

Urbanization in Bangladesh: Present Status and Policy Implications

A.K.M. Helal uz Zaman^{*}
Khan Md. Tariqul Alam^{**}
Md. Jahirul Islam^{***}

Abstract

A major change to be witnessed in Bangladesh over the next decade is the rapid spread of urbanization. Unless this spread is effectively managed, the chaotic conditions and accompanying ills like pollution, joblessness and exacerbation of criminal activities is likely to choke growth. An attempt has been made to examine the current situation and trends of urbanization in Bangladesh. Urban migration and population growth trend in Dhaka city has been critically examined. Forces which work behind rapid urbanization in Bangladesh have been identified. An evaluation has also been made to assess, the positive and negative impacts of urbanization. Finally a number of recommendations have been put forward to face the challenges of urbanization in Bangladesh.

Keywords: Urbanization, population growth rate, trends and impact of urbanization, megacity, forces behind urbanization, improving city governance.

Introduction

Bangladesh is one of the world's most densely populated country and has also faced rapid population growth throughout the last century although the population growth rate has somewhat decreased to a moderate level in recent times. The country is going to witness a rapid spread of urbanization over the next decade. According to an estimate, by 2020, nearly every other man, woman and child will live in an urban area (World Bank ed., *Bangladesh 2020*). Unless this spread is effectively managed, the chaotic conditions and accompanying ills like pollution, joblessness and exacerbation of criminal activities is likely to multiply. The growing disparity in living standards in Dhaka between the slum dwellers on one side and well-to-do urban elites on the other may lead to increased social and political instability. However, with a proper strategy for growth and employment, this can give rise for job creation in the non-farm sector and thus absorb surplus labor force generating in the agricultural sector.

Like many other Asian developing countries, an increasing share of population of Bangladesh migrates to urban centers in search for employment opportunities outside agriculture and into industrial enterprises or the services sector. A historical transition has been taking place during the decade 2000-2010 for low income countries like Bangladesh, since for the first time in history the urban population in this group of countries is growing faster than rural population (Khan, 2008).

^{*} Associate Professor, Faculty of Business, ASA University Bangladesh

^{**} Senior Lecturer, Faculty of Business, ASA University Bangladesh

^{***} Lecturer, Faculty of Business, ASA University Bangladesh

Objectives of the Study

This study focuses on the trend and impact of urbanization in Bangladesh and suggests some policy measure. The major objectives of this study are as follows:

- To examine the current scenario and the trends of urbanization in Bangladesh
- To explore urban migration and population growth in Dhaka city
- To identify driving forces behind rapid urbanization and to assess positive and negative impacts of urbanization
- To make policy recommendations.

Methodology of the Study

The study is mainly based on secondary data. Data have been collected from different published materials like the publication of World Bank, Bangladesh Bureau of Statistics, relevant writings of some scholars. The data from the year 1996 to 2010 have been analyzed to evaluate the urbanization process of Bangladesh. The collected data have been processed manually and report in the present form has been prepared in order to make the study more informative, analytical and useful for the users.

Current Scenario of Urbanization

Bangladesh's urban population has been growing at a yearly average rate of 6 percent since independence, at a time when the national population growth was 2.2 percent. As a result, urban population has grown six-fold, compared with a 70 percent increase in rural population (World Bank, 2007). As per recent UN data, approximately 25 percent of Bangladesh's current population currently lives in urban areas. Of this urban population, more than half lives in the four largest cities: Dhaka, Chittagong, Khulna and Rajshahi. With a population of almost 12 million, Dhaka is the capital and largest city in Bangladesh. It is also the 11th largest city in the world. At the same time, it is consistently ranked as one of the world's least livable city. Although income growth is higher and the poverty incidence is lower than the rest of Bangladesh, Dhaka still is a low income city with large numbers of poor when compared with most mega cities of the world. Holding the prospects for better income opportunities than most parts of Bangladesh, rapid migration is causing Dhaka's population to grow much faster than the rest of the country. This fast urbanization is putting pressure on the city's limited land, an already fragile environment, and weak urban services. The population density is now believed to have reached around 34000 people per square kilometer, making Dhaka amongst the most densely populated city in the world.

Poor city management and low efficiency are exacerbating the problems. Urban traffic has reached nightmare proportions, often causing huge delays in covering small distances with associated productivity losses. Water and air pollution from poor waste and traffic management poses serious health risks. The already acute slum population is growing further, contributing to serious human and law and order problems.

All major cities in South Asia are facing similar problems. In general, poverty, deplorable condition of slums, corruption and inefficiency in service delivery, weak governance and poor finances are characteristic of all South Asian mega cities: Dhaka, Kolkata, Karachi, Mumbai and

Delhi. Dhaka probably ranks the worst, however, in terms of infrastructure, service delivery and city governance (Siddiqui 2004).

Trends of Urbanization in Bangladesh

A study on the level of urbanization and share of national urban population along with total urban population for each of the six divisions reveals that Dhaka Division overwhelmingly holds the highest rank in all the census years both for level of urbanization and share of national urban population (Rouf and Jahan, 2009). On the other hand, the rank of Sylhet Division was the lowest for both of the above-mentioned cases. From 1961 to 1981 the level of urbanization of the divisions of Dhaka, Chittagong and Khulna remained above the national level. But in 1991 Khulna dropped from the status with a narrow margin. The rank of level of urbanization for all the Divisions remained same for the census years of 1961 and 1991 with descending order as Dhaka, Chittagong, Khulna, Rajshahi, Barisal and Sylhet Division. In 1974 Khulna Division occupied the 2nd position and Chittagong scored the 3rd position but in 1981 they interchanged their positions. The same incidence happened between Rajshahi Division (4th in 1974) and Barisal Division with the 4th and 5th positions. Thus, like the regions the spatial, temporal and spatio-temporal variations are also present in case of divisions. This can be seen from the Table and charts below.

