

Land Price in Dhaka City: Distribution, Characteristics and Trend of Changes

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Introduction

Since the inception of the human civilization all social, economic and cultural activities developed centering land. For this reason, land is considered a valuable and important component of urban system. The pace of urbanization in the developing countries over the next decades is expected to be very rapid. Especially in mega cities, urbanization processes are closely associated with economic aspects and at the same time push up the demands for serviced land for various kinds of urban uses, infrastructure and services. Thus the wise management of urban land is a key issue to guide urban growth and expansion. The necessity of research and analysis of urbanization processes and related issues is undeniable. To address the multidimensional issues of urban development, cities of developing world require an organized and accurate information system on the land market. The updated information on land market would certainly facilitate the process of rational decision making in both public and private sector considering economic, social and environmental benefits. In the process of rapid urbanization, urban land, generally, is considered more valuable than rural land. Hence land market has occupied an important place in urban geography and land economics. The costs of poor land management are enormous since once land has been built upon it cannot easily be reclaimed. The relationship between people and land is often complex, though, it differs between societies depending on their history, culture and legal system. To understand the dynamics of land market and its operation, the prime requirement is updated information on land price at different locations of a city. In most of the developing countries, inadequate supply of developable land for urban expansion is not the main factor but failures of land market due to faulty operating system and absence of adequate taxation measures are some of the key issues.

Dhaka is the focal point and centre of all activities in the context of political, social and economic perspective of Bangladesh. The main stream of our urbanization process is oriented towards this megacity. To cope up with the heavy pressure of urbanization, Dhaka is in vital need of accurate and systematic information about its land market. Private owners and real estate developers dominate land market of Dhaka. There is no control over land price and very few programs have been so far undertaken to regulate the land price in order to ensure wider access of people to land market. Age-old land record system, taxation structure and cumbersome land transaction procedure have made the

whole system unmanageable and inoperative. Any assessment and study on land market must start with an updated land price document. But no such upto date land price record system is available at this moment. It is worth mentioning that land price available at the land registration office of Dhaka is far below the actual market price of land. In the backdrop of such a scenario, this study attempts to prepare an updated land price data of all wards of Dhaka City Corporation area and for some selected fringe areas of Dhaka City. Land market of Dhaka is very dynamic and it is said that land price of Dhaka is increasing over time faster than that of any other commodity of the market. Historic trend of land price changes in Dhaka has also been studied here and a number of physical and planning factors are identified which have significant influence on land price of the city.

Objectives of the Study

The main objectives of this study are:

- To find the current land price in different wards of Dhaka City.
- To find the trend of land price changes over time (1947-2005).

Methodology of the Study

In this study 90 wards of Dhaka City Corporation (DCC) and four fringe areas namely Ashulia, Savar, Kamrangirchar and Keraniganj were considered as the study area to get actual, field level land price data of Dhaka City. Relevant information has been sought extensively from different thesis works; journals, articles in newspapers and periodicals. The Internet has been of immense help to make the study rich. Field visits to all the 90 wards and the fringe areas were made to find the present land prices through consultation with the landowners, ward commissioners and also with the real estate developers. All these sources were utilized to cross check the reliability of data. The land price of all plots of the same ward is not equal. Land price of a particular plot depends on various factors like width of the access road, width of the main road, and distance to the main road and so on. So the land price of the plot near to the main road is obviously higher than the plot far from the main road. To address this variation of land price of different plots within the same ward, a range of price for each ward is considered here. Actually the range is taken on the basis of the lower and higher price of the ward.

The data of official land prices was collected from the concerned office of the Sub Registrar. At the Sub Registrar office, mouza-wise land price was available where the land was categorized into different types, such as land for dwelling, land for agriculture, vacant land, low land etc. and price of land is determined by the quality. Some land price data have been collected from the other important secondary sources like different real estate companies and different thesis works carried out over different periods of time.

