

The question might be raised: has Dhaka simply become too big to manage? After all, it has grown extremely rapidly, it is ranked as one of the world's least liveable cities (137 out of 140 in the Economist Intelligence Unit's 2016 rankings), and its environmental problems are immense. The further question is: what is the limit to the population size that the Dhaka mega-urban region can sustain?

Many analysts have argued that there is no limit to the size megacities can reach (see, for example, Lowry, 1990: 162). Certainly, diseconomies of agglomeration can increase, but this can be offset to a considerable extent by poly-nucleation. Vining (1985: 30) noted the statistical association between increasing primacy and faster economic growth; Mera (1978: 271) stated "If a high rate of economic growth is to be achieved, further concentration of population into a few large metropolitan areas cannot be avoided". The average size of the world's largest 100 cities has grown to almost 10 times their size in 1900 (World Bank, 2009: n.p.). The World Bank's 2009 study makes the case strongly that peaks of high productivity – found in the megacities-are crucial in economic growth.

There is no doubt that a high proportion of Bangladesh's GNP is produced in the largest cities, where the peaks of high productivity are located. At the same time, local circumstances cannot be ignored in assessing the urban prospects in any given country. Local geophysical conditions are often vitally important in determining whether scale effects are positive or negative within a given range (Linn, 1982).

If one key need is for industry in Dhaka to move up the value chain, to what extent is Dhaka's development hindered by the shortage of skilled human resources? The overall educational level of Dhaka's workforce has certainly been increasing (as has that of Bangladesh's workforce in general). But as well as general increases in educational levels, there needs to be focused attention to the skills needed for particular growth industries. The issue of highly skilled human resources in the Dhaka megacity has also been addressed in a study of three industries in Dhaka: RMG, leather

industry and products and the food and beverage industry (Choe and Roberts, 2011, Chapter 6). This study emphasized that the RMG industry (except in a few specialized product lines) and the leather industry are competing at the bottom end of the global marketplace. The food and beverage industry is predominantly oriented only to the domestic marketplace. There is a need to overcome the lack of education and training facilities and a scarcity of human resources to make these industries more competitive.[26]

The leather industry has been growing and diversifying its products, representing about 11 percent of export earnings in 2007-08. It is highly concentrated near the centre of Dhaka, where in 2003, 80 percent of all leather industry employees in Bangladesh were located. About 90 percent of all tanneries are located in the Hazaribagh area of Dhaka, leading to serious environmental issues and health problems for residents of this area. Relocation is needed to outer metropolitan areas, including provision of an effluent treatment plant (Choe and Roberts, 2011: 158-9). Relocation has in fact been demanded by the government, but progress in achieving this has been slow.

3. Rural Development Implications of the Emerging Pattern of Urbanization

While there are many reasons to aim at narrowing the poverty gap between urban and rural populations, an important one is to lessen the incentive for people to migrate to the cities. How can this be done? In two ways. First, diversification of agriculture to give greater emphasis to higher-yielding crops, and development of agro-processing industry, are both possible. Integrated farming can diversify employment as well as add new value-added farm products. This can not only secure Bangladesh's food and nutrition needs but also significantly increase earnings of rural dwellers, including farmers, farm labourers and non-farmers. As cities grow even larger, the potential increases for intensive market gardening and production of specialty crops such as flowers selling to large nearby markets. Second, there is the need for further diversification of economic activities in rural areas, with development of more non-agricultural activities.

What policies will lead to such outcomes? Clearly, well-focused agricultural extension activities can inform farmers of opportunities available through crop diversification and moving to higher-yielding crops. But much broader development policies can provide the framework within which such specific policies will reap rewards. For example, the investment in the Jamuna River Bridge provided better market access and reduced input prices for farmers in the Rajshahi Division, enabling them to diversify into high-value crops such as modern varieties of rice and perishable vegetables (Bayes, 2007). The Padma Bridge should lead to similar outcomes in the southwest of Bangladesh. Aside from infrastructure development, what the World Bank refers to as policies that are spatially blind in their design and universal in their coverage can play an important role in affecting spatial development. Some of the main examples are regulations affecting land, labour and international trade, and such social services as education, health and water and sanitation financed through tax and transfer mechanisms. Effective implementation of such policies can raise prosperity in rural areas and in lagging regions without specifically subsidizing these areas.

4. Policy Issues

Policy recommendations regarding urbanization and migration normally focus on development strategies affecting urban growth, infrastructure issues, labour markets and urban-rural balance. In the context of Bangladesh, though, it is necessary first to step back and note the underlying issue of continued population growth, which is contributing to urban population growth both through the excess of births over deaths among the urban population and through increasing the rural population from which rural-urban migrants are drawn. While population momentum will ensure considerable population growth over the next three decades (UNFPA, 2015: 97-102), a rapid reduction in present fertility levels to somewhat below replacement levels would contribute in a major way to keeping this increase within manageable bounds by ameliorating the pressure of population increase in both rural and urban areas. Fertility would fall below replacement level if most of the unmet need for

contraception revealed in surveys can be met through provision of family planning information and services, and such provision can therefore be seen as an important component of urbanization and migration policy in Bangladesh.

a) Strategy for urban development

According to the World Bank (2009: xxii) the principles of an urbanization policy are:

- In places mostly rural, governments should be as neutral as possible and should establish the institutional foundation for possible urbanization in some places.
- In places urbanizing rapidly, governments must put in place, in addition to institutions, connective infrastructure so that the benefits of rising economic density are more widely shared.
- In places where urbanization has advanced, in addition to institutions and infrastructure, targeted interventions may be necessary to deal with slums. But these interventions will not work unless institutions for land and basic services are reasonably effective and transport infrastructure is in place.

Another perspective to keep in mind is that provided by Goal 11 of the Sustainable Development Goals agreed on by the world community in 2015: Make cities inclusive, safe, resilient and sustainable. Actually, although in short form this goal is expressed in terms of cities, it focuses on meeting basic needs and reducing inequities in settlements of all types, partly by fostering beneficial urban-rural connections. Selected Goal 11 targets include:

- By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums.
- By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons.
- By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries.
- By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations.
- By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management.
- Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning.

The principles and goals outlined above should be kept in mind in recommending policies for urban development in Bangladesh, though allowing for Bangladesh's particular circumstances. Perhaps the goal of inclusiveness mentioned in Goal 11 above is the most difficult to achieve in Bangladesh urban development. As Douglass (2015: 2) notes, "progressive cities" should be marked by participatory governance, distributive justice, social conviviality, and non-instrumental relations with nature – features that have been missing or muted in widely circulated concepts for improving urban governance. Clavel (1986), focusing on American cities, argues that progressive cities are those that are successful in redistributing public benefits and the economy toward greater equality, and that such success results from grassroots mobilizations that are able to gain effective voice in urban governance coalitions. The same principles are relevant in the case of a city such as Dhaka; but unfortunately, they are far from realization.

The expected need to accommodate the entire increase in Bangladesh's population in urban areas over the coming decades results from a number of factors, some of them common to the development experience of most countries, and some specific to the Bangladesh situation. The common factor in the development experience of most countries is that higher productivity activities cluster in urban areas, especially the

larger urban areas, and this attracts migrants whose prospects in rural areas are poor. The specific factor in Bangladesh is the extreme pressure of population on the land, resulting in the limited capacity of rural areas to provide an acceptable living to growing populations, though it can be argued that the limits of possible productivity increases in agriculture, not to mention other economic activities in rural areas, are actually far from being reached.

Though very difficult challenges are faced in meeting the national objective of narrowing urban-rural income differentials, the high population density and compact land area in Bangladesh also provides some opportunities for an effective development strategy linking urban and rural development. Some elements of this strategy should be:

(i) Agricultural diversification, stressing high value products, and diversification of the rural economy. Higher rural incomes would lessen incentives to move to the cities. Agricultural diversification and increased productivity would facilitate increased investment in agro-processing in smaller cities based on locally produced goods.

(ii) The "thickening" of the transportation network, enabling large rural populations at an increasing distance from cities to commute, or engage in periodic migration to the cities.[27] Transportation developments improving access to markets, both domestic and overseas, should also facilitate in situ urbanization – the transformation of some villages into urban areas, not requiring urbanward migration.

(iii) The improvement of educational and skill levels of rural and village populations would make them a more desirable labour force in the eyes of industrialists, and this could help attract industry and service sector activities away from the big cities, with their increasing diseconomies of agglomeration, to semi-rural areas, especially those with good transportation linkages to the cities.

(iv) The previous point implies the need to upgrade the quality of schools in regional areas. This, along with upgrading of health services, could influence those living in rural areas and small towns to remain in these locations.

It is worth examining aspects of the development experience of some other densely populated countries in Asia to throw further light on the kinds of policy approaches that may work for Bangladesh.