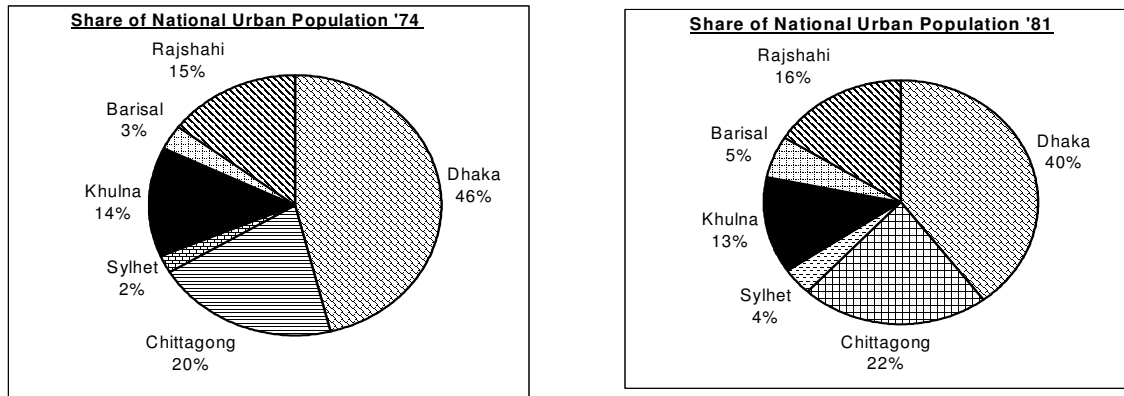
TABLE: 6
National and Divisional Variations in the Level of Urbanization and Share of National Urban Population(1961-2001).

| Years → | 1961 | | | | 1974 | | | | 1981 | | | |
|-------------------|------------------------|------------------------|-------------------------------|-------------------------------|------------------------|------------------------|-------------------------------|-------------------------------|------------------------|------------------------|-------------------------------|-------------------------------|
| | Total Pop ⁿ | Urban Pop ⁿ | Level of Urbaniz ⁿ | Share of Urb Pop ⁿ | Total Pop ⁿ | Urban Pop ⁿ | Level of Urbaniz ⁿ | Share of Urb Pop ⁿ | Total Pop ⁿ | Urban Pop ⁿ | Level of Urbaniz ⁿ | Share of Urb Pop ⁿ |
| Dhaka Div. | 15293 | 1073 | 7.02 | 40.63 | 21316 | 2900 | 13.60 | 46.23 | 26242 | 5383 | 20.51 | 39.77 |
| Ctg Div. | 10140 | 569 | 5.61 | 21.54 | 13876 | 1273 | 9.17 | 20.29 | 16940 | 2994 | 17.67 | 22.12 |
| Sylhet Div. | 3490 | 71 | 2.03 | 2.69 | 4759 | 131 | 2.75 | 2.09 | 5656 | 493 | 8.72 | 3.64 |
| Khulna Div. | 5805 | 311 | 5.36 | 11.78 | 8768 | 858 | 9.79 | 13.68 | 10641 | 1737 | 16.33 | 12.84 |
| Barisal Div. | 4261 | 119 | 2.79 | 4.51 | 5427 | 191 | 3.52 | 3.04 | 6510 | 730 | 11.22 | 5.39 |
| Rajshahi Div. | 11850 | 498 | 4.20 | 18.86 | 17332 | 920 | 5.31 | 14.67 | 21132 | 2198 | 10.40 | 16.24 |
| Bangladesh | 50839 | 2641 | 5.19 | 100.00 | 71478 | 6273 | 8.78 | 100.00 | 87120 | 13536 | 15.54 | 100.00 |

Table 6 contd.

| Years → | 1991 | | | | 2001 | | | |
|-------------------|------------------------|------------------------|-------------------------------|-------------------------------|------------------------|------------------------|-------------------------------|-------------------------------|
| | Total Pop ⁿ | Urban Pop ⁿ | Level of Urbaniz ⁿ | Share of Urb Pop ⁿ | Total Pop ⁿ | Urban Pop ⁿ | Level of Urbaniz ⁿ | Share of Urb Pop ⁿ |
| Dhaka Div. | 33940 | 9620 | 28.34 | 43.20 | 38987 | 13386 | 34.33 | 46.80 |
| Ctg Div. | 21865 | 4757 | 21.76 | 21.36 | 24120 | 5724 | 23.73 | 20.01 |
| Sylhet Div. | 7149 | 755 | 10.56 | 3.39 | 7897 | 976 | 12.36 | 3.41 |
| Khulna Div. | 13244 | 2515 | 18.99 | 11.29 | 14605 | 2921 | 20.00 | 10.21 |
| Barisal Div. | 7758 | 1001 | 12.90 | 4.50 | 8154 | 1160 | 14.23 | 4.06 |
| Rajshahi Div. | 27493 | 3799 | 13.82 | 17.06 | 30089 | 4438 | 14.75 | 15.51 |
| Bangladesh | 1E+05 | 22447 | 20.14 | 100.00 | 123851 | 28605 | 23.10 | 100.00 |

Source: Calculated from Appendix Table



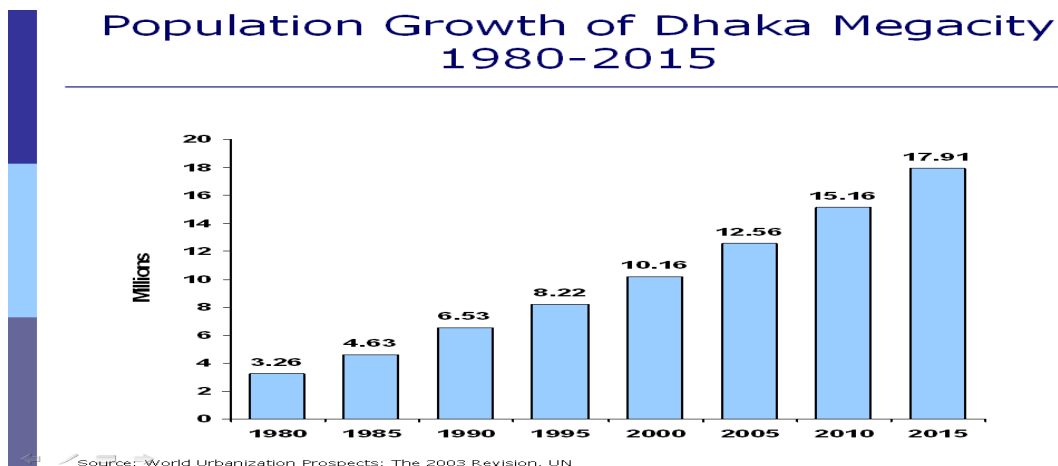
Source: *Spatial and Temporal Patterns of Urbanization in Bangladesh* (Rouf and Jahan, 2009)