The raw data collected from different primary and secondary sources were first arranged in a suitable form for the statistical analysis. Different statistical techniques were effectively used to bring out the findings of the study. GIS software like ArcInfo and ArcView were used for preparing maps and for spatial analysis such as to find distance of different physical features from the study area, to measure the dimensions of roads etc.

Application software Microsoft Excel and SPSS facilitated the statistical analysis to find out the correlation between different physical attributes and land price and perform regression analysis.

Distribution of Land Price in Wards of Dhaka City

In this research the land price of Dhaka has been classified into three broad categories namely (i) Low price wards (below 0.015 million Tk./sq. meter); (ii) Medium price wards (0.015 million to below 0.0299 million Tk./sq. meter) and (iii) High price wards (0.0299 million Tk./sq. meter and above).

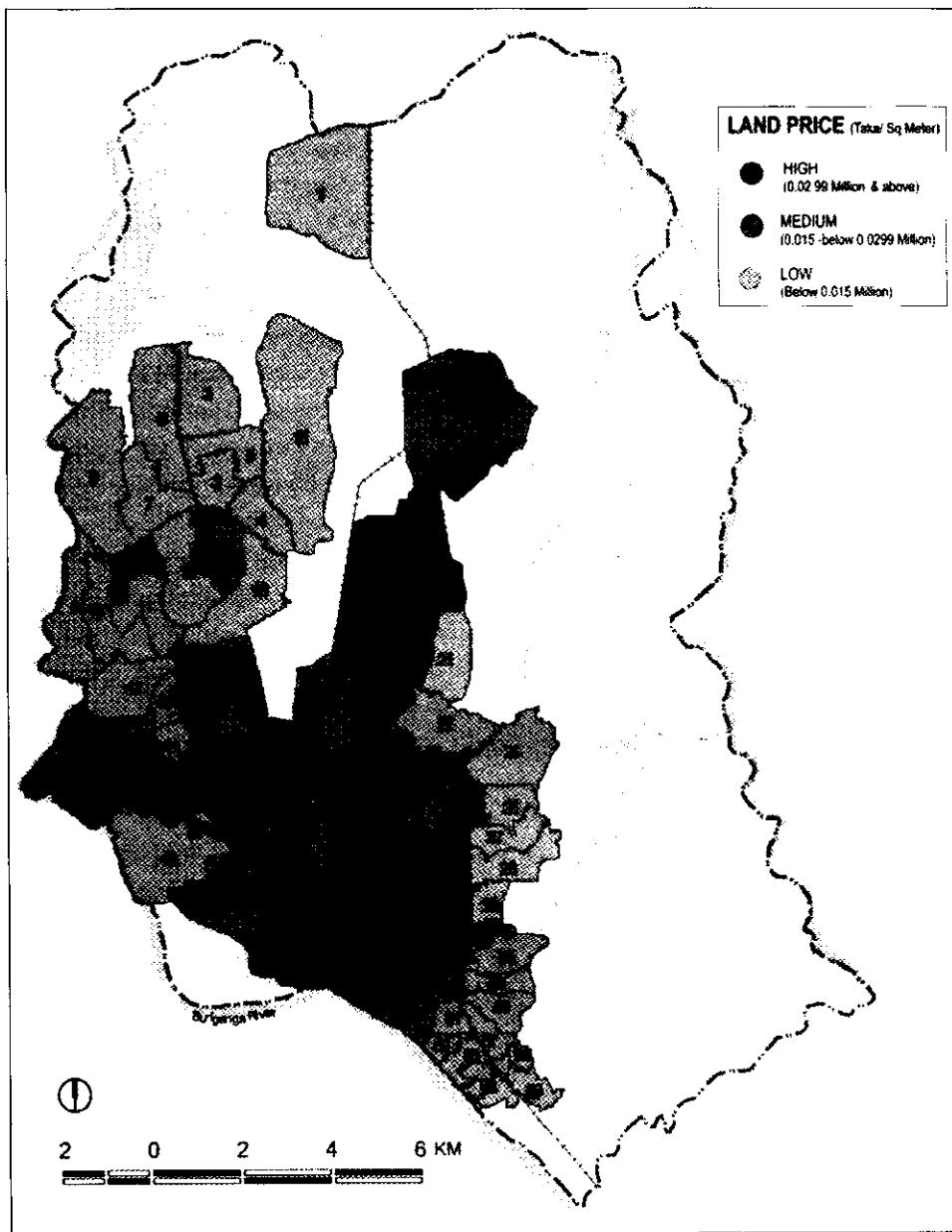
It is evident from Map 1 that the areas with similar land price are clustered at some specific locations. Map 1 shows that the high land price zone mainly prevails at the CBD (Motijheel) and its adjacent areas (Wards 36, 31, 33, 34, 54, 53, 56 etc.) which supports the idea of Northam (1975) that the land value peaks mainly at the city centre where the demand of land is highest. And according to Nelson (1969), this area with highest land price is called the “hundred percent corners” or “hundred percent location” or “peak land value intersection”. Though the high land price zones mostly occupy central part of Dhaka but planned residential and commercial areas such as Dhanmondi, Gulshan, Baridhara, Karwan Bazar (Wards 18, 19, 39) are also included within this category. It is interesting to note that some portion of Old Dhaka still possesses very high land price due to its age old commercial activities and its close proximity to Motijheel commercial area.

