

Rapid Urban Growth of Dhaka City & Its Socio-Economic Impact

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Abstract: Bangladesh is a most densely populated country consisting of 150 million of population. Its urban population has grown at a yearly average rate of 6% since independence. Urban population of Bangladesh has grown 7 folds from 1974 to 2011. During the last century world population had increased tremendously. The level of urbanization in Bangladesh was 4.33% in 1974 which has been increased at 28.40% in 2011. Total urban population was 6.7 million in 1974 which at present stands at 42.11 million. Dhaka, Chittagogn, Rajshahi & Khulna are the largest cities in Bangladesh. Most of the urban population of Bangladesh lives in 4 largest cities and 40% of the urban population live in Dhaka only. Once Dhaka was a green beautiful city. It was an attractive place to tourist for its natural beauties and historical heritage up to 1980. Now Dhaka becomes an unlivable dirty city.

Transport and Communication system of Dhaka are in a very miserable condition. Inadequacy of Roods, **insufficiency of mass transport and excessive private cars are the causes of traffic congestion.**

Dhaka is the least motorized mega city in Asia. But Dhaka's economy is crippled by highest cost of congestion. Dhaka has the highest congestion index and one of the highest commuting times in South Asia. Average commuting time is 50 minutes and can reach two hours at reach time (World Bank-2012). Long travel time incurs huge cost to both individual and the economy and congestion also degrades air quality of Dhaka.

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Housing problem is one of the main problems in Dhaka city. About 40 percent of urban population of Bangladesh lives in Dhaka. It is estimated that Dhaka needs 65,000 new houses every year & it needs more 4 sp. km. land yearly. According to CUS survey, 33 percent of city land is residential and according to the survey of JICA, area of residential is only 19 percent. In both of the survey it has been shown that 40 percent land is still used in non-urban purposes.

Number of slum household is 1043329 in the urban areas of Bangladesh of which 673883, that is, 64% live in Dhaka. People of the slums lead a miserable in human life- life of animals. In the slums 1500-2000 people live per sq. acre where as in Gulshan it is only 30 people. Besides slums there are 2-3 lac floating people. They sleep under the open sky, Railway stations, Launch ghat and Bus stand and also on the foot-path. Due to fast urbanization Dhaka faces the problem of utility services. The poor international ranking suggest that citizens access to basic services is relatively poor in Dhaka in comparison to other major cities of the world.

Ratio of housing prices to income is higher in Abidjan, Jakarta and Dhaka. It is highest in Bangladesh 16.7. 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 of housing in Dhaka. 20 to 30 Organizations and Department are engaged in performing different functions. There is no proper co-ordination among the organizations and departments. Proper location planning for industries, educational institutions especially Universities & Hospitals is essential to avoid undesirable congestions and sound pollution. To sustain economic development of Bangladesh we should develop other cities and towns to reduce Dhaka's primacy.

Introduction

Bangladesh is a most densely populated country consisting of 150 million of population. Its urban population has grown at a yearly average rate of 6% since independence. Urban population of Bangladesh has grown 7 folds from 1974 to 2011. During the last century world population had increased tremendously. World urban population was only 15% in 1900 which had increased at 52% in 2011. The level of urbanization in Bangladesh was 4.33% in 1974 which has been increased at 28.40% in 2011. Total urban population was 6.7 million in 1974 which at present stands at 42.11 million. Dhaka, Chittagong, Rajshahi & Khulna are the largest cities in Bangladesh. Most of the urban population of Bangladesh

lives in 4 largest cities and 40% of the urban population live in Dhaka only. Once Dhaka was a green beautiful city. It was an attractive place to tourist for its natural beauties and historical heritage up to 1980. Now Dhaka becomes an unlivable dirty city. Growth rate of Dhaka's population is very much high.