Urban Migration and Population Growth in Dhaka City

Dhaka is the largest city in Bangladesh, its capital, and also the financial, cultural, and business center of the country. The total urban area of Dhaka spans about 1530 square kilometers (Islam 2005). About 80% of the garments industry in Bangladesh, accounting for the overwhelming majority of the country's exports, is located in Dhaka city (World Bank 2005b). Dhaka city contributes to about 13% of the country's GDP. Per capita income and literacy rate are higher in Dhaka than in the rest of the country, and the poverty incidence is also lower.

From 1906 to 1991, Dhaka city's area grew by 58 fold and its population grew by over 35 fold (Asian Development Bank 2000). More recently, Dhaka's population grew from 3.26 million in 1980 to a staggering 10.16 million in 2000. In 2005, its population was estimated to have swollen to 12.56 million (Figure 1).

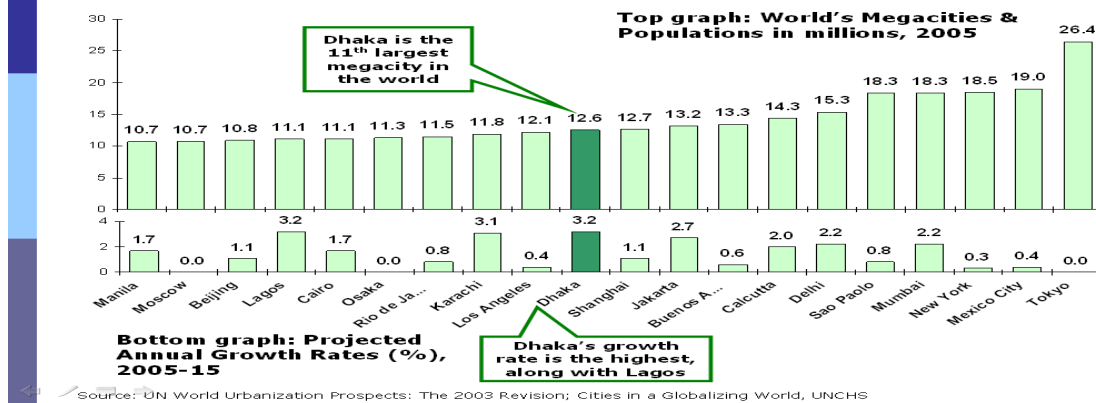
FIGURE 1



With a population now exceeding 12 million, Dhaka mega city currently ranks as the world's 11th largest city (Figure 2). Dhaka is also the fastest growing mega city¹ in the world along with Lagos, Nigeria.

FIGURE 2

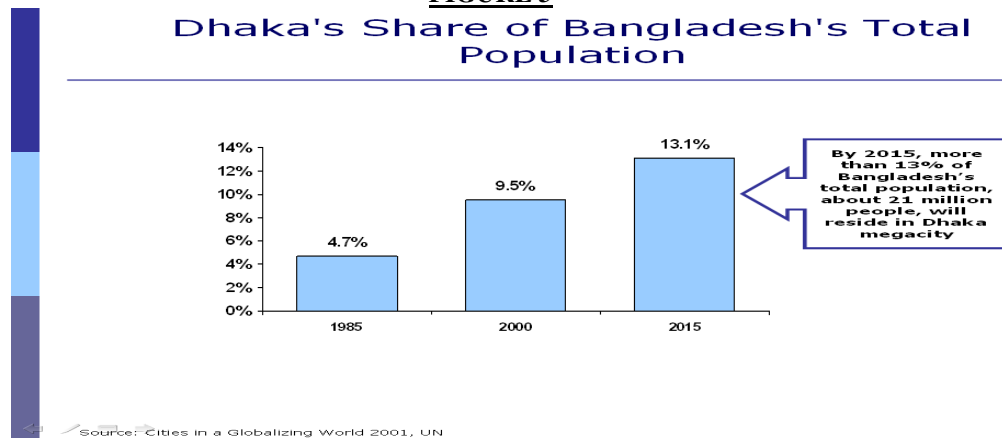
World's Fastest Growing Megacity



Due to this high growth rate, Dhaka's share of the country's total population has been steadily growing, currently at over 10% (Figure 3). By 2015, almost 13% of Bangladesh's total population, a staggering 22 million people, will call Dhaka their home.