Medium priced zones mostly surround the high priced areas with few exceptions like Ward 12 and Ward 14. At the southernmost edge of DCC area a significant portion of Old Dhaka has medium land price. Land transaction in Old Dhaka is very limited and still today land price is comparatively higher in this area even though this is one of the most problematic areas of Dhaka in terms of physical and environmental quality. Low price zones occupy a major portion of the DCC area and are concentrated in the north-west and south-east periphery of Dhaka. These are the newly developed urban areas accommodating expanding urban activities to keep pace with rapid urbanization trend.

Table 1 shows the percentage distribution of wards in different categories of land price. From the table it is seen that 39 percent of wards are comprised of low priced land and 24 percent wards have high land price. These 24 percent wards are mostly situated around Motijheel area and the 39 percent low land price wards are distributed along the periphery of Dhaka City. The rest 37 percent medium priced wards are distributed in different parts of the city. Distribution of land according to these three price categories is shown in Map1.

Table 1. Distribution of Wards in Different Categories of Land Price.

Land Price (Tk./Sq. Meter)	Number of Wards	Percentage (%)
High (0.0299 million Tk./sq. meter and above)	22	24
Medium (0.015 million to below 0.0299 million Tk./sq. meter)	33	37
Low (below 0.015 million Tk./sq. meter)	35	39
Total	90	100

Map 1. Land Price Distribution of Dhaka City.

Source: Compiled from GIS map, DCC.

Land Price of Some Fringe Areas of Dhaka City

The urban fringe is that part of the metropolitan area where settlement is not dense enough to be called urban. Low density development of new houses, roads and commercial buildings causes urban areas to grow further out into the countryside and increases the

density of settlement in formerly rural areas. The urban fringe represents opportunities for growth and innovation, converting agricultural land to urban uses and often involves investments in infrastructures. The fringe area is a kind of partially integrated, semi urban, slum, squatter, stagnant settlements at the periphery of large urban metropolitan centres. Fringe areas in Dhaka City are continuously undergoing changes. Currently Dhaka City is surrounded by fringe areas in all directions. The major development works in these areas are carried mostly by individual households, private developers and partially by the public sector. As a result, the land of those areas is becoming valuable day by day and its price is also increasing. For this reason, during the collection of land price data from different wards of Dhaka City, the land price data of some such fringe areas was also collected through field survey. Table 2 provides information regarding the present land price of some fringe areas of Dhaka City and Fig. 1 shows the comparison of land price of some fringe areas. From Fig. 1 it is seen that among the fringe areas Ashulia and Kamrangir Char have higher land price.

Table 2. Land Price of Some Fringe Areas.

