A STUDY ON LAND SPECULATION BY INDIVIDUAL LAND HOLDERS IN DHAKA AND POTENTIAL REGULATORY MEASURES

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CANDIDATE'S DECLARATION

It is hereby declared that this thesis entitled "**A STUDY OF LAND SPECULATION OF INDIVIDUAL LAND HOLDERS IN DHAKA AND POTENTIAL REGULATORY MEASURES**" has not been, either in whole or in part, previously submitted elsewhere for the award of any degree or diploma.

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Session- October, 2009

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Dedicated to

My Parents Nur Muhammad Mian and Jahanara Khatun

For their unconditional love, inspiration and

never ending supports and prayers

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ABSTRACT

For the rapidly increasing population in Dhaka demand for new housing is increasing. But buildable land, a precondition for housing, is gradually decreasing in Dhaka leading to sky rocketing price comparable to that in suburbs in New York or London. Different studies indicated the presence of speculation in the land market of Dhaka. The study seeks to investigate the nature of land sale (by individual land holders) in Dhaka city. The objectives of the study are to understand the location and nature of land designated for sale by individual land holders and to explore the pattern and reason of sale of land/plots by individual land owners. In addition, it has taken objectives as to explore the relationship between land sale and potential speculation by individual plot holders and to find out the potential regulatory measures to control the speculation. For this research, only the individual land holders have been taken into consideration. From print and online media, advertisements given for selling land were collected and after scrutinizing them a total of 1087 lands advertisements were considered for the study. With 95% confidence interval 284 samples were taken to survey by telephone and 10% of those (i.e. 28 in number) lands were taken to survey physically. The behavior pattern of individual land sellers and if any presence of speculative motivation were tested to find out. 59.6% of the sample lands have been found as flat land originally i.e. at the time of owning and rest 38.1% plots were either pool, or pond or low land. Among those lands, 38.1% (90) land holders developed their lands later. Lands are at the potential location for making house on those because 90% of the plots have road abutting them and only 10% plot or lands have no road connection yet. Although most of the plots are ready for construction of house and surroundings are developed, the plot owners are selling them may be because of speculation. Based on holding lands unsold and unproductive more than 10 years 39.5% land holders are suspected as land speculators. In addition, 48.59% land holders can be suspected as land speculators because they have changed their primary intention of land buying to just earning money. In case 63.73% lands, no attempt was taken to build up houses though surrounding lands have housing on them. There are 60.21% plots having houses on adjacent land but that plot is not attempted to be developed yet, can be suspected as speculators. 6.75 years can be taken as normal time of housing. Moreover, if any land holders do keep land unbuilt more than this period, he/she may be suspected as land speculator. Maturity period of land speculation have

been found as 6.63 year. There is speculation in the land market in Dhaka at least 39.5%. This speculation has to be taken into consideration to regulate. For that, government authority along with people of the society should have some measures to regulate speculation for the sake of the city to be grown properly.

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CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Dhaka, the capital of Bangladesh is the second fastest growing city in the world with an average annual population growth rate of 3.78% from 2000-2015, which was 6.17%, globally highest, in between 1975-2000 (UN, 2004). Having an acute housing crisis (Nahrin, 2009), Dhaka needs at least 0.1 million new household units every year (Seraj & Islam, 2014). According to Jahan (as mentioned in Mahmud, 2013) most of the people in Dhaka cannot afford housing of their own; only 30% dwelling units are owner occupied. So for the rest 70% households there is a huge need and demand for residential land and housing units.

Buildable land, a precondition for housing, is gradually decreasing in Dhaka leading to sky rocketing price comparable to that in suburbs in New York or London (World Bank, 2007). Only few people in Dhaka, of whom more than 65% are tenants (Jahan, 2011), have the ability to buy it. Yet, a significant portion of land holders keep their plots vacant without building any house. In fact, "people can readily sell off their land if there is an urgent need for cash" (Haque, 2004, p 115). 61% of low income allottees even in Uttara Model Town left their plots vacant and later a significant portion of plots were sold out to other people (Akter, 2011). A 300% increase in land price in Dhaka and its outskirts between 2000 and 2007 (Mahmood, 2013) gives clue to the scope for liquidification of the asset and to potential land speculation in Dhaka.

A group of people buy land or serviced plots from public or private land developers with no intention of construction but only to sell them off in future and profit making which can be defined as speculation. According to Makwarimba & Ngowi (2012) land speculation is where land is bought by prospective and actual investors but is not developed and land remains idle and unproductive but inaccessible to others who could have made use of it. Also according to Lindeman (1976) the *speculator* does not envision any important immediate economic use for his land; he holds it in order to have it ready for some anticipated future use. He buys land specifically in order to acquire a future profit due to an anticipated increase in the market price of the land.

Linderman (1976, p. 143) also defined speculation as "A key element in any speculative market is the expectation that at some time in the reasonably near future someone will come along who will buy the land, at a high enough price to make the return over the holding period to the speculator"s investment worthwhile."

Though there are few usefulness of speculation, but bad impact is more powerfull. Speculation does often hold off development until the time the speculator thinks will yield a greater return, hence leaves land underused relative to its current potential (George, 1879, p. 264 mentioned in Foldvary, 1997). According to Foldvary (1997), land speculation both adds to malinvestment by shifting financial capital away from investment in capital goods to buying land, and that speculation also contributes to distortions by making the land-appreciation due to unpaid-for public works part of the profit.

Studies (Kashem et al., 2008; Akter, 2011; Nahiduzzaman, 2006; Islam 2008; Satu, 2009) have indicated that perhaps vigorous speculation is taking place in the land market in Dhaka. The households, both buyers and sellers, tend to demand and supply land from short term profit motive both in terms of real and speculative investment which does not always move along with demand and supply schedule (Manusher Jonno Foundation (MJF), Uttaran and CARE Bangladesh, 2014).

Again RAJUK and other government agencies can cover only three percent of housing demand and consequently private land developer companies (PLDCs) have come forward to provide serviced land for housing, at cheaper rate, in fringe areas (Haque, 2004). Islam, et al. (2009) also support the claim of the previous study: more or less out of 5,500 hectare lands were converted to urban uses in between 1983 and 1991 of which around two-third were in the fringe areas, and the rest in the central city. However at the same time, the population increased only 30% in the fringe areas and 70% in the central urban areas (Fatema, 2003). These studies raise a question about the real purpose of land conversion and land development (business) in fringe areas. Nahiduzzaman (2006), therefore, thinks that non-individual speculators in the land market hold significant amounts of land especially in fringe areas.

Islam (2008) states: the target of private land developers is "mostly high income group who consider investment in land secured and highly profitable". Both Islam

(2008) and Haque (2004) are unanimous that marginal (individual) buyers and non-individual i.e. entrepreneurial sellers - private land developers and real estate companies are merely and mainly "land speculators". That is why more than 1500 private real estate and land developers are now active in Dhaka; of them 1081 are registered with REHAB (Dewri, et. al. 2012). So we find that there are two types of speculating stakeholders, at least, in land market in Dhaka – individual buyers and private enterprises. This study seeks to explore perception regarding buying land and rate/frequency of resale by individuals, initial condition of land/project when bought and if any attempt at all been made by them to construct house.

On the other hand, Chowdhury (2013) observed that very few studies have been conducted on the low and middle-income groups in the urban areas despite the fact that these two income groups substantially contribute to the national economy. Several issues were identified after reviewing notable studies conducted on the housing issues in Dhaka: housing market and rental market are out of reach of middle-income households due to price escalation (Heilig, 2012); housing affordability problems persist in Dhaka largely due to the failure of the government to initiate proper policies (Farzana, 2005); recommendations proposed in the Dhaka Metropolitan Development Plan (DMDP) on the low-income and slum-dwelling households are not objective and political process is one of the main barriers to effective policy making (Nahiduzzaman, 2006). Considering the fact that a clear lack of policy support exists at different levels of the government, several studies (Chowdhury & Chiu, 2011, Chowdhury, 2013 and Seraj & Afrin, 2003) emphasized on the importance of investigating the policy environment and institutional setup related to the housing sector in Dhaka. Therefore, this study also tried to find out some policy to handle the speculation.

Mainstream newspapers used to have a dedicated page for advertisement on land selling by residential plot holders in Dhaka. In such a context, there is an imperative to study land advertised for sale by the residential land holders and existence of potential speculation behind the sale. Such a study is expected to be useful for decision making regarding most economic and efficient land use planning, land taxation and scientifically control or guide artificially inflated land values in Dhaka.

1.2 Hypothesis and Objectives with Specific Aims and Possible Outcomes

The study seeks to investigate the nature of land sale by individual land holders in Dhaka city.

To investigate the hypotheses the research has identified the following Objectives:

- To study the location and nature of land designated for sale by individual land holders.
- To explore the pattern and reason of sale of land/plots by individual land owners.
- To explore the relationship between land sale and potential speculation by individual plot holders.
- To find out the potential regulatory measures to control the speculation.

Possible outcome of the study:

A map of land selling (hot) spots will be prepared and features of land usually advertised for sale in Dhaka will be revealed. A clearer picture of the potential speculative behavior of the individual buyers will come into light.

The findings of the research will help to devise appropriate government policies for land and housing to regulate location, price of buildable land and timing of land development and hence control land speculation. RAJUK, Private Land Developers‟ Association can directly use the research outcomes to address the distortion in urban land market.

1.3 Rationale of the Study

This study will put light on the vigorous exchange of land buy and sale (and re-sale) taking place in Dhaka market at individual level. It will help to assess the actual need and demand for plots and dwelling units for housing in Dhaka and consequently will provide inputs for rearranging urban (vacant) land taxation system.

The findings will also help city authority to make policy to control horizontal expansion of Dhaka and development in the fringe areas.

1.4 Scope and Limitation of the Study

A few studies have mentioned the presence of land speculation in Dhaka city but no one has elaborately conducted any analysis on this issue. Therefore, no specific criteria of land speculation have been found. That is why this study had to depend on some hypothesis (mentioned in section 3.6) on speculation. No specific data has been found in literature survey about the maturity period of speculation. That is why maturity period is calculated only from this study, no supporting data is used.

This study has considered only the individual land owners to find out their speculative behavior on land selling and non-individual land owners are not considered. To collect the land or plot sellers‟ address, this study depends on the land or plot selling advertisements of three renowned national newspapers and one online market platform for six months. The advertised lands are not equally distributed in all parts of the city.

As people do not like to spend much time in telephone that is why the questions for telephone survey were kept in very limited number. Primary data were the main data source of this study. To get information on the buildability of land only current condition of the plot and development of its adjacent plots are considered but presence of residence in the locality is not considered.

Finally, for calculation of the price change of the lands, time value of money has not been taken into consideration.

1.5 Definition of the terms used in the study

Some special terminologies are used in this study. Those terminologies are defined below-

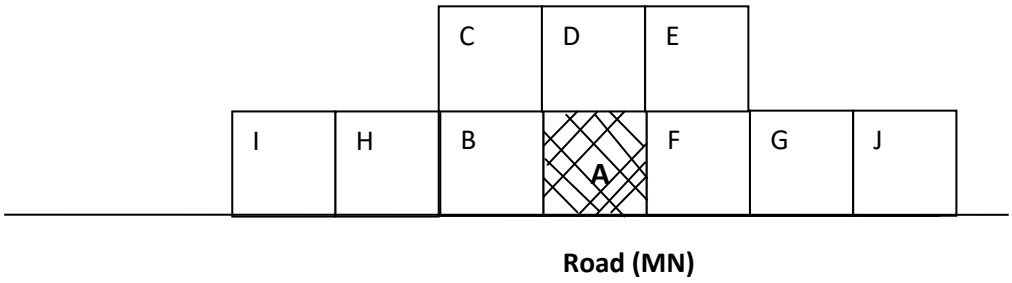


Figure 1.1: Sample land and surroundings

Adjacent land: An adjacent land means that land which is just next to the plot. If here A is the sample land, then adjacent lands denote B, C, D, E, F (Figure-1.1).

Surrounding Land: Surrounding land means that lands which are located beside the access road but not just next to the abutting plot. If A is the sample land, then surrounding lands denote H, I, G, J (Figure-1.1).

Near to: It means not very far from the plot. It may mean land H, I, G, J in the diagram and also the closer lands through the access road.

Land and Plot: land and plot have been used for same meaning. Both of the words denote the parcel of land demarcated for selling or using or developed etc.

Buildability of lands: It denotes that land which has potential to be developed and to be built house therein. If buildings are found in the abutting or nearer plots beside the access road and the plot is developed and ready for housing therein then it can be considered as having potential to be developed.

Abutting road: It denotes that road which has connected the plot with road network. It has gone thorough beside the plot. In the above figure 1.1, road MN is the abutting road for the plot A.

1.6 Organization of the Study

The study deals with various perspectives to fulfill the designated objectives and to reach the final goal. Thus, successful completion of the job is done by going through the following arrangement of the study report.

Chapter one introduces the study, along with its background and rationale. Organisation of the study is also outlined here.

Chapter two presents literature review on the key issues related to this study i.e. urban land market system, speculation, urban land taxation system in different countries, control policy of speculation etc. This chapter also discusses with the key terminologies related to the study like the definition of land holders, types of land holders, land selling pattern, concept about the nature of land, demand for plot etc.

The methodology and procedural approach followed to carry out this study and steps followed for successful completion of the research are described in the chapter three.

Chapter four contains the profile of study area and the lands/plots selected for study. It also describes the sampling process maintained in this study. The distribution pattern of plot/land advertised to be sold is portrayed and the sample size in different part of the city was also depicted. It incorporates maps of study areas, GIS maps etc.

Chapter five states the nature of lands designated for selling by individual. This includes mainly description of the lands, location and area of the lands, initial and current condition of the lands, surrounding condition of the land, nature of the development of surrounding the plot/land. It also describes the findings got from the field inspection. Data got from field inspection is cross checked with the data got from telephone survey in this chapter.