FIGURE 3

Dhaka's Share of Bangladesh's Total Population

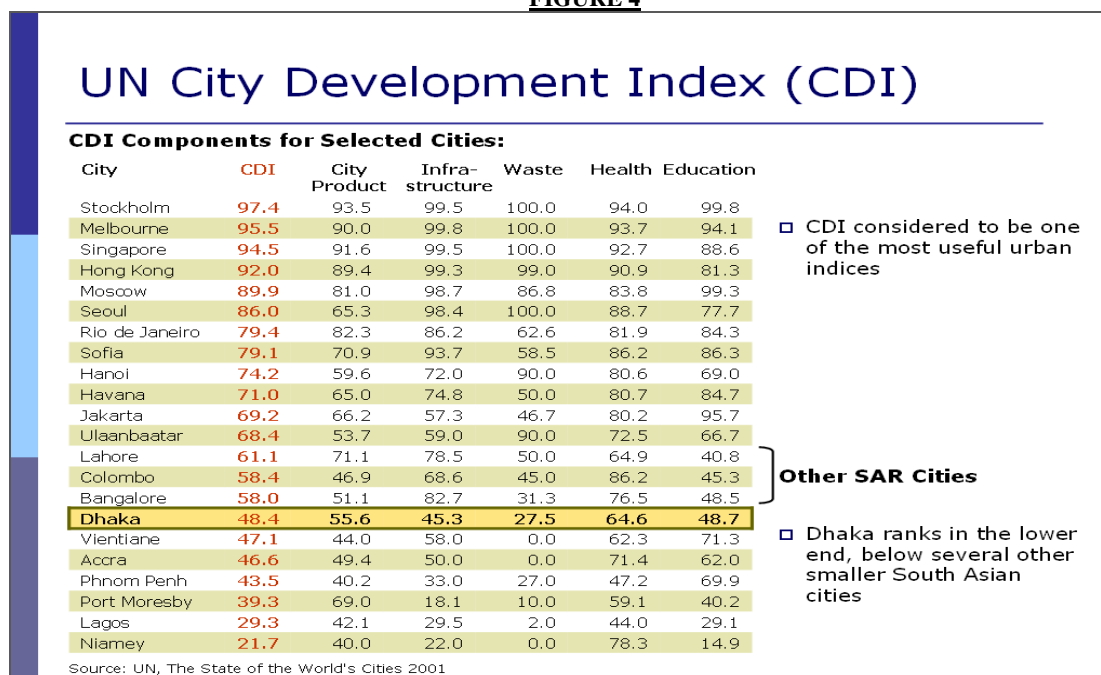


¹ Mega cities are defined as those urban centers with 10 million population or more.

International Comparison of Dhaka as a Megacity

Several agencies have rated the quality of living in major cities of the world. The United Nation's City Development Index (CDI) is considered to be one of the most useful urban indices for comparing cities. The ranking for the latest available year is shown in Figure 4. Out of a possible maximum CDI of 100, Dhaka scores 48.4 and ranks near the bottom of the cities ranked. Importantly, Dhaka is ranked below the three other South Asia cities included in the ranking: Lahore, Colombo, and Bangalore.

FIGURE 4



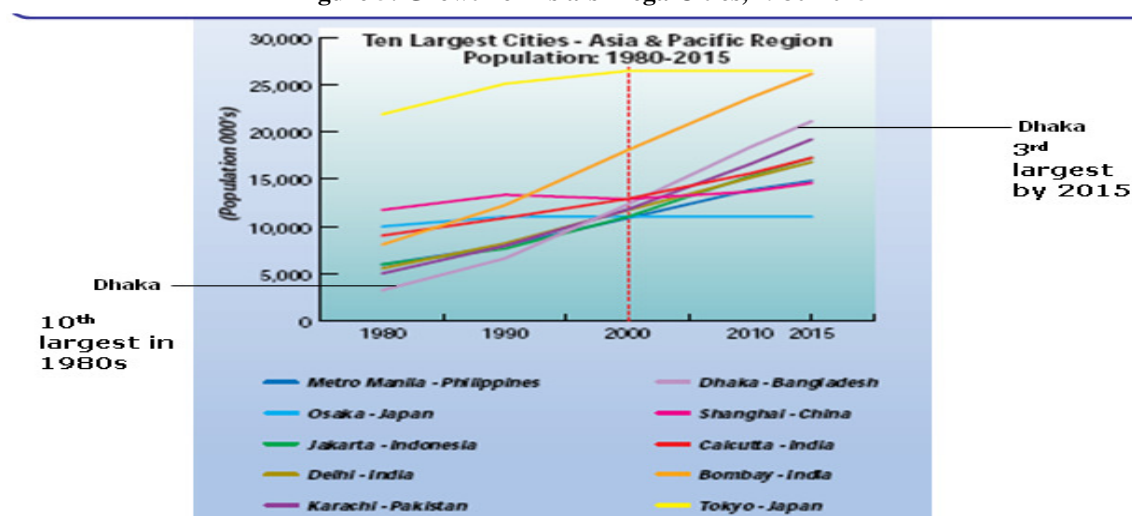
Estimates by UN, World Urbanization Prospects, 1999 projected Dhaka to move up to the 6th position with 18.4 million people in 2010, just behind Tokyo, Mumbai, Lagos, Sao Paulo and Mexico City. The projected populations for 2010 and 2016 have been estimated at 9 million and 10 million for Dhaka City Corporation (DCC) area and 14.88 million and 18.00 million for the Dhaka metropolitan Development Plan (DMDP) area (World Bank, 2007). This can be seen from the Table below.

Table 1: Urban Population and Poor Population in DCC and DMDP

| | Territorial Limit | 2001 | 2004 | 2010 | 2016 (proj.) |
|------------------|-------------------------|-------|--------|---------|--------------|
| | | | (est.) | (proj.) | |
| Urban population | DCC (million) | 5.90 | 7.50 | 9.00 | 10.00 |
| | Rate of growth (%) | (4.0) | (3.5) | (3.5) | 2.50 |
| | DMDP (million) | 10.50 | 12.00 | 14.88 | 18.00 |
| | Rate of growth (%) | (3.5) | (4.25) | (4.00) | 3.50 |
| Urban Poor | DCC (million) | 2.66 | 3.37 | // | // |
| | Share of population (%) | 4.5 | 4.0 | // | // |
| | DMDP (million) | 4.73 | 5.40 | // | // |
| | Rate of growth (%) | 4.0 | 4.0 | // | // |

Source: Dhaka: Improving Living Conditions for the Urban Poor, World Bank (2007).