Dhaka now becomes a mega city. Dhaka mega city includes Dhaka City Corporation, Narayanganj City Corporation, Kadam Rashul, Savar, Tongi, Pourashavas, Gazipur City Corporation & adjacent thanas. The higher rate of growth of Dhaka's population creates various problems and makes Dhaka an unlivable megacity. Problem of environment, health, transportation and communication make the city unlivable. The city has recently been rated as second least livable city with ranking 139 out of 140 cities.

Population of Dhaka Mega City

Dhaka is an oldest city. It is known to have existed in the 7th century. During the Mughal period Dhaka became a prestigious city of the empire of Mughal. It was named as Jahangir Nogar after the name of the Emperor Jahangir. It was made the

Table 1: Population of Dhaka in the National and National Urban Context 1974-2011

Year	Population of Dhaka (million)	Percent of National Population	Percent of National Urban Population
1974	1.77	3.0	28.3
1981	3.44	3.8	25.7
1991	6.84	5.8	30.5
2001	10.71	8.0	37.4
2011	13.00	8.9	40.00

Source: Calculated from BBS, 1994, and World Bank-2012

Population of Dhaka (percent of national population)
Percent of National Urban Population

Figure-1

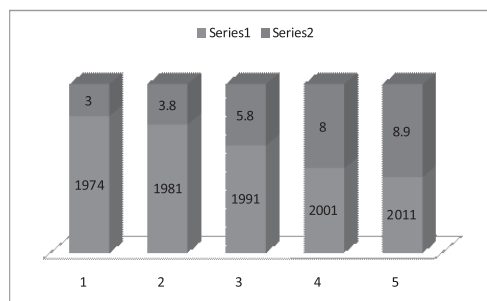
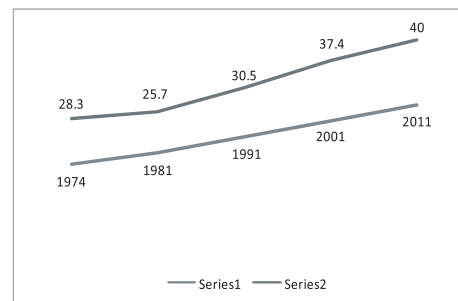


Figure- 2



capital of Bengal in 1608 by Subadr Islam Khan. After the partitation of India and Pakistan, Dhaka was made the Capital of East Pakistan. After independence in 1971, Dhaka was made the capital of Bangladesh. The population of Dhaka increased tremendously during 1971 to 1991. In 1974, 1st Population Census of Bangladesh was under taken. According to the census of 1974 population of Dhaka city was 1.77 million which increased at 6.84 million in 1991. (Table 1 and Figure-1.2)

From 1991 to 2011 Dhaka's population increased at a higher rate & stood at 13 million and in 2014 perhaps it may be increased at 18 million. Only 28.3% of national urban population lived in Dhaka in 1974 which has been increased at 40% in 2011. Dhaka now becomes a mega city where 9% of the total population of Bangladesh lives. (Table 1 Figure 1-2). The area of Dhaka city was 326 sk km in 1974 which expended at 1530 sk. km in 2001 and at present it may be near about 2000 sk km. The contribution of Dhaka mega city to GDP of Bangladesh was 36% in 2009 (WB-2012) and at present it may be above 40%. Rapid growth of Dhaka mega city contributes significantly to the GDP growth and development of Bangladesh but excessive urban concentration in the absence of concomitant improvement urban management and infrastructure carries associated economic cost in the from of congestion and pollution. Such cost is indent in Dhaka. There arise problems of housing, health and environment, sanitation and utility services for rapid population growth in Dhaka.