Pattern of sale of land or plot is mainly described in the chapter six. Basically the process and outline of usual land selling system in Dhaka city is explored here. Duration between land buying and selling, increase of land price, development work of land done for further sell of land with higher price, development pattern of land, nature and origin of potential buyers are described in this chapter. Correlation between the price and condition of land, correlation between price and location of the land are explored in this chapter. This chapter also depicts the nature of speculative behavior of the individual land holders elaborately. It records the intention of buying land initially, whether the seller took initiative to build house on the plot or not, actual reason behind selling the land, attempt to develop the land, the causes for development of the land, rate of development of land, frequency in terms of time of selling land after purchase. Finally, a summarized Finding about the intention of selling land is tested with respect to the hypothesis using statistical tools.

The next chapter depicts the major findings in the study. It also draws the potential regulatory measures to control the speculation. It contains the measurements followed in other countries and similarities between those countries condition and ours. How the measurement can be adopted in perspective of our country has been discussed in this chapter.

The last chapter is the conclusion of the study. It gives concluding remarks about the presence of land speculation in the land market of Dhaka. It suggests adopting some measures to regulate the speculation in the market.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents a review of literature on speculation specially on land speculation concepts, pattern of land speculation, impact of speculation. Strategies and policies adopted in different countries to control speculation. A review of literatures reveals that, no elaborated work has been done on speculation in Dhaka city. Some ideas from this literature review have been incorporated in the current research.

2.2 Land, Land market and Urban development

Palmer and his colleagues (2009) define land market as "mechanisms by which rights in land and housing, either separately or together, are voluntarily traded through transactions such as sales and leases". An integrated analysis of land markets and land institutions stresses the complexity of procedures and the extra-legality of practices that strongly affect the functioning of formal and informal markets and make access to land costly and insecure, with negative social, economic, and environmental impacts over the long term.

In general, in effectively functioning land markets, land will be allocated to the highest bidder and land-use changes will be mediated by market-determined land prices. In theory, this should lead to the most efficient use of land. In this context, the role of government is to ensure clarity of property rights (through a clear legal and regulatory framework and transparent and accessible land administration); enforce adequate measures to address externalities that are not internalized by land markets; plan for urban development in an appropriate manner; and optimize service/infrastructure provision. In addition to these interventions, authorities may also ensure a certain level of equity in access to land and housing (such as social housing programs in many developed countries) (Lasserve et al., 2013).

In many cities of the developing world, the story is actually quite different. Social, economic and political constraints, unclear land rights, insufficient land supply, weaknesses of land governance, dysfunctional land administration and unregulated land

markets may result in an unplanned and uncontrolled city structure, with land-use patterns that are both inefficient and inequitable. In cities where a significant part of the population is poor, access to land and housing has often become a key concern for residents and a source of social unrest and political instability (Lasserve et al., 2013).

Land delivery process holds different steps. To understand the entire process the steps are to be understood first. The steps are found in differents studies. Lund, C (2002) (mentioned in Nkurunziza, 2007) points to three stages, as seen from the acquirer‟s perspective: identifying the interests in property; staking a claim; and having the rights claim recognized. According to Nkurunziza (2007), the process is divided into four stages, namely: obtaining information on rights availability; negotiation of a land transaction; plot adjudication and demarcation; and evidencing land rights transfer. And Lasserve et al. (2013) state that land delivery channels refer to all the steps in the process whereby land (i) is initially made available to buyers or allottees (origin of the land), (ii) undergoes an often incremental formalization of tenure (which is seldom obtained by the initial buyers or allottees), and (iii) is sold on land markets before or after formalization. The concept of land delivery channel complements that of land market, which refers only to transactions on land at a given point in time, irrespective of the origin of the land and of the step of the formalization process at which the transaction takes place.

Each type of land delivery channel is characterized by: (i) its organization and steps observed in the delivery process (from initial conversion of non-urban land into urban land to the occupation of the developed land by its final user); (ii) the parties involved in the delivery process; and (iii) the different tenure statuses of land, and (iv) land values (whether market or non-market based). These land delivery channels form a system: any change affecting one component within one land delivery channel has impacts on other channels and consequently on the whole land delivery system. For instance, a land price increase in a given delivery channel will drive households towards other delivery channels (substitution effect) (Lasserve et al., 2013).

Land administration is a system that comprises different phenomenon. Davies et al (2001) (mentioned in Nzioki et al, 2006) define land administration as “the framework (regulatory, spatial, institutional, stakeholders, systems and processes) that encompass

the determination, allocation, administration and access to information concerning land use, rights, interest, title creation and restrictions."

Among framworks of land administration stakeholder is so much important that stakeholders are no longer only subjects or clients but more and more partners (Magel, 2003; mentioned in Masum, 2009). Lasserve et al. (2013) states that the land delivery system involves many stakeholders. They have different functions that can be grouped in 6 main categories: (i) land suppliers/sellers; (ii) land purchasers; (iii) institutions governing land allocations and transactions (i.e. providing *attestations de vente authentifiées*, administrative documents, precarious titles and property titles); (iv) intermediaries between sellers, buyers and authorities (brokers, *coxers*); (v) professionals (land surveyors who plot and subdivide land, notaries, and urban planners); (vi) credit / Finance institutions.

2.3 Land market in Bangladesh

2.3.1 Characteristics of land market in Bangladesh

According to EU"s survey (2014) some qualities of land market in Bangladesh are as follows:

1. Apart from buyers/sellers and lease givers/lease takers, there is a number of other actors and institutions as facilitators/intermediaries in land market. Family members, relatives and friends – neighbours, community people, villagers, elected local representatives, professional intermediaries like Dalal, financing agencies, local land offices (Sub-registrar's office, Tehsil office and AC land office), real estate agencies and contract farming companies can be identified as the main facilitators/intermediaries.

2. Heterogeneity of landed property, absence of many buyers and sellers, prejudice of actors, asymmetric information and lack of freedom in marketplace all lead to imperfections in the market.

3. Market is afflicted with asymmetric information of actors which is reflected in their reaping price loss (under-pricing in case of selling and over-pricing in case of buying), land loss (lower amount of land in case of purchase and higher

amount of land in case of sale), money loss (bribe, extra charges etc.), and time loss (repeated visits to land offices).Institutional failure appears in the form of poor service delivery by local land offices.

2.3.2 Functional process of land market in Dhaka

The government and private sector actors are taking different initiatives to improve the supply of land through the formation of new towns in fringe area of Dhaka, often these initiatives result to „urban sprawl". Most importantly, the middle and higher income groups benefit mostly from these initiatives while the low income group remain cut off from benefiting from the initiatives. In general, prevailing approval processes and regulations have not always served the interest of low income people. As a result, the prospect for the poor"s access to land is getting bleaker in response to the need to meet their land demands; it has become common for land development to take place in informal ways without conforming to state rules and regulations. While this is informal, it does bridge the demand and supply gap in land through the provision of shelter, especially for the poor. Therefore, informal land development is serving as both feasible and viable options for low income people in Dhaka (Masum et al., 2016).

2.3.3 Land development by private sector

Since the 1960s public sector and individual households are playing major roles in fringe land development in Dhaka whereas at that time the role of housing companies (formal private sector) was very limited. The contribution of formal private sector becomes noticeable during 1980s. According to REHAB (2012) there were only 42 private companies in housing market in 1988 and presently 1500 private companies are active in this sector. Although favorable government policy encourages the private sector to expand gradually, their target is still higher and middle income groups and motivation is speculative in nature.

Speculators in the land market hold significant amounts of land especially in fringe areas and this reduces the supply of land. Private land developers in Dhaka purchase land directly from the owners. Often, land owners, especially small scale farmers are forced to sell their land to private developers. Islam (2007) (mentioned in Masum et al., 2016) estimated that a typical real estate company makes a profit of USD 893,559 by

developing one hectare of land over a five year period. Present ongoing phenomena in Dhaka reveal the power exercise and illegal activities of land grabbers to acquire any amount of land and for performing this illegal activity, they do not face any legal problem. In many cases, they grab not only the private land, but the public land also.

Masum et al. (2016) mentiones that "delay in project implementation and delay in plots handover is not also uncommon for private sector. The survey in Uttara model town reveals that to get the possession of the land it took from 2 to 6 years depending on the progress of land development/ construction of buildings. In Bashundhara residential area, to get the possession of plots/flats respondents had to wait 1 month to 5 years depending on the progress of land development / construction of buildings.

RAJUK is responsible for monitoring land development and building construction activities in Dhaka metropolitan areas. Without getting designs and plans approved by RAJUK, no formal development is allowed. But the regulatory framework which specifies the planning and building standards, regulations and administrative procedure makes constraints for low-income group to conform to official requirements. The formal process of dealing with land is complex, time-consuming and extremely expensive."

2.4 Definition and functional system of Land Speculation

Low-intensity uses provide stable but low incomes to land; as urbanization approaches, property taxes go up and soon the low-intensity user is caught in a squeeze. His rising taxes reduce his income; at the same time the rising value of his land offers the opportunity to sell out and to buy more land further out. However, since the land is not yet ready for development, a buyer must be willing to hold it until it is. Enter, then, the speculator, whose "function" is to hold the undeveloped land from the time the original user is forced to sell out until a "final user"-i.e., a developer is willing to buy it from him (Lindeman, 1976).

Land speculation is where land is bought by prospective and actual investors but is not developed; hence land remains idle and unproductive but inaccessible to others who could have made use of it (Makwarimba and Ngowi, 2012).

According to Lindeman (1976) the speculator does not envision any important immediate economic use for his land; he holds it in order to have it ready for some

anticipated future use. He buys land specifically in order to acquire a future profit due to an anticipated increase in the market price of the land. In theory, the “pure” speculator intends to sell the land to someone else, after a passive period of ownership during which he has done nothing to enhance the value of his land except to wait for the market to do its anticipated duty. In reality, though, he may engage, also, in entrepreneurial activity connected with speculation: he may seek zoning changes, provision or improvement of public services to the property; he may produce development plans to use as selling aids, or may do any of a variety of other things. Also, at the end of the holding period he may decide to become the final user himself, to develop the property and receive both the speculative as well as development profits.

Speculation, may be defined as the purchase (or sale) of goods with a view to re-sale (re-purchase) at a later date, where the motive behind such action is the expectation of a change in the relevant prices relatively to the ruling price and not a gain accruing through their use, or any kind of trans-formation effected in them or their transfer between different markets. Thus, while merchants and other dealers do make purchases and sales which might be termed “speculative, "their ordinary transactions do not fall within this category. What distinguishes speculative purchases and sales from other kinds of purchases and sales is the expectation of an impending change in the ruling market price as the sole motive of action (Kaldor, 1939).

Land buyers can be devided into two categories: *users* and *holders. Users* are those who put land to current economic use. These include farmers, as well as developers and builders. Also included is one who holds tracts of land for even only sporadic use, such as hunting preserve, or as distance between himself and his neighbors, or to provide the satisfaction of being a land owner. To all of these, land is a *factor* of *production,* that is, it is a necessary input into a process of the production of some kind of economic goods and services. The prices they are willing to pay for land are related to the proceeds they expect to receive for the products they can produce by virtue of using the land.

In every speculation there is a waiting period before sale and also expectation of greater profit. “Speculation is limited to commodities of uncertain production or limited supply that are under no monopoly control in demand and supply and create a general world-wide demand. Speculation is a transaction, in which one acquires by purchase the right to

a certain property, and gains or losses for himself the difference between the values at the time of the purchase." (Emery, 1969, p.100)

According to Lindeman (1976), "The *primary* objective of speculation is profit at time of sale . Therefore, it can be concluded that a key element in any speculative market is the expectation that at *some* time in the reasonably near future someone will come along who will buy the land, at a high enough price to make the return over the holding period to the speculator"s investment worthwhile. It should be noted that the subsequent buyer need not be a final user, but can be another holder, that is, another speculator".

Property speculation is defined as the purchase of property that are neither for immediate consumption (occupation purpose) nor investment purpose (rental). The investor buys and holds the land for a certain amount of time, waits for the price to escalate, and then sells the property with the maximum profit. This operation causes high vacancy rates and fast turnover in ownership, leading to some of the speculation effects (Plattner, 1988).

According to Bratt (1986), "a real estate speculator can be defined as an entrepreneur or corporate entity that buys and develops real estate with the hope of making a profit from raising the land value". Most speculators work in a capitalist market system. Whether they are individuals or companies, by definition, they are all land owners waiting to make their profit.

The final user buys *only* when the land is ready for development (if he buys earlier, we can treat his purchase as a speculative transaction, since he expects to act as a holder before becoming a user and, therefore, submits himself to the risks of speculation at first and only later undertakes the different risks that face the final user). So, if the speculator wishes to sell the land before it is ready for development, he must find a buyer who is willing to continue holding the property: another speculator (Lindeman, 1976).

From the above discussion some basic features of speculation have been identified as below:

- Speculation denotes holding the undeveloped land from the time the original user is forced to sell out until a "final user"-i.e., a developer is willing to buy it from the speculator.

- Land remains idle and unproductive but inaccessible to others who could have made use of it.
- The speculator does not envision any important immediate economic use for his land.
- Speculator holds land in order to have it ready for some anticipated future use.
- Speculator buys land specifically in order to acquire a future profit due to an anticipated increase in the market price of the land
- Speculator do nothing to enhance the value of his land except to wait for the market to do its anticipated duty.
- At the end of the holding period speculator may decide to become the final user himself, to develop the property and receive both the speculative as well as development profits.
- What distinguishes speculative purchases and sales from other kinds of purchases and sales is the expectation of an impending change in the ruling market price as the sole motive of action.
- Property speculation is defined as the purchase of property that are neither for immediate consumption (occupation purpose) nor investment purpose (rental). The investor buys and holds the land for a certain amount of time, waits for the price to escalate, and then sells the property with the maximum profit.

If any two of the criteria mentioned above are found in a land selling process then that is taken as land speculation here. Also based on the features above this study has made several hypothesis to identify individual land speculators in section 3.6.

2.5 Consequences of speculation

2.5.1 Value increment

"In land speculation there is always increment or reduction in the value of the properties. The amount (gain or loss) is the speculators‟ real aim. Of course, they will always buy the property below market value to make the maximum profit possible. The change in the value of the property is controlled by the speculators if they have the capital to support their investments; therefore, the speculators hold the market in their hands" (Fatta, 2014).