Importantly, some of the urbanization that took place in these countries, and that will take place in Bangladesh, did not require massive movements of people into cities. There was (and almost certainly will be in Bangladesh) considerable "in situ" urbanization – meaning the transformation of villages in ways that gradually transform them into functional urban areas. This has happened throughout history as countries urbanize; it has been well documented in the case of China, where government policy deliberately fostered the growth of TVEs (township and village enterprises) and of foreign investment linked to these enterprises, and this transformation of villages into towns contributed to rapid urbanization, particularly in the coastal provinces of China (Yu Zhu, 2000). Nevertheless, massive rural-urban migration also occurred in China, and was estimated to have accounted for 60 percent of all population growth during the 1990s, while reclassification contributed about half of the remainder (Chan and Hu, 2003).

The "monsoon development" analysis of Oshima (1987; 1993) is relevant in considering Bangladesh's urban future. His theory focused mainly on East Asia, taking as its starting point the peculiar, climatically determined characteristics of rice cultivation. The critical element was the highly peaked demand for labour, which left peasants unemployed for much of the year but incapable of being permanently shifted to non-agricultural occupations because without them the rice economy would collapse. Oshima argued that the key to development under these conditions was a diversification of crops that would increase employment, raise incomes, and add forward linkages to processing, packaging and other off-farm activities. When full employment was reached, the demand for

labour would stimulate rising capital intensity and technological progress throughout the economy.

More generally, in Japan, South Korea and Taiwan as they developed, the dense population and relatively good transportation network meant that for many rural dwellers, it was possible to "keep one foot in agriculture and place the other foot in urban employment", through patterns of commuting and seasonal employment in cities that were readily accessible to surrounding rural populations. Rural households could allocate their labour resources according to the agricultural cycle and the possibility of urban jobs, whether temporary or long-term. In Taiwan, the pattern of industrial development favoured the development of a close rural-urban nexus,[28] making it possible for many farm families to modify the work patterns of family members so that some members engaged more in non-agricultural activities, without necessarily moving permanently to cities.

Bangladesh is well placed to foster similar strategies for large rural populations. To some extent, this is already happening, but it could be promoted more intensively if transportation networks are further improved, and the quality of schools outside the cities can be improved in order to upgrade the education and skill levels of the rural and small town workforce, thus encouraging the movement of many non-agricultural activities away from the large cities, where congestion costs and expensive land and housing are already providing disincentives to locating industrial activities there.

Nevertheless, a great deal of movement to the towns and cities will continue (Mahbub 1997, chapter 9), and this needs to be managed effectively. Many of the recommendations in the remaining part of this chapter deal with the issues of making Bangladeshi cities both more economically dynamic and more liveable and environmentally sustainable.

b) Addressing the East-West dichotomy in Bangladesh urbanization

The East-West dichotomy in Bangladeshi urbanization appears to have been caused by both the exigencies of history and the transportation barrier of the Jamuna-Padma-Meghna River. The division of Bengal into its Indian and Pakistani sections in 1947 separated the western part of Bangladesh from its links with West Bengal, focused particularly on Kolkata. At the time of separation, Khulna was a much more important city relative to Dhaka than is the case today. Partition led to the cutting off of transportation and trade linkages with West Bengal, leaving the cities of Khulna, Jessore, Rajshahi and Rangpur with a smaller effective hinterland and interrupted trade routes.

As for the transportation barrier of the Jamuna-Padma-Meghna River, this effectively complicated communications with the eastern areas of Bangladesh, including Dhaka Megacity. Uncertain travel times made transportation of perishables a hazardous undertaking, and the long travel times to Dhaka deterred the frequency and intensity of contacts, thus preventing desirable levels of connectivity.

The completion of the Padma Bridge in 2019 will have major repercussions for development of Bangladesh's southwest (see Box). Of course, it has frequently been found in other parts of the world that improving transportation connections with the leading cities of a country lead to migration of workers to the big city rather than to accelerated development in the areas with improved connections. In Bangladesh, too, the SMA of Rajshahi failed to grow significantly after being more effectively linked to Dhaka with the completion of the Bangabandhu Bridge in 1998. However, in the southwest Bangladesh case, it seems likely that improvements in transportation, while undoubtedly leading to more movement to Dhaka on a temporary or permanent basis, will also foster economic development in both urban and rural areas of southwest Bangladesh through better access to markets and reduced prices of inputs. If allied with efforts towards equalizing the quality of education and health services that can be accessed in different parts of Bangladesh, the prospects for more rapid development in the region are good (see Box). If, in addition, progress can be made in improving trade relations with India, this should benefit Western Bangladesh because of its close proximity to West Bengal and its megacity, Kolkata.

Box: Prospects for Urban Growth in Bangladesh's South-West

Both the Khulna City Corporation and Khulna SMA actually lost population between 2001 and 2011, a very rare experience for a city of this size in a developing country with a rapidly growing population. But this does not necessarily mean that urban growth prospects in the region are poor. The relative stagnation of cities such as Khulna and Jessore have multiple causes. Historically, the insertion of an international boundary after the division of British India interfered with the formerly smooth flow of trade between West Bengal and what is now Bangladesh; the main corridor along which this trade moved passed through Jessore. The lack of a bridge across the main rivers except the Bangabandhu Bridge across the Jamuna further north meant that transport of people and goods from Dhaka and eastern Bangladesh to the southwestern parts of Bangladesh have always been subject to serious delays through ferry crossings.

Some major changes are in train, which will fundamentally alter the situation. The most important of these is the construction of the Padma Bridge, scheduled for completion in 2019. This will considerably shorten travel times between the southwest of Bangladesh and Dhaka, and will remove uncertainty about the condition of perishables transported by road. At present, the road trip from Dhaka to Khulna through Mawa and Kaurakandi takes at least 5-6 hours, and through Doulotdia and Paturia, 7-8 hours. Trucks can take 8-9 hours via Mawa-Kaurakandi, and they can only enter Dhaka City after 10 p.m. Once the Padma Bridge is opened, the trip from Dhaka to Khulna will take 4 hours, and trucking companies will be able to schedule trips in order to minimize waiting times to enter Dhaka. Train travel will also be speeded up once the Padma Bridge is opened.

Other infrastructure developments include construction of an international airport at Ramphal, serving Khulna, also by 2019; better supply of LPG through Mongla Port; and controversial construction of a coal-based power plant at Ramphal, scheduled to be completed in five years' time. A direct rail link between Khulna and Kolkata is about to open; the rail line in Western Bangladesh is broad gauge, as in India, so there is no need to change trains.

Other factors likely to influence the development of Bangladesh's southwest include the plan to use Mongla port for shipment of goods to and from Nepal and Bhutan; and the routing of the Asian highway through Jessore and Banapole (on the West Bengal border), expected to lead in time to increased traffic from the tribal states of India.

Positive features of some of the cities and towns in the southwest include the location of Jessore in a non-disaster-prone area, with thriving market gardening, flower cultivation and fruit tree industries, and very close to the markets of West Bengal, including Kolkata. The road distance from Jessore to Kolkata is only 122 kilometres. Whether proximity to the Indian border should be considered an advantage (a gateway to an enormous market) or a disadvantage (close to the "barrier" of an international border), of course, depends on future political and trade relations between Bangladesh and India. Another paurashava in Jessore District – Noaphara – has excellent road, river and rail linkages, and appears to be growing rapidly. As for Khulna, while its jute mills will never recapture their past importance, its industrial infrastructure and experienced workforce can be tapped for other industries once the disadvantages of long travel times to Dhaka, and inadequate power supply, are overcome. Experience of Bangladeshi workers in Singaporean shipbreaking industries could lead to the development of shipbreaking industry in southwest Bangladesh.

Of course, the factors working against rapid industrial and service sector development in Bangladesh's southwest must not be ignored. Mongla port, for example, is basically a river port and its suitability for large-scale development is questionable. Constant dredging would probably be required, and its location on the edge of the Sundarbans would entail the risks of spillages and other shipping disasters adversely affecting the environmental heritage and tourist potential of the Sundarbans. The shrimp industry in the area has had a chequered history, and salinization of the land converted to shrimp farming means that it cannot be readily converted back to agriculture. The superior quality of educational and health facilities in the Dhaka area mean that even in Khulna, Bangladesh's third largest city, lack of high quality health and educational facilities are deterrents to industrialists in setting up businesses. Finally, it cannot be certain that improvement of transportation connectivity with Dhaka will work to the area's advantage. It is possible that it will simply make it easier for young people to leave for the metropolitan city.

What is clear is that ways must be found to foster urban development in Bangladesh's southwest. The accommodation of some 39 to 53 million additional population in urban areas of Bangladesh over the next 30 years requires that the urban growth be spread as widely as possible across the country. The above discussion points to some ways forward in accommodating some of this increase in Bangladesh's southwest.

c) Managing urban development in the large cities

Despite the serious issues facing Bangladesh's megacity – Dhaka – the argument of Kelley and Williamson (1984) continues to be valid-if the diseconomies of agglomeration become so serious that they outweigh the economies of agglomeration, this will affect the decisions of business. There is no need for strong intervention by government to restrict the growth of large cities.