During the decade from 1985 to 1995, the city's population growth rate averaged more than 7% a year, much higher than any other South Asian mega cities and substantially higher than Bangladesh's average growth rate (Ahmed, A., J.K. Ahmed and A. Mahmud, 2007). Most of Dhaka's growth was due to migration from rural areas. Although the city's population growth rate is expected to slow down, it is still projected to grow at around 3.2% per annum, as compared with 1.7 % for the country as a whole. If this projection materializes, then Dhaka will become the third largest city in Asia and the sixth largest in the world by 2015 (Figure 5).

Figure 5: Growth of Asia's Mega Cities, 1980-2015

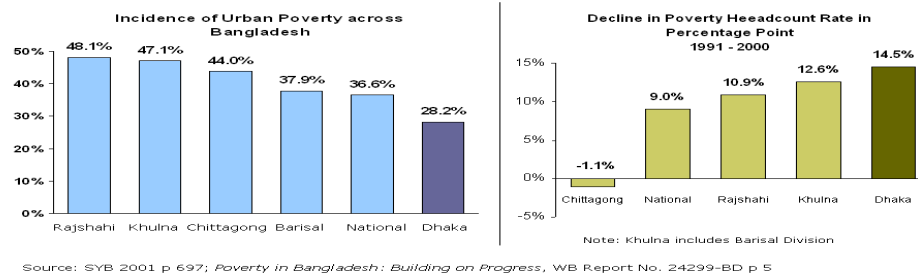
Source: UN-Habitat, 2001a

In terms of poverty levels, 28% of Dhaka Division's population live below the poverty line, according to the Household Income and Expenditure Survey, 2000. However, this is a much brighter picture when compared with other urban centers of the country. Urban poverty incidence

of Dhaka Division at 28.2% is lower than the national urban poverty rate of 36.6% (Bangladesh bureau of Statistics, 2003). Due to dominance of Dhaka city, the Division saw the largest decline

FIGURE 6

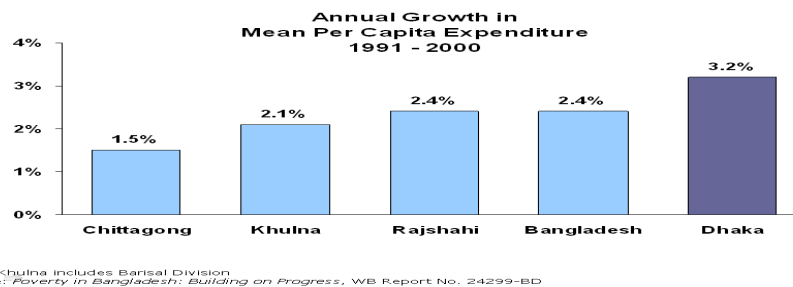
Dhaka Division has the lowest urban poverty rate



in poverty incidence (14.5%) among all the Divisions during 1991 to 2000 (Figure 6). At the same time, Dhaka Division experienced the highest growth in per capita expenditure during this

FIGURE 7

...and Highest Growth



period (Figure 7). While the average annual increase in expenditure for Bangladesh during this period was 2.4%, Dhaka Division's per capita expenditure grew by 3.2% (World Bank 2002). The higher consumption growth accompanied by higher poverty reduction rates in Dhaka compared with the other regions of the country obviously engendered greater inequality vis-à-vis the rest of the country. Thus, gini coefficient in Dhaka is 0.37, compared with 0.31 for the country as a whole, 0.29 for Chittagong and 0.35 for Khulna. This inequality is most telling for household consumption, which is 5 times higher for the richest quintile as compared with the lowest (World Bank 2005).

Driving Forces behind Rapid Urbanization in Bangladesh

With an area of 144,000 square km, the agrarian economy of Bangladesh is experiencing a very high rate of urbanization. In 1974 people living in urban areas accounted for only 8.8% of the

Table 2: Growth of Urban Population in Bangladesh, 1951-2001

| Census year | Total National Population (million) | Annual Growth Rate of National Population (%) | Total Urban Population (million) | Urban Population as Percentage of Total Population (i.e. Level of Urbanization) | Decadal Increase of Urban Population (%) | Annual Exponential Growth Rate of Urban Population (%) |
|-------------|-------------------------------------|---|----------------------------------|---|--|--|
| 1951 | 44.17 | 0.50 | 1.83 | 4.34 | 18.38 | 1.58 |
| 1961 | 55.22 | 2.26 | 2.64 | 5.19 | 45.11 | 3.72 |
| 1974 | 76.37 | 2.48 | 6.00 | 8.87 | 137.57 | 6.62 |
| 1981 | 89.91 | 2.32 | 13.56 | 15.54 | 110.68 | 10.03 |
| 1991 | 111.45 | 2.17 | 22.45 | 20.15 | 69.75 | 5.43 |
| 2001 | 123.10 | 1.47 | 28.81 | 23.40 | 27.38 | 3.25 |

Source: Government of Bangladesh Population Census 1981, Report on Urban Areas 1987 and Preliminary Report, Population Census 1991; and BBS 2005.

population (Table 2). By 2001, urban population was 23.40% of total population. UN data estimates that currently 25% people of Bangladesh live in urban areas. This is indicative of the fact that growth of urban population and labor force is increasing relative to rural population and labor force.

A major cause of urbanization in Bangladesh is that the agriculture sector is no longer able to absorb the surplus labor force entering the economy every year. Inability of the agriculture sector to provide sufficient employment or sufficiently high household incomes to cope with a growing number of dependents can encourage people to seek employment outside agriculture. In the case of Bangladesh the rural to urban migration has contributed to more than 40 percent of the change in urban population (Khan, 2008).

The lure of employment opportunities existing in these cities is another reason for urban migration. Most of the industrial establishments and businesses as well as business services are concentrated in the largest cities. Dhaka alone accounts for 80 percent of the garments industry—the mainstay of manufacturing in Bangladesh. The domination of business services, particularly finance and real estate services is considerably higher in the four major cities relative to the rest of the country.

Positive and Negative Impacts of Urbanization

Like other metropolitan cities around the world, urbanization in Bangladesh has both positive and negative effects on the population and environment, which is briefly discussed here.