According to Lindeman (1976), “A particularly significant aspect of speculative markets is that a given property may pass through the hands of a series of speculators on its journey from farm to subdivision. Especially when the “ripening” period is a long one, speculators will be tempted to sell and take their profits. As long as the land is not yet ready for development by a final user, the buyer will most likely have to be another speculator”.

2.5.2 Alteration of land market

Land speculation has the potential of altering land market situations not only during the speculative boom but for a long time afterwards as well (Lindeman, 1976).

According to Lindeman (1976), most of the available and useful lands pass through the speculators in the land market. When this occurs, there is a very real chance that speculation can have lingering effects long after it disappears. These effects will be to restrict supply and to impose overly high prices upon much of the available supply. The absolute extent of this effect is difficult to measure, but there is no guarantee at all either that it will not happen or that when it does happen it will be insignificant.

“In land speculation, there is a high financial risk in the value change. This risk is the one factor behind what we call speculation. Speculation usually occurs when a new project is announced, or services are extended to a new part of the city within the urban growth boundary. Being equipped with new services, the property within the vicinity is predicted to increase in value. Speculators invest their money in that area. They buy the land within that area with a below or equal to market price, and sell it after waiting for an anticipated time and the property value has increased. By doing that, they play a big role in controlling the land market as the price is adjusted to their buying and selling transactions. Therefore, speculators are controlling the supply and demand in the real estate sector” (Fatta, 2014).

2.5.3 Information gap

Obtaining the correct information about the housing market is quite tough job. How the events unfolded when the city unveils the new king Abdullah university the people rushed to buy dirt cheap land outside the city only to resale later, and this is just one case out of many that have unfolded in the city of Jeddah (Fatta, 2014). The citizens always

differ and their choices vary from one person to another. No one can predict the demand on the market as it is difficult to control the flow of the supply. This lack of information leads to one of the causes behind speculation and sets up room for speculation to occur.

2.6 Specialty of Land Speculation

Land speculation has some unique characteristics, which make its effects quite different from that of other types of speculation. Most speculation in commodities and stocks are for uniform products obtained through central exchanges. Land, in contrast, is heterogeneous. Each plot, having a unique location, is different from all others, and is bought and sold as an individual property.

Due to the effects of real property law, as a tract of land goes through the speculative process it becomes encumbered by additional mortgages and other restrictions. This does not happen in most other institutionalized speculative markets. Eggs remain eggs, soybeans remain soybeans, and shares of Xerox stock remain unchanged. Only the price changes, but, if the new price is unwarrantable, it usually finds a more reasonable level very quickly. Speculative markets in land are different. By far and away the most critical difference is that, in this speculative market, the nature of the commodity itself is changed by the speculation process. Furthermore, the price changes which are brought about by speculation are not nearly so easily adjusted if it turns out that speculative expectations were unwarranted (Lindeman, 1976).

2.7 Economic bubble and land speculation

Speculative bubble means a fast growth in prices of land as an effect to excessive buying in land. This affects the supply and demand of land. Speculators rush to buy the land before the price escalates and rush to sell the property before the price reverses (Fatta, 2014).

Speculative activities can be branched into two sectors. One is the buying of the land and waiting for the anticipated price due to the changes happening in supply and demand. The other is the speculative bubbles. This only happens when the price of the property increases with no justifiable reason (Wong et al, 1994).

Pezdona (1988) explained the second sector in the housing market as some type of price movement that are quicker than which would be expected on the basis of changes in a housing fundamental ability to provide income or service. The speculators would get misleading information regarding a property but that may happen due to irregularity of the circumstances affecting each property. There is no one hundred percent accurate data in this line of work. The most accurate information that could be obtained is through observing the recent transactions in the housing supply and demand. That prediction whether the property price was going up or coming down is the main cause of a speculation bubble. Only the well informed speculators who can make profits from the ups and downs of the real estate market can make speculative bubbles explode.

2.8 Positive effects of speculation

Speculation can be beneficial to an economy if the speculators correctly anticipate future supply and demand. Land speculation is not an exception; it can also have such a beneficial, market-enhancing effect. If there is a plot of bare land, the owner may speculate that rapid growth will warrant a larger building in the future than at the present time, and that demolishing the smaller building would be more costly than the net rental income to be gained from it. Overbuilding at present would result in costs and vacancies that would be more costly than the opportunity cost of foregone rentals. Hence, the speculator will leave the land idle or put it to low-cost uses such as a parking lot, waiting until the time is ripe for the larger development. By maximizing the present value of the future profits, the speculator allocates resources efficiently, and this land speculation is market enhancing (Foldvary, 1994).

Archer (1973, p. 370) concludes, "the land market will only ensure the efficient use of urban-fringe land if the landowner, developer and homebuyer participants in the market are confronted with the full costs and benefits of their respective decisions".

2.9 Negative Effects of Speculation

2.9.1 Unstable Prices

“The increase in the speculation often brings escalated prices and has always been deemed the reason behind these unstable prices in the land market. In fact, the unstable

prices are the factors that induce speculation. The big risk is often accompanied with bigger profits and of course more instability in the price" (Fatta, 2014).

The destabilizing effect of speculation on the amplitude of the price rise then makes the intervention even more severe, as speculators buy even more because they anticipate further speculative demand as well as user demand. Current site tenants and those seeking new sites then have to pay a speculative premium for space, and this increase in their costs and thus the decrease in their expected profits acts to reduce investment (Foldvary, 1994).

As stated by Mason Gaffney (1994, p. 92), "In a speculative land boom, land prices go prematurely high. Premature high land values profoundly distort the character of capital investment. High land prices stimulate land-saving, land-enhancing and land-linking investments."

It is not just local markets that become destabilized, but the entire economy, since the financial (banking and interest-rate) factors are economy-wide and the business cycle tends to affect an entire economy. Real-estate construction plays a leading role in the recovery from a depression, and then as vacancies decline and rents rise, speculation sets in, anticipating further increases in rent. Construction and land purchases are spurred even more if interest rates are below the natural or non-interventionist rate. The high price of land chokes off investment, while much of the construction is a malinvestment not warranted by consumer demand. Construction slows down along with other investment, decreasing aggregate demand and thus leading to a recession and depression. Lowe (1975) notes that in a contraction, it is more difficult to sell land, and the lack of liquidity intensifies the drop in the demand for land. Fred Harrison (1983, p. 65) finds that historically, peaks in building follow peaks in land values and precede the general recessions.

Since much of bank lending goes to real estate buying and construction, when land values fall below loan amounts and borrowers default, the collapse of land prices results in bank failures. During the recession of 1990-1, Rhode Island declared the first banking holiday in the United States since 1933 as "the speculative bubble in real estate has burst,

with office vacancy rates soaring" (Miller, 1991, p. 5). Over 1000 banks, failed from 1988 to 1990, not including savings and loans (Miller, 1991, p. 7).

Land speculation can also distort the geographic pattern of development. With land priced for anticipated future uses rather than present-day uses, current development often shifts to lower-priced areas where speculation has not set in. The area where development would have taken place is then left relatively less developed as the speculation turns out to be incorrect and self-defeating. Land speculation also induces urban sprawl as developers skip over lands awaiting future development. The margins of urban development thus extend further than they would in the absence of market-hampering speculation. Such sprawl increases the cost of infrastructure as well as lengthening commuting time. The lower density of new development makes it less efficient to provide public transit, increasing congestion and pollution. The entire Los Angeles metropolitan area consists of sprawl that was instigated by land speculators who made development itself the key industry in the area (Davis, 1990). Lopez, Adelaja, and Andrews (1988) find that speculative suburbanization also distorts agricultural production, since farmers' incentive to invest is reduced. This is the "impermanence syndrome" that makes land more a speculative commodity and less a factor of production.

2.9.2 High Expectations

“Land purchasing or real estate in general is something of a high value and normally, acquiring the property is accompanied with making use of it. With the high price, it is not something people do on a whim at all. Nevertheless, when the land value is increasing constantly, that could instigate the investors to play their little game. Normally a property in a good location with all the amenities will serve as a perfect piece where the increase in its price is almost a sure thing” (Fatta, 2014).

“The main instigator in the increase of real estate prices is actually the fear of more increase. This way of thinking is like an illusionary expectation of the public and the people are susceptible to it. This will affect mostly the future of the real estate market as well as the supply and demand in the current market” (Fatta, 2014).

2.9.3 Unstable supply and demand

The way of supply and demand work is that they satisfy each other, meaning the demanded quantity must be supplied. If supplies are short, then prices would change to meet market requirements and they will stay that way until the supplies could catch up with the demands or the demands lessen to the limited supplies. The relation between supply and demand is strong. If for some reason the price of the market is low, then the current supply is going to run out, and the demand will increase. The demand will not stop until the suppliers acknowledge that the price needs an increase to stop the urgent demand. The housing market is of no exception: the demand for housing will lessen as the price increases. The housing price will increase at a fast pace since this is a product that cannot be produced overnight.

The demand might outgrow the supply if met with other factors such as a change in the demographics, an increase in population income, a decrease in the materials cost for buildings, and many other factors. All of these factors combinedly affect supply and demand. The function of land markets should be to assure the most economic and efficient use of land, but planners are fully aware that in the real world this goal is infrequently achieved. Land markets contain many legal and institutional requirements and restrictions which can cause them to deviate markedly from the economist‟s ideal theoretical model. Particularly when speculation is present, activity can alter the basic legal nature of the traded commodity (land) and can alter basic supply and demand forces operating in the market. Aftereffects of speculation can persist in land markets long after the speculative episodes themselves have died down and disappeared. (Lindeman, 1976)

Fred Harrison (1879, p. 201) cited in Flamant and Singer-Kérel (1970) as providing evidence that land speculation during the 19th century contributed to panics of that era, namely in 1816 in Britain, 1825 in South America, 1836-9 in the U.S.A., 1847 in France, 1853-7 in the U.S.A., 1866 in Germany, and so on.

2.10 Land Speculation: Global Experience

land speculation is a common phenomena found in different corner of the world. In some cases the pattern may vary a little but speculation is common. Some features related to speculation found in different countries are described below.

2.10.1 Causes of increase in housing demand

According to Lasserve et al. (2013) the demand for land for housing has increased as a response to the steady increase, until recently, in the incomes of urban households, the emergence of urban middle classes which nevertheless remain fairly small, massive remittances from Malian expatriates of which part is invested in land; changes in urban family structure and norms, and a willingness on the part of low-income urban tenants to access land ownership in peri-urban areas, in a context where rents for low-standard and unserviced housing are quite high.

Other financial and economic factors have also played a role in stimulating the demand for land: because of weak savings institutions, or the scarcity of opportunities for investment, and in a context of limited social protection, holders of monetary assets and/or idle funds view land as a profitable and inflation-proof investment. With the development of the market economy, land can also be seen as an asset that allows access to mortgage finance (Lasserve et al., 2013).

2.10.2 Effect of land price increase on the demand of land

Over the last 5 years, there has been a steady increase in land prices in the urban and peri-urban areas of Bamako (with several observers mentioning annual increases of up to 100% in some locations), which is further stimulating the demand for land due to expectations of further increases (Lasserve et al., 2013). Speculation in Bomako resulted increase in land prices rather than the provision of affordable land to those who were entitled to it (Vaa, 1998).

2.10.3 Abnormalities in land transaction process

The legal supply of land for house construction has been insufficient in relation to demand for decades in Bamako. This has resulted in a flourishing extra-legal or parallel land market, characterized by speculation in illegal sub-divisions of individually, often extra-legally, held land, in high prices and sometimes fraud (Vaa, 1998).

The land acquisition process in many major cities in Indonesia usually involves brokers *(calo tanah)* who extract large amount of money as a commission fees and make the process more complicated. A study shows that the *calo tanah* collect about ten percent

from the transaction value less than Rp. 100 million, and about five percent otherwise. This is in fact a manifestation of the lack of a mechanism to control the process of land transfers on 'equal' bargaining positions (Firman, 1998).

Most often lands do not have formal title, while the inadequate land administration has made for high transaction costs and land disputes, particularly in rapidly growing areas such as in the fringe of Jakarta (Firman, 1998).

2.10.4 Causes of land speculation

There are several problems that led to speculation in Saudi Arabia. First is that the residents depend on the country for their income as a primary source and almost all of the private companies depends on the government for their continuous existence; the effect of that caused all the citizens preferred the governmental job which led the private companies to hire the cheap outside labor to stimulate the rest of the economy, and eventually they become a necessity for both the government and the private sections. The outside labor reached a 90 percent occupation in the private section. Second is the absence of rules regarding vacant land development on the contrary there are rules that make it easier to do (Fatta, 2014). Also due to lack of coordination with the management of spatial growth, ultimately fueled urban expansion, encouraged speculation in land and contributed to sprawl in cities such as Riyadh (Garba, 2004).

2.10.5 Behavior pattern of speculators

Behavior pattern of the speculators are similar in different countries. In Saudi Arabia it is observed that, if the speculator acquired a piece of land his goal is to keep it for the longest possible time, and never to sell unless he is in desperate need for cash, in his eyes the land is the best way to keep his fortune. For several reasons he does not need to pay anything for there are no taxes and the price is only going to increase therefore he will always keep it in that form and will only sell some of the property to sustain his other expenses. For example: if an investor owns 100,000 square meter of land he needs 300,000 Saudi riyals which is about 80,000 USD. For his annual expense he will only sell a parcel of the land to cover this year expense. And next year as the price increase he will sell a smaller parcel of the land. And what is happening that the investor is only selling to a small percent that can afford his price. (Fatta, 2014).

According to Firman (1998), considerable land areas in the outskirts of big cities of Indonesia have been acquired by the developers or land speculators, which in turn creates difficulties to establish the land subdivision. The change in land use is frequently accompanied with certain parties attempting to take advantages, through a land speculation business. Land acquisitions by the developers were often carried out with a "negotiated" price but no agreement, which put the developers at a "monophonic" position, as the land owners were not having any other options to whom they could sell their lands. On the contrary, the developers were at an "oligopolistic" position when they sell the land to their consumers. Very often, the process of "land transfers" from the land owners to the developers or a certain private parties is "unfairly" executed.