However, given Dhaka's crucial importance as the primate city and the key locus of Bangladesh's movement towards middle income status, it is critical to tackle infrastructure deficiencies, slum conditions, environmental concerns and the overall quality of life in the Dhaka mega-urban region. It is perhaps not an exaggeration to argue that in the absence of sensible and effectively implemented policies, Dhaka faces ecological and social catastrophe. The challenge for planners is to strike the right balance between investments needed to boost Dhaka's productivity and livability, and the investments needed to boost productivity and livability in other cities and towns, to raise productivity and incomes in agriculture, and to improve the education and health levels of the population in all areas.

Focusing first on Dhaka's needs, investment in infrastructure is of overriding importance. The transportation woes of Dhaka are well known to all who live in this megacity. As argued in the 7th Five Year Plan (p. 514-515), the growing number of motorized and non-motorized vehicles, low quality traffic management, shortage of buses and absence of a metro system has led to ever increasing chaos and congestion of urban traffic in Bangladesh (and particularly in Dhaka). The Five Year Plan attributes the growing chaos on urban roads to:

- The varied traffic mix of motorized and non-motorized vehicles (mainly rickshaws).
- the absence of a dependable public transport system.
- Inadequate road infrastructure.
- Inadequate traffic management practices.
- Undue encroachment on urban road space by vendors and traders and for keeping construction materials during construction of buildings; pedestrians also forced to walk on the roadways when sidewalks are cluttered in this way and by parked cars.
- Poor road user behaviour.

The Strategic Transport Plan for Dhaka City approved in 2008 by the Government of Bangladesh recommended the development of a mass transit system combining Bus Rapid Transit and a metro system. The Dhaka Structure Plan 2016-2035 contains a chapter on "Transport for Efficient Connectivity" which highlights the need for a more efficient public transport network, including the development of an efficient mass transit system, development of ring roads and more effective east-west connection, improved bus transport system, introduction of efficient and affordable taxi cab system, and more effective parking and electronic road pricing systems. Given that Jakarta, which also depends almost exclusively on road transport, is currently building a subway, to be opened in 2018, Dhaka now appears to be the largest city in the world without a subway system. The massive investment needed for such a system is unavoidable if traffic gridlock is to be avoided, and the government has agreed to construct such a system and is completing detailed land registration, geotechnical and right-of-way surveys and detailed design works in preparation.

The Dhaka Structure Plan's infrastructure chapter shows a vision for the future transport network, but it is silent on the need to restrict motor vehicle ownership. At present, road space is dominated by low capacity vehicles (cars) and the building of flyovers has tended to merely shift the traffic jams to junctions on both sides of the flyovers (Mahmud, 2012). Affordability of public transport is another crucial issue for Dhaka's poor, and improving conditions for pedestrian traffic is essential for the many who can only afford to walk to their destination.

The problems faced by slum dwellers in Dhaka and other large cities also pose daunting planning issues. The 2013 Urban Health Survey highlighted many of these problems. Three out of four slum households live in only one room; 65 percent of them share a water source with more than 10 households, and 43 percent share a toilet with

more than 10 households. The under 5 mortality rate in slums is higher than the national average.

However, compared with the findings of the 2006 Urban Health Survey, there were encouraging trends in a number of indicators. For example, the under 5 mortality rate in slums was reduced by 30 percent since 2006; and the total fertility rate in the slums fell by 20 percent over the period, to replacement level, indicating that the natural increase of the slum population is likely to become slower. In slums, one third of deliveries were performed by medically trained providers in 2013; although this was only just over half the figure for non-slum City Corporation areas, it was above the national average, and was more than double the 2006 figure. Mobile phones have become almost universal among slum dwellers, compared with only 20 percent in 2006.

5. Some Policy Recommendations

Specific policy recommendations will be attempted in this section, though with the understanding that policy related to urban development and migration is a very complex matter.

a) Improving the wellbeing of rural populations

Though the proportion of population living in urban areas is increasing, the rural population will probably continue to be in the majority for another two decades. Thus the wellbeing of the rural population must be a key planning focus. The development of employment opportunities in rural areas is also crucial in order to slow the rural-urban migration flow, and agricultural productivity needs to be raised to ensure food security for the city populations.

Due to Bangladesh's favourable geographical setting, highly profitable labour intensive integrated farming can be introduced in many areas of the country. It can frequently be associated with agro-processing industries. The success of employment generation within rural areas depends to a great degree on the availability of banking and other credit facilities, marketing facilities, and security of investment, which the Government should be active in providing.

b) Supporting the development of secondary cities

Merely ensuring "even handed" policies-by providing better quality education and health care, better infrastructure and services, throughout Bangladesh-will serve to increase the attractiveness of secondary cities that have been relatively neglected in provision of such services. In addition, however, a systematic assessment is needed of the growth potentials of the secondary cities in Bangladesh, since these potentials differ from place to place. Once these have been identified, strategic investments should be made aimed at building on the potentials identified.

Rondinelli (1983: 198) argues that three actions are essential in strategies for secondary city development:

(i) "Strengthening the economies of existing secondary cities by : (a) extending basic social services and municipal facilities and infrastructure that support productive activities and improve human resources; (b) improving physical structure to make these cities more efficient and conducive to productive economic activities; (c) strengthening the economic base and employment structure; and (d) strengthening the planning, administrative, and financial capacity of local governments to manage urban development.

(ii) Stimulating the growth and diversification of smaller towns and market centres to increase the number and geographic distribution of secondary cities within the national settlement system; and

(iii) Strengthening the physical, economic, social and political linkages among secondary cities and between them and larger and smaller settlements to provide greater access to urban services, facilities, and job opportunities to people living in rural areas, and to create an integrated system of urban centres through which the benefits of urbanization and economic development can be spread more widely."

Bangladesh has quite a dense network of urban centres of different sizes (see Map 2.1) and many of them have been growing quite rapidly. Bangladesh's experience with Export Processing

Zones (EPZs) suggests that promotion of particular cities or regions is unlikely to succeed unless there are strong supporting arguments for such location. "The EPZ program has failed to make lagging regions competitive and attractive for garment firms. In contrast to the very successful Dhaka and Chittagong EPZs, the Ishwardi, Mongla and Uttara EPZs – all located in the lagging western region of Bangladesh – have not succeeded in attracting firms ..." (Muzzini and Aparicio, 2013: 85). Rather than seeking "growth centres" to promote, following the principles outlined above should help realize the potential for further growth and diversification of the economy of many of these secondary cities. Reducing the large gaps in services and infrastructure standards between Dhaka and smaller cities should be a key objective, one of its expected benefits being an upgrading of the quality of their labour force, which is a key factor investors take into account in their location decisions.

c) Urbanization of Bangladesh's Western regions

The major potentials for sustainable urbanization in the Western Region are:

- It has a good network of broad gauge railways and roads.
- It has resources of quality minerals including coal, limestone and hard rock.
- Rich agricultural diversity along with potential for establishing agro-processing and agro-tools.
- The people have a good background of textile craftsmanship based on which jute, cotton, silk and handloom industries can be developed further.
- Upcoming transit facilities with India, Nepal and Bhutan and port facilities at Mongla, Paira and Holdia (in India) can turn this region into an international hub of EEZs/EPZs.

The following specific policies can be suggested for sustainable and economically efficient urbanization in the western part of Bangladesh:

- Create favourable environments for establishing industries like agro-processing, agro-equipment, textiles and other consumable products.
- Facilitate mining activities and establish industries based on mineral resources.
- Provide quality schooling and health facilities in the major cities in this region, particularly in divisional and district headquarters. This will improve the quality of the labour force, a key factor in attracting industry, and will also make these cities more able to retain employers and workers and attract more from elsewhere.
- Strengthen transit with neighbouring countries and expedite connectivity with ports (sea ports and land ports).
- Develop a number of EEZs in suitable locations within this region.
- Consider provision of extra incentives (e.g. tax holiday, soft loan) to private entrepreneurs to establish industries and businesses in the western region.
- Strengthen and empower local government institutions so that local authorities can employ qualified and skilled planners and other professionals to support sustainable and competitive development of their respective towns.

d) Policies for a livable Dhaka

Population growth in the Dhaka Megacity will continue, but needs to be kept within manageable limits. An urgent need is to improve the wellbeing of Dhaka's growing population, especially of its poorer residents, in cost-effective ways. "This will require approaches involving physical planning, transportation policy, and the harnessing of community resources in building cohesive communities. With the right approaches, it is possible to develop a rich community life, with the safety of women in particular better guaranteed than at present, including in slum communities." (UNFPA, 2015: 133). Some specific recommendations are as follows:

(i) Decentralize some employment and facilities from DMC to some regional towns. Important services which can be decentralized include judicial, education, health, banking, and some industries and businesses.

