URBAN POOR’S ACCESSIBILITY TO DECENT SHELTER IN DHAKA CITY
- An exploratory study on housing enablement through the private informal sector -

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Dhaka is one of the most densely populated cities in the world. It is a city of tenants, a third of which are poor and harshly suffering from housing ills. This study quests for decent shelter for city’s poor tenants. Residential land in Dhaka is extremely expensive and short in supply. The

proposition of ‘Tenement Apartment (TA)’ as affordable decent shelter for the poor tenants is assessed in this exploratory study based on ‘affordability, cost recovery and replicability’ concepts. The study further assessed conventional construction customs and financing mechanisms of informal providers and finds their potential to implement the proposition.

Keywords: Affordability, Cost Recovery, Informal Provider, Replicability, Tenement Apartment

1. INTRODUCTION

Dhaka (Bangladesh) is now the tenth largest urban agglomeration in the world with second fastest rate of population growth and has become one of the mega cities of the world (UN, 2004). Present population size of the city is over 12.6 million and about 35 percent of the city dwellers live in informal settlements and are classified as urban poor. Poor quality of housing and lack of tenure security is the direct indicator of these informal settlements where there have no basic urban amenities. The poor are the direct sufferers due to the housing ills and their thirst for decent shelter is somehow overlooked over time.

In Dhaka, residential land for housing is limited due to topographic constraints and extremely expensive. With limited buildable land, high density housing is one of the viable solutions in providing affordable shelter. Tenement houses typically configure with small dwelling units. Usually there are rows of dwelling units where the families occupy limited individual space and share common facilities and services. The concept of tenement houses presents a potential solution to the housing crisis in cities of developing countries and ensures a high-density living at an affordable cost. This study addresses the aptness of TAs to the impoverished city dwellers based on affordability*, cost recovery* and replicability* concepts. To make housing accessible to vast urban poor population, the apportioned cost must be affordable to them without subsidy. As the housing providers possess limited resources, housing programs can only be sustained if aimed at full cost recovery from the beneficiaries.

Policies to supply shelter for the urban poor are not adequately addressed and seem to be ill suited to the realities of Dhaka city where nearly all housing is produced by private informal efforts. The conventional informal provider’s shelter supply policy is very different from the formal housing providers who often provide shelter for the poor and neglected sector in the housing market. This study attempts to explore the informal providers’ latent shelter supply policy and to utilize their energy to meet the growing need for affordable decent shelter by the poor. TAs are still absent in the city’s housing market and proposed in this study to facilitate decent housing production by informal providers who usually supply sub-standard, structurally vulnerable and service deficient housing for the city’s poor.

2. CHARACTERIZATION OF THE PROBLEM AND RESEARCH METHOD

In the simplest form, ‘decent shelter’ means a kind of shelter that meets the minimum standards for habitation, habitable space per person, healthy, hygienic, with basic services, structural safety, security of tenancy, access to community facilities and to work places. The dearth of residential land, high construction cost together with planning deficiencies has made decent shelter beyond the reach of the majority in Dhaka. It results to the poor resorts to dwell in hutments or other forms of temporary shelters which are structurally vulnerable, inadequately equipped, have minimum service provision and create unhealthy environment. There have been a number of government housing projects attempting to alleviate the problem but that failed to attain its goal due to the deficiencies in planning, lack of coordination by different actors, absence of private sector participation and political influences (Begum, 2007). The problem still persists because of the national economic imbalance and poor families continuing search for shelter in the wider urban environment. Hence the main aim of the study is to answer – “How could ‘Tenement Apartments’ play a role to lessen the shelter dilemma of the poor dwellers in Dhaka city?” To attain this aim, the following research questions were

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formulated:
- How far ‘Multi-Storey Tenement Apartment (MSTA)’ is feasible to be an affordable decent shelter for the urban poor in Dhaka city?
- What strategies are adopted by the conventional informal housing providers to produce shelter and how their participation ensures the production of MSTAs?