2.10.6 Effect of speculation on demand for land

Speculative investments have a strong impact on the demand for land. Land market activity in Bamako is partly driven by speculative strategies as many investors look for urban plots to buy, expecting a price increase with their future incorporation into the urban area, or, following improvement of the tenure status of the land (Lasserve et al., 2013).

2.10.7 Strategies to control speculation

“The housing ministry in Saudi Arabia in its new strategy outlines strategies to control speculation in their website http://www.housing.gov.sa/. There will be increase in the developed land, increase in the government loans for housing which is currently at 130,000 dollars, issue rules regarding vacant land, and new monitoring system for apartments rent, increase density in the housing units, and lastly issuing tax for any real estate transactions. These are some of the issues the housing ministry will look at in the following year. The housing ministry will issue a law that a vacant land should be developed within a period of time, or the owners will face extreme punishment such as taking the land. This has never happened before in the country. This is not evident until now in Jeddah city but in king Abdullah economic city this law is in the contracts” (Fatta, 2014).

Considering land speculation as a major problem, the head of National Land Agency of Jakarta Mr. Joyo Winoto said at the state palace that, there would be heavy sanctions [against speculators]. Speculations should be prevented by the law" (Suharmako, 2010).

2.11 Policies used to control land speculation

2.11.1 Applying lease fee

Fatta (2014) states that in Hong Kong the government introduced the stamp duty ordinance in 1992. The ordinance required that any buyer would need to pay a stamp duty at the time of signing any sale or purchase agreement. This ordinance has affected all the short term speculation since their activities depended on fast turnover ownerships.

Such a rule would be very helpful to the middle income class since it will force short term speculators to bow down. The way to implement this at best would be 2.5 to 5 percent depending on the value of the land to be paid to the government. This will not only help contain speculation but in addition will help the government set aside some extra fund for housing (Fatta, 2014).

2.11.2 Utilizing the vacant lands

"Setting some simple rules such as develop within a maximum of year or two after purchase or else the government will have to use imminent domain. Such a rule is now implied in the new city in Saudi Arabia (King Abdullah Economic City) the rule states if the purchase did not use the land for the purpose of his/her purchase the city has the right to forcefully take back the property source (Emmar company)" (Fatta, 2014).

"One of the other rules that are being implied in that city is if a resident has proven to be a nuisance or fail to fulfill his obligation to the property as it is zoned the city has the right to retain the land" (Fatta, 2014).

2.11.3 The monetary remedy for market-hampering land speculation

The two basic origins of dysfunctional land speculation and malinvested construction are firstly, artificially low interest rates that transfer wealth from savers to borrowers and secondly, the implicit transfer of wealth from wages to land rent during the upswing of

the business cycle. The remedy for market-hampering land speculation is therefore the elimination of the monetary and fiscal interventions that cause these transfers.

Currency speculation has been blamed for the downfall of the East Asian countries in 1997, but it was the policy that made the currencies vulnerable that made the speculation profitable. The problem goes beyond poor macroeconomic policy. Flood and Marion (1996, p. 2) find that "Even governments with disciplined stabilization policies may be susceptible to successful attacks" (p. 2), although "it must be the case that historical or current macroeconomic policies have made the exchange rather vulnerable to an attack." To eliminate speculation, the potential profit must be squeezed out, which implies a currency not just backed by some commodity, but which is itself that commodity, such as gold.

Interest-rate distortions derive from the money-supply policy of the central bank and from other interventions in the supply of credit. Centrally-planned money suffers from the two major flaws of any central planning, the problems of knowledge and incentive. When the economy is depressed, the incentive of the governing agencies is to stimulate the economy to quicken the recovery, and so monetary policy becomes expansive. This does stimulate total production, but at the cost of distortions in the mix of products. As explained by the Austrian-school capital theory, there is a structure of goods from the lowest order consumer goods to capital goods of higher order which produce the consumer goods and then goods of even higher order that produce the capital goods that produce the consumer goods, and so on up the pyramid of goods. Lower interest rates deepen the structure, making the more roundabout production profitable. Monetary expansion that artificially lowers interest rates thus stimulates investment in high-order capital goods. This provides employment in the short-run, but later, when this investment turns out to be unwarranted by actual consumer demand, the resources turn out to have been wasted, and the diminution of such investment then results in unemployment and a reduction in aggregate demand that leads to a recession.

Gordon Tullock (1988, p. 75) criticizes this Austrian-school theory, saying that the malinvestments are a sunk cost, but "There is no reason why this equipment should stop being used," and the added capital goods increase the demand for labor. But there are two reasons why the "equipment" is not used. First, capital goods, especially real estate

such as hotels, shopping centers, office buildings, and housing have been produced for which there is insufficient ultimate consumer demand for profitable operation, even to cover operating costs. Secondly, the price of real estate may be slow to decline because the owners have not yet realized that the there is a major glut. The problem is not the past production but the fact that too much financial capital has become tied up in unproductive fixed capital goods. Future investment declines both because malinvestments do not generate profits for investment, and because creditors become more cautious due to the defaults. Finally, that Tullock notes that "producer goods industries are always a fairly small part of the economy" (p. 76) indicates not that Austrian theory itself is faulty but rather incomplete in not identifying the key and major affected industry, real estate.

Aside from the incentive problem, a central bank faces an inevitable knowledge problem. There is no way to know for sure how fast to expand the money supply. The demand for money depends on the velocity of the circulation of money as well as foreign demand and the growth of population and commerce. The money supply and interest rates also affect the value of the currency relative to foreign money. There is also uncertainty regarding the relationship between unemployment and price inflation. Fears that growth and low unemployment will lead to price inflation can lead the monetary authority to reduce the growth of the money supply to increase interest rates and slow the growth, but the theory behind this relationship may well be flawed or not apply to the current environment. The policy of slowing the economy to prevent wage increases may act to prevent labor from obtaining its warranted share of increased productivity. The central bank can therefore sometimes expand to rapidly and other times contract too much.

The effective way to solve the knowledge and incentive problems is to avoid central monetary planning and allow decentralized market processes to determine the money supply. This is the "free banking" policy of unrestricted branch banking and the freedom by banks to issue their own notes as money substitutes or "inside money" convertible into the monetary base or "outside money." Until World War I, base money consisted of gold. Now, with fiat money used world-wide, a free-banking policy could be implemented by freezing the supply of central-bank notes, such as the federal reserve note dollars used in the United States.

The future expansion of purchasing media (money and money substitutes) would be done by the private banking system with competitive private bank notes in the form of circulating paper notes and bank deposits. With bank notes redeemable into base money as well as convertible into the notes of other banks, the banks would not issue more notes than would be warranted by market demand. Redemption into a frozen based, as well as convertibility among bank notes, would prevent monetary inflation.

2.11.4 The fiscal remedy for market-hampering land speculation

The forced redistribution of wealth from workers to landowners that stimulates market-hampering land speculation can be remedied in two ways. First, the provision of infrastructure can be shifted from government to the private sector. Not being able to tax labor to finance the infrastructure, the providers would have to obtain the funds from the beneficiaries, the users of land sites. This is how residential associations, condominiums, hotels, shopping centers, and industrial parks finance their internal developments (Foldvary, 1994).

Secondly, if government provides the infrastructure, then rather than taxing wages, the financing of the public works can be obtained from the very rents generated by the works. When the owners of land pay a community rent that funds the infrastructure, a rent equal to that which the infrastructure generates as well as the rent generated by the general increase in commerce and population, landowners cease receiving the implicit subsidy of rent and land value. With land then having an explicit carrying cost, any land speculation that occurs becomes market enhancing, since the social costs of delaying development are accounted for.

The complete remedy for market-hampering land speculation thus consists of free banking and the community collection of rent (CCR). Both the monetary and fiscal remedies are required in order to avoid the interest-rate and tax distortions causing the problem. CCR is a subset and the usually greatest part of the more general public collection of rent (PCR) that also includes rents generated by natural advantages apart from those created by infrastructure and commerce.

2.12 Conclusion

After going through various literature reviews, some parameters for definition of land speculation have been found like the speculators will try not to develop their lands, keep idle and unproductive but inaccessible to others who could have made use of it. Some effects of speculation have been found. and also some prospective measures have been found from different literature to prohibit the speculation, that may help to propose regulatory measures for this study.

CHAPTER THREE

METHODOLOGICAL APPROACH

3.1 Introduction

To fulfill the objectives of the research, the entire study has been carried out in a sequential process. A brief outline of the research methodology is presented in this chapter. The total procedure of methodology is represented by the following flow chart:

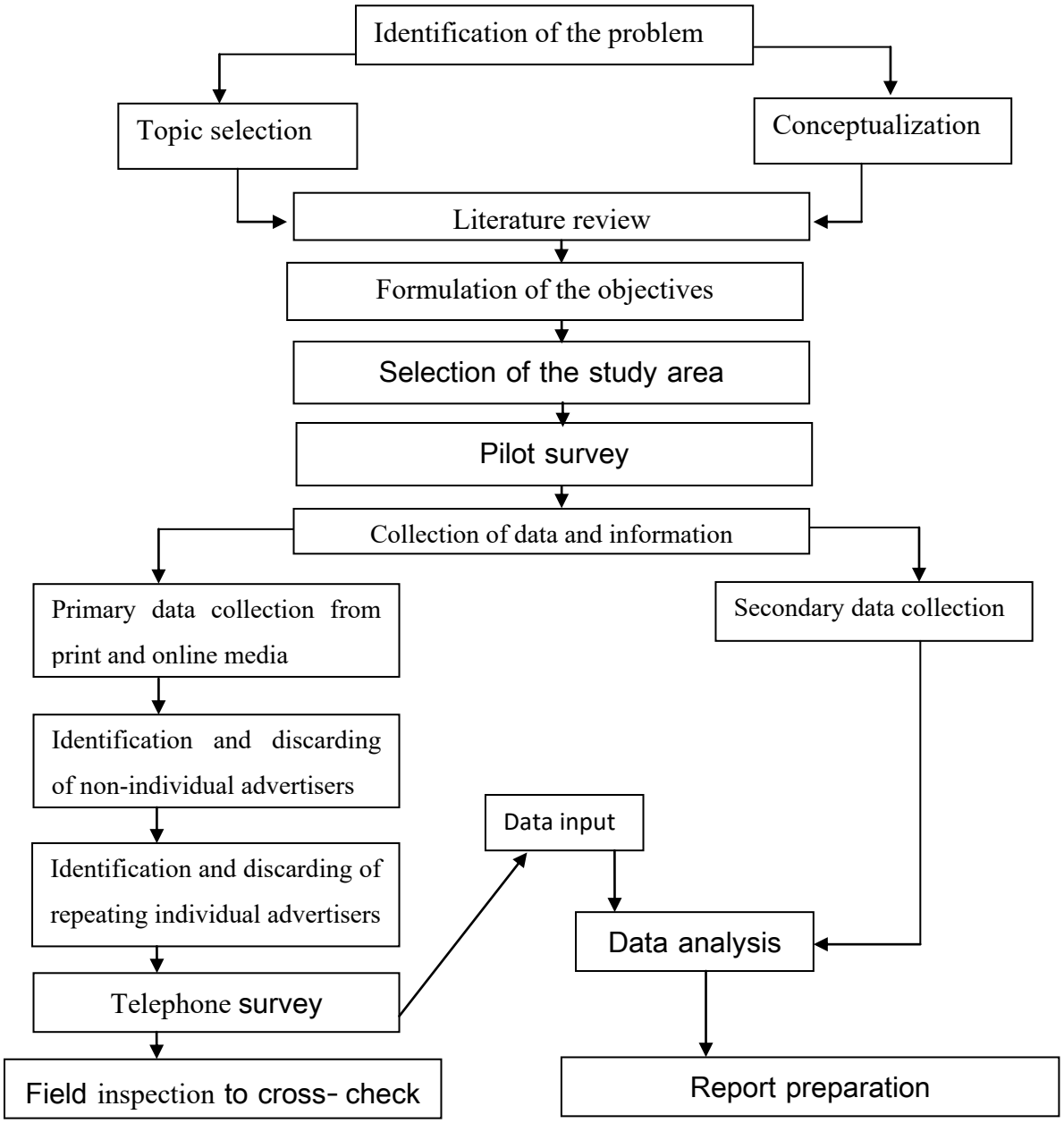


Figure 3.1: Flowchart diagram of the methodology of the study

3.2 Selection of study area and sampling process

Dhaka, the capital city of Bangladesh and its surrounding area has been selected as the study area. It covers Dhaka North City Corporation, Dhaka South City Corporation, rest of the area of Dhaka district and the adjacent Purbachal New Town area.

The advertisements of land or plot in the selected area published from January 2015 to June 2015 in three daily national newspapers i.e. Daily Prothom alo, Daily Ittefaq, Daily Bangladesh Protidin and from April 2015 to June 2015 in online advertisement platform Bikroy.com were collected first. It is to be noted that online platforms usually keep advertisements for three months. From all these platforms total 2858 advertisements were found.

Here mobile phone number has been taken as identification of advertisement givers; mobile number is the only clue for identification provided in all of the advertisements. When a same number has been found for the advertisements of different lands, it has been considered that the same person is the owner of those different lands. These types of cases have been found frequently. That means there are many advertisers, who as a single person gave advertisements of more than one land. As target of this research is to consider lands of only individual land holders, land brokers and business companies (land developers) were tried to be discarded in the beginning. Therefore, it was hypothesized that if land holders give advertisements of more than two lands within the stated period of six months (advertisements of the land have been collected for six months duration in this study) he/she will not be treated as individual land holders. Thus if a single mobile number is found attached with advertisements of more than two different lands, related advertisements have been excluded from the list of lands to be analyzed in this study.