Name of the Fringe area	Land price (Million Taka/ Sq. Meter)
Ahsulia	0.006
Savar	0.0037—0.0045
Kamrangir Char	0.0045—0.0075
Keraniganj	0.0022—0.0045

Source: Field survey, 2004-05.

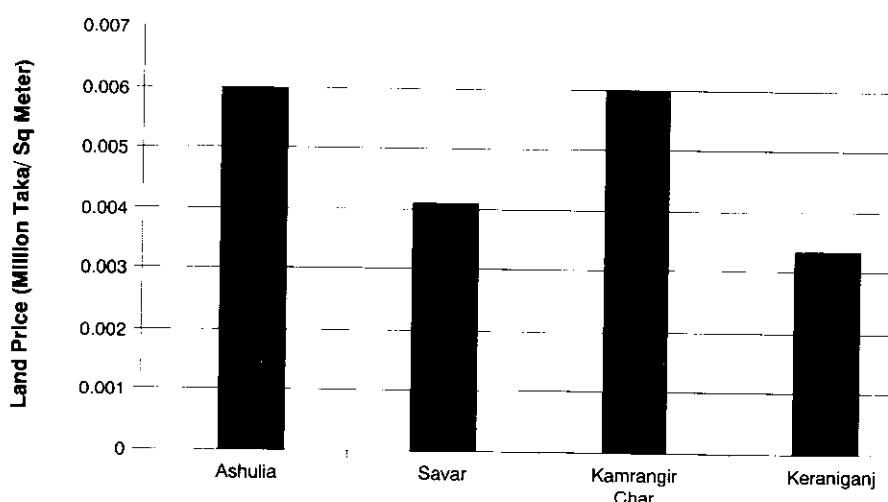


Fig. 1. Comparative Picture of Land Price of Some Fringe Areas.

Source: Field survey, 2004-05.

Factors Influencing Land Price

The land price of an area depends on several factors. Some of the physical factors that influence the land price of Dhaka City are identified here. These physical factors include (i) type of the neighborhood (planned/unplanned); (ii) width of the main road (Wm); (iii) width of the access road (Wa); (iv) surface quality of the main road; distance of the main road from the area (Dm); (v) duration of water logging (Wd); depth of water during flood (Dw); (vi) distance of the nearest market place (Dmp); (vii) distance of the nearest health facility (Dh); (viii) distance of the nearest school (Ds); (ix) distance to the CBD (dCBD).

A correlation matrix has been prepared to display all possible simple coefficients of correlation between the land price and different influencing factors of land price. Table 3 shows the Correlation Matrix between the independent variables and the dependent variable (land price), as well as the correlation among the independent variables.

Table 3. Correlation Matrix

	Land price	Wm	Dh	Wa	Dmp	Dm	Ds	dCBD	Dw
Wm	0.736								
Dh	-0.379	-0.3597							
Wa	0.679	0.6121	-0.29571						
Dmp	-0.439	-0.2682	0.266713	-0.22896					
Dm	-0.573	-0.3799	0.15229	-0.10272	0.4986				
Ds	-0.335	-0.0687	0.274791	-0.21552	0.4669	0.246			
dCBD	0.04	0.3396	-0.0635	0.478922	-0.048	0.264	0.14		
Dw	-0.188	0.0478	0.175102	0.004555	0.5312	0.28	0.358	0.252	
Wd	-0.554	-0.3266	0.443437	-0.20965	0.554	0.49	0.356	0.197	0.728

From Table 3 it is seen that the four dependent variables namely width of the main road (Wm); width of the access road (Wa); distance of the main road from the area (Dm) and duration of water logging (Wd) have high correlation with the land price. Other variables have low degree of correlation with the land price. So width of the main road (Wm), width of the access road (Wa), distance to the main road from the area (Dm) and duration of water logging (Wd) are the most influencing factor in determination of land price of Dhaka City. These variables thus influence the land price within the same ward.