(ii) Support commuting as an alternative to migration. Develop commuter trains and other transportation modes so that potential rural-urban migrants can commute to the city instead of migrating. This will reduce the migration pressure on the city and improve rural life and development. As in India, a subsidized rate can be offered for train tickets for commuters. Map 7.1 shows the undoubted potential for commuting to Dhaka. The enormous population living within 50 kilometers – or even 75 kilometers-radius of Dhaka could be tapped as commuters if efficient bus and commuter train links were established. Nearly 10 million people live outside DMC but within 50 kilometres of the megacity, and a total of 35 million within 100 kilometres of the megacity.

(iii) Decentralize city administration and empower local government within this very large urban agglomeration, to facilitate smooth functioning and management.

(iv) Impose restrictions on development of certain industries, businesses and services within or near to DMC. This is necessary for the development of a disaster resilient and environmentally friendly modern city, considering the extremely high population density and the political and environmental security of the capital region. Examples of polluting industries which should be restricted include dyeing, chemical, leather, brick, and iron industries.

(v) To prevent further proliferation of slums, and go beyond slum upgrading, land and housing policy reforms are needed, including measures to stimulate the supply of affordable housing and offer more options to both low and middle-income households.

(vi) Protect DMC from environmental and social catastrophes. A key requirement is tough, efficient governance so that illegal construction, poor construction standards, draining and earth filling of flood prone land, and land grabbing are minimized. More efficient use of water is needed by harvesting rainwater, using surface water instead of groundwater and preventing misuse of municipal water. Projects like 3Rs (recycle, reuse and reduced use), and energy conservation programs will only succeed if the public is aware of the issues and feel empowered to take action. Public participation in the planning process is urgently needed.

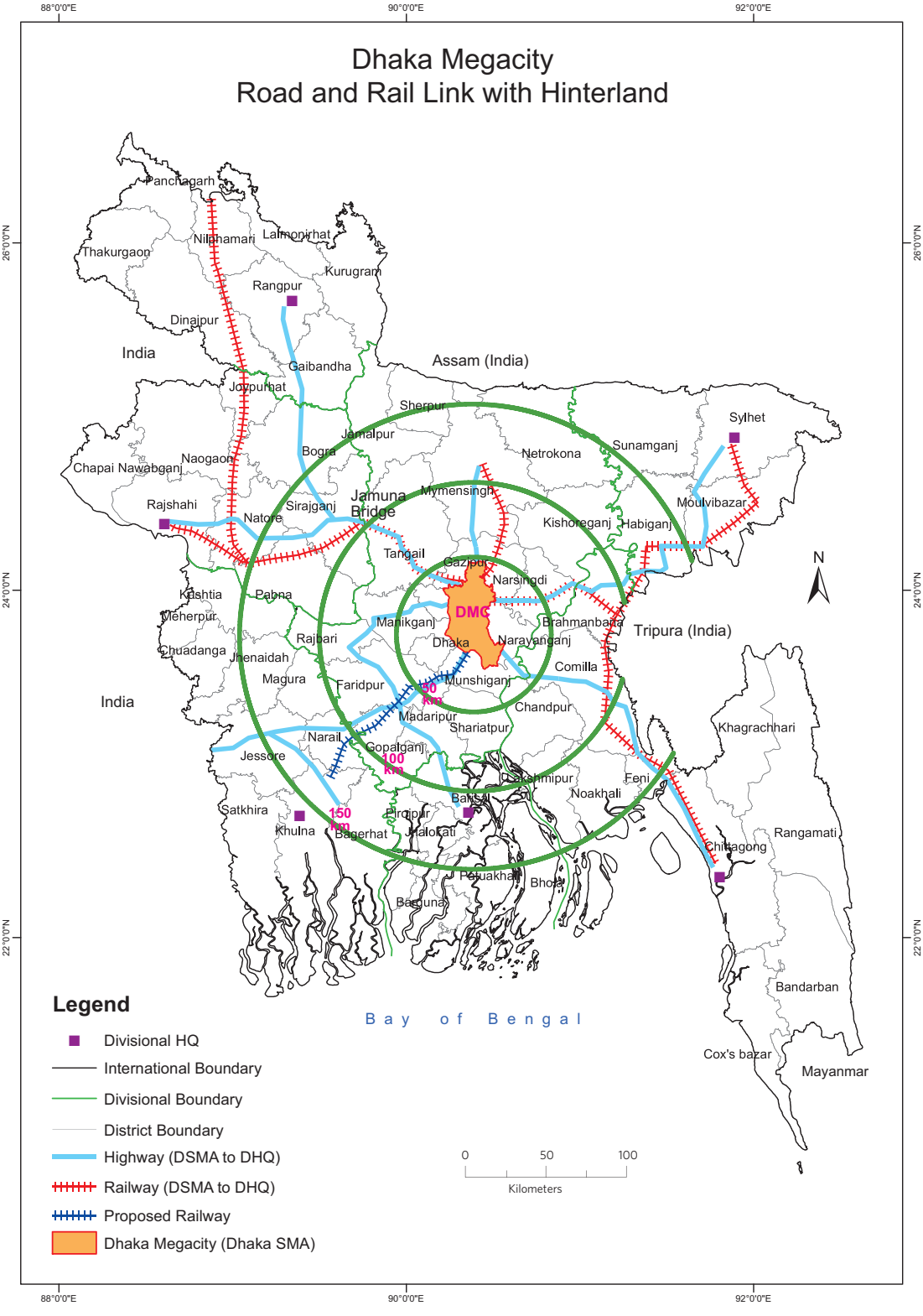
To carry out such policy recommendations will require effective governance and planning mechanisms, which unfortunately are not in place. There is a multiplicity of actors: a total of 22 ministries and 51 agencies are involved in the planning and development of Dhaka (Ahmed et al, 2014: 39), with key roles played by RAJUK and the Dhaka City Corporation (now split into north and south). In brief, it can be argued that governance of the megacity is constrained by:

- An ad-hoc legal framework with little reference to city vision and long term action plan, often unduly influenced by the power elites.
- Strongly centralized city management with virtually no citizen accountability.
- Lack of or poor financial autonomy.
- Multiplicity of service providers with unclear and often overlapping mandates.
- Serious lack of coordination among the agencies.
- Absent or very weak public-private partnerships.
- Low efficiency and corruption.

The issues involved are too complex to be discussed in detail here, but it can be noted that the future wellbeing of many millions of city dwellers will depend on finding workable solutions.

e) Addressing gender issues in migration and urbanization

One of the key findings of this study has been the enormously important role of women in Bangladesh's economic transformation. The increasing employment of women in the key sectors fuelling economic development, and


Dhaka Megacity
Road and Rail Link with Hinterland
88°0'0"E
90°0'0"E
92°0'0"E
26°0'0"N
24°0'0"N
22°0'0"N
Panchagarh
Nilphamari
Lalmonirhat
Thakurgaon
Kurugram
Rangpur
Dinajpur
India
Gaibandha
Assam (India)
Joypurhat
Sherpur
Sylhet
Jamalpur
Bogra
Netrokona
Sunamganj
Naogaon
Chapai Nawabganj
Mymensingh
Jamuna Bridge
Moulvibazar
Rajshahi
Sirajganj
Natore
Kishoreganj
Habiganj
Tangail
Gazipur
Narsingdi
N
Kushtia
Pabna
Meherpur
Manikganj
DMC
Brahmanbaria
Tripura (India)
Rajbari
Dhaka
Narayanganj
Chuadanga
Jhenaidah
Comilla
Magura
Faridpur
Munshiganj
50 km
India
Madaripur
Chandpur
Shariatpur
Khagrachhari
Narail
Gopalganj
100 km
Jessore
Lakshmipur
Feni
Noakhali
Barisal
Satkhira
Pirojpur
150 km
Khulna
Bagerhat
Jhalokati
Rangamati
Chittagong
Patuakhali
Bhola
Barguna
Bandarban
Bay of Bengal
Cox's bazar
Mayanmar
Legend
Divisional HQ
International Boundary
Divisional Boundary
District Boundary
Highway (DSMA to DHQ)
Railway (DSMA to DHQ)
Proposed Railway
Dhaka Megacity (Dhaka SMA)
0
50
100
Kilometers

Map 7.1

their growing part in the migration flows to the cities, has been fundamental to the growth of the RMG industry in particular, and has led to considerable transformation in women's place in the family and in social and political affairs. How can the further development of women's roles in migration and urbanization be facilitated? Some key requirements appear to be:

- Facilitating women's education, particularly at the tertiary level, where females still lag. This will enable women to take up some of the more lucrative employments that have tended to be firmly in male hands.
- Widening the range of employment opportunities for women. While the RMG sector has given women a firm foothold in industrial employment, the range of employment needs to be widened and women need a stronger place in modern service sector activities. Campaigns may be needed to change the mind-set of employers about suitable work for women.
- Government-employer partnerships to improve dormitory and other accommodation for female factory workers, emphasizing adequate hygiene, lighting, security and recreational possibilities.
- Facilitating safety for mobile women. Women in the city face many dangers and harassments, both while on the move between workplace and home, at the workplace itself, and in various public places. A multifaceted approach is needed, including better implementation of regulations protecting women, and public education campaigns so that women's rights are better respected.
- Labour legislation and workplace safety campaigns can improve working conditions for both women and men.