Based on the condition, non-individual land holders are excluded from the list of the advertisement giver and 1383 advertisements were remaining. But in this list same land belonging to a single advertiser exist more than once. In such case of multiple presence of same land in the list only one advertisement was kept for and others were excluded. This is how only 1087 advertisements remained lastly in the list. It is found that, 14.4% of the advertisers i.e. 157 people have given advertisements of two different lands. 71% i.e. 773 people have given advertisements of only one land. Therefore, 930 unique

advertisers have been found. For some primary factors, this 1087 sample will be analyzed. Finally, this is the population size for analysis.

Table 3.1: Count of the advertisements and advertisers

	Frequency	Percent (%)
Primary Case (unique advertisers)	930	85.6
Duplicate Case (number of advertisers given advertisements of two different lands)	157	14.4
Single advertisers	773 (930-157)	71.37
Total number of unique lands adverised (population size)	1087	100.0

Source: Author"s calculation based on advertisements for selling land in different platforms, January to June, 2015

3.3 Pilot survey

Some advertisers from the individual land holders lists were surveyed by telephone for pilot survey. Having response from them, the questionnaire had been upgraded and updated.

3.4 Primary data collection

3.4.1 Telephone survey

To collect the land or plot sellers address, this study depends on the land or plot selling advertisements of three renowned national news papers and one online market platform for six months. The advertised lands are not equally distributed in all sides of the city. From different part of the city and outskirt lands have been found from the advertisement. As the sample is scattered in different corners of the city, field survey to each of the sample was not possible. Therefore, telephone interview was conducted.

From the population size of 1087, with 95% confidence interval and 5% confidence level, 284 samples were taken randomly for telephone survey. In this case, it has been tried to select samples equally distributed in all the six months.

Table 3.2: Monthly number of sample selected

Month	**Number of individual land/plot advertised**	**Number of land or plot owners surveyed by telephone**
January	137	47
February	104	29
March	136	50
April	127	51
May	297	47
June	286	60
Total	**1087**	**284**

Source: Author‟s calculation based on advertisements for selling land in different platforms, January to June, 2015

3.4.2 Field Inspection

Next phase of the study is field inspection. The analysis of the study was done basically based on the telephone survey data. To justify the data got from the telephone survey it was decided to do field survey on 10% lands of the samples surveyed by telephone. That‟s how total 28 lands were supposed to survey physically and finally 30 lands have been surveyed. For field survey a checklist was prepared. Data have been collected based on the checklist. Obviously lands for field survey were selected among the samples surveyed by telephone. To justify the actuality of information about the lands surveyed by telephone same lands/plots physically surveyed have been cross checked for few parameters. During field visit, Physical Features Survey had been done to collect land use and land value data of the surrounding area and transport Survey had been carried

out to collect information on road hierarchy, road geometry, modes availability etc. in the vicinity of the plot.

3.5 Secondary Data

Secondary data included relevant literature like published and unpublished thesis paper, study reports, journals, books, newspapers, magazines, research publications, seminar paper, ordinance/policy etc. related to this research topic. Many of these literatures were found online. Also secondary data was collected from various government and non government organizations.

3.6 Data analysis

Advertisements given in the newspapers and online platforms have provided some basic information like mobile number, location, area of land/plot. Some of the advertisements have included price of the lands. Analyzing these informations, area wise distribution of the plots to be sold, average size of the plots has been found. A gross picture of area-based local price of the land has been found also. Analyzing the number of advertisements given from same mobile number an image of reality of selling land has been seen.

Telephone interview of the individual land holders wishing to sell land included queries on time of land bought or got (in case of inheritance), location and area of the land, current condition of the land and its surroundings, if any attempt was ever made to build house on the plot, initial intention of buying the land, reason for selling. The causes of buying and selling land have been analyzed, location of plots advertised for selling have been identified, and frequency - in terms of time - of selling land after purchase have been calculated.

Findings from field survey have been processed statistically. Info-graphics has been used to depict of surrounding development (of house, if any, and of plot by the buyers); land use of the surrounding plots of the land to be sold have been analyzed. The land use of the plots beside access road has also been analyzed. Besides, nearer local and secondary road intersections have been taken into consideration and the land use of the plots surrounding the intersection have been identified. This land use analysis has depicted the

picture of the importance of the plot. Transport data (options to reach the plot) have been used to assess the accessibility to the plots.

To study the potential speculation by the marginal sellers it is **hypothesized** that speculators will

(i) keep their land undeveloped or unbuilt,

(ii) make no or least attempt to construct house in their plots and

(iii) sell land as much lately as possible.

The hypotheses have been tested statistically to achieve the third objective. Finally to find out the regulatory measures of land speculation different countries policies had been searched in this regard. Based on this research some recommendations have been drawn to regulate the land speculation in Dhaka.

3.7 Reporting

Finally the findings and analysis have been reported in the dissertation. Apart from the analysis of the data, the report has also reflected, based on the findings, on the potential ways to curb inflation of land price and thus control land speculation in Dhaka.

3.8 Conclusion

This chapter deals with procedural approach followed to carry out the study. The methodology of the study was classified into several steps. The research was started with identification of the problem and ended with the report making of the findings in this regard.

CHAPTER FOUR

STUDY AREA PROFILE

4.1 Introduction

Number of population is increasing in Dhaka rapidly. To house them built areas in Dhaka is also growing. Therefore this study has studied the land market in the central and peripheral areas of Dhaka.

4.2 Description of the Study Area and samples there in

Dhaka city, the capital city of Bangladesh and its adjacent area have been taken as the study area. Dhaka North City Corporation, Dhaka South City Corporation, rest of the area of Dhaka district and the adjacent Purbachal Land Project area have been included in the study area. Dhaka is comprised of two city corporations naming Dhaka North City Corporation (DNCC) and Dhaka South City Corporation (DSCC). Dhaka North City Corporation (DNCC) consists of 5 administrative zones and 36 wards covering the thanas of Mirpur, Mohammadpur, Sher-E-Bangla Nagar, Pallabi, Adabor, Kafrul, Dhaka Cantonment, Tejgaon, Gulshan, Rampura, Banani, Khilkhet, Lalmatia, Kallayanpur, Baridhara, Badda, Uttara, Uttarkhan, Dakkshinkhan and some others. DNCC cover about 82.638 square kilometers area (DNCC website, 2016). Total holding number in DNCC area is 1,72,254 (DNCC website, 2016) and total population is 39,57,302 (BBS, 2011).

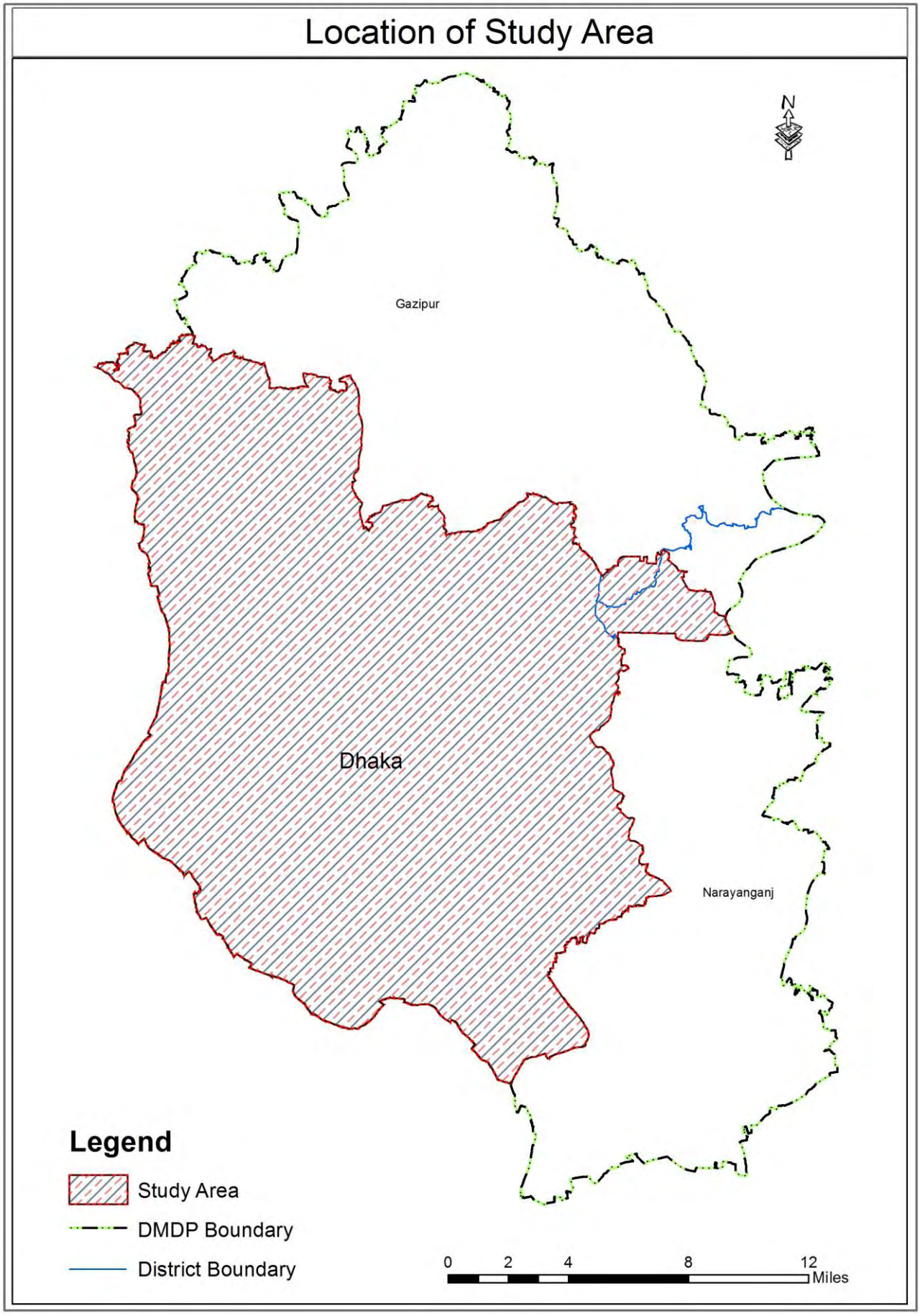
Dhaka South City Corporation (DSCC) consists of 5 administrative zones and 57 wards covering the thanas of Azimpur, Maghbazar, Malibagh, Motijheel, Jatrabari, Dhaka Kotwali, Sutrapur, Bangsal, Wari, Gendaria, Lalbagh, Hazaribagh, Dhanmondi, Shahbagh, New Market, Khilgaon, Kamrangirchar & some others. DSCC cover about 45 square kilometers area.

Adjacent areas of the two cities are also included in the study area. Besides Dhaka city corporation area rest of the area of Dhaka District was included in the study area. The Purbachal New Town is also included in the study area though that is not inside Dhaka District but very much important for studying land market of Dhaka city.

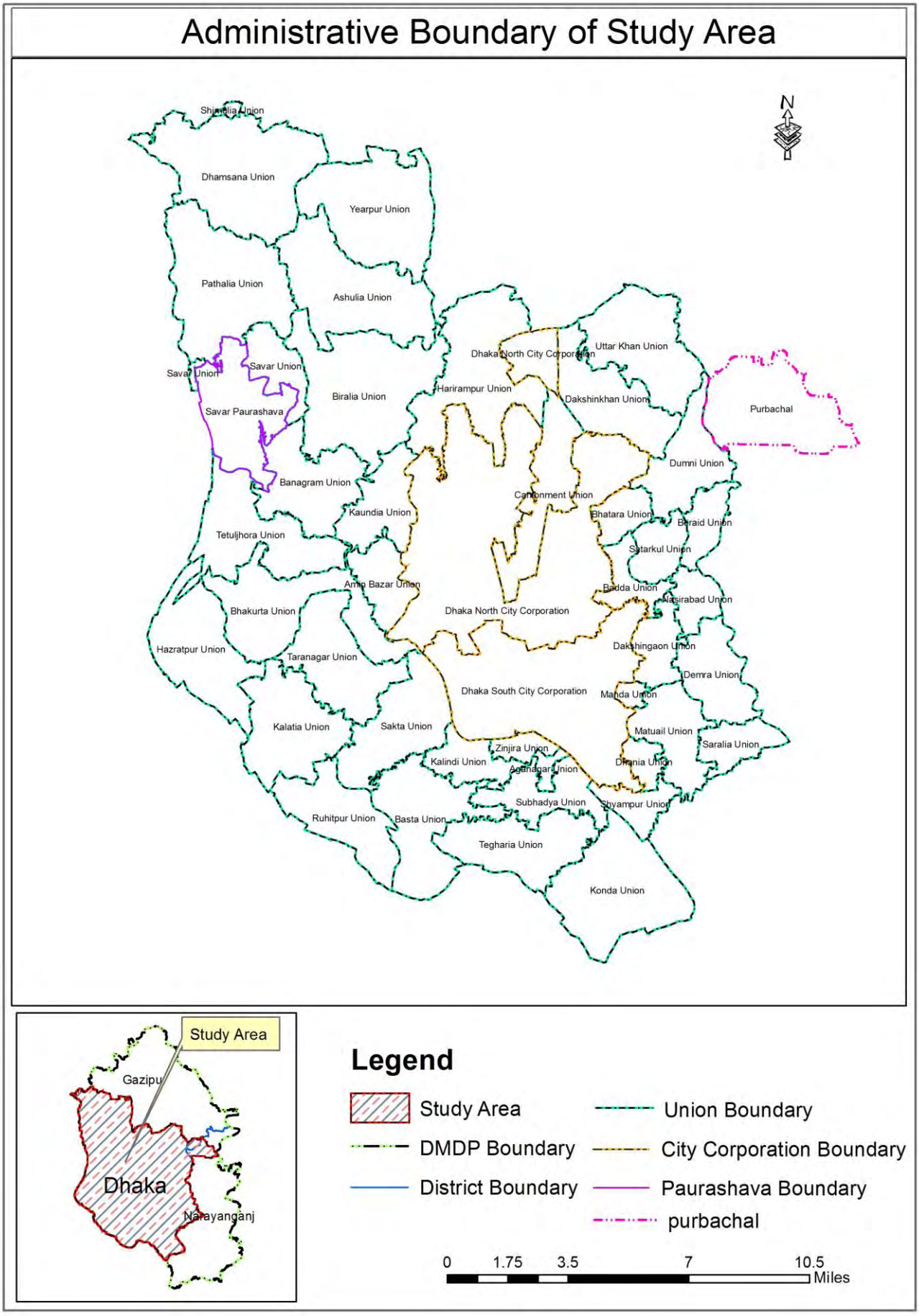
Dhaka district, including City corporations, holds total 1463.60 square kilometers. This district is surrounded by Gazipur and Tangail district in north side, Munshigonj and

Rajbari in South, Narayangonj in East and Manikgonj in West. Total population size is 12517361 **(**BBS, 2011**).** Number of total household is 27,86,133 and density of population is 8229 persons per square kilometer (BBS, 2011). Urbanization rate is 77.36% (BBS, 2011). Entire Dhaka district contains 41 metropolitan thanas, three municipalities and 79 unions (appendix table 4.3) (BBS, 2011).