Some Salient Features of the Three Land Price Categories

Land price may be influenced by a number of factors. They may be physical or social, tangible or intangible. Generally land with better access, better facilities and better communication to major parts of the city is of higher price. But there are exceptions also;

the older part of Dhaka can be cited in this regard where municipal services are scarce, facilities are limited and as a result quality of life is poor due to unplanned development. In case of Old Dhaka high land price is influenced by both physical and social issues. Though the physical environment is poor, its locational advantage (close to the CBD) and its commercial importance have put it into the high price category. Moreover social bonding and cultural context of this part of the city often restrain its landowner from selling their property. It must be admitted that social factors are not easy to measure and considering the extent of this study, only the major physical characteristics were taken into account for detailed analysis. It is evident from the above correlation matrix that the land price of Dhaka City has been influenced by some physical features such as width of the main road, width of the access road, distance of the main road from the area and depth of water during flood. The data on those physical features of the selected neighbourhoods were collected through field survey and questionnaire survey. The 90 wards of Dhaka City have been classified into three groups based on their land price, which have been previously discussed. Comparative analyses of these features of the three price zones have been discussed below.

Table 4. Salient Features of the Three Land Price Categories

Features	Low Priced Land	Medium Priced Land	High Priced Land
Average land price (million Tk. / sq. meter)	0.009	0.02	0.04
Average width of the main road (meter)	16	23	31
Average width of the access road (meter)	2	3	5
Average distance to the community facilities (meter)	500	260	200
Average distance to the CBD (km)	2.5	2.6	2.6
Average distance of the main road from the locality (meter)	500	400	260
Average duration of water logging (hr)	17	6	3

Source: Field survey, 2004-05.

Trend of Land Price in Dhaka City

Dhaka has experienced an unprecedented increase of land value since the early seventies. The value of land in Dhaka City, mainly in the central area, has increased at a rate much higher than the rate of any other commodity. Between 1969 and 1979, the cost of living in Dhaka increased 25 to 35 folds (Seraj and Alam, 1989), while land price increased by about 60 to 80 folds.

In the absence of any proper land value records, it is very difficult to compare the land price over the past years. Fig. 2 will provide some idea regarding the increase in land price

of some areas of Dhaka City. It shows the increase of land price in different areas of Dhaka city during different periods of time. It is to be mentioned that data were found in different units (e.g. Tk./acre, Tk./*katha* etc. 1 acre = 4046.86 sq metres, 1 *katha* = 66.89 sq. metres), but for the convenience of the study they were converted to an identical unit of Tk./*katha*. This study is based on ward wise land price. But there is no ward wise data available for the land price in the past years. The data from field survey conducted in 2005 was integrated with the available previous land price data and the percentage increase of land price is shown in Fig. 2. It provides some idea regarding the percentage increase of land price in some selected areas of Dhaka at different time periods. From Fig. 2 it can be observed that land price in Dhaka City has drastically increased between 1966 and 1983. In fact, this increase has mostly occurred after independence which means in the early and mid seventies. Here the time period between 1966 and 1983 indicates mainly the land price changes after independence. In most of the areas, land price has increased at a higher rate in the period 1966-1983 than in the periods 1947-1966 and 1983-2005. It means the land price of Dhaka City mainly increased more rapidly after independence of the country (as for example, in Dhanmondi land price has increased 12,000 percent after independence where as the increase was 2,900 percent before independence).

As Dhaka City became a capital of an independent country, the functions of this city underwent rapid change with the economic and political changes of the country. Its importance increased both economically and politically to the country as well as to the world. During this time the city has started to develop toward north through expansion of the upper class residential area. For this reason during the early seventies the land price of Dhaka City increased more rapidly than in previous years.