The poor in Dhaka city are the target Households (HHs) of this study and they are categorized according to HH income. Previous study by Kamruzzaman and Ogura (2008.5) examined housing affordability of middle income groups in Dhaka. Present study is a deviation from past study where housing issues for the poor is a new agenda. The materials for this study were gathered through a field research conducted in 2007-8. The survey was held in Vashantek, in outskirts of Dhaka in typical informal settlements, selected on the method of housing delivery and consolidation process. The survey conducted interview of 50 informal providers and focused group discussion with local leaders. The informal providers housing supply strategies were closely observed during the survey to incorporate their strategies in proposed MSTA production. Besides, the study involves collection of secondary data including statistical records on HH income, housing expenditure, input cost and rental market. Feasibility of MSTAs are assessed based on key concepts of international funding agencies led by the World Bank (WB).

3. HOUSING SITUATION OF THE URBAN POOR AND COST OF LAND FOR HOUSING

There are at least 4,300 informal settlements in Dhaka where the poor live (Photo 1). Only one-in-twenty live in permanent housing and floor area per person is as small as 1.2 sq. m. They live in one-roomed homes made of corrugated iron sheet roof and metal sheet/brick wall. It was observed during the survey that service units and common spaces are provided for 4 to 5 individual rooms, constructed side by side in a row. The poor families share the service and common spaces and the single rooms provide only rudimentary dwelling with lack of privacy and hygienic environment. These unplanned settlements lack urban amenities and services, most acute among the problems. It deteriorates the neighboring environments to great extend and need attention for innovative planning solution. Due to the temporary forms of the dwellings, the poor have easy access to this cheap housing and meet their temporary necessity to live in the city.

The high price of land in Dhaka city acts as a barrier to the supply of housing to all but the highest income group. The price of prime serviced land is around US$ 1,560/sq. m in the central residential areas. The median land price in Dhaka varies between US$ 780/sq. m to US$ 550/sq. m. Land in the least expensive residential areas in Dhaka, is valued at US$ 270/sq. m. Land prices in Dhaka are even high compared to those of in developed countries. WB (2004) found that land prices in Dhaka are similar to those of New York in the USA, while the average income of Dhaka residents is hundred times lower than the New York people. These prices make it impossible for the poor to purchase land in the open market within the metropolitan Dhaka. The cost of housing would be additional.

4. HISTORICAL CONTEXT OF TENEMENT HOUSING IN DHAKA CITY

4.1 Evolution of Tenement Housing in Older Part of Dhaka

Dhaka’s commercial and industrial potentials had attracted increasing number of skilled and unskilled immigrants to work in the capital. This has lead to the evolution of a new habitat like tenement housing in the older part of the city. It was a response to the increasing demand of housing of a commercial and administrative center of a country as well as a way to increase income by letting a part of the dwelling. Thus, the large mansions in old Dhaka were converted to tenement houses (Photo 2). Later, increasing demand, popularity of such houses and the resultant high economic viability lured other owners to convert their dwellings into tenements. Besides, the migrants responded positively to this housing scheme because it supports their survival and congruent with their life-style. Today, there are about 50,000 tenement units providing accommodation to more than half a million people in older part of Dhaka city (Chowdhury, 2006).

4.2 Forms of Tenement Housing in the Old Dhaka

Two distinctive forms, devised out of the necessity and use, can be established in the tenement houses of old Dhaka. The first form is that of the converted tenement houses which are mostly large buildings dating back 50 years. These usually have more than one courtyard which forms the hub of most activities. The other one is the purpose-built two storey tenement houses which usually takes the form of a group of dormitories connected by long corridors. Compared to the converted tenement houses, the purpose built tenement houses are of recent origin. The later were constructed with the motive of acquiring the maximum return. Therefore, instead of having courtyards as an integrator of spaces and accommodator of common functions, long corridor or verandas are used for linkages, circulation and location of shared services. The latter type in the form of multi-storey apartment is recommended in this study.

4.3 Obstacles to Produce Tenement Type Housing in Newly Developed Area of Dhaka City

The reasons that tenement type housing evolved only in the old Dhaka are mainly two. One, old Dhaka being largely a commercial, manufacturing area, attract less-skilled workers who tend to flock to the old city from rural areas; two, there are many houses in old Dhaka that are fit to be used as tenement houses because of their location, ownership, physical pattern and demand. However, most of them are deteriorating and all are concentrated in older part of the city. Transfer of western notions of housing development, lack of housing finance, non-assistive environment for housing investment causes not to reproduce tenement houses in
newly developed area of the city. Besides, housing for the poor remains a neglected sector by the formal housing providers. Thus the preceding section will evaluate the rationale of tenement type housing as a mode of affordable permanent shelter for the city’s poor tenants and the informal provider’s potential to implement the proposition.