According to the official website of RAJUK (2016), "Purbachal New Town" project area is located in between the Shitalakhya and the Balu River at Rupgonj thana of Narayangonj district and at Kaligonj Thana of Gazipur district, in the north-eastern side of Dhaka at a distance of 16 km from zero point of Dhaka. The total area of the project is 6150 acres which is divided into 30 sectors. The Purbachal New Town is the biggest Planned Township in the country. The Township is linked to the crossing of Airport Road and Progati swarani with eight lane-wide express way with the distance of 6.8 km. There will be provision of about 26,000 residential plots of different sizes, 62,000 apartments with all necessary infrastructure and urban facilities. Primary objectives of the Purbachol New Town project were to reduce the pressure of population in Dhaka city by creating opportunity of residential accommodation of the city dwellers in the vicinity of the city, to reduce the existing acute problem of housing, to mitigate future housing demand. That is why the authority allotted the plots among different categoriy of people of the society. People were allocated with land for their housing here in 2003 and 2004. Scrutinizing the land hand over notice of RAJUK (website, 2015), it is seen that most of the plots are being handed over currently. Also most of the infrastructures have been developed there, which indicates that this is very high time for housing construction in the site. But without having decision of building house if a land holder advertises to sell his/her land now, intention of that person can be suspected. For these reasons, this site is included in the study area.



Map-4.1: Location of study area in DMDP



Map-4.2: Administrative boundary of study area

Map 4.3: Link road to the Purbachol New Town from Dhaka city

Two city corporation area of Dhaka and those surrounding areas have been taken as the study area. Lands are being sold from different corner of the city and its outskirt. Finally, for field survey, those samples have been selected among the respondents of the advertisers who gave consent at the time of telephone interview to help in field survey. This help was needed to know the exact location of the land advertised. Because advertisements published in newspapers do not contain exact position of the lands; it gives idea of location area barely. Among these advertisements, lands ware selected randomly. Besides, in case of final selection of the lands to be surveyed physically it has been tried to take sample from different part of the city and surrounding areas.

4.3 Distribution of lands advertised

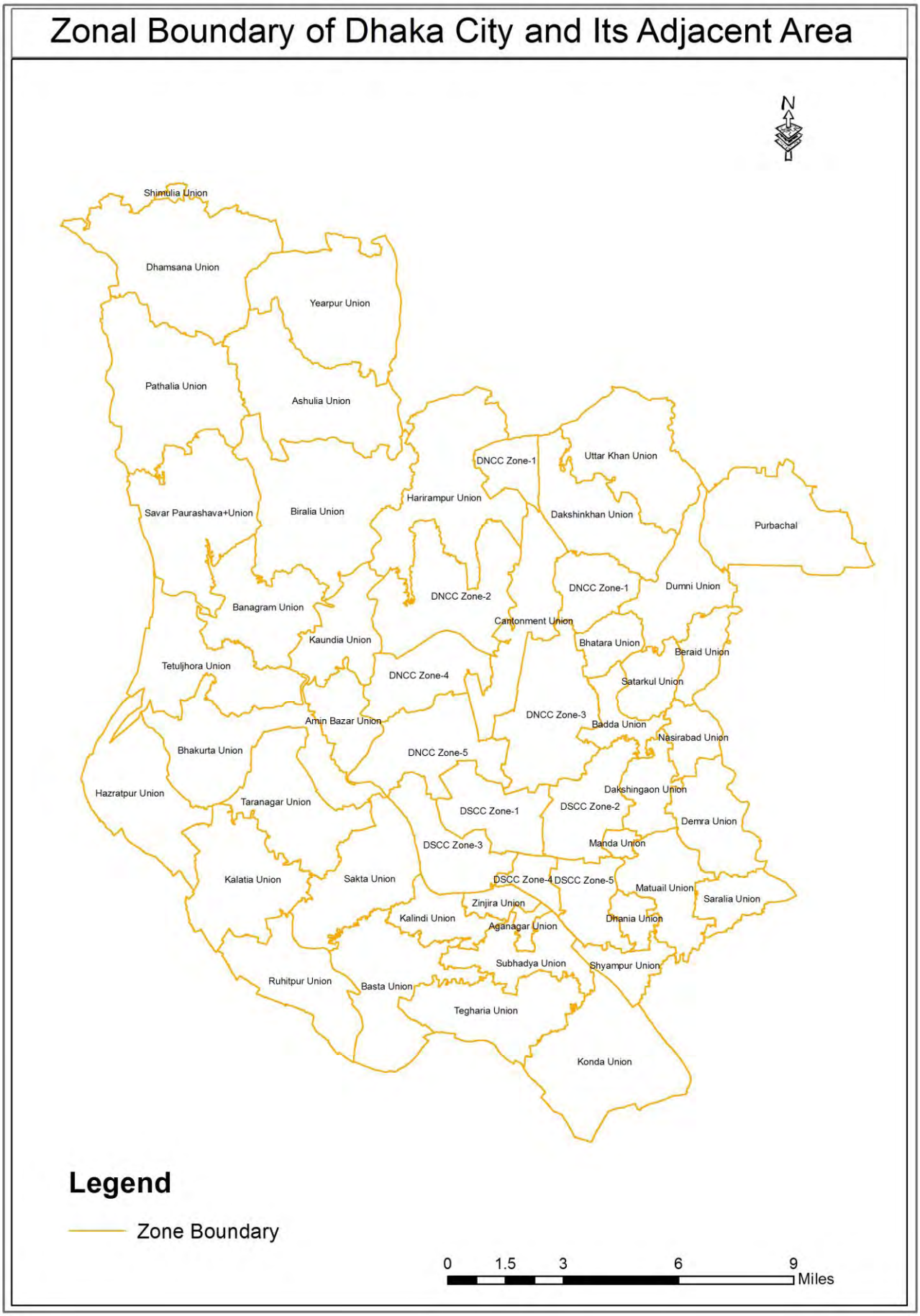
Land or plots advertised are found spreaded throughout the city and outskirt. For getting meaningful distribution pattern sample lands have been grouped into clusters based on the zones of Dhaka North City Corporation and Dhaka South City Corporation and the lands outside the city corporation area but within Dhaka District boundary are grouped based on the union boundaries. In case of Savar area, there is a municipality and union, both areas have been added and total territory has been taken as one unit zone. And the Purbachol Land Project has been taken as a single zone located outside Dhaka District but adjacent to it. In this study, the Purbachal project area has not further been divided into different unions for making zone. By this process, total 17 zones have been found among which 5 zones are from DNCC, 5 zones are from DSCC and 18 are from outskirt area.

Table 4.1: Zone wise distribution of the lands advertised for sale

Broad area	Zone names	Lands/plots counted
DNCC	Uttara Zone	200
	Mirpur-Pallabi Zone	81
	Gulshan Zone	115
	Mirpur-Kazipara, Gabtoli Zone	16
	Mohammadpur-Kawranbazar Zone	43
	DNCC total	**455**
DSCC	Shahbag Zone Total	13
	Motijheel Zone Total	48
	Lalbagh Zone Total	5
	Kotwali Zone	0
	Jatrabari Zone Total	24
	DSCC Total	**90**
Outside Dhaka City Corporation area	Uttarkhan Zone	39
	Dakkhinkhan Zone	42
	Demra zone	20
	Dhamrai Zone	2
	Dumni	65
	Bhatara	3
	Harirampur	9
	Konda	12
	Tegharia	12
	Shuvadya	27
	Kalindi	15
	Kalatia	3
	Sakta	11
	Aminbazar	17
	Ashulia	39
	Hemayetpur	5

	Savar	77
	Purbachol zone	119
	Outside Dhaka City Corporation area	**517**
Others (specific location of whice were not found out from the advertisements)		25
Total		**1087**

Source: Author"s calculation based on advertisements for selling land in different platforms, January to June, 2015



Map 4.4: Zonal boundary of Dhaka city and its adjacent area

In the city corporation area, the lands are grouped into different wards firstly (appendix table- 4.1, 4.2), then the wards are referred to the zones. **455** samples (42%) have been found in DNCC area, 90 samples (8%) have been found in DSCC area, 517 samples (48%) have been found outside of the city corporation area. Specific locations of 25 lands have not been found out from the advertisements.

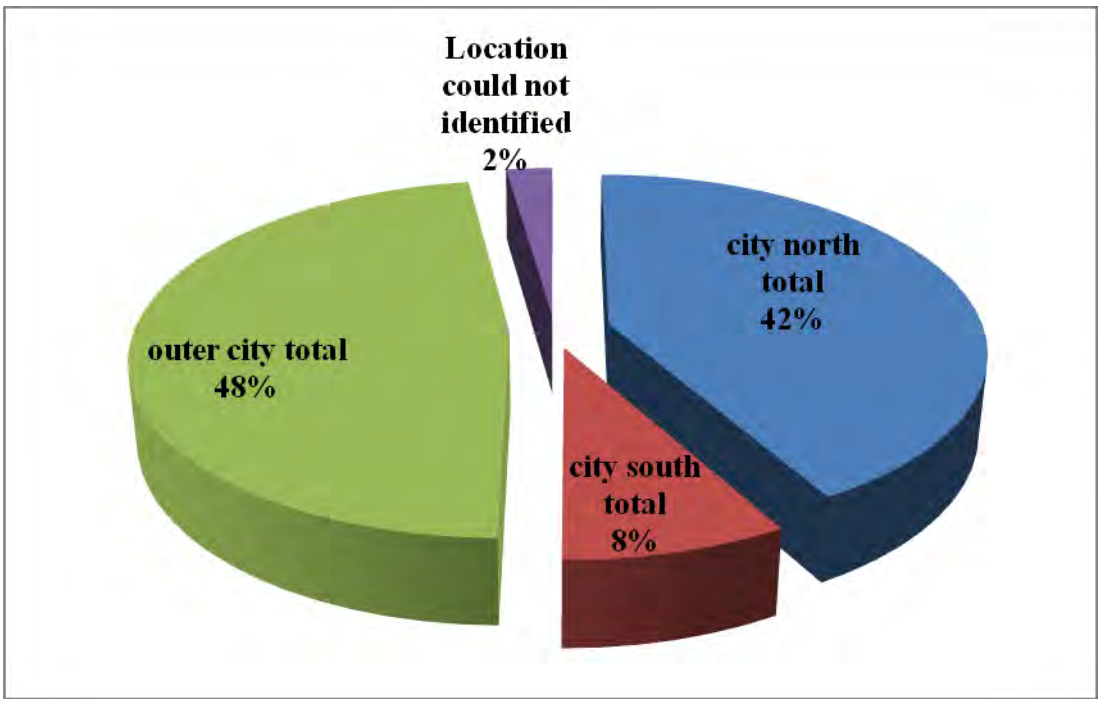
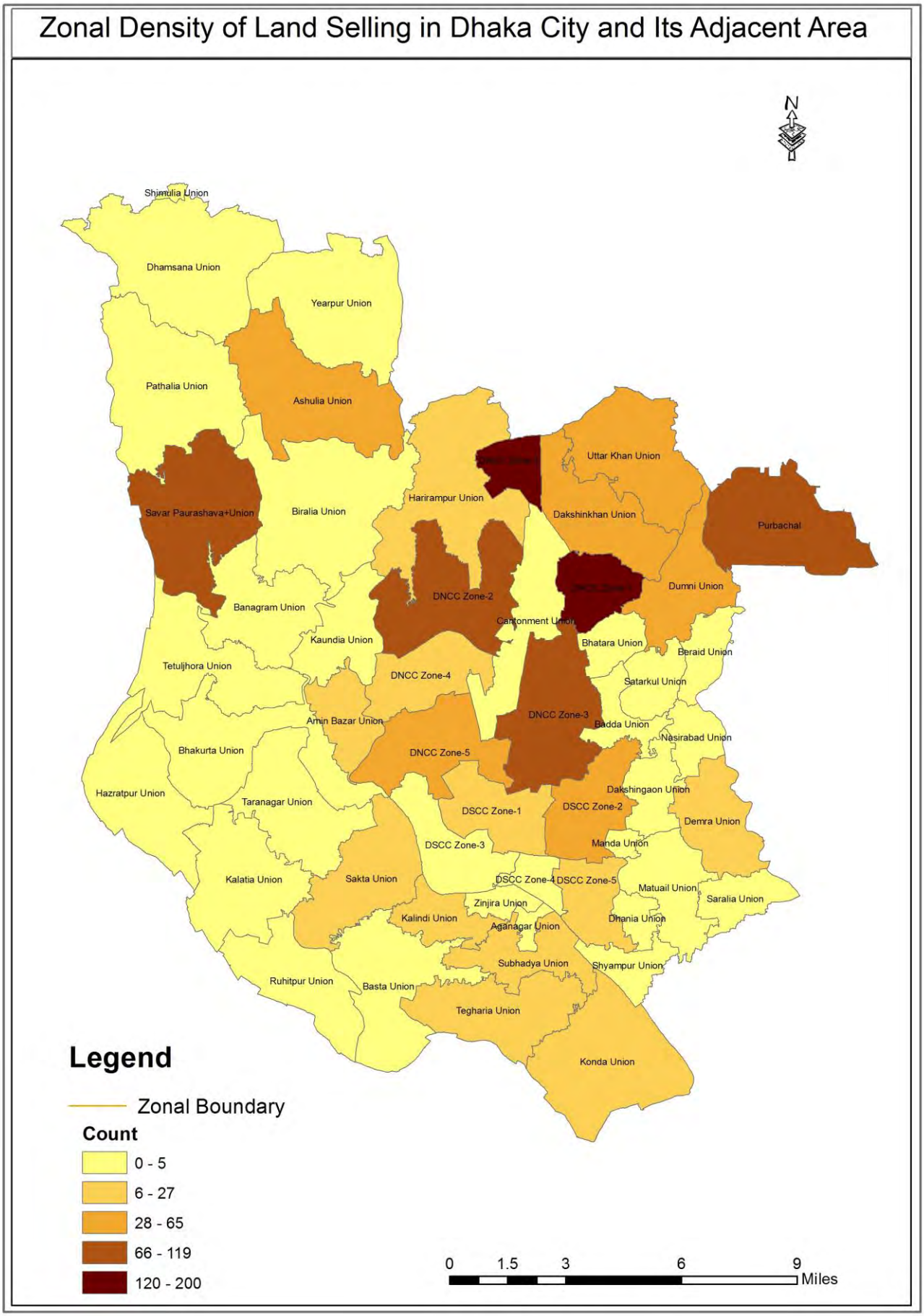