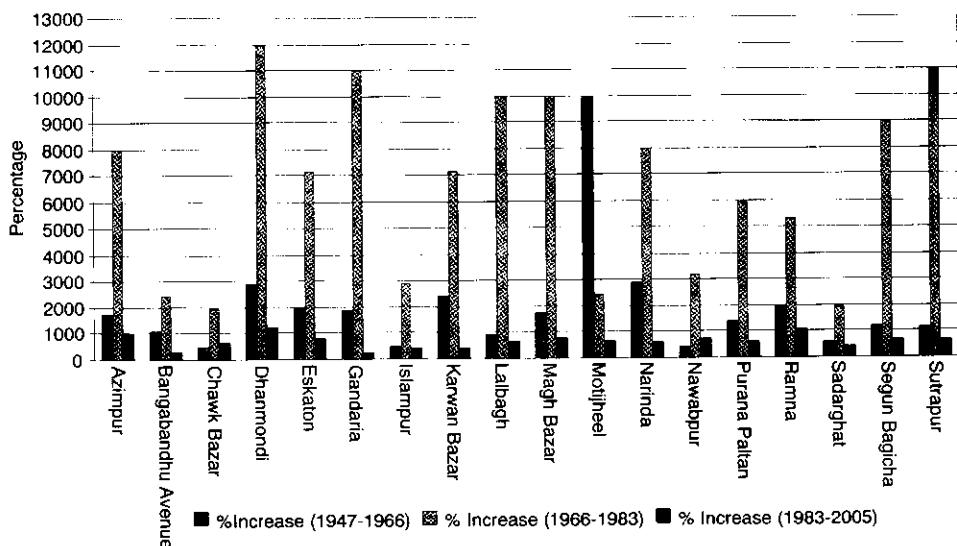


Fig. 2. Percentage Increase of Land Price of Selected Areas in Dhaka City 1947-66, 1966-83 and 1983-2005.

On the other hand, it can be observed from Figure 2 that there is only one area, namely Motijheel, where land price had been increasing more rapidly even before independence (between 1947 and 1966) of the country. It increased by 9,900 percent before independence and by 2,400 percent after independence. This phenomenon can be explained as Motijheel started to flourish as CBD before independence.

Nowadays, real-estate companies have land development and housing projects all around Dhaka City. The activities of these companies have been responsible for the high price of land in many areas of Dhaka City because they pay a much higher price for a good piece of land. For this reason the land price in the areas where developers operate such as Dhanmondi, Gulshan, Banani, Shegunbagicha, Siddeshwari, Shantinagar, Mohammadpur etc. is comparatively higher. The land price in most of the areas of Dhaka City did not increase at a much higher rate in the 1990s in comparison to the past decades. It can be seen from Fig. 2 that among all the areas, the growth rate of land price of Dhanmondi was higher during the time period 1983 to 2005, which is 1,222 percent. In recent years, land price of Dhanmondi has crossed the previous ceiling and developers are competing with each other for a single piece of land.

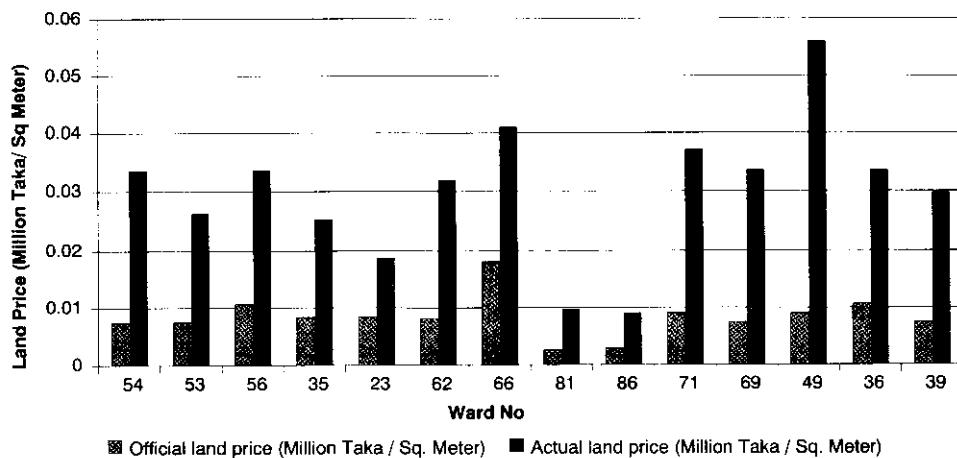
The transformation of land use from residential to commercial causes the increase of land price of an area. For example, the transformation of land use of Dhanmondi residential area to commercial use has made its land price higher than any other planned residential areas.