5. RATIONALIZATION OF TENEMENT APARTMENTS

The study proposes TA, which is supposed to build with RC frame structure, to ensure adequate structural safety, with minimum habitable space, service and utilities, as a mode of affordable decent shelter. Average household size is 4.8 in Dhaka city (BBS, 2001). Thus per capita minimum floor space will be 3.1 to 5.2 sq. m. (considering the tenement units having floor area of 15 to 25 sq. m). Each floor can accommodate 4 to 8 tenement units on a 235 sq. m plot (leaving 30 percent land as open space as present building by-law). One service unit can be shared by maximum 4 families. Two service units can be provided in case the number of dwelling units, in each floor, exceeds four. In densely populated slums (Photo 1), average per capita floor space is 1.2 sq. m, service provisions are severely insufficient, if present at all (Kamruzzaman and Ogura, 2008.5). House itself needs recurrence maintenance which also needs ample investment every year. These habitats are also cause degradation to surrounding environments. Proposed TAs can provide a basic minimum individual living space, some common space, shared services and utilities within a permanent structure. Thus proposed TAs are deemed to satisfy basic habitation standards and can serve as affordable decent shelter.

Sharing of essential services and public spaces is an effective way of reducing the housing cost. Amenities and common space sharing is a characteristics of TAs, and has been widely applied in other populous cities like Hong Kong and Singapore. This section analyzes the prospects of MSTAs on WB’s trilogy in the light of Dhaka’s prevailing housing de-facto.

5.1 Affordability

House Price-to Income (HPI) ratio is the most important determinant of housing affordability. This ratio provides a direct and easy measurement for housing affordability. National habitat report (GOB, 1996) documented a generalized data on HPI ratio for urban areas in Bangladesh and it was 18.93 in 1996. This HPI ratio is already dated and has obviously increased further during the last 13 years. Thus the affordability estimation in this study analyzes the market and later determines study group’s status and prevailing options.

Fig. 1 (a) is the representation of Dhaka city dwellers annual income distribution and respective income groups’ affordable floor area estimated based on three different HPI ratios. The latest salary scale as of 2005 of the public servants is considered as standard income level of the city dwellers for affordability estimation and put in x-scale of Fig. 1 (a). The pay scale has 22 grades of monthly salary which further categories into 6 income groups i.e. very poor, poor, low income, lower-middle income, middle income and high income group. This study specifically deals with the very poor, poor and low income groups who are regarded as urban poor. Despite the presence of few highly paid private service holders and extremely poor or destitute population, Government’s salary structure is well accepted as median and standard salary to the city dwellers. Details of all input cost of housing production in Dhaka city were analyzed by the previous article by Kamruzzaman and Ogura (2008.5) and the results used here as the minimum cost of a permanent shelter. Fig. 1 (b) is the distribution of total HH number according to annual HH income. Projection from Fig.1 (b) to (a) evidently indicate that the poor urban dwellers can not afford a 20 sq. m. floor area with 12.5 HPI ratio. Even a higher HPI ratio will not bring any significant change in affordable floor space by the study population due to low HH income. It appears from Fig. 1 (a) that housing ownership is a frank dilemma for the city’s poor dwellers where a search for rental affordability is worthwhile. Fig. 1 (b) also indicates the size of the informal housing market in Dhaka city. About 60 percent HHs can not attain minimum living space of 20 sq. m in the formal market3. In addition, Fig. 1 (b) shows that 60 percent of urban HHs depends on informal sub-markets7 who fail to get minimum living space in the formal market. Housing finance is also immature and inadequate in Dhaka and these drawbacks made home ownership totally difficult for the poor. Thus rental market operates largely in the informal sector and play dominant role in city’s housing market and therefore proceeding analysis will search for rental affordability in TAs for the target population.
House rents are found varying within 35-50% of HH’s income in Dhaka. Fig. 2 further illustrates the rental affordability of the study population considering an apartment unit in median land price location. It is evident from Fig. 2 that the bottom two groups still can not afford minimum living space of 20 sq. m at current rental market even spending 45% of their HH income for housing. In reality, the bottom two groups (i.e. very poor and poor) often live in slum areas in hutments and the rest group stay in semi-permanent houses or in squatters in and around the city. Here the study proposes walk-up tenement apartments as permanent decent shelter for the poor tenants. Provision of shared service and common space is often praised for efficient utilization of scarce urban land and common in informal settlements. This not only help large number of residents to reside within the city but also the users’ pay less due to the provision of shared services. A recent study by Chan (2008) explained that shared space exert a downward pressure on housing price in Hong Kong. The higher is the amount of shared space the lower the housing price.