6. Further Data and Research Needs

Urbanization and migration are such important issues for Bangladesh that research should be focused on better understanding the trends and their implications for policy. This will require better sources of data and sophisticated methods of analysis. Census data provide the most basic source of data on both urbanization and migration. In future censuses, consideration should be given to increasing the size of the sample census (the source of information on migration and many other matters) from 168,000 respondents (or a 0.1% sample) to enable more sampling points and a lower standard error of estimates. For more effective policy analysis, other sources of data also need to be utilized, the most promising of which is the use of satellite imagery to provide detailed information on urban change at local and regional levels (Deuskar and Stewart, 2016).

While satellite imagery can provide very useful information about the extent of urban and suburban areas, it cannot provide information about the numbers, and the social and economic characteristics, of the people inhabiting these urban spaces. The "marrying" of census and survey data with satellite imagery will be necessary if synergy is to be achieved in utilizing the most useful characteristics of each kind of data.

In future censuses, BBS should consider expanding the area of Dhaka SMA, to incorporate the fast-growing areas lying outside the SMA boundary, which are now highly urbanized. This would facilitate analysis of the dynamics of growth of this major world megacity. BBS should also consider a change in the definition of migration, both with regard to time and space. With regard to time, the requirement of at least 6 months residence means that many migrants are not counted as such, so shortening the period of residence required to be considered as a migrant would be a positive move. With regard to space, it would facilitate migration analysis if the requirement of crossing a district boundary to be considered as a migrant were changed to the requirement of crossing a sub-district boundary. Recent Indian census surveys have successfully applied procedures to better capture short-term, short-distance, seasonal and non-seasonal circular migration, and BBS should carefully consider their procedures in revising the definition of internal migration.

When detailed data is collected in censuses, a great deal of money is wasted if the resulting data is not effectively analysed. The collaboration

between BBS and UNFPA in producing a series of reports utilizing the 2011 Census data for Bangladesh is therefore to be commended. Bangladesh could also profit from following the Indian practice in presenting disaggregated 2011 census data in spatial detail to local governments as well as researchers.

It would be easy to provide a long list of research studies that are needed in order to better understand urbanization and migration in Bangladesh. Rather than do that here, we would rather stress the need for a variety of approaches to be used in urbanization and migration studies. The approaches of demography, economics, geography, sociology and anthropology are all needed for a comprehensive understanding of the factors driving urban growth and migration. And in moving from analysis of what has been happening to providing sensible recommendations, there is obviously a need to involve experts in public policy and in urban and regional development.

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[24] These are the increases projected in the medium and low projections prepared under the UNFPA Demographic Impact Study (UNFPA 2015). The high projection gave a much greater increase – 73.2 million – but the assumption underlying this projection – that the total fertility rate would remain at its 2011 level of 2.3 - was used only to demonstrate what the effect would be of continued fertility at that level.

[25] Actually, 48 percent according to the low projection; 51 percent according to the medium projection.

[26] For example, the only specialized educational institution serving the RMG industry is the College of Textile Engineering and Technology. Some other educational institutions have degree courses in fashion technology, merchandising, and supply chain management, but very few offer skill enhancement programs. In the case of the food and beverage industry, relevant specialized educational institutions are producing very limited numbers of graduates and there are very few skills enhancement program or training for the semi-skilled and unskilled workforce (Choe and Roberts, 2011: 148, 158, 170).

[27] Dhaka can easily be linked through railways with Mymensingh, Tangail, Bhairob Bazar, Narsingdi, Comilla and even with Shariatpur, Madaripur, Jessore etc. when the Padma Bridge is completed.

[28] "As about 90 percent of industrial establishments are small or of medium size, their spatial distribution has had a substantial effect on Taiwan's population distribution. These firms are widely dispersed over the island, owing to the topographical features of the islands, the excellent road and rail network, uniform prices of fuel and power, the availability of banking and related services, and cheap labour in rural areas". (Tsai, 1987).

7. Key Points – Chapter 7

- Bangladesh's continued population growth, resulting from age structure (momentum) effects and from above-replacement fertility, is contributing to both natural increase of urban populations and to rural-urban migration. Meeting unmet need for family planning should be a key element of urbanization and migration strategy.
- About 50% of Bangladesh's population is likely to be living in urban areas by 2046. They will live in the two largest mega-urban regions – Dhaka and Chittagong, in growing secondary cities, in smaller towns and in formerly rural localities that have developed urban characteristics.
- Dhaka and Chittagong megacities will continue to grow in population. Policy should be directed towards maximizing the economies, and minimizing the diseconomies of agglomeration.
- Though the RMG industry, heavily concentrated in the vicinity of Dhaka and Chittagong, has served Bangladesh well in its initial industrialization drive, the diversity and sophistication of Bangladesh's exports needs to be increased.
- Continued rural development will be crucial for lowering the poverty gap between rural and urban areas, lessening the incentive to migrate to the cities, and developing effective connectivity between cities and their hinterlands.
- The high population density and compact land area of Bangladesh provide opportunities for an effective development strategy linking urban and rural development. Some elements are:
    - Agricultural diversification, stressing high value products, and diversification of the rural economy, increasing employment, raising incomes, and providing forward linkages to processing, packing and other off-farm activities.
    - "Thickening" of the transportation network, facilitating commuting, periodic migration, improved access to markets, and in situ urbanization.
    - Investment in the educational and skill levels of rural, small town, and secondary city populations, thereby helping to attract industry and service sector activities away from the big cities.
- The historical experiences of South Korea and Taiwan – both densely populated countries like Bangladesh – are highly relevant. Ready access to cities meant that rural households were able to allocate their labour resources according to the agricultural cycle and the availability of urban jobs, whether temporary or long-term.
- Bangladesh's Western region has good potential for sustainable urbanization. The completion of the Padma Bridge in 2019 should help lessen the East-West dichotomy through greatly improved connectivity with Dhaka. Efforts are also needed to equalize the quality of education and health services and improve trade relations with India.
- Policies addressing Dhaka's massive problems are discussed in the report. Key needs are effective implementation of the Dhaka Structure Plan 2016-2035, to deal with massive infrastructure shortfalls; land and housing policy to stimulate the supply of affordable housing; and tough environmental protection policy. Illegal construction, poor construction standards, draining and earth filling of flood prone land, and land grabbing must be minimized.
- A range of policies are needed to enable women to further expand their role in the urban workforce, including facilitating their education at the tertiary level, widening the range of employment opportunities open to women, providing improved accommodation for factory workers, and addressing the dangers and harassments women face in urban areas.

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APPENDIX TABLE 2.1
Change in population densities in various districts of Bangladesh, 2001-2011