Economic activity and income base: Among the urban centers, Dhaka is having the greatest economic impact, being the capital city. The garments industry alone is responsible for almost

80% of Bangladesh's export earnings. Dhaka mega city contributes to about 13% of the country's total GDP. Much of the organized service sector (government, banking, construction, and trade) is also concentrated in Dhaka. Because of this concentration of income opportunities, per capita income in the city is much higher than the national average or for other cities in Bangladesh. Thus, in 1999-2000, average per capita income in the city was about \$872, which is 2.4 times that of the national average of \$363.

Table 3: Year-to-year Growth of Gross District Product by selected sectors (in million BDT)

| | 1996-97 | 1997-98 | 1998-99 | 1999-00 | Growth from 1996-2000 |
|--------------------------------------|--------------|--------------|--------------|--------------|--------------------------|
| Agriculture | 13.66% | 6.51% | -1.27% | 6.36% | 27.1% |
| Manufacturing | 4.46% | 9.17% | 3.87% | 4.57% | 23.9% |
| All Services | 5.49% | 6.64% | 4.81% | 5.96% | 24.9% |
| Wholesale and retail trade | 2.98% | 7.59% | 2.12% | 5.53% | 19.4% |
| Transport, storage and communication | 9.25% | 7.84% | 6.78% | 7.18% | 34.8% |
| Growth of total GDP | 5.28% | 7.37% | 4.15% | 5.03% | 23.6% |

Source: Bangladesh Bureau of Statistics 2001, 2003, 2004

Employment and Education Levels: The rapid migration rate coupled with increased female participation in labor force has led to an expansion in labor force in urban areas, particularly in Dhaka much faster than the national average. Labor force in Dhaka was estimated at 3.5 million in 2000, representing 59% of the working age population in the city (10 years and over), which is 84% of the male and 33% of the female working age population. Services sector accounts for two-thirds of total employment as compared with only 25% for the country as a whole. There is a little bit of agricultural activity on the periphery of the Dhaka metropolitan area but it accounts for some 11 percent of employment. Industry accounts for some 20 percent of employment, of which half are in the garments sector and mostly female workers. This compares with only 10% for the country as a whole.

Education levels of workers is higher in Dhaka than the rest of the country with more than 50% of the employed population aged 15 plus attaining education of class 6 or above. This compares with only 50% for the country. Also, female constitute a third of the labor force in Dhaka, primarily due to the garment sector, as compared with 18% for Delhi and 14% in Kolkata.

Existing Housing: The last statistical survey conducted in 1995 (Islam et. al, 1997) found that 16% of the poor were owners; 56% were tenants; 8% were rent free dwellers and nearly 20% were squatters of illegal occupants. The low ownership rates in Dhaka fares very poorly with comparable Indian cities such as Delhi (ownership rate: 47%) and Mumbai (ownership rate: 59%) (World Bank, 2005) and also with cities in regions such as Middle East and North Africa. In these places ownership of dwelling is the dominant status even for the poor.

The exorbitant land price is at the root of Dhaka's housing problem. Dhaka's land prices are comparable to those in suburban New York or London. Prices are similarly high in most other residential areas of Dhaka, including the periphery. Because of this, it is impossible to make

housing affordable for the poor. Not surprisingly, a heavy concentration of poor has emerged in the slum areas creating all kinds of human and law and order problems. The supply of moderately priced housing also is a major issue.

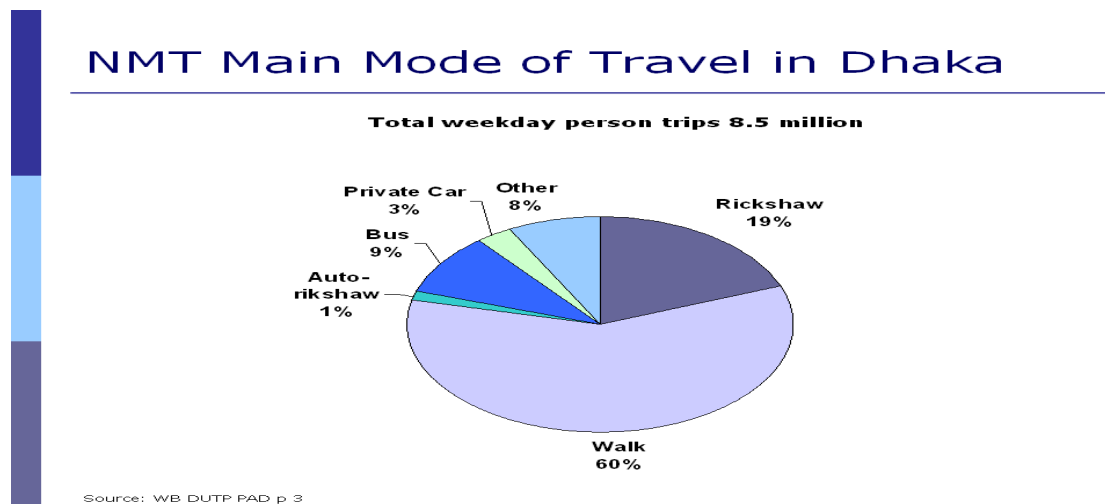
Slums: An inevitable offshoot of unplanned urbanization is the large scale sprouting of slums in the cities. It is estimated that a third of Dhaka's population live in slums (World Bank 2005b). The majority of slum dwellers are under the poverty line: earning less than BDT 4,500/month. Some 15% of households earn less than BDT 3,000, 65% earn less than BDT 4,000 per month. Persistent inequalities in women's wages and male control over female labor persist. Some 53% of husbands do not allow women to work and nearly half of children aged 10-14 are involved in income generating work (Pryer, 2003).

There is an estimated 4966 slum settlements scattered all over the city (Islam, 2005). Living conditions in the slum areas are appalling. Only 43% of the slums are within 100 meters of public toilet. Most garbage is dumped in the close proximity of the slums, which is rarely serviced. Less than a third of the slum population has access to safe water (piped or tube wells). Only 7 % of the slums have a public health clinic and 26% have a government school. In the absence of security of tenure and the persistent risk of eviction, the slum dwellers are a frequent prey to the "Mastaans" (hooligans) for all kinds of extortions and protection money.