To assess rental affordability in TAs, three types of tenement units equipped with shared services and common spaces are empirically modeled for the target population. Each of the units are considered for some amount of internal private living space, external common space (corridors, stairs, lobbies) and service (communal facilities). In these models, external public space is considered 30 percent of internal private space. The typical models i.e. Type-1, 2, and 3 have internal private space of 15, 20 and 25 sq. m respectively. Using estimates from current rental market, Fig. 3 explores how the different attributes of housing space affect private housing rents. The ‘other’ category included in Fig. 3 denotes those apartments where there is no provision of shared service and space. Monthly rents are estimated accordingly to the rent levels in existing slums and squatters. A gradual rising trend of rent is observed with increase in floor area where the pick rent is found in private apartments with individual service and space.

5.2 Cost Recovery

The financial resources available to most housing providers are limited, yet the numbers needing assistance are vast. It is therefore vital that the majority of investment costs in housing are both affordable by, and recoverable from, the beneficiaries. An unaffordable housing project can run only with subsidy. On the other side, an affordable housing need no subsidy and is expected to be cost recoverable as the beneficiaries will not find stress to pay for their housing expenditure. Figure 4 demonstrates a higher annual rate of return*8 in TAs than that of ‘other’ apartments.

In a typical residential plot, more housing units, similar to Type-1, can be built than Type-2 or 3. Thus an owner-builder can earn higher rental income if he motivated to build Type-1 units in his plots compared to those of Type-2 or 3. Accordingly rate of return will be higher and capital recovery rate will be shorter in Type-1 than Type-2 or 3. Rate of return of the three TA models varies between 13.5 to 15.8% and individual private units have the lowest return rate, merely 9.6%. As well, total capital recovery period of the TA models varies between 6.3 to 7.4 years. Again from Fig. 4, it is evident that shared units have faster capital recovery rate while individual units have slower return rate and longest total recovery period.

5.3 Replicability

Analyzing the rental market of Dhaka city, it is estimated that the cheapest rental apartment unit having individual living space and service is not affordable to 94% poor HHs. Designed TA units with shared space and service can drop the housing cost to an extent that eventually enrich 53% poor HHs to afford the housing cost. As the land price in Dhaka is extremely high, saving in land price is worthwhile and it is axiomatic that the land cost is the first debit what is to be afforded. Comparing a 4-storey TA with other conventional apartments, estimates affirmed that sharing of services and spaces can drop 10% in land cost, 5% in land servicing cost and 13% in structure cost. On average, TAs can reduce 32.9% housing cost than the conventional apartments.

Figure 5 displays the percentage of HHs affordable to each type TA models and total recovery period. It validates that Type-1 and Type-2 models are affordable to more than 51% poor HHs and Type-3 is affordable to 55.8% HHs having moderate recovery rate. These models can not suit rest of poor HHs due to their low

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*8 Annual Rate of Return is the rate at which the investment cost is recovered by the income that the property generates over time.
*9 Cost Recovery Period is the time required to recover the cost of the investment from the cash flows generated by the property.
income level despite the units are the prevailing cheapest solutions. The conventional apartments with individual service and spaces show negative results to replicate housing where the urban poor usually have no access. Private rental housing market in Dhaka is generally excluded to any form of subsidy. As well, rental housing sector in Dhaka operates smoothly due to satisfactory rate of return over other non-housing investment sectors. From 1994 to 2005, house rent indices in Dhaka increase by 39% where the building construction cost index increase by 33%. The construction cost generally can not keep pace with rental income. Thus, the rising propensity of rent can also contribute to replicate TAs in wider scale. However, the participation of informal housing suppliers can best ensure executing and revolving the proposed models.