Figure 4.1: Distribution pattern of the advertised lands

Source: Land advertisement survey in different platforms, 2015



Map 4.5: Zonal density of land selling in Dhaka city and its adjacent area

Lands advertised in DNCC are dessiminated in different zones like 44% in Uttara Zone, 25% in Gulshan zone, 18% in Mirpur-Pallabi Zone, 9% in Kawranbazar-Mohammadpur zone (According to website of DNCC this zone is named as Kawranbazar Zone. Here Kawranbazar-Mohammadpur Zone is named to make more understandable) and 4% in Mirpur-Kazipara, Gabtoli zone. Highest number of lands advertised to be sold are in Zone 1 named as Uttara Zone in DNCC area. Lowest number of lands advertised in Zone 4 named as Mirpur-Kazipara, Gabtoli Zone.

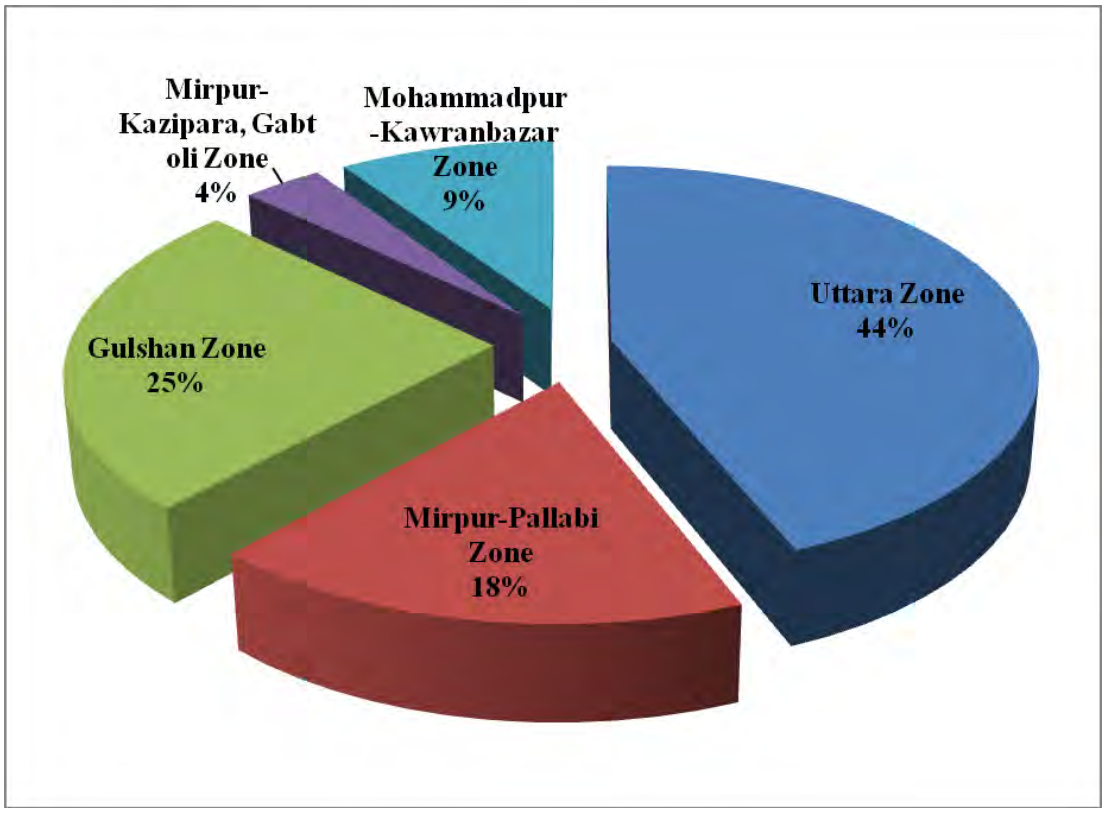


Figure 4.2: Distribution of the advertised lands among different zones of DNCC.
Source: Land advertisement survey in different platforms, 2015

If the distribution pattern of the lands advertised in the Dhaka South City Corporation is analyzed it is found that in this area highest number of the land advertised (53%) are located in Motijheel Zone (Zone 2). No land has been advertised in Kotwali Zone (Zone 4). 27%, 14% and 6% advertisements are found in Jatrabari (Zone 5), shahbag Zone (Zone 1) and Lalbag Zone (Zone 3) respectively.

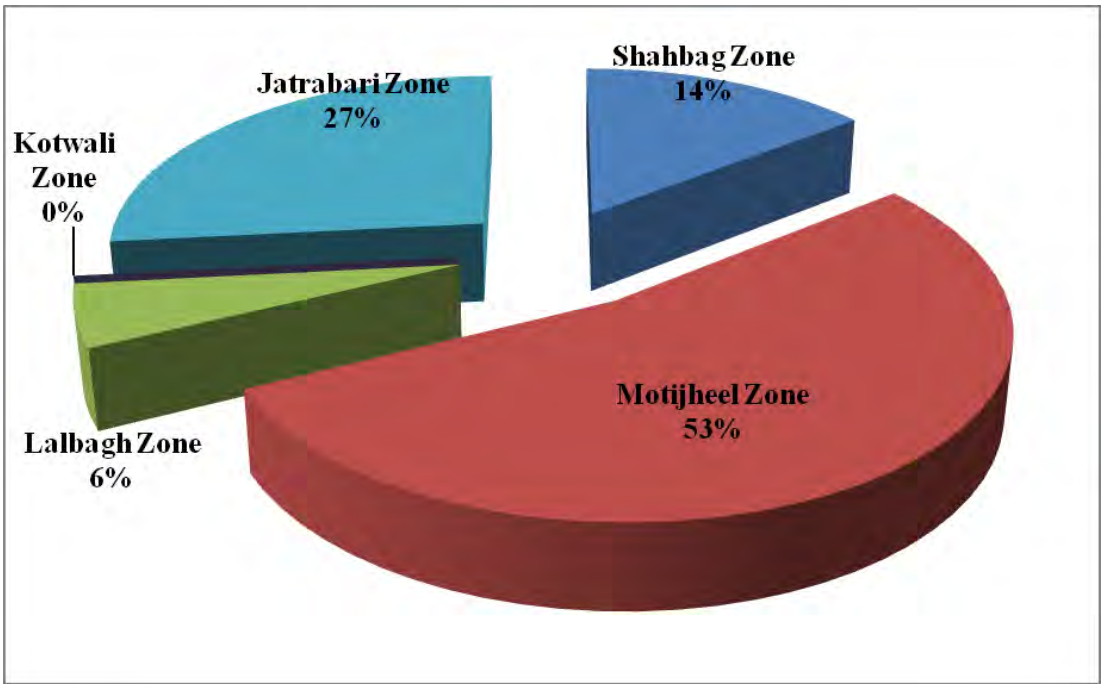
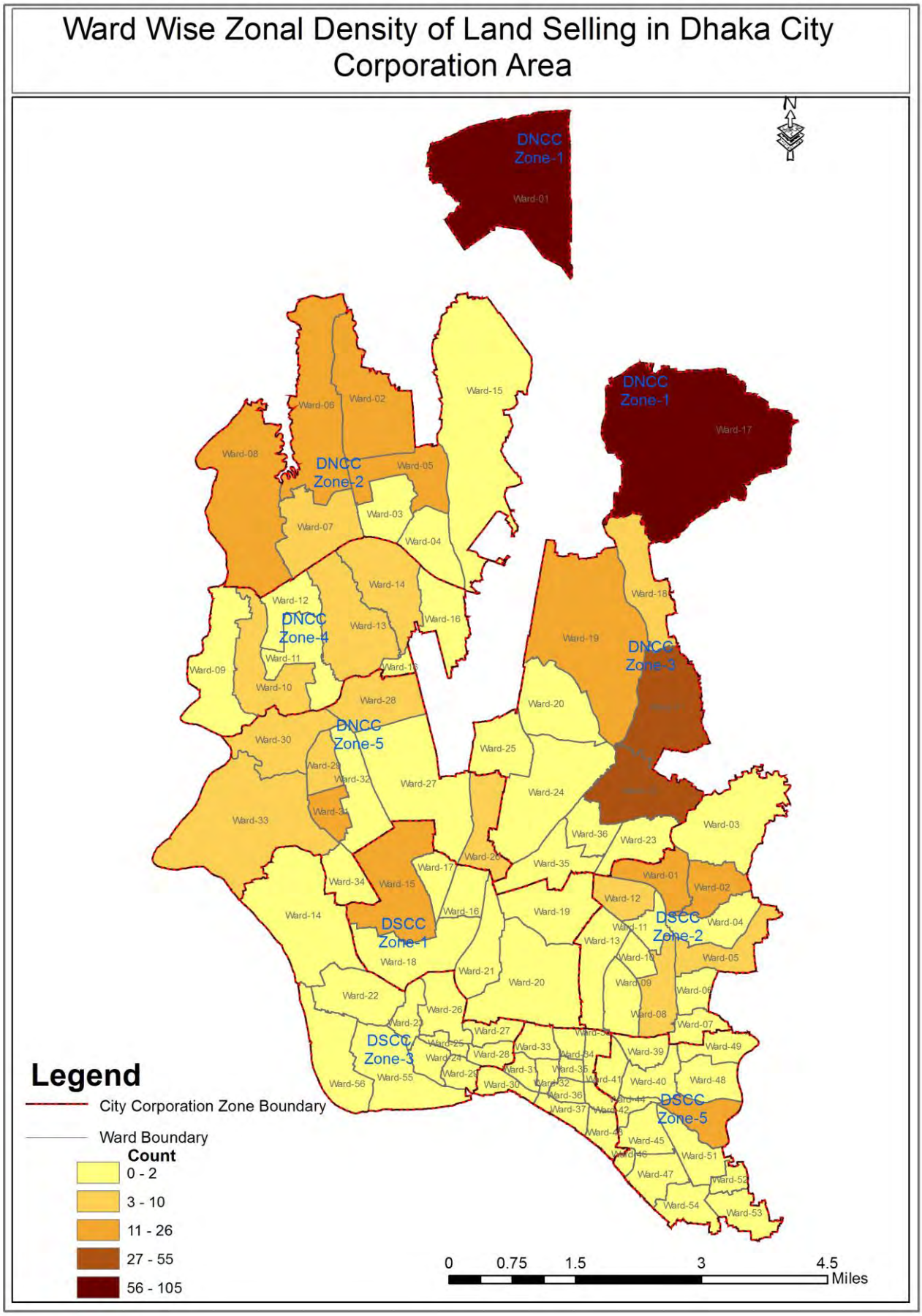


Figure 4.3: Distribution of the advertised lands among different zones of DSCC.

Source: Land advertisement survey in different platforms, 2015



Map 4.6: Word-wise zonal density of land selling in Dhaka city corporations area

For outside the Dhaka City corporation area, total 18 zones have been considered. In this area highest number of the land advertised (23%) are located in Purbachal Zone. Second highest number (15%) are located in Savar zone. Third one is Dumni union (13%), in which a great part of Bashundhara Residensial Area is located. Each of Dakkhinkhan, Uttarkhan and Ashulia zones hold 8% of lands advertised outside Dhaka city corporation area. Suvadya Zone can be mentioned next as lands advertised (5%) located there.