According to a World Bank estimate, the proportion of slum dwellers in Dhaka is similar to Kolkata, less than Mumbai, and greater than in three other major Indian cities—Delhi, Chennai and Bangalore.

Transportation: The commuting pattern in Dhaka during the late 1990s is indicated in Figure 8. In the absence of a public mass transit system, much of the traffic relied on private sources, with

FIGURE 8



rickshaws providing the most used travel mode. It is remarkable that a mega city like Dhaka has relied on walking and non-motorized transport (NMT) as the major method of commute (79 percent). On the positive side, the NMT has lowered the potential air pollution while also conserving energy. Additionally, the rickshaws employ a larger number of poor. On the negative side, NMT has contributed to heavy traffic congestion and poses a severe safety hazard.

Delivery of Basic Services: The poor international ranking suggests that access to basic services is relatively poor in Dhaka as compared with other major cities. This is shown in Table 4. Dhaka has done relatively well in providing electricity coverage, but lags substantially behind in other services.

Table 4. Access to Basic Services In Dhaka Compared With Selected Cities (1998)

| City | Ratio of housing prices to income | Access to potable water (%) | Access to sewerage connection (%) | Access to electricity (%) | Access to telephone (%) |
|-------------------|-----------------------------------|-----------------------------|-----------------------------------|---------------------------|-------------------------|
| Dhaka | 16.7 | 60 | 22 | 90 | 7 |
| Buenos Aires | 5.1 | 100 | 98 | 100 | 70 |
| Santiago de Chile | n.a. | 100 | 99 | 99 | 73 |
| Abidjan | 14.5 | 26 | 15 | 41 | 5 |
| Yangon | 8.3 | 78 | 81 | 85 | 17 |
| Rio de Janeiro | n.a. | 88 | 80 | 100 | 59 |
| Jakarta | 14.6 | 50 | 65 | 99 | 25 |
| Ibadan | n.a. | 26 | 12 | 41 | n.a. |
| Seoul | 5.7 | 100 | 99 | 100 | 80 |
| Lima | 10.4 | 75 | 71 | 99 | n.a. |
| Bangkok | 8.8 | 99 | 100 | 100 | 60 |
| Casablanca | n.a. | 83 | 93 | 91 | n.a. |
| Damascus | 10.3 | 98 | 71 | 95 | 10 |
| Ankara | 4.5 | 97 | 98 | 100 | 80 |
| Cebu | 13.3 | 41 | 92 | 80 | 25 |
| Lima | 10.4 | 75 | 71 | 99 | n.a. |

Source: World Bank 2005a.

The high housing price to income ratio suggests the low affordability of housing, which is a basic urbanization challenge. The mismatch in the supply and demand for different types of housing in Dhaka is a critical constraint to housing in Dhaka.

Electricity: Electricity is provided by two public electric distribution entities called Dhaka Electricity Supply Authority (DESA) and the Dhaka Electric Supply Company (DESCO). They both buy power from the publicly owned generation entity called Power Development Board (PDB). An estimated 90% of population in Dhaka has power connections, which compares

favorably with the rest of the country. Per capita consumption is 45kw/hour and demand is growing at 12% per year. However, there are high system losses, around 20-30%. Load shedding, especially in summer, is common due to insufficient peak load capacity. DESA's collection efficiency has improved recently, but losses still remain high.

Water Supply: Some 70% of Dhaka's population has now access to piped water. Piped water is provided by an autonomous water agency, the Dhaka Water and Sewerage Authority (D-WASA). The D-WASA currently obtains most of its water from an over exploited aquifer. Because of the high rate of population growth, access to piped water seems to be decreasing. Dhaka's groundwater level is rapidly declining due to over-use. It dropped 20 meters in last decade. Future development of surface water sources is in danger because of industrial pollution. D-WASA is unable to meet full demand of the city. There is high system loss of 40% and collection efficiency is around 80 percent. However, deficits have gone down in recent years both in absolute liters and as percentage of demand. There are also significant complaints arising from the long time it takes to get connection, illegal payments, and inadequate supply

Sanitation: In 1998, only 15 percent of Dhaka's population had access to sewerage connection through D-WASA, while about 30% of the population had no access to any type of sanitation. This population basically uses roadside drains or other spaces causing tremendous health hazards through water and air pollution. The system of household waste disposal is similarly inadequate. It is estimated that about 3,200 metric tons of solid waste is produced per day. Only about 50% is collected by the city authority for proper disposal. Overall, the sanitation management is grossly inadequate, posing a tremendous health challenge.

Challenges of Urbanization

The challenges of urbanization are:

- Unplanned and unguided spontaneous urbanization with continuously mounting problems;
- Lack of advanced planning for utility services, shelter and infrastructure;
- Lack of advanced planning for road infrastructure and public transportation, installation of electric, gas, water, sewerage and telephone lines;
- Lack of comprehensive urbanization comprising all civic amenities like parks, lakes and other recreational facilities;
- Absence of regulatory framework of urban public land and waterways to prevent their misuse;
- Absence of conscious policy for utilization of urban public land and waterways which could be used as resources for building civic amenities;
- Inadequate environmental concerns for protection of urban waterways, disposal of solid wastes and industrial sludge;
- Lack of concern for poor and slum dwellers;
- Absence of regulatory support for citizen's protection against exploitation by home developers and other private utility providers;
- Absence of strong mechanism for coordination of infrastructure development and provision of utilities in all city corporation areas;

Conclusion and Policy Recommendations

The challenges of future urbanization in Bangladesh are enormous. Poor management, inefficiency and lack of coordination among implementing agencies combined with insufficient financial resources have been aggravating the situation. Failure to address them with a strong and coordinated planning will have disastrous consequences. Sound planning and well thought out strategy, strong coordination and a compact implementation plan supported by ample finance is essential.