Some Problems of Dhaka mega city

1) Transport and communication

Transport and Communication system of Dhaka are in a very miserable condition. Inadequacy of Roods, insufficiency of mass transport and excessive private cars are the causes of traffic congestion. Dhaka is the least motorized mega city in Asia. But Dhaka's economy is crippled by highest cost of congestion, in Dhaka compared to other Asian countries, around 90% of the daily travel trips are bus, walk and rickshaw trips and closed to 60% of the trips are Zero emission trips. Dhaka has the highest congestion index and one of the highest commuting times in South Asia. Average commuting time is 50 minutes and can reach two hours at reach time (World Bank-2012). Long travel time incurs huge cost to both individual and the economy and congestion also degrades air quality of Dhaka.

In the main cities areas roads are narrow and mass transportation are inadequate in comparison to population density. In the central city density of population is much higher than other areas. Population density of central city is 26000 &

*Table 2: Number of Garments Industries and Employees
along Different Primary Roads*

Name of Primary Roads	No. of Garments Industries	Percentage	No. of Employees	Percentage
Airport Road	432	31.3	195,485	33.91
Rokeya Sharani	354	25.65	144,973	25.15
Progoti Sharani	353	25.58	144,029	24.99
Mirpur Road	241	17.46	91,967	15.95
Total	1,380	100.00	576,454	100.00

Source: Hoque Shamsul & et al- Road safety garment Industry workers in Dhaka City.

average density of mega city is 13000 per sk km. (WB-2012). Garments workers aggravated the situation further due to spread of garment industries in 1980s and 1990s. Large number of garment industries is clustered on the primary roads

*Table 3: Numbers of Garments Industries and Employees
along Different Secondary Roads*

Name of Primary Roads	No. of Garments Industries	Percentage	No. of Employees	Percentage
Motijheel C/A	146	32.30	68,284	35.63
Elephant Road	75	16.59	34,498	18.00
Purana Paltan	43	9.51	15,718	8.20
Dilkusha C/A	42	9.29	17,832	9.30
Kamal ataturk Avenue	36	7.96	20,169	10.52
Motijheel Circular Road	26	7.96	10,348	5.40
Kachukhet	24	5.75	9,534	4.97
Kafrul, Ibrahimpur	13	5.31	7,175	3.74
Naya Paltan	11	2.88	3,419	1.78
Mirpur # 14		2.43	4,689	2.45
Total	452	100.00	191,666	100.00

Source: Hoque Shamsul & et al- Road safety garment Industry workers in Dhaka City.

(Table-2).

Even in commerical area large number of garments are established. Hoque Md Shamsul and et al found in a study that a total of 2960 enlisted garment industries

are in the heart of Dhaka city where 10,70,754 workers are employed. Factories are found to be clustered along the primary and secondary roads and 72% of the workers are working in these industries. Nearly 47% of the industries are localized in Airport Road, Rokeya Sharni, Progoty sharni, Mirpur Road. (Table 2-3) The study also states that everyday workers of these industries generate 5,82,000 workers movements. The industries of Motijheel and Dilkusha Commercial area generate nearly 68,000 workers movements in the busy central business areas. Garment industries in city areas are the main cause of congestion. According to the Dhaka Chamber of Commerce & Industries loss due to congestion in Dhaka is equal to 3% of this GDP of Bangladesh. Some govt. universities and about 50 private universities are situated in Dhaka city corporation area. There are hundreds and thousands of schools, colleges & Madrashes in city corporation areas which are also responsible for congestion. Large number of employees in govt. and private organizations contribute to congestion.

2) Housing

Housing problem is one of the main problems in Dhaka city. About 40 percent of urban population of Bangladesh lives in Dhaka. Rahman (1996) estimated that Dhaka needs 65,000 new houses every year & it needs more 4 sp. km. land yearly. According to CUS survey, 33 percent of city land is residential and according to the survey of JICA, area of residential is only 19 percent. In both of the survey it has been shown that 40 percent land is still used in non-urban purposes (Nazrul-1996). Excessive land price is at root of Dhaka's housing problem. Dhaka's land prices are higher comparable to those in sub-urban New York or London. (WB-2009)

Dhaka is located in flood plain and surrounded by rivers. These create scarcity of developable land. So population density stands at 24000 to 26000 per sq. km. and in some parts even 1,00,000. Since 1959 RAJUK has developed sufficient only for 16000 housing units or less than 400 unit per year. At the same time the area within its jurisdiction has added more than 6 million people roughly (One Million house hold). (World Bank 2009). Number of higher- & middle-class families in Dhaka is 30 percent and this 30 percent enjoy 80 percent ownership of residential area. Rest 70 percent is the owner of 20 percent residential area and 50 percent house hold have no land of their own. Due to lack of housing facilities and excessive house rent the poor are supposed to live in slums. According to United Nations population fund 47 percent people live in slums. According to the survey of ADB and Ministry Planning in 1996, 32% of Dhaka's household live in jhupris.

According to the report of World Bank 2012, 40 percent population of Dhaka live in slums. There are 9048 slums in the urban areas of Bangladesh of which 53 percent (4966) located in Dhaka. (Table 4 & Figure- 3).

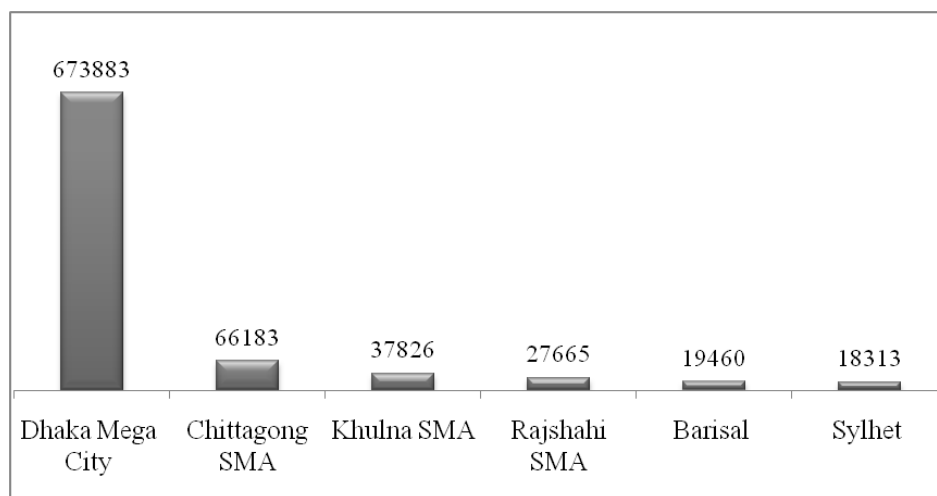
Table 4: Number of slum and cluster between 1997 and 2005 census.

S.N	Name of city	1997 no slums	% of total	2005 no slums	& of total	Household 2005	% of household
01.	Dhaka Mega City	1579	52.79	4966	54.9	673883	64.16
02.	Chittagong SMA	186	6.22	1814	20	66183	25.5
03.	Khulna SMA	202	6.75	520	5.7	37826	3.6
04.	Rajshahi SMA	84	2.81	641	7.1	27665	2.6
05.	Barisal	*	-	351	3.9	19460	1.9
06.	Sylhet	**	-	756	8.3	18313	1.7
07.	14 cities	293	9.8	***	***	-	-
08.	100- Paurashavas	647	21.63	***	***	-	-
	Total	2991	100	9048	100	10,43,329*	100.00

* Number of Population of slums in Dhaka 3286770 & Bangladesh 5233217

Source: Slum of Bangladesh an Overview/economics bd, Posted on March 6, 2011

* Included with Khulna ** Included with Chittagong *** Not coverage



Number of slum household is 1043329 in the urban areas of Bangladesh of which 673883, that is, 64% live in Dhaka. (Table-4 & Figure-3). People of the slums lead a miserable in human life- life of animals. In the slums 1500-2000 people live per sq. acre where as in Gulshan it is only 30 people. (Ahemd 1996). Besides slums there are 2-3 lac floating people. They sleep under the open sky, Railway stations, Launch ghat

and Bus stand and also on the foot-path. According to research report of ADB and planning commission (1996) 89 percent residents of Dhaka live in 1 room & 65 percent live below 100 sq. feet and 96 percent households live in space of less than 200 sq. feet. Houses are built haphazardly without proper planning. Rujuk has no attention in long run planning strategy. In some old residential area, high-rise buildings are permitted where as 20 years before it had permitted only for 5 storied building. These are indication of lack of long rung planning strategy. The high-rise building in the old residential have area created heavy pressure in utility services like water, electricity, sewerage and drainage system. This sort of change in planning strategy of Rujuk clearly a violation of the constitution of the Peoples Republic of Bangladesh. High rise buildings deprive the residents of the 5 storied buildings from God gifted free air, sunlight & moonlight, upon which every citizen has equals right. Derivation of any one from free goods is illegal and inhuman.

3) Utility services Due to fast urbanization Dhaka faces the problem of utility services. The poor international ranking suggests that citizens access to basic services is relatively poor in Dhaka in comparison to other mage cities of the world. This is shown is table No-5.

Table 5: 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.
Banetok	8.8	99	100	100	60
Casablanca	n.a.	83	93	95	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.

Ratio of housing prices to income is higher in Abidjan, Gakarta and Dhaka. It is highest in Bangladesh 16.7 (Table -5). 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 of housing in Dhaka.

It is can be seen from table-5 that Dhaka's position is good in access to electricity (90%) but lacks behind in other services. Only 60% of the dwellers in Dhaka city have access to portable water and 22% have access to sewerage connection. (Table-5). The study conducted by CUS in 2005 shows that 72% of urban population use traditional fuel for cooking and only 22% have access to Gas facilities. Slum dwellers in the city are in a most disadvantaged position in terms of their access to urban utility services & garbage disposal. About 67% of slum dwellers use electricity and 30% still have no access to electricity (Hossain-2008). In another report it is shown that 44% of household have sanitary latrines and small portion of the urban poor (20%) use sanitary latrine (Shahadat-2008) and about 30% of the population have no access to any type of sanitation (Zamal-2010). It is estimated that about 3200 metric tons of solid waste are produced per day. Among them only 50% is collected by the city corporation authority for proper disposal.

4. Environmental degradation

Every man has right to live in a beautiful natural environment. It is a great challenge of urbanization to sustain development without hampering environment. Fast growth of Dhaka city gives birth various social and environmental problems. Huge number of motorized vehicles create air pollution and sound pollution. Black smokes of vehicles & industries contribute to air pollution and it is much above the normal level. Industrial wastes & human waste and chemicals waste pollute soil, water & air of the city.

Sewerage system of Dhaka is very much inadequate. Only 22% household have sewerage connection and 20 percent area of the city are under sewerage system. Large number of kacha toilet still exist (40%) and 40% of the poor use open latrines. Once Dhaka city was known a beautiful and healthy city. But at present it is turned into a dusty and unhealthy beutiless unlivable city. About 40% of the total population of the city lives in slums, over and above, there are 3 lac floating people who use dustbin and open spaces as latrine. Wastes of dustbins are not fully cleared; 42-50% remain scattered in the bins which make the environment polluted. Only a small fraction of the poor household of the slums, use dustbin. In

the recent times use of plastic goods have been increased tremendously. Polythine bags and plastic goods fill up drains and pits causing water logging. The drainage system of Dhaka is in a miserable condition. Rainfall water can not fall smoothly due to unplanned drainage system & closure of the open drains beside roads and natural drains. As a results rain water makes water logging for long time. Surface water entering into sewerage pits all the city is flooded over by dirty water. Industry are one of the main causes of environmental problem. Before 1970 there were a few industries in the heart of the city. In 1994 there were 1042 polluting industries, now the number have been increased. Among the polluted industries tannery 137, steel 48, metal 46, textile 181, Chemical 67, Ruber 28, Tobacco 7, hides 32, plastic 11, dying 145, Medicine 33, welding 187, shaw Mills 57 and Board Mill-2 (Table-6). Since 1980s garments industries were establishing here and there in the city and number of garment industries stand at about 3000 with about 11 lac workers. Most of the industries are localized in the densely populated areas. It is seen from the table-6 that industries are clustered in Lalbag, Mirpur, Sutrapur, Malibagh, Motijheel & Mohammadpur. (Table-6)

Table 6: Thana wise polluting industries in Dhaka City

Thana	Industry number	Polluting industry	percent	Served industries
Malibag	322	85	25.9	29.49
Sutrapur	160	41	25.3	13.53
Quotawali	85	21	25.2	7.80
Bongshal	14	4	28.6	1.41
Dhanmondi	29	3	10.0	1.06
Mohammadpur	48	42	25.0	8.86
Mirpur	272	82	29.7	28.78
Motijheel	63	21	30.8	7.37
Gulshan	6	1	16.6	0.35
Uttara	3	1	33.3	0.35
Demra	40	11	26.4	7.71
Total	1042	282	-	100.00

Source: Bangladesh Urban studies vol-2 No.2 June 1994

It was not justified to allow establishing industries in the heart of city. It is an urgent matter to prohibit any industry in the main city. Shifting of present industries to outside city is a great necessity to make the city livable. Urbanization plays a great role in the economic development of the country but unplanned excessive is not helpful after a certain point. Cost of economic development is much higher and at the cost of sufferings of the citizens. The sufferings are for inadequate utility services, transport, communication and also for environmental hazards.

Ethical Values and City life

In the urbanization process ethical aspect is totally ignored in Bangladesh. Unplanned Urbanization creates problems like housing, traffic jam, scarcity of utility services. Due to housing problems near about 40% of the citizen of Dhaka city lives in slums and the slum dwellers are deprived of basic human needs. They not only live in unhygienic houses & even they also have no access to utility services. All the organizations engaged in providing utility services & organizations engaged in planning & implementation did not play their due role sustaining Dhaka a live able city. Dhaka WASA is not able to supply sufficient water for citizens. Water supplied by the authority is not safe for health. As a result, a large number of people full fills water demand from market which incurs extra cost and sufferings. Lack of proper plan- policy and management, traffic jam becomes a serious problem in Dhaka. Traffic Jam incurs great loss of labour time of the citizens which has a great negative impact on the economy of the country. Planning & Management Policies for city development are not based on ethical values. Degradation of moral values of the citizen as the hold makes the city unlivable.

Conclusion

About 10 percent of the total population of Bangladesh lives in Dhaka mega city. But Management of the city is very much dissatisfactory & it is hard to manage such a large mega city. 20 to 30 Organizations and Department are engaged in performing different function. There is no proper co-ordination among the organizations and departments. Steps may be taken to form some from of city government with greater power and authority for the mayors and other elected representative. Proper location planning for industries, educational institutions especially Universities & Hospitals is essential to avoid undesirable congestions and sound pollution in order to maintain peaceful residential environment. To sustain economic development of Bangladesh we should develop other cities and towns to reduces Dhaka's primacy. Proper planning Management and steps should also be taken to make Dhaka a livable city. For City Competitiveness planning and management actions to be taken to make Dhaka capable of innovative, connective and livable. Road networks are very much important for market access which acts as a vital factor for attracting investment. To make a livable city sewerage and drainage system should be improved and wastes management should be efficient, so as to use wastes as resource for generating economic development of the country. Necessary actions may be taken to use wastes in recycling & fertilizer production. Flyover is not proper solution of congestion rather decentralization of administration & shifting of universities and garments form Dhaka central area to peri urban areas is an urgent need of the time.

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