This is also true for many of the wards of the older part of Dhaka City where the neighbourhoods are not planned and deprived of adequate facilities and amenities. Although there is almost no land transaction in the older part of Dhaka, but some wards with high land price are found there such as Wards 62, 63, 64, 66, 68, 68, 69, 70 and 71. Land price in these areas are high due to their commercial importance since the inception of the city. Most of Old Dhaka is a hub of commercial activities of Dhaka City and plays a significant role in the regional and national economy.

Registered Land Price and Actual Land Price

Transaction of land is made through the Office of the Sub Registrar and every Sub Registry Office contains land transaction records. However these stated prices are usually far below the actual market price. Table 5 and Fig. 3 show the comparison between the official land price and the real land price of some selected wards of Dhaka City.

From Table 5 it can be seen that the actual land price of the selected wards is more or less two to six times the official land price. Since the registration fee is paid on the basis of official land price, every year the Government is deprived of a huge amount of revenue from land transaction. For every transaction of land generally 12 percent of official land price is paid to Government as registration fee. A calculation from the collected data shows that the revenue from land transaction can be increased by more than three folds if the actual price is taken into account. Such discrepancy between the official and actual land price should be eliminated by establishing an effective Land Information System which will result in better management of land and revenue collection.

**Fig. 3.** Comparison Between Official Land Price and Actual Land Price.

Source: Official land price data was collected from the Office of the concerned Sub Registrar and the actual price was collected from field survey.

Table 5. Comparison between actual land price and official land price of some selected wards of DCC

Ward	Official land price (Million Taka/ Sq. Meter)	Actual land Price (Million Taka/ Sq. Meter)	Ratio of Actual land price to official land price
54	0.007	0.034	4.5
53	0.007	0.026	3.5
56	0.010	0.034	3.2
35	0.008	0.025	3
23	0.008	0.019	2
62	0.008	0.032	4
66	0.018	0.041	2
81	0.003	0.01	3.7
86	0.003	0.009	3
71	0.009	0.037	4
69	0.007	0.034	4.5
49	0.009	0.056	6.25
36	0.010	0.034	3
39	0.007	0.030	4

Source: Official land price was collected from the office of the concerned Sub Registrar and the actual price was collected from field survey.

Conclusion

Recently the rate of urbanization is increasing rapidly in Bangladesh. According to the population census of 2001 twenty three percent of the population live in the urban areas. The increasing rate of urbanization is the effect of population increase and rural-urban migration. Increasing population pressure on Dhaka City has severe impact on housing, infrastructure and employment sectors which require land to meet the demand. The land price in Dhaka City has inflated highly due to the limitation of serviced land in comparison to demand. Land plays a very complex role in society – not only as a factor of development, but also as a commercial good. Consequently, every land related decision is surrounded by an array of institutional, administrative, technical, financial, cultural, and environmental and political issues. As a result the information of land market has become an important factor for the following reasons: (i) to regulate land market and to avoid artificially created land crisis; (ii) to ensure equitable access to land by citizens; (iii) to overcome the problem of land speculation (iv) to ensure proper revenue collection from land transaction. Establishment of database information on land price of an area is an essential first step toward making local land market more efficient. The information of land price can be used to gauge market performance, identify future needs for infrastructure and to control development.

In this study an attempt was made to give an overall land price picture of Dhaka City as well as to establish a database information system of land price of Dhaka City. It is very difficult to get detailed information on land price of a megacity like Dhaka due to the lack of correct and reliable sources. The city system is typically dynamic or unstable. The information of land price distribution and the land price database system helps decision makers and planners to understand and analyze the dynamic urban structure of Dhaka as a capital city. Thus planners can take proper and efficient steps for planning urban development.

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