Improving City Governance: the Principal Strategy: The key constraints to the effective functioning of the city government are unclear mandate and service responsibilities; lack of accountability; weak finances and financial autonomy; poor coordination and control among service agencies and weak management. These problems call for a major rethinking and wholesale change in city management and its enabling environment. City governments will be organized to manage their functions by themselves, with the central government playing a supportive role. For the urban cities of Bangladesh to be dynamic growth centers it is essential that they have elected and accountable governments with clearly defined responsibilities.

Transport, power, water and sanitation all require capital intensive enterprises and require large investment. The backlog of demand for services suggests large funding needs. However, the country's fiscal situation is severely constrained. Much of the additional funding will need to come from service charges. Indeed, a part of city reform strategy will be to develop viable city government that is able to attract private investment and mobilize public resources based on service delivery and attractive city environment.

Decentralization of Functions and Responsibilities: The theory of decentralization of functions is based on the principle of allocating public functions to those levels of government which can do it best. Based on notions of economies of scale and spatial incidence of benefits certain public expenditures, such as water distribution, sanitation services, solid waste management, local roads management, traffic management, certain aspects of transport services, are best placed at the local level. These have traditionally been part of the responsibility of urban local governments in many parts of the world.

In Bangladesh, the present management structure does not put the full accountability for the city's management in the hands of the mayor and city council. For example, water and electricity distribution—two important services affecting citizens' welfare—are in the hands of the central government. The policing function is managed by the central government.

The push for decentralizing authority to the city level is further strengthened by the need to coordinate the management of services in a city and to avoid undertaking capital investments in a piece meal fashion, (one project at a time). The management of traffic congestion, for example – a critical urban challenge for Dhaka – is not a function of a series of fly-over projects only. It is a joint function of urban land management, in particular zoning and land planning, broader regulation of the transport market, management of traffic police, and finally physical investments in road infrastructure. If different aspects of this policy chain are under the purview of different

tiers of government, the ability of Dhaka to coordinate its traffic movement will depend on the ability to coordinate public sector agencies. Thus establishing decentralization to appropriate levels for achieving greater coordination among public sector agencies will be a strategy of the Plan.

Coordination of Fiscal, Regulatory and Administrative Systems: The ability of city managers to coordinate fiscal, regulatory and administrative systems which influence the efficiency of cities is crucial to improving the welfare of urban citizens. In this context, cities need to be managed as standalone economies where project investments are planned in the context of a coherent city strategy and better understanding of how urban markets perform overall. Where city managers do not have the authority for managing the city as a whole – as a self-contained system – the ability to leverage the productivity of the city to improve the welfare of residents will be limited.

Autonomy to Raise Own Finances: The principle of devolution also relates to the tax side of city management. A separate tier of government needs to have the autonomy to raise its own finances and fund its expenditure responsibilities. In the case of city governments the access to property taxes and some form of “neutral” business or income tax is important for ensuring their accountability. Thus while upper tier of the government sets the tax base for economic efficiency, the ability of city governments to set rates and have autonomy to raise own finances will be reviewed as a strategy to achieve Plan targets.

Good Urban Planning and Sound Incentives: The challenges of urbanization and homelessness discussed earlier point to the magnanimity of the problem in coming years. To meet these issues squarely will need sound urban planning and incentives to facilitate housing, particularly private sector housing initiatives. Job creation should be a part of the strategy so that expansion of employment and income will allow the urban population to move into formal and informal housing. The trend of slums in open spaces transforming themselves into private real estate which has been experienced in the periphery of many urban cities in the developing world appears to be emerging in the periphery of Dhaka and Chittagong at present. This will necessitate urgent steps for improvements in land use planning, property valuation and taxation and improvement of service delivery.

Developing a Sound Real Estate Market: The target of providing decent housing to the rising urban population rests to a large extent upon development of sound real estate or housing market in the near future. The private housing market which was constrained by finance constraints is recently emerging as a major activity. Presently around 80 percent of the housing purchased is from self-finance. As such the housing market serves mostly the upper and middle-income households. Therefore to meet the housing needs of the lower income households the House Building Finance Corporation will be restructured and housing finance in the private sector for lower income households will be encouraged.

Exploring the Feasibility of NGO Involvement in Housing: NGO involvement in housing programs in Bangladesh has been limited. However, some programs exist that offer interesting insights into solutions to this issue. A promising approach to providing shelter solutions to the

poor is the type of projects run by some NGOs which offers cost-effective rental hostel accommodation for female garment workers (World Bank, 2007). The feasibility of replicating such initiatives will be explored as a housing strategy.

Taking Steps for Better Role of Government in Urban Land Management: The pressure of urban housing in the major cities particularly Dhaka ultimately puts focus on the government's land management policies and practices. The limited urban supply of land is subject to competitive claims for commercial, industrial, administrative, educational, recreational, and military use as well as for road building besides demand for residential purposes. As such, sound land management policies are crucial in solving urban housing problems.

Currently various government and semi-government agencies are involved in urban land use and land management in Bangladesh. In the case of development control and building permission, Paurashava authority and metropolitan development authorities are responsible. Planning and development activities and preparation of Master Plans are undertaken by RAJUK, CDA, KDA and RDA. Housing and real estate development is within the purview of the National Housing Authority (NHA) (under Ministry of Housing and Works) and Land Ministry. Town planning is carried out by the Urban Development Directorate. In the case of land policy and land reform, urban area extension the relevant agencies are mainly the Parliament, National Economic Council, Planning Commission, Ministry of Land, Ministry of Housing and Public Works and Ministry of LGRD and Cooperatives. The existing organizational structure for land management makes it difficult to come up with timely responses to the growing needs of a rapidly expanding urban population. Coordination between the agencies and some degree of decentralization is necessary. In this context, strengthening of land management policies through coordination between the various related agencies and some degree of delegation of authority will be an important measure to meet the urban development situation.

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