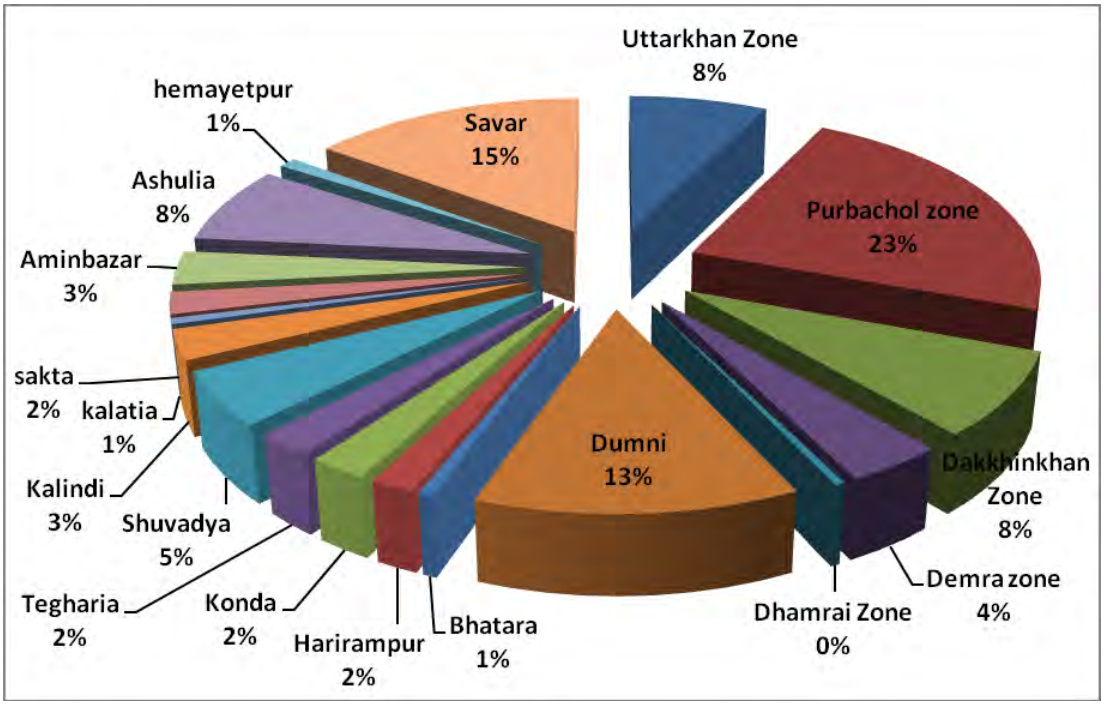
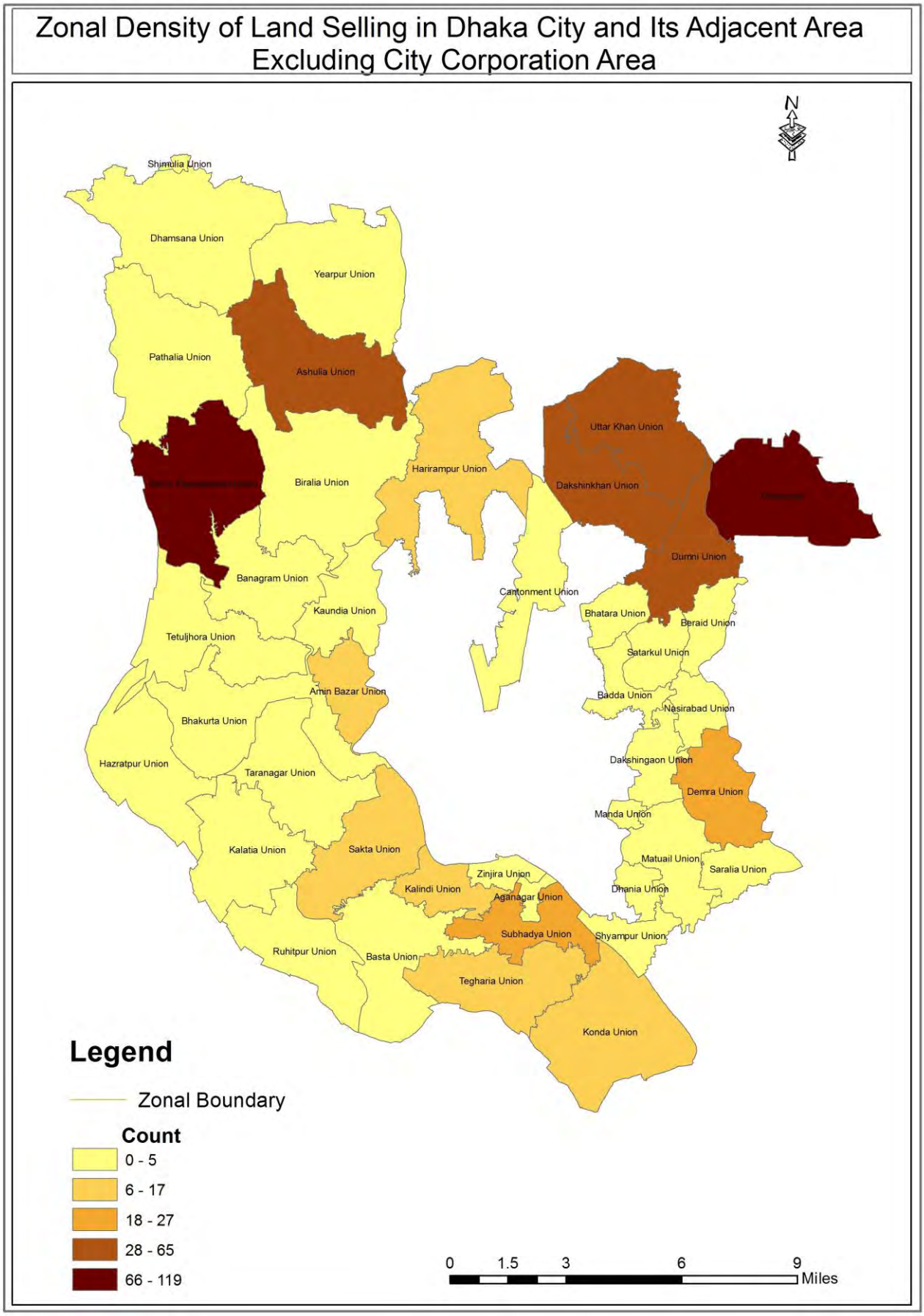


Figure 4.4: Distribution of the advertised lands among different zones of surrounding area of Dhaka City.

Source: Land advertisement survey in different platforms, January to June, 2015



Map 4.7: Zonal density of land selling in Dhaka city and its adjacent area excluding City corporation area

4.4 Conclusion

Lands have been found advertised for sale from different corner of the city and its outskirt. This study tried to include all those lands advertised by individual. Highest share of the lands to be sold is in outside the city corporation area (48%), secondly in DNCC (42%) and thirdly in DSCC (8%) area. In case of DNCC area, Highest number of lands advertised to be sold are in Zone 1 named as Uttara Zone (44%) and lowest number of lands advertised in Zone 4 named as Mirpur-Kazipara, Gabtoli Zone (4%). On the other hand, in case of DSCC area, highest number of the land advertised (53%) are located in Motijheel Zone (Zone 2) and no advertisements has been found in Kotwali Zone (Zone 4). For outside the Dhaka City corporation area, out of total 18 zones, Purbachol shares highest (23%) land advertisements and lowest sharing zone is Suvadya Zone with 5% lands. Studying these lands it is hoped that actual land selling scenario of Dhaka and the speculative behavior of the land holders can be found.

CHAPTER FIVE

NATURE OF LAND DESIGNATED FOR SALE BY INDIVIDUAL LAND HOLDERS

5.1 Introduction

Studying the nature of land designated for sale is very much important for studying the speculative motivation behind selling the lands. Nature of land denotes the importance and potentiality of that in different perspective. Condition, location, size, adjacent land use, road network etc. are associated with the nature of land. Development pattern of land and its surrounding can influence the importance and potentiality of the land to the buyers. As the demand of land depends on that potentiality, land holders get scope to make it commodity for speculation. The nature of the lands designated for sale has been found from the information given in the advertisements, telephone survey and field inspection.

5.2 Description of the plots/lands

From the telephone survey it has been found that 84.4% (233 out of 280) of the lands or plots advertised to be sold are currently flat i.e. at similar elevation to the surroundings. Respectively 2.2% (6), 5.4% (15) and 8.0% (22) of the lands surveyed by telephone (284) are pool, under water and low land. This shows that most of the lands are ready to build house. But in reality these lands are kept vacant, unproductive.

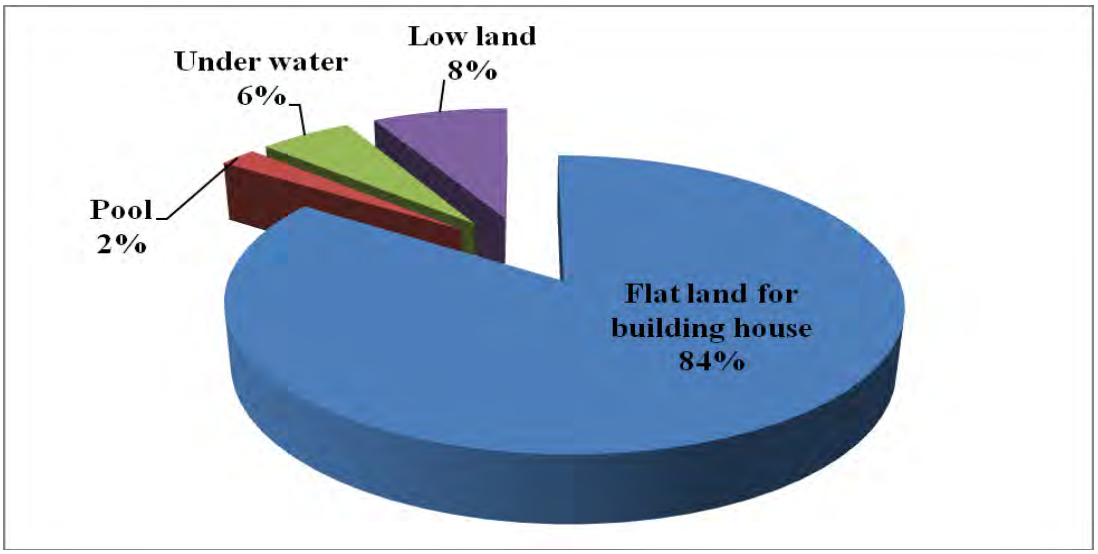


Figure 5.1: Current condition of Land/Plots Source: Telephone survey, January to June, 2015

An advertisement of the plots contains very few information of the properties. Area, in katha, is one of them. For 1032 plots, out of 1068, areas have been found in the advertisements. The mean area of the plots is 10.2937 *katha*. Median is 4 *katha*. Mode is 3 katha and this same area is counted for 24.1% of respondents land (Appendix Table-5.2). 25 percentiles, 50 percentiles and 75 percentiles of the data are 3, 4 and 5.50 Katha respectively.

Table 5.1: Area of lands (in katha) advertised to be sold

Number of advertisements		1032
Mean (area, in Katha)		10.29
Median (area, in Katha)		4.00
Mode (area, in Katha)		3.00
Std. Deviation		61.49
Percentiles	25	3.00
	50	4.00
	75	5.50

Source: Advertisement source survey by author, January to June, 2015

As the sizes of the plots are different, those are categorized based on standard size of plots used in different planned residential areas in Dhaka. The standard sizes of the plots considered are based on the sizes of plots in Purbachal New Town by RAJUK and Bashundhara Baridhara Land Project by a private land developer. For example Purbachal Project has 3, 5, 7.5 and 10 katha sized plots and Bashundhara Baridhara Land Project holds 3, 4, 5, 10 and 20 katha plots. Having these sizes in consideration the groups have been made.

Share of 3 katha or less than 3 katha sized lands or plots are highest (39%) in the study area. There are 3-4 katha, 4-5 katha, 5-7.5 katha, 7.5-10 katha, 10-20 katha sized plots are 13%, 22%, 9%, 8% and 5% respectively. More than 100 katha sized lands to be sold are only 1%. That means, most of the plots (74%) are below or equal to 5 katha size.

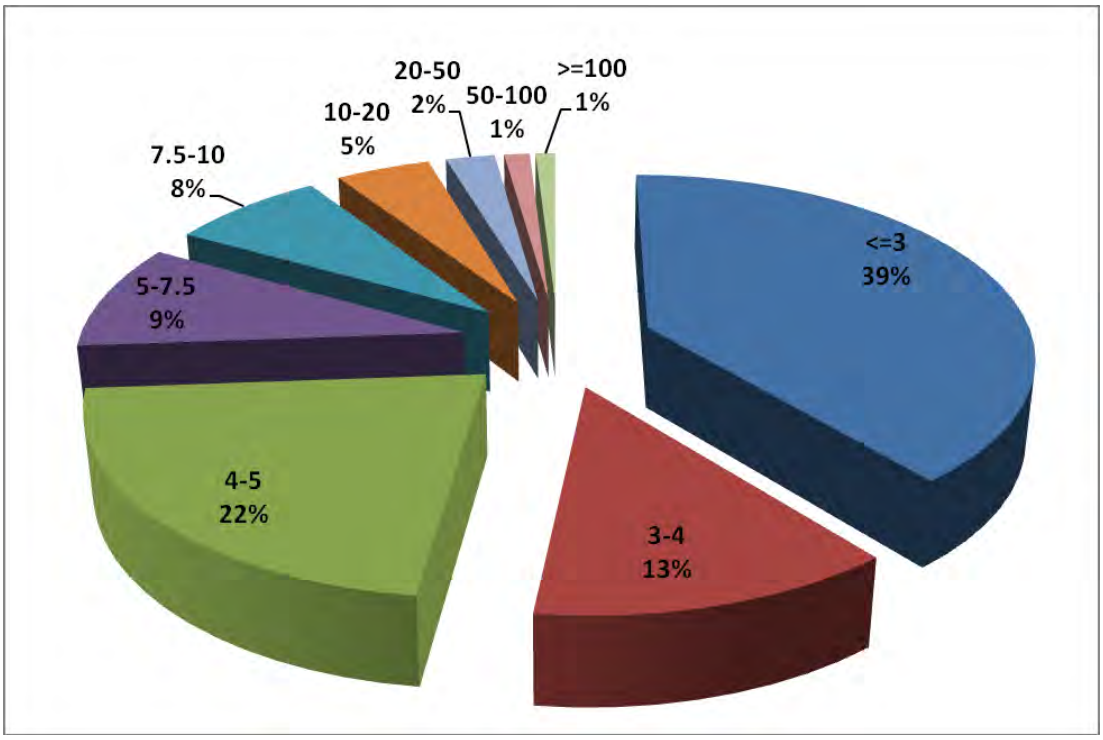


Figure 5.2: Distribution of area of the plots to be sold

Source: Telephone survey, January to June, 2015

5.4 Initial condition of the land parcels

During telephone survey of 284 plot owners (advertisers), they were asked if any attempt has been made to develop the plot or land parcels. According to their response, 61.9% (146) land holders have not attempted to develop the land once the plot was handed over to him/her. It means that the initial condition and the current condition of these lands are same. 38.1% (90) land holders attempted to develop their land or plots. In the development work, some plots have been developed by only filling up and some have been developed by both filling up and erecting a boundary wall. So these actions prove that these newly developed lands or plots were initially low lying actually.

Also it has been found from analysis that 59.6% lands were initially flat. Other 38.