

## HOUSING FOR MIDDLE-INCOME GROUP OF DHAKA: ROLE OF PUBLIC AND PRIVATE SECTOR

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### ABSTRACT

Fast pace of urbanization and poor economy followed by inequitable distribution of resources have created severe housing problems in Dhaka city, particularly for low and middle income population. With limited resource and capacity, the government has contributed very little to address the housing problem, particularly for middle income group. A number of site and service schemes were the major focus of government which mostly benefitted a privileged group of the society. In response to failure of the public sector, the Formal Private Sector Housing emerged as a dominant force to cater to the housing demand of the residents of Dhaka. Construction of apartment buildings has become a viable solution to meet the growing demand for residential accommodation in the limited land of Dhaka. Real estate business started in Dhaka in the late seventies and by the 1990s the business had started to flourish and expand at a fast pace. At the beginning, the target group of the developers were the upper income group of the society. But recently the private housing companies have shifted their focus to middle income group who are the largest segment of population (about 50 percent) of Dhaka city. Though real estate developers have a commitment to meet the housing demand of middle-income people, the question arises how far the cost matches with the affordability of the middle income group. This research reviewed the government policies and projects for housing the middle income group. It also explored the affordability of the middle-income group to meet the housing cost developed by the private sector. The research has studied the cost of housing and existing modes of payment for housing. Findings have compared with the targets groups' income and affordability. A questionnaire survey has been conducted on 180 middle-income households located in four different middle-income areas who have plans to buy an apartment in the near future. Officials of 20 developer companies (about 10% of total developers who are engaged in construction of apartment buildings) were also interviewed to understand their perspective on the middle-income group. In conclusion, the gap between the housing market and the aspiration of the middle income has been portrayed. The study also suggested some measures to address the housing issue of middle income group.

**Keywords:** Dhaka, housing, Middle-income group, private developers, public sector

### Introduction

Housing is one of the three primary needs and is as equally important as food and clothing. It provides shelter, safety and a sense of belongingness to the owner. It also provides privacy, promotes health and comfort and provides a basis for employment and income generation. It is considered as an integral part of overall

improvement of human settlement and economic development. "Housing" has been defined in 1961 by WHO: 'Residential environment, neighbourhood, micro-district or the physical structure that environs of that structure, including all necessary services, facilities, equipments and devices needed for the physical and mental health and social well-being of the family and the individual' (United Nations, 1976).

Affordability for housing means the housing that the people can afford to buy, operate and maintain within their range of income and other properties (Moniruzzaman and Noor, 2004). According to US Department of Housing and Urban Development (HUD, 2013), the generally accepted definition of affordability is for a household to pay no more than 30 percent of its annual income on housing. Families who pay more than 30 percent of their income for housing are considered cost burdened and may have difficulty affording necessities such as food, clothing, transportation and medical care (HUD, 2013).

### **Housing in the Context of Dhaka**

Dhaka (Statistical Metropolitan Area), the capital city of Bangladesh is stretched over an area of 1,325 sq. km., with a population of 14.5 million (BBS, 2011). After independence, in 1974 the population was 1.4 million (Hasan, 2008). By 2025 Dhaka will be the 4th largest Mega City of the world with a population of 25 million (United Nation, 1999). The annual population growth rate of Dhaka Metro is 4.34% per annum against 1.39% of the national growth rate (BBS, 2008). Average household size is 4.2 (STP, 2005). About 600,000 people are added annually in this city (CIA-The World Factbook, 2011). Share of Urban population is highest in Dhaka and housing is one of the major challenges of this city. Every year, Dhaka generates a demand for 120,000 new units. But the average rate of production is only 25,000 units per year by private sector. The contribution is almost negligible by public sector. Among the private sector, the formal real estate developers contribute about 15,000 units per year. Remaining 10,000 units is provided by individual developers (Seraj, 2012). It needs to be noted that the migrated population of Dhaka is mostly rural poor and middle income population. Their housing demand is typically out of the scope of both private and public sector. As a result, housing for poorer section of the city is a critical issue.

Traditionally people used to buy land and build their own residence. Government also undertook a number of site and service schemes in Dhaka since 1960s to provide serviced plots to the residents. But it supported a very little fraction of the demand. The ever accelerating land price of Dhaka made people attracted to apartment living. Real estate sector emerged in early seventies and gradually flourished. By the end of 2010 it has

reached such a level that many people depend on it (Seraj, 2012). Not only for economic reason, people also prefer apartment living for the provisions of better management, community facilities, security etc.