District	Population density 2001	Density ranking 2001	Population density 2011	Density ranking 2011	% increase in population density	Change in ranking	Population 2011 ('000)
Dhaka	5,831	1	8,111	1	39	-	12,044
Narayanganj	3,161	2	4,139	2	31	-	2,948
Narsingdi	1,744	3	1,930	3	11	-	2,225
Gazipur	1,231	10	1,852	4	50	+6	3,404
Comilla	1,490	4	1,719	5	15	-1	5,387
Feni	1,336	6	1,530	6	15	-	1,437
Munshiganj	1,355	5	1,487	7	10	-2	1,446
Brahmanbaria	1,244	9	1,457	8	17	+1	2,840
Chittagong	1,252	8	1,421	9	13	-1	7,616
Chandpur	1,333	7	1,404	10	5	-3	2,416
Sirajganj	1,121	11	1,290	11	15	-	3,097
Kushtia	1,082	12	1,210	12	12	-	1,947
Rangpur	1,059	13	1,200	13	13	-	2,842
Lakshmipur	1,034	15	1,200	13	16	+2	1,710
Nilphamari	1,016	17	1,186	15	17	+2	1,834
Bogra	1.039	14	1,173	16	13	-2	3,401
Mymensingh	1,022	16	1,163	17	14	-1	5,110
Gaibandha	1,011	19	1,125	18	11	+1	2,379
Jamalpur	996	20	1,084	19	9	+1	2,295
Kishoreganj	965	22	1,084	19	12	+3	2,851
Rajshahi	943	25	1,070	21	13	+4	2,595
Jessore	948	24	1,060	22	12	+2	2,678
Pabna	916	29	1,062	23	16	+6	2,523
Tangail	963	23	1,056	24	10	-1	3,605
Madaripur	1,018	18	1,036	25	2	-7	1,166
Lalmonirhat	889	29	1,007	25	13	+4	1,256
Manikganj	928	27	1,007	27	9	-	1,393
Sherpur	938	26	995	28	6	-2	1,358
Sylhet	740	44	995	28	34	+16	3,434
Shariatpur	922	28	984	30	7	-2	1,156
Chapai Nawabganj	837	35	968	31	16	+4	1,647
Jhalokati	982	21	966	32	-2	-11	683
Chuadanga	858	32	962	33	12	-1	1,129
Rajbari	871	30	961	34	10	-4	1,050
Faridpur	856	33	931	35	9	-2	1,913
Kurigram	798	39	921	36	15	+3	2,069
Cox's Bazar	712	46	919	37	29	+9	2,290
Joypurhat	836	36	903	38	4	-2	914
Jhenaidah	804	37	902	39	7	-2	1,771
Natore	801	38	898	40	10	-2	1,707
Magura	793	40	884	41	5	-1	918
Meherpur	787	42	872	42	11	-	655
Pirojpur	870	31	871	43	0	-12	1,113
Dinajpur	767	43	868	44	8	-1	2,990
Noakhali	699	48	843	45	18	+3	3,108
Barisal	846	34	835	46	0	-12	2,324
Netrakona	712	46	798	47	10	-1	2,230
Gopalganj	793	41	798	47	1	-6	1,172
Habiganj	667	51	792	49	11	+2	2,089
Thakurgaon	682	50	780	50	12	-	1,390
Naogaon	696	49	757	51	5	-2	2,600
Narail	722	45	746	52	0	-7	722
Panchagarh	595	52	703	53	18	-1	988
Maulvibazar	576	53	686	54	7	-1	1,919
Sunamganj	537	55	659	55	18	-	2,468
Khulna	541	54	528	56	-3	-2	2,319
Bhola	500	56	522	57	7	-1	1,777
Satkhira	488	57	520	58	8	-1	1,986
Barguna	463	58	488	59	5	-1	893
Patuakhali	453	59	477	60	11	-1	1,536
Bagerhat	391	60	373	61	-2	-1	1,476
Khagrachhari	191	61	223	62	17	-1	614
Rangamati	83	62	97	63	10	-1	596
Badarban	67	63	87	64	27	-1	388
BANGLADESH	**881**		**1,015**		**15**		**149,772**

Source: Statistics on population by districts, Bangladesh Census Reports

APPENDIX TABLE 2.2
Variation of urban area and population by district, 2001 and 2011

District/Division	Area in Sq.km.		Variation (%)	Population (Enumerated)		Variation (%)
	2011	2001	2001-2011	2011	2001	2001-2011
BANGLADESH	**8867.42**	**10711.89**	**(-)17.22**	**33563183**	**29255627**	**14.72**
Barisal Division	**665.69**	**630.82**	**5.53**	**1361943**	**1162775**	**17.13**
Barguna	71.92	88.87	(-)19.07	103094	87582	17.71
Barisal	172.1	134.88	27.59	519016	394567	31.54
Bhola	160.86	141.94	13.33	243317	234302	3.52
Jhalokati	58.89	59.67	(-)1.31	112003	104070	7.62
Patuakhati	115.6	115.71	(-)0.09	201882	175284	15.17
Pirojpur	86.32	89.75	(-)3.82	182631	166970	9.38
Chittagong Division	**2462.29**	**3251.63**	**(-)24.28**	**6905480**	**6022650**	**14.66**
Bandarban	214.18	290.37	(-)26.24	100423	92766	8.25
Brahmanbaria	123.39	120.41	2.47	448493	336184	33.41
Chandpur	160.57	134.93	19	435724	314102	38.72
Chittagong	450.88	1254.89	(-)64.07	3152629	3381723	(-)6.77
Comilla	215.88	172.68	25.02	840326	535289	56.99
Cox's Bazar	148.38	127.99	15.93	499011	272395	83.19
Feni	92.87	69	34.59	293742	170200	72.59
Khagrachhari	309.1	330.06	(-)6.35	215808	171035	26.18
Lakshmipur	159.53	141.49	12.75	262997	225426	16.67
Noakhali	202.62	117.7	72.15	496700	353342	40.57
Rangamati	384.89	492.1	(-)21.79	159627	170188	(-)6.20
Dhaka Division	**2093.47**	**2998.6**	**(-)30.19**	**15584835**	**13364520**	**16.61**
Dhaka	213.8	797.53	(-)73.19	9317043	7794086	19.54
Faridpur	116.31	122.65	(-)5.17	271100	227471	19.18
Gazipur	173.19	475.63	(-)63.59	1037574	929770	11.59
Gopalganj	72.4	75.04	(-)3.52	128705	113133	13.76
Jamalpur	159.06	157.23	1.16	387869	331264	17.09
Kishoreganj	155.33	139.77	11.13	489030	356941	37.01
Madaripur	66.39	67.59	(-)0.02	157810	140365	12.43
Manikganj	65.12	74.28	(-)12.33	128710	95579	34.66
Munshigonj	38.02	36.88	3.09	186106	148352	25.45
Mymensingh	268.79	276.14	(-)2.66	798127	660331	20.87
Narayanganj	108.83	189.45	(-)42.55	988956	1221955	(-)19.07
Narsingdi	109.67	93.27	17.58	447645	349585	28.05
Netrokona	128.99	120.55	7	247183	187839	31.59
Rajbari	56.93	55.8	2.03	136042	118891	14.43
Sariatpur	61.47	63.53	(-)3.24	131044	114776	14.17
Sherpur	61.7	43.22	42.76	188106	136171	38.14
Tangail	237.47	210.04	13.06	543785	438011	24.15
Khulna Division	**1104.36**	**1261.8**	**(-)12.48**	**2822121**	**3041699**	**(-)10.97**
Bagerhat	109.35	110.38	(-)0.93	195331	206554	(-)5.43
Chuadanga	212.43	194.75	9.08	306157	274519	11.52
Jessore	139.58	127.27	9.67	513552	400851	28.12
Jhenaidha	147.11	135.18	8.83	280192	230392	21.62
Khulna	137.78	341.39	(-)59.64	777588	1284208	(-)39.45
Kushtia	73.09	74.66	(-)2.10	235526	214275	9.92
Magura	58.46	61.82	(-)5.44	120414	105323	14.33
Meherpur	48.47	46.81	3.55	83393	68154	22.36
Narial	94.61	81.28	16.4	112352	85809	30.93
Satkhira	83.48	88.26	(-)5.42	197616	171614	15.15
Rajshahi Division	**1193.04**	**1253.98**	**(-)4.86**	**3317022**	**2808131**	**18.12**
Bogra	185.14	80.28	130.62	670388	389069	72.31
Joypurhat	66.71	61.82	7.91	143910	121305	18.63
Naogaon	104.25	95.59	9.06	275567	222576	23.81
Natore	110.68	92.53	19.62	228008	191826	18.86
Chapai Nawabganj	99.26	95.33	4.12	320278	269087	19.02
Pabna	127.29	213	(-)40.24	387675	449390	13.73
Rajshahi	374.14	502.53	(-)25.55	854619	843625	1.3
Sirajganj	125.57	112.9	11.22	436577	321253	35.9
Rangpur Division	**872.92**	**897.3**	**(-)2.72**	**2109071**	**1868314**	**12.89**
Dinajpur	165.27	157.16	5.16	453699	370864	22.34
Gaibandha	80.02	92.02	(-)13.04	210524	195107	7.9
Kurigram	179.39	172.7	3.87	326494	278071	17.41
Lalmonirhat	59.56	75.53	(-)21.14	129209	141361	(-)8.60
Nilphamari	127.13	116.93	8.72	289974	235839	22.95
Panchagarh	61.12	51.93	17.69	95149	72015	32.12
Rangpur	99.45	157.17	(-)36.72	442713	457234	(-)318
Thakurgaon	100.98	73.86	36.72	161309	117823	36.91
Sylhet Division	**475.65**	**417.76**	**13.86**	**1462711**	**987538**	**48.12**
Habiganj	91.89	79.98	14.89	244966	191633	27.83
Maulvibazar	87.8	80.45	9.14	208079	145301	43.21
Sunamganj	138.89	119.61	16.12	256117	217006	18.02

Source: Table 3.3.2 from Urban Area Report, 2011 Census

APPENDIX TABLE 2.3
Area variation in cities having more than 100,000 population, 2001 and 2011