6. INFORMAL PROVIDER’S SHELTER SUPPLY STRATEGY

The private housing market in Dhaka city is dominated by small scale, self built housing. In the absence of well-established formal land and housing markets in the city, informal sector has been playing the major role to cater the housing needs. The public sector’s contribution is too insignificant and government’s policy is to act as an enabler and the construction of housing is generally left to the private sector and the people themselves. Small-scale builders and developers, owner-builders (self-help) operating in the informal private sector, are the largest suppliers of land and shelters in Dhaka. The dominant role of the informal sector is further revealed in its 90% share of the total owned properties. Rental sub-market in informal settlements is the single largest supplier of housing. Rental housing in Dhaka has been estimated to vary between 70% of the total housing stock in Dhaka. Thus, the proposed TA models are deemed to be best suited for production by the conventional informal sector as they are the largest and active housing deliverer in Dhaka city (Kamruzzaman and Ogura, 2009).

The inability of central and local governments to meet the ever increasing need for shelter, especially by lower-income groups, has created a void which various informal settlement processes have filled. In Dhaka as well as other South-East Asian towns and cities, these new accommodate the majority of all citizens and they take a wide range of socially and commercially motivated forms. Informal housing development have penetrated deep within urban centers, surfacing through spot redevelopment of lots and embedding themselves in the urban fabric. It is an integrated hybrid of contemporary technology, new forms and reinterpreted traditional elements. It can be bland, awkward or whimsical yet is always rational, practical and expedient. Individual owner-builders, landlords design and construct their housing units according to their own choice, need and affordability. The informal builders housing development process remain unnoticed and hence undocumented. This study recognizes not only their indispensable role in shelter supply but also testifies the most accepted housing construction practice. It is important to understand the indigenous shelter production strategy in order to devise a compatible shelter solution for the informal builders. Such a congruent design can ensure their participation into the proposed shelter production.

6.1 Role of Informal Providers in Dhaka’s Housing Market

The informal sector includes partially-legal, illegal and service deficit housing. Partial legal housing is the houses constructed on legally occupied land but violating building by-laws and illegal houses have no legal land title. The dominance of the informal delivery systems over the formal system is focused by a breakdown of the housing stock into sub-categories in Table 1. The informal sector is estimated to have produced 85% of the 1.0 million housing units in the city. The highest segment (85%) of urban housing stock belongs to informal sector; including 50% of the stock belongs to permanent shelter (Table 1). These informal housing deliverers who built permanent shelter is the specific attention in this study and their housing production strategy is described in the following sections.

6.2 Self-help Piecemeal Housing Construction Technique

In self-help piecemeal housing construction process, the owner-builders are intimately involved in the process of creating and controlling modern apartment developments. As articulated in Fig. 6, the owner-builders split the whole construction works into several phases and then build apartments in a gradual process. They first construct their own dwelling unit and then construct additional units for rental use depending on affordability, practicality and expediency (Kamruzzaman and Ogura, 2009). Almost all dwelling units in urban areas are constructed in self-help piecemeal construction process. The owner-builders gradually acquire construction skills during construction and continue constructing apartments over a period of 20-25 years until addition of final floor as designed in the master plan. Urban HHs often adopts self-help incremental construction process to build their shelter as well as for the tenants with minimum dependence of external actors and hence it can save the housing cost to an extent 30-35%. Hence this sector remains consistent in the housing supply chain in a high priced housing market and became the largest housing deliverer in Dhaka. The informal providers gain construction skills during the construction and at time they became proficient. These conventional informal providers are not much aware of the technical know-how to drop the construction cost and to provide shelters for more tenants. The concept of MSTA may appear new to them but it can lower the construction cost and increase housing supply utilizing the same resources as well as accelerate rate of return.

6.3 Incremental Housing Finance

In most cases, informal providers in Dhaka finance their homes through informal channels and from individual endeavors. The informal providers made first investments on a piece of land with a shack. A shack may be transformed into a more robust dwelling, with rooms being added and improved incrementally. Land purchase, service installation and upgrading, as well as housing construction, consolidation and expansion, all are financed at different phases at separate times. Thus the owner-builders often buy land at a single payment but finance the construction cost at their suitable time, incrementally in different phases.
Generally, a typical owner-builder constructs apartment by accumulating funds from various informal sources. It includes savings, selling redundant assets, rural assets, loan from friends and relatives etc. People opt to build dwelling units as far as they can manage financial resources and thus the building construction takes place incrementally, in different phases and Fig. 6 portrayed this phenomenon. Figure 6 shows how the informal providers feed the construction cost. It does not include land purchase phase in order to solely highlight small construction cycles financed by different incremental finances.

6.4 Other Strategies

Use of modern equipments and advanced construction techniques are gradually invading in conventional informal provider’s construction customs. As well, they also depend on local labor force which can generate more employment and is suitable for city’s huge unemployed population. The informal private sector somehow overcomes the financial barrier but lacks proper planning including structural safety. In this regard, MSTA models can assure structural safety as well. One of the reasons behind the booming of the private informal sector in Dhaka is the ingenious construction management. Again, MSTA can be best executed under informal sectors’ management where the whole management remains in the hand of the landlords. Culturally, Bangladeshis, whether rich or poor, are enthusiastic to own a house, which they can handover to their descendants, in addition to renting for income supplement.

7. MEANS OF IMPLEMENTING THE PROPOSAL

In the developing world’s housing literature, there are number of successful examples that delineates what strategies work to provide housing for the poor and what ingrained policies cause housing programs to fail. The in-depth understanding of both successful and failed housing schemes ratifies that affordability remains a key factor that plays a vital role to the ultimate upshot of a housing program. Thus, the first criterion to attain success in housing scheme is ‘affordability’. If housing is under priced, it will be some amount of subsidy. An unaffordable housing needs subsidy as well as external dependence. The poor in the developing countries are often deprived whenever housing is provided with subsidy. Thus, public housing projects in developing countries often fail to reach the poor where the informal providers fill the gap. An affordable housing can ensure good return what is a precondition to attain sustainability in housing. Obviously a sustainable housing is replicable and ‘replicability’ is directly linked with affordability and cost recovery.

It is the aim of this study to look for a permanent shelter for the poor. Permanent shelter is obviously costly where shared services and common spaces can drop the overall cost significantly. In fact, the poor are housed in temporary shelter with shared service and common space. Thus sharing is common and suited to the livelihood strategies of the poor and a positive point to implement the proposition. Vertical development offers an optimum solution in situations where land is scarce and expensive. To reach of the poor, compact housing form is essential where provisions should be at a minimum or basic level. Due to the meager resources, informal providers often provide housing with minimum provision which is affordable to the poor. They provide housing that matches with the livelihood strategies and fiscal status of the poor. The proposed TAs are found to be economically, culturally, socially and structurally viable to the poor and corresponds to their living customs. In Dhaka’s housing market, informal providers are the active providers and they has the highest potential to supply shelter for the poor including TAs. They can build TAs incrementally with their meager resources with no external dependence. Feeding external finance at the supply end can boost the production.

8. CONCLUSION

A relatively large number of neglected poor populations are living in informal settlements in metropolitan Dhaka. Although their contribution to economic upturn is enormous, their housing condition is terribly bad. Land prices in the city are simply too prohibitive to produce decent shelter for the poor. Among the housing options available, TAs offer a promising solution to improve their shelter standards. In terms of planning, TAs hold some good aspects including effective utilization of land resource, reduction in construction costs, affordable renting, accommodation of more families, and faster rate of return which eventually become economically viable both for the poor and the providers. This study has unfolded the foreseeable preeminence of TAs which is found to be affordable to some of the poor people, capital recoverable by the providers. Revolving housing programs are directly depends on these two criteria. The empirical TA models analyzed in this paper provide a comparative match with conventional apartments according to WB’s trilogy. The Type-3 model of this study is the most accessible by the larger population with good rate of return. The other two; Type-1 and Type-2 are affordable to half of the two extremely poor groups. It is expected that the solution can tackle housing dilemma of the poor effectively. On the basis of field research and analytical evidence, the paper concludes by advocating MSTA, as a sensible alternative to the present supply trend that potentially offer a solution to the housing need of the huge urban poor in the city.
Notes

*1 Housing expenditure is universally regarded as a proxy for housing affordability. In this study, ‘affordability’ is considered as a realistic approach to housing supply in terms of what the urban poor could really afford, not a predetermined housing expenditure often set in public projects.

*2 Cost recovery is related to the concept of affordability where ‘user pay’ policy is emphasized rather than the adoption of subsidy.

*3 Replicability is an apparent logical combination of affordability and cost recovery. If the investment costs of housing projects are recovered because they are affordable to the target population, then the successful repetition of such projects become likely.

*4 The current WB’s approach is based upon following implications of three relatively simple concepts ‘affordability’, ‘cost recovery’ and ‘replicability’. In 1980s, a number of Indian cities became the ‘laboratories’ in which this new approach of the WB was tested (Pugh, 1990).

*5 In addition to reference already cited in the main text of the paper, this graph (Fig. 1) has been developed through compilation of data from several sources which includes Islam (2005), GOB (1996) and Haque (2005).

*6 Fig. 1 (a) establishes a relation between cost of floor space produced through formal sector and study population’s fiscal capacity. It makes evident that bottom three income groups cannot attain even 20 sq. m floor space in formal market and thus they need to depend on informal housing. Fig. 1 (b) shows that they represent 60% of all households in Dhaka.

*7 A housing submarket may be defined in its broadest term as ‘an independent subset of larger housing market’. Informal submarkets can be identified on the following ad hoc basis: a) geographic location (spatial submarkets), for example areas grouped by postcodes, b) house type (structural submarkets), for example permanent (flats), semi-permanent, temporary (slums, hatyakans) and c) tenure type, for example owner-occupied, private rented. The study populations are supposed to be housed in various informal sub-markets in Dhaka city.

*8 Land cost is not included in calculating ‘annual rate of return’ and ‘capital recovery period’ as appeared in Fig. 4. Because the estimation is based on the premise that the owner-builders, operate in the informal sector, have some parcel of land, can utilize the same resource effectively by developing TAs instead of semi-permanent houses what they accustomed to build.

*9 Land cost is not included in the analysis due to two grounds. First reason is – a typical owner-builder purchased land two or three decades before when land cost was not so expansive. Due to rapid inflation in land price, it is difficult to establish a clear relationship between previous land price and present construction cost for further estimation. Thus the analysis particularly focuses on construction cost due to estimate rate of return and capital recovery period. Hence land price is excluded to ease the empirical estimation. The second reason is – owner always bear land cost even if small-scale builders are employed for construction. Note 10 briefly explain the nature of involvement of small-scale builders.

*10 Owner-builders often adopt one option between the two, in order to built apartment on their land. In the first option, owner-builders appoint different kinds of labors in building trade and carry out the construction works with extensive self-involvement. In the second option, the owner-builders appoint small-scale builders or micro-developers to minimize the rate of self-involvement and remain in the management of whole construction project. Owner-builders (for example landlord households) shelter development strategy is described concisely in Kamruzzaman and Ogura (2009.6). Apart from the owner-builders, the crucial role of small-scale builders or micro-developers’, is overlooked in the housing literature as shelter producer. Forthcoming paper will focus on micro-developers’ shelter production strategy. The owner-builders and small-scale builders simultaneously operate in producing shelter but the owner always bear all cost related to shelter production including land, materials and equipments. The study recognizes both operators in self-help shelter production process.

*11 Housing programs of Grameneen Bank (GB) in Bangladesh is worth mentioning in this regard. GB provides microfinance for income generating activities as well as for housing for the poor HHs. They provide loan to meet the cost of a basic shelter which is affordable to the poor. The poor use their home for income generating activities as well they return the loan regularly. The recovery rate of GB housing is nearly 100% and thus its shelter production strategy is replicated widely.

*12 Bakeen (1999) reports how a housing program in an Indian city failed due to the beneficiaries’ incapability to bridge the real housing cost and their low fiscal capacity that leads the program’s cost recovery rate to only 5.1% which eventually collapsed.

References