### **Background of the Research**

Distribution of housing facilities for Dhaka city dwellers exhibits high levels of disparity and segmentation. In Dhaka, 80 percent of the residential land have been occupied by only 30 percent of urban people, and remaining 20 percent area provide shelter to the residual 70 percent of the city dwellers comprised of middle and lower income people (Mahbub-Un-Nabi, 2003). Land speculation is a major problem of this city, investment in apartment and land has been identified as a lucrative sector. The buyer of apartment or land do not need to show their source of income to buy property. As a result, demand for apartment or land is always high which eventually led the price of housing to go up. But the question is, how far is housing demand of the middle or lower income group addressed by the present trend of housing market? Inadequate supply of affordable dwelling units for middle and low-income people is the most severe challenge for housing market of Dhaka. Different government or public sector agencies are engaged in solving the enormous housing problem of the country.

This research reviewed the government policies and projects for housing the middle income group. It also explored the affordability of the middle-income group to meet the housing cost developed by the private sector. The research has studied the cost of housing and existing modes of payment for housing. Findings have compared with the targets groups' income and desire.

According to the income of the households, 50 percent people of Dhaka belong to middle class. Again, middle class is divided into three sub groups: upper-middle, middle-middle: and lower-middle. Samples from these three sub groups have been collected (Islam, 1996; Islam, 2004). In this research target population will be the upper middle and middle-income tenant group living in various localities of Dhaka city. Among these population only those household heads were surveyed who belong to upper-middle and middle-middle income groups and who had a plan to buy an apartment in the next 5 years. The survey was conducted in

2007. Upper middle class is comprised of 20% of total middle class population and 10% of total population of Dhaka city and their household monthly income range is BDT 25,000-50,000. The middle-middle income group includes 40% of total middle class population and 20% of total population of Dhaka city and the household monthly income is BDT 10,000-25,000. Due to lack of authentic income data from national data sources it is very difficult to determine the income range of the target population group. This range has been determined after consultation with a expert group of academic and professionals. Four middle class areas of Dhaka City Rampura, Bashabo, Syamoli and Eskaton Garden area have been selected for questionnaire survey. Except the last one, the other three are predominantly middle class areas with respect to dwelling unit (Nabi et al., 2003). Eskaton garden area is occupied by government officials, and in respect of income, the area is also recognized as a middle class area.

Primary data was collected through face to face questionnaire survey of the middle class household heads in the selected study areas. For this purpose, pre-designed questionnaire survey was conducted on 180 households. Samples were drawn from two categories of middle-income population according to the following proportion: 120 samples from middle-middle and 60 samples from upper-middle class. Primary data has also been collected through interview of 5% of total developers who are involved with the apartment building business.

### Public Sector Initiatives in Housing Sector

Although several institutions have responsibility for housing for different groups, but no notable achievement has been made for the middle-income people. Several public agencies are involved in construction of housing and residential infrastructure projects: National Housing Authority (NHA) former HSD (Housing and Settlement Department), City Development Authorities (RAJUK, Chittagong Development Authority, Khulna Development Authority) and Public Works Department (PWD) of the Ministry of Housing and Public Works, etc. These agencies are developing residential subdivisions for lease to upper and upper-middle income households, and resettlement programmes and site and services schemes for lower to middle-income groups. It has always been difficult to reach lower-income households with the site and services projects and the size of the

combined public housing programmes has remained extremely small in relation to housing requirements and new construction. Altogether, the public sector has only produced approximately 1–2% of total urban residential land and housing requirements (not more than 6,000 units per annum) over the past few years (Hossain, n.d).

RAJUK had developed a number of model towns and housing estates to supply serviced plots and apartment blocks for all residents of Dhaka. In these estates, all sorts of infrastructure and services facilities are provided. RAJUK started its residential area development program in 1961. The organization developed Gulshan, Banani, Baridhara and Uttara residential areas for upper and upper middle class people of the Dhaka city. RAJUK also developed Purbachal, Uttara (third phase), Jhilmil residential project for middle class people of the city. RAJUK also provide rehabilitation plot at Jorashara, Gandaria, Shaympur and Badda areas.