SL. No.	City	Area in sq. km.						Decadal Expansion (%)
		2011			2001			
		Total	Paurashava/ City Cor.	Other Urban	Total	Paurashava	Other Urban	
1	Barisal	69	58	11	43	20	23	60.46
2	Begumganj (Chowmohoni)	36	15	21	-	-	-	-
3	Bhairab	16	16	-	-	-	-	-
4	Bogra	69	69	-	14	11	3	393
5	Brahmanbaria	23	18	5	23	18	5	0
6	Chandpur	27	23	4	17	11	6	59
7	Chittagong	155	155	-	1045	207	838	(-)85.17
8	Chuadanga	69	37	32	69	37	32	0
9	Comilla Adarsha Sadar	24	12	12	-	-	-	-
10	Comilla Sadar Dakshin	31	31	-	58	11	47	(-)47.00
11	Cox's Bazar	24	8	16	-	-	-	-
12	Dhaka	316	126	190	1371	290	1081	(-)76.95
13	Dinajpur	22	21	1	23	19	4	(-)4.35
14	Faridpur	20	19	1	23	23	-	(-)13.04
15	Feni	22	22	-		-	-	-
16	Gazipur	47	47	-	-	-	-	-
17	Jamalpur	55	53	2	55	53	2	0
18	Jessore	29	15	14	20	15	5	45
19	Jhenaidah	43	40	3	-	-	-	-
20	Kadam Ras (Bandar)	11	11	-	-	-	-	-
21	Kaliakair	27	25	2	-	-	-	-
22	Khulna	51	51	-	267	70	197	(-)80.90
23	Kishoreganj	11	11	-	-	-	-	-
24	Kushtia	14	13	1	-	-	-	-
25	Mymenshingh	71	22	49	68	22	46	4.41
26	Naogaon	37	37	-	37	37	-	0
27	Narayanganj	13	13	-	-	-	-	-
28	Chapai Nawabganj	33	33	-	34	34	-	(-)2.94
29	Noakhali	24	17	7	-	-	-	-
30	Narsinghdi	21	15	6	16	9	7	31.25
31	Pabna	27	27	-	45	27	18	(-)40.00
32	Rajshahi	97	97	-	377	97	280	(-)74.27
33	Rangpur	51	51	-	68	51	17	(-)25.00
34	Saidpur	30	25	5	34	34	-	(-)11.76
35	Satkhira	32	32	-	-	-	-	-
36	Savar	14	14	-	-	-	-	-
37	Shiddhirganj	23	23	-	-	-	-	-
38	Sirajganj	31	28	3	31	28	3	0
39	Sreepur	47	47	-	-	-	-	-
40	Sylhet	42	27	15	58	27	31	(-)27.59
41	Tangail	34	34	-	29	29	-	17.24
42	Tarabo	19	19	-	-	-	-	-
43	Tongi	14	14	-	-	-	-	-

Source: Table 3.2.3 from Urban Area Report, 2011 Census

Note: Appendix Table 2.3 reproduces data from another table in the 2011 Census Report, Vol. 3, which shows the areal variation between the 2001 Census and the 2011 Census in cities having a population of more than 100,000. Five of these cities had a substantial increase in area – Barisal, Bogra, Chandpur, Jessore, and Narsingdhi.

APPENDIX TABLE 4.1

Net migration rate of recent internal migrants by districts, and districts' share of all lifetime and recent migrants, 2011

1	2	3	4	5	6	7	8	9
Division and District	Net Migration Rate (N)	Division and District's Share of Bangladesh Population	Division and District's Share of Lifetime In Migrants	Division and District's Share of Recent In Migrants	(4)/(3)	(5)/(3)	Division and District's Share of Recent Out Migrants	(8)/(3)
BARISAL	**-167.22**	**6.1**	**2.08**	**2.54**	**0.34**	**0.42**	**9.99**	**1.64**
Barguna	-65.64	0.64	0.3	0.37	0.47	0.58	0.41	0.64
Barisal	-369.59	1.69	0.64	1.05	0.38	0.62	5.49	3.25
Bhola	-125.15	1.31	0.13	0.08	0.10	0.06	1.88	1.44
Jhalokati	-36.86	0.49	0.33	0.29	0.67	0.59	0.46	0.94
Patuakhali	-108.95	1.17	0.29	0.26	0.25	0.22	1.18	1.01
Pirojpur	-56.49	0.81	0.39	0.49	0.48	0.60	0.57	0.70
CHITTAGONG	**-41.15**	**19.51**	**10.47**	**10.70**	**0.54**	**0.55**	**16.78**	**0.86**
Bandarban	94.77	0.27	0.32	0.23	1.19	0.85	0.13	0.48
Brahmanbaria	-76.99	1.95	0.53	0.57	0.27	0.29	1.57	0.81
Chandpur	-142.72	1.73	0.5	0.9	0.29	0.52	2.26	1.31
Chittagong	86.85	5.11	6.02	5.15	1.18	1.01	2.56	0.50
Comilla	-140.8	3.76	0.91	1.15	0.24	0.31	4.94	1.31
Cox's bazar	-17.66	1.52	0.16	0.66	0.11	0.43	0.47	0.31
Feni	-50.52	0.91	0.43	0.73	0.47	0.80	0.86	0.95
Khagrachhari	99.98	0.44	0.56	0.2	1.27	0.45	0.15	0.34
Lakshmipur	-28.32	1.23	0.22	0.34	0.18	0.28	0.47	0.38
Noakhali	-139.68	2.19	0.38	0.51	0.17	0.23	3.18	1.45
Rangamati	56.35	0.4	0.43	0.24	1.08	0.60	0.19	0.48
DHAKA	**89.23**	**32.72**	**64.46**	**66.96**	**1.97**	**2.05**	**38.6**	**1.18**
Dhaka	468.69	8.01	41.92	38.07	5.23	4.75	7.19	0.90
Faridpur	-218.29	1.34	0.7	0.69	0.52	0.51	2.95	2.20
Gazipur	370.97	2.28	9.63	14.14	4.22	6.20	1.08	0.47
Gopalganj	-101.52	0.86	0.43	0.53	0.50	0.62	1.06	1.23
Jamalpur	-60.82	1.65	0.46	0.38	0.28	0.23	1.69	1.02
Kishoreganj	-112.53	2.05	0.54	0.57	0.26	0.28	3.75	1.83
Madaripur	-147.76	0.82	0.27	0.54	0.33	0.66	1.39	1.70
Manikganj	-96.56	0.98	0.38	0.35	0.39	0.36	1.12	1.14
Munshiganj	-177.78	0.96	0.87	1.08	0.91	1.13	1.65	1.72
Mymensingh	-118.32	3.66	1.48	1.57	0.40	0.43	7.28	1.99
Narayanganj	175.55	1.85	4.59	5.7	2.48	3.08	1.44	0.78
Narsingdi	9.29	1.55	1.27	1.31	0.82	0.85	1.07	0.69
Netrokonaq	-78.69	1.58	0.38	0.41	0.24	0.26	1.88	1.19
Rajbari	85.62	0.74	0.66	0.45	0.89	0.61	0	0.00
Shariatpur	-166.1	0.85	0.21	0.36	0.25	0.42	1.03	1.21
Sherpur	-115.03	0.98	0.18	0.22	0.18	0.22	1.55	1.58
Tangail	-68.32	2.55	0.48	0.6	0.19	0.24	2.46	0.96
KHULNA	**-26.66**	**11.05**	**8.96**	**6.28**	**0.81**	**0.57**	**10.80**	**0.98**
Bagerhat	-60.23	1.09	0.65	0.53	0.60	0.49	1.32	1.21
Chuadanga	-24.52	0.79	0.63	0.31	0.80	0.39	0.51	0.65
Jessore	-9.69	1.92	1.87	1.78	0.97	0.93	1.96	1.02
Jhenaidah	-15.97	1.22	1.03	0.91	0.84	0.75	0.88	0.72
Khulna	17.73	1.65	2.35	1.31	1.42	0.79	2.47	1.50
Kushtia	-51.9	1.34	0.91	0.44	0.68	0.33	1.13	0.84
Magura	-71.22	0.62	0.55	0.38	0.89	0.61	0.86	1.39
Meherpur	-13.15	0.46	0.21	0.12	0.46	0.26	0.14	0.30
Narail	-48.84	0.5	0.44	0.27	0.88	0.54	0.53	1.06
Satkhira	-38.77	1.45	0.32	0.22	0.22	0.15	1	0.69
RAJSHAHI	**-32.03**	**12.95**	**6.10**	**5.95**	**0.47**	**0.46**	**9.97**	**0.77**
Bogra	-8.05	2.4	1.44	1.56	0.60	0.65	1.58	0.66
Joypurhat	14.54	0.63	0.58	0.48	0.92	0.76	0.48	0.76
Naogaon	-34.99	1.81	0.63	0.49	0.35	0.27	1.24	0.69
Natore	-9.55	1.2	0.83	0.68	0.69	0.57	0.59	0.49
Chapai Nawabganj	-38.6	1.14	0.29	0.49	0.25	0.43	0.54	0.47
Pabna	-68.67	1.81	0.68	0.75	0.38	0.41	1.79	0.99
Rajshahi	-2.42	1.73	1.28	0.96	0.74	0.55	1.36	0.79
Sirajganj	-70.69	2.23	0.37	0.54	0.17	0.24	2.37	1.06
RANGPUR	**-39.49**	**11.08**	**4.69**	**3.61**	**0.42**	**0.33**	**10.05**	**0.91**
Dinajpur	-25.51	2.06	1.14	0.97	0.55	0.47	1.56	0.76
Gaibandha	-66.82	1.68	0.49	0.61	0.29	0.36	1.57	0.93
Kurugram	-41.63	1.47	0.28	0.24	0.19	0.16	1.04	0.71
Lalmonirhat	-19.22	0.85	0.35	0.22	0.41	0.26	0.69	0.81
Nilphamari	-0.99	1.3	0.6	0.47	0.46	0.36	0.74	0.57
Panchagarh	0.64	0.71	0.47	0.27	0.66	0.38	0.37	0.52
Rangpur	-95.92	2.04	0.86	0.51	0.42	0.25	3.53	1.73
Thakurgaon	1.51	0.97	0.5	0.32	0.52	0.33	0.56	0.58
SYLHET	**7.43**	**6.59**	**3.24**	**3.96**	**0.49**	**0.60**	**3.82**	**0.58**
Habiganj	0.11	1.41	0.55	1.44	0.39	1.02	0.51	0.36
Moulvibazar	24.37	1.24	0.6	0.47	0.48	0.38	0.86	0.69
Sunamganj	-12.3	1.7	0.47	0.47	0.28	0.28	0.9	0.53
Sylhet	17.63	2.24	1.63	1.58	0.73	0.71	1.55	0.69

Source: Calculated from unpublished data supplied by BBS

Note: N = 1000 x (I - E) / P

Where,
N = Net migration rate
E = Number of people emigrating out of the district/division
I = Number of people immigrating into the district/division
P = Estimated mid-year population

APPENDIX TABLE 5.1
Comparative urban statistics of various types of urban centres of Bangladesh, 2011

Locality	No. of Urban Centres	Population		Area (km²)		Density (per km²)	Exponential Population Growth		Sex Ratio (M/F)
		Total	Average	Total	Average		2001-2011	1991-2011	
Bangladesh		144,043,697		147570^		976^	1.47	1.52	100^
Urban*		39,847,550				3,785^	3.09	3.24	109^
Rural		104,196,147				846^	0.91	0.99	98^
Dhaka Megacity	1	14,171,567	14,171,567	1371.1	1371.1	10,336	3.82	3.91	121
Dhaka Metropolitan	1	8,906,039	8,906,039	316.0	316.0	28,185	3.18	3.76	124
Statistical Metropolitan Areas (SMAs)	4	19,622,230	4,905,558	3060.6	765.1	6,411	3.03	3.37	117
City Corporations (CC)	6	11,473,719	1,912,287	514.8	85.7	22,319	2.47	3.04	119
Municipalities	316	27,279,735	86,328	5416.5	17.1	5,036	3.66	4.15	110
Non Municipal Towns**	167	2,290,001	13,713	1931.5	11.6	1,186	0.67	1.40	101
C 4 (1,000,000-5,000,000 population)***	1	2,591,681	2,591,681	155.4	155.4	16,677	2.47	3.10	112
C 3 (500,000-999,999 population)***	2	1,196,391	598,196	92.5	46.2	12,940	0.96	2.08	112
C 2 (200,000-499,999 population)***	14	4,316,511	308,322	589.0	42.1	7,329	3.93	3.51	113
C 1 (100,000-199,999 population)***	25	3,617,542	144,702	736.8	29.5	4,910	2.71	3.22	104
Large Town (50000-99999 population)***	62	4,174,827	67,336	1733.7	28.0	2,408	2.10	3.02	101
Medium Size Town (25000-49999 population)***	161	5,672,123	35,231	2864.4	17.8	1,980	2.67	3.71	100
Small Town (below 25000 population)***	239	3,143,027	13,151	2482.8	10.4	1,266	1.78	2.54	101

Source: National Report, Vol-2 and 3, Bangladesh Population and Housing Census, 2011

* The total number of urban population of 2011 was calculated including SMA by following the old definition of urban area of 2001 and 1991. (Table 24, National Report, Vol-3, Bangladesh Population and Housing Census, 2011). Rural population was determined by the subtraction of urban population from total population of Bangladesh.

** The number of common non municipal town (in the period of 1991-2011) is 167. Only these non-municipal towns were taken into account to determine density, population growth and sex ratio.

*** City size class (C1, C2, C3, C4) and Town size class (Large Town, Medium Size Town and Small Town) are based on the population size in 2011.

^ Data collected from National Report, Vol-2, Bangladesh Population and Housing Census, 2011.

APPENDIX TABLE 5.2.
Growth in different categories of urban areas, by division, 1991-2011

Division/Region	No. of urban centres			Number of cities			Number of municipalities			Number of non-municipal towns		
	1991	2001	2011	1991	2001	2011	1991	2001	2011	1991	2001	2011
Barisal	38	39	41	1	1	1	9	22	25	29	17	16
Chittagong	86	91	102	3	6	9	18	38	60	68	53	42
Dhaka	119	124	130	7	12	17	27	64	86	92	60	44
Khulna	57	58	60	2	3	6	21	28	37	36	30	23
Rajshahi	66	67	75	5	6	6	15	36	60	51	31	15
Rangpur	58	58	58	3	3	3	13	21	28	45	37	30
Sylhet	35	36	39	1	1	1	4	14	20	31	22	19
BANGLADESH	**459**	**473**	**505**	**22**	**32**	**43**	**107**	**223**	**316**	**352**	**250**	**189**
Eastern part	214	226	243	11	18	26	43	97	147	171	129	96
Western part	245	247	262	11	14	17	64	126	169	181	121	93
Coastal part	126	131	141	4	7	10	31	70	92	95	61	49
Non-coastal part	333	342	364	18	25	33	76	153	224	257	189	140

Source: 1991, 2001 and 2011 Population Census Reports

Notes:

(1) Urban centres have been determined according to the new definition of urban area, 2011
(2) Urban growth centres are excluded
(3) Municipalities (paurashavas) in statistical Metropolitan area (SMA) are considered as individual urban centres
(4) In the 1991 Census, in some cases the Other Urban Area (OUA) of an urban centre was considered as an individual urban centre which leads to an increase in number of urban centres in that census year. To avoid this complexity, in the case of Chandpur, Feni, Patuakhali, Jessore, Brahmanbaria, Sylhet, Kustia, Bogra, Darshana, Natore, Haragacha, Kurigram and Parbatipur urban centres, the value of various parameters (i.e. population, area, female population, male population, number of households) was determined by adding the values for municipalities and upazila headquarters (other urban area) of that particular urban centre.
(5) Cities=having more than 100,000 population.

APPENDIX TABLE 5.3
Population, area, density and growth rates of City Corporations, 1991-2011

City corporation	Population			Area (sq. km.)			Density (per sq. km.)			Growth rate (av. ann) %	
	1991	2001	2011	1991	2001	2011	1991	2001	2011	1991-2001	2001-2011
Barisal	170,232	192,810	328,278	16.4	20.0	58.1	10,399	9,645	5,655	1.25	5.32
Chittagong	1,392,860	2,023,489	2,582,401	209.7	168.1	155.4	6,643	12,040	16,618	3.73	2.44
Dhaka	3,612,850	5,327,306	6,970,105	153.8	153.8	126.3	23,484	34,629	55,169	3.88	2.69
Khulna	663,340	770,498	663,342	70.1	70.1	50.6	9,464	10,993	13,107	1.50	-1.50
Rajshahi	294,056	388,811	449,756	96.7	96.7	97.2	3,042	4,022	4,628	2.79	1.46
Sylhet	117,396	263,197	479,837	10.5	26.5	26.5	11,191	9,932	18,107	8.07	6.01
TOTAL	**6,250,734**	**8,966,111**	**11,473,719**	**557.2**	**535.2**	**514.1**	**11,219**	**17,090**	**22,319**	**3.61**	**2.47**

Source: 1991, 2001 and 2011 Population Census Reports

APPENDIX TABLE 5.4
Urban population growth by division and region

Division/Region	Total Population			Exponential Growth (%)	
	1991	2001	2011	1991-2001	2001-2011
Barisal	924,333	1,162,771	1,361,943	2.29	1.58
Chittagong	3,372,386	5,180,208	6,932,353	4.29	2.91
Dhaka	7,295,360	11,275,504	15,577,829	4.35	3.23
Khulna	2,002,723	2,628,364	2,815,926	2.72	0.69
Rajshahi	1,716,167	2,526,644	3,337,386	3.87	2.78
Rangpur	1,431,599	1,861,257	2,124,706	2.62	1.32
Sylhet	556,807	987,538	1,467,998	5.73	3.96
Bangladesh	**17,299,375**	**25,622,286**	**33,618,141**	**3.93**	**2.72**
Eastern Part	10,785,601	16,784,162	23,201,522	4.42	3.24
Western Part	6,513,774	8,838,124	10,416,619	3.05	1.64
Coastal Part	4,946,684	7,012,139	8,585,936	3.49	2.02
Non-coastal Part	12,352,691	18,610,147	25,032,205	4.10	2.96

Source: 1991, 2001 and 2011 Population Census Reports

EUROPEAN UNION

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