The research of Haque (2012) identified a number of issues regarding allocation of plots in these government projects. He studied the plot allotment categories in Purbachal and Uttara Third Phase projects. The plot allotment categories are mainly on the basis of professional groups and not according to income group. Most of the professional groups (i.e. Armed Forces, Businessman, Industrialist, Government, Justice and MP) belong to the political economic elite strata of the society. Some of them like expatriate and lawyer. Many other professional groups like Artist, Freedom Fighter, Journalist and Private Service may or may not be affluent but still enjoy high social status. In case of Purbachal, there are two categories named *Adibashi* (original inhabitants) and affected. The first one includes people who were living in these lands before their acquisition by RAJUK and other one includes people who were somehow affected by the project. The highest 24% of Purbachal plots are allotted to Government category followed by 15% plots for *Adibashi* category, their plot size is smaller. Mostly bigger size plots are allotted to government category. The other large allocations of plots are 10% for Affected, 9% for Autonomous and 8% each for Private Service and Expatriate categories (RAJUK, 2013; Haque, 2012). One of the major objectives of these public sector projects is reducing acute housing problem. As already mentioned, middle and low income group face the housing problem most acutely but no specific

mention of these groups is found in project descriptions. No specific criteria has been determined to identify the middle and lower income group.

Uttara 3<sup>rd</sup> Phase project of RAJUK has both apartment and plot. RAJUK has already invited application for 1620 sq.ft apartment. A 1620 sq.ft apartment would cost about BDT 5.7 million (1USD=BDT 79). The payment need to be made by eight installments. RAJUK extended the time for application because it only got 35% of the expected applications. The price of apartment is beyond the affordability of the middle income group though it is lower than the price of apartment constructed by the private developers (Financial Express, 2012). People are more interested for plot allotment because allotment of plot to an individual bring immense financial benefit to him.

Public Works Department is responsible for construction of public buildings and housing for government officials. The HSD implemented housing project to rehabilitate the low income and provide housing for the middle-income people including the refugees during the pre-liberation era. HSD established housing estate at Lalmatia, Mirpur and Mohammadpur of Dhaka city. The department constructed 24,000 flats for low and middle-income people of Dhaka city at Mirpur. HSD also constructed flat for low and middle income people at Mohammadpur, Mirpur (section 14 & Rupnagar area) and Badda areas (Jahan, 2002).

### Role of formal Private Sector

From the late 1970s the business started to emerge with five developer companies. The number increased to 42 in 1988. In 1991, Real Estate and Housing association of Bangladesh (REHAB) was formed. In 2012 the number of REHAB members increased to 1,081 (Seraj, 2012).

Real Estate Sector in Dhaka is presently involved in three major arenas, namely Housing Construction, Land Development and Commercial Unit Production. Seraj (2012) conducted a research on private sector housing in Dhaka. His research was conducted during the period of 2008-2010 and covered almost 98% buildings constructed by the private developers. Table 1 shows the salient features of the residential projects constructed by the private developers in Dhaka.

**Table 1: Salient features of Residential Projects by Private Developers**

Attribute	Data
Number of projects	5,913 (45% under construction)
Total Number of apartment units	123,783 (41.7% under construction)
Average Apartment size (sq.ft)	1,525
Average plot size (Katha)	6.9
Average number of stories	07
Average apartment price, 2010 (BDT per sq.ft)	7,640
Average rent (BDT per sq.ft)	15.69

Since the emergence of this industry, private developers focused on higher income group of the society but recently the developers feel that the higher-income apartment market is becoming saturated and they attempted to target the middle income group. In their advertisement they try to attract buyers from middle income group but the question arises whether the price of the apartments are affordable by the target group.

The most serious constraints to offer housing to middle income group is ever increasing land price in Dhaka (Figure 1), lack of mortgage financing and increasing cost of construction material.

With the increasing demand for apartment, scarcity of land and its high price, the housing market has become more costly over the years. Seraj (2012) in his research showed the trend of increase of apartment price in Dhaka (Figure 2).

The average price of per sq.ft. apartment is BDT 7,640 (USD 96.7). This price is never affordable by the middle income group of the city because a 1000 sq.ft apartment will cost about BDT 7,640,000 which is not at all affordable by the income group of BDT 10,000 to 50,000 per month.

### Housing Finance

Finance in the housing sector could be in the form of individual finance or in the form of institutional finance. The individual finance is mostly the domestic savings and resource mobilization, which include specialized savings, postal savings, insurance companies and private domestic sources. The institutional finance include loans from

commercial banks, private banks, private housing developers, finance scheme for the government employees, external funds for housing finance and House Building Finance Corporation (HBFC). Investment is required to purchase or develop land, construct the structure and make provisions for related services.

Commercial banks typically dominate the financial system. Excessive demand induces the banks to lend to risk-free borrowers. Wealthy customers with ample collateral thus gain access to most of the mortgage money and the low & middle-income clients are rationed out. Alternative sources of long-term institutional finance, other than the HBFC, are virtually non-existent in Bangladesh.

Bangladesh Bank in the financial year 2007-08 launched BDT 300 crore under Housing Loan Refinancing Scheme for housing loan. Initially, the scheme was applicable to income group of maximum BDT 30,000 per month and interest rate was 10%. Later, it was revised and interest rate was reduced to 9% and maximum income bar refined to BDT 50,000 per month. According to this scheme, person will only be eligible to get the housing (real estate apartment) loan upto BDT 2.0 million from 15 commercial banks and non-bank financial institutions either for buying or constructing an apartment of maximum 1,250 square feet in six divisional cities along with Tongi, Gazipur, Narayanganj and Savar areas. Only BDT 7.79 crore was disbursed by the banks between July 2007 and April, 2008 out of Tk.100 crore earmarked for the fiscal period 2007-08. But by June, 2008, the refinancing figure stood at Tk.46.34 crore. Maximum amount of loan taken out is BDT 2.0 million with interest rate of 9% and repayment period of 20 years. Considering the current housing price, it is not possible to buy an apartment from private sector with BDT 2.0 million.

Country Name	Interest Rate
India	11.6%
Pakistan	11.5
China	5.56
Japan	2.69
Malaysia	4.93
USA	5.38
England	6.9

Home loan interest rate is ingeneral very high in Bangladesh. Some private and autonomous organizations offer house loan where the interest

rate varies from 10% to16.5% (Seraj,2012). But in developed world this rate is up to 6% and some neighboring countries this rate is 5-11.5%. The Table 2 shows the interest rate of some countries of the world.

### Gap Between Expectation of the Middle Income Group and Housing Market Reality

A questionnaire survey was conducted by the researchers to the potential buyers of apartment from middle income population group of Dhaka in 2007 to understand the desire of the target population regarding the location, price and payment mode in the process of purchasing an apartment from the developer. The researchers also interviewed developers and asked them how they can accommodate the middle income group. The following discussion will focus on views of both potential middle income buyers and developers regarding location, price, and payment issues.

**Location:** The middle-income people mainly prefer the areas like Dhanmondi, Gulshan, Banani, Baridhara, Uttara etc. because these areas are well planned with adequate infrastructure and amenities. But the price of land of these areas are very high, and thus the developers recommended Rampura, Bashaboo, Goran, Mirpur, Badda Madartek, Jigatola etc. areas as suitable locations for middle class people (Field Survey, 2007).

**Size of the apartment:** Nearly 40% respondents of middle-income group have a desire to buy 1,200-1,800 sq.ft. (108-162 sq. meter) apartments (Table 3).

**Table 3: Preference of Buyer Regarding Size of Apartment**

Size of Apartment Sq. M (Sq. Feet)	Upper-Middle	Middle-Middle
72-90 (800-1000)	8.3%	16.7%
90-108 (1000-1200)	18.3%	11.7%
108-135 (1200-1500)	13.3%	17.5%
135-162 (1500-1800)	28.3%	24.2%
162-180 (1800-2000)	18.3%	24.2%
180-225 (2000-2500)	10.0%	5.0%
225-270 (2500-3000)	3.3%	0.8%

On the other hand, the developers suggested that 800-1,000 sq.ft (72 sq. meters to maximum 90 sq. meters) size apartments are compatible for the target group. This survey was conducted in 2007.

In the following year, apartment price increased drastically (Figure 2), thus it is questionable whether it is at all possible for middle income households to buy an apartment in Dhaka from private sector. According to the survey among developers, 74% companies informed that they have programs to construct apartment for middle-income people. But no significant attempt has been found to cater middle income group. Begum (2010) studied to 710 apartment buildings of Dhaka and found that small size apartment is not yet a popular choice of developers (Table 4).

Size range in Sq-ft	1990-1994	1995-1999	2000-2004	2005-2009
400-1000	1	6	3	22
1001-2000	13	58	102	294
2001-3000	1	20	46	107
Above 3000	0	2	18	17
Total number of project found = 710				

Cost of the apartment: Purchasing of apartment involves investment of large amount of money. Table 5 shows that 40% of middle-middle class respondents are able to pay maximum BDT 1,800 per sq.ft. On the other hand, 30% of upper income respondents are able to pay maximum BDT 2,000 per sq.ft.

According to the survey, almost 75% of the upper-middle income respondents can afford to pay BDT 3,000,000 to buy an apartment. In the case of middle-middle class respondents, approximately 72% respondents are willing to pay maximum BDT 3,000,000 to buy an apartment. Almost one-fourth numbers of respondents can afford more than BDT 3 million for purchasing an apartment. In fact, in 2010 average cost of per sq.ft apartment was BDT 7,640.

Cost (BDT) (Per sq.ft or 0.09 Sq. M.)	Upper-Middle Income People	Middle-Middle Income People
1000 taka	6.7%	15.8%
1200 taka	11.7%	9.2%
1500 taka	18.3%	15.0%
1800 taka	26.7%	40.0%
2000 taka	30.0%	14.2%
2200 taka	6.7%	3.3%
2500 taka	0.0%	2.5%

Amount of money for booking an apartment: Majority of the middle class people want to pay

BDT 20,000-40,000 for booking an apartment and they try to manage the money from their savings. The developers usually take 7.5%-10% of the total apartment price or BDT 50,000 as a booking payment, which is not affordable for the target group.

Down payment amount: People usually pay a particular amount of money as down payment when they want to buy an apartment. Nearly 45-50% respondents manage the money from savings and loan from financial organizations or banks. Almost 60% upper middle income group and 30% of middle-middle income group are able to pay more than 0.5 million taka as down payment. According to the survey of developers, 30% developers take 25%-30% of the total apartment price as down payment. But some developers asked for a particular amount of money as down payment. In that case 25% developers take BDT 0.3 to 0.5 million as down payment.

Loan and installment system: Purchase of an apartment involves a large amount of money and the total amount of money is not payable at a time. Majority of the respondents mentioned that at least 60 installments are needed to repay the loan. The target group is able to pay BDT 5,000-15,000 monthly as installment. Developers in their interview mentioned that they offer maximum 48 installments (monthly basis) to pay the total price of the apartment. More than 60% developers offer 24/36 installments to pay the price of the apartment. According to the survey of developers, minimum BDT 20,000-60,000 and maximum BDT 50,000-150,000 per month is defined as installment money. But this amount of the installment money is not affordable by the target group (Survey, 2007).

### Recommendations

The major obstacles of affordable housing market is scarcity of developable land within the city, high land price and high rate of interest of housing loan. To solve the housing problem in Dhaka city, particularly for middle-income people, the government needs to take the major initiatives to arrange serviced land, easy loan and to build partnership with the private developers to construct apartments to serve the middle income group of Dhaka. It is evident that due to extremely high land price it is quite impossible for private sector to meet housing requirement of the middle income

group. If the developers get serviced land from the government than it is possible for them to construct dwelling units for the target population.

Moreover, it is worth mentioning that efficient implementation of policies and regulations is rare in Bangladesh. Though the national housing policy admitted the acute need of housing for poor and middle income group, no significant program has yet been undertaken to address this issue. Land speculation is a major problem in Dhaka City. A large tract of wetland and agricultural land has already been converted for urban residential use but the middle income group cannot afford those (Islam, 2008). There is no effective enforcement of land ceiling act, even though land is the scarcest resource of the country. As a result, wealthy people can keep as much land as they can afford to buy. Investment on apartment or land has become a culture of Bangladesh to ensure economic security of one's own life as well as his future generation. Taxation policies can be applied to discourage buyers from owning a second home. High tax on vacant land can also be an effective tool.

In this densely populated city a significant amount of land is still unused or underutilized. Urban redevelopment/regeneration projects can be adopted. However, following recommendations can be considered to increase the affordability of the target group considering the present context of Dhaka.

As the land price in Dhaka city is very high, the developers can choose those areas on the out skirts of the city where the land price is low. To encourage the buyers and developers, these areas need to be well connected with the city by efficient transport network.

Small size apartment with efficient architectural design can meet the space requirement of the middle income group. The developers should construct 63 to maximum 90 sq. meter (700-1000 sqft.) size apartments for the target group. Government can also offer tax incentives to the developers of small size apartments.

Reducing the amount of booking money and amount of down payment can lessen the financial stress on the middle income group. The developers need to increase the number of installment to repay the total price of the apartment. They should arrange 96-120 installments for the middle-income

group. The middle income group is mostly dependent on loan to purchase an apartment. Interest rate of bank and financial organizations is very high in Bangladesh compared to other countries. These organizations should reduce the interest rate less to than 10%. Particularly for smaller size of apartment, interest rate of loan need to be lower with long term repayment provision.

Still today, plot by plot basis development is the popular trend. As a result, high-rise development is not possible due to restriction of FAR (Floor Area Ratio). Block development with high rise residential buildings can accommodate more dwelling units with better environment and services. Construction of high-rise apartment for middle class people can accommodate a good number of households in one piece of land.

In most of public land development projects, plots of different sizes are distributed among the allottees. Price of these plots is far below the market price. As a result, a single allottee enjoys a huge financial gain because most of the time the recipients of these plots hand over the plot to the developers and get 40-50% share of the constructed apartments. These apartment are sold at market price which is not at all accessible by the middle income group. Public sector is always found interested in plot development project because the privileged group of the society gets the benefit.

Rather than distributing single plot to individual owners, Public agencies can take initiative to undertake project to deliver apartments to the middle-income group. Purbachal and Uttara Third Phase are two very recent housing schemes of the government. The following calculation shows how middle-income people can get apartments at an affordable price.

Calculation of Cost for Apartment in Purbachal Area:

Land price for a 5 *Katha* plot (3600 sq.ft or 335 sq. meter): 1 million taka (BDT 0.2 million per *Katha* (720 sq.ft or per 67 sq. meter).

Apartment size: 1000 sq.ft (93 sq. meters)

Approximate construction cost of apartment including one basement, stair case, lift core, finishing and others: BDT 2,000/sqft. Thus the cost of construction of 1000 sq.ft apartment is 2,000x1,000=2,000,000 (BDT 2.0 million)

If 60% of the plot area is built with a six story

structure then there will be two apartments of 1000 sq.ft. on each floor. If the ground floor is kept open then 10 apartments can be constructed. The share of land price will be BDT 0.1 million. Thus total cost of apartment will be BDT 2,100,000. About 15% consultancy fee to the developer will add BDT 315,000. Final price of a 1,000 sq.ft apartment can be kept within BDT 2,100,000+315,000=2,415,000. This price is affordable to the middle income group. Whereas, according to the average apartment price of 2010 from private sector (Table 1 and Figure 2), apartment of 1000 sq.ft would cost BDT 7,640,000. Use of low cost building material can also reduce the cost significantly.

### Conclusion

Housing the middle income and poorer section of the society is always a challenge, particularly in cities with shortage of land, high density of population and poor economy. Optimum utilization of land with equitable distribution to different income groups is the key concern. As the real estate sector is playing a vital role, they need to be motivated to meet the housing demand of the middle income group. Public sector can support the developers with serviced land and financial arrangements. On the other hand, measures need to be taken to discourage speculative motives of investment on land and plot by the higher income group. More research is needed to determine the affordable housing standard for the middle income group to reduce the gap between their desire and the reality of the housing market. It is evident that the government alone or real estate developers alone cannot solve the housing problem of the country. The cooperation between public and private sectors can ensure progress in providing housing for all in general and middle class people in particular.

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### References

- B.B.S (2008). *Bangladesh Population Census*, (National Series), Bangladesh Bureau of Statistics, Government of Bangladesh: Dhaka.
- B.B.S (2011). *Bangladesh Population Census*, (National Series), Bangladesh Bureau of Statistics, Government of Bangladesh: Dhaka.
- Begum, T (2010). "A study on trend analysis of apartment housing by private developers in DCC area" unpublished MURP Thesis, Department of Urban and Regional Planning, Bangladesh University of Engineering and Technology, Dhaka.
- CIA-The World Fact book (2011). (HYPERLINK "<https://www.cia.gov/library/publications/the-world-factbook/goes/sn.html>")  
<https://www.cia.gov/library/publications/the-world-factbook/goes/sn.html>
- Financial Express (2012) "HYPERLINK "[http://www.thefinancialexpress-bd.com/more.php?news\\_id=136160&date=2012-07-11](http://www.thefinancialexpress-bd.com/more.php?news_id=136160&date=2012-07-11)" at "\_blank" RAJUK Uttara project gets lacklustre response " VOL 20 NO 222, July 11 2012, Dhaka, [http://www.thefinancialexpressbd.com/more.php?news\\_id=136160&date=2012-07-11](http://www.thefinancialexpressbd.com/more.php?news_id=136160&date=2012-07-11)
- Haque, H. K. N. (2012). "The Political Economy of Urban Space: Land and Real Estate in Dhaka City" IGS Working Paper Series No. 03/2012 Published by the Institute of Governance Studies, BRAC University.
- Hassan, D (2008). (edited) *Commercial History of Dhaka*, Dhaka Chamber of Commerce Industry, Dhaka
- Hossain, K. H. (n.d.), "Public Policies on Urban and Housing in Bangladesh - The Context Governance" Ministry of Housing and Public Works Bangladesh Secretariat, Dhaka C:\DOCUME~1\ADMINI~1\LOCALS~1\Temp\Public-Policies-on-Urban-and-Housing-in-Bangladesh-Works-Secretary-1.doc
- HYPERLINK "[http://portal.hud.gov/hudportal/HUD?src=/program\\_offices/comm\\_planning/affordablehousing/](http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/affordablehousing/)"  
[http://portal.hud.gov/hudportal/HUD?src=/program\\_offices/comm\\_planning/affordablehousing/](http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/affordablehousing/) (Accessed Aug, 2013)
- HUD (2013) "Affordable Housing", US Department of Housing and Urban Development.
- Islam, I (2008). *Wetlands of Dhaka Metro Area: A Study from Social Economic and Institutional Perspectives*, AH Development Publishing House: Dhaka

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- Islam, I., Sharmin, M. Masud, F., and Moniruzzaman, M. (2009). "Urban Consolidation Approach for Dhaka City: Prospects and Constraints" *Global Built Environment Review*, 7(1), Edge Hill University, UK, pp. 50-68.
- Islam, Nazrul (2004). The Poor Access to Land and Housing in Dhaka, Paper presented on a Seminar of Dhaka Urban Poor Study of World Bank, Dhaka.
- Islam, Nazrul (ed.) (1996). *Urban Poor in Bangladesh*, Centre foUrban Studies: Dhaka.
- Jahan, A. (2002). "Housing Provision in Dhaka: An Analytical Study of the Role of State and Private Formal Developers", un published MURP Thesis, Department of Urban and Regional Planning, Bangladesh University of Engineering and Technology, Dhaka.
- Mahbub-Un-Nabi, A.S.M. and et.al (2003). "Urban Housing Market-Towards a Demand Responsive Supply", International Seminar Architecture: Overcoming Constraints, held on 11-13 June, 2003, Department of Architecture, BUET, Dhaka.
- Moniruzzaman, M. D. and Al-Amin Noor, M. (2004). "Affordable Housing for Lower Middle Income House-Buyers in Dhaka: Exploring Accessibility to Finance and Land", Unpublished BURP Thesis, Department of Urban and Regional Planning, Bangladesh University of Engineering and Technology (BUET), Dhaka.
- RAJUK (2013)  
[http://www.rajukdhaka.gov.bd/rajuk/uttara3rdphase/flat\\_application.pdf](http://www.rajukdhaka.gov.bd/rajuk/uttara3rdphase/flat_application.pdf)
- Seraj, T (2012). Private Sector Housing, Pearl Publication: Dhaka.
- STP (2005). Strategic Transport Plan for Dhaka. Government of the People's Republic of Bangladesh, Ministry of Communication, Dhaka Transport Co-ordination Board. Dhaka, Bangladesh.
- United Nations (1976). "Housing Policy Guideline for Developing Countries". Department of Economics and Social Affairs.
- United Nations (1999). "World Urbanization Prospects: The 1999 Revision". United Nations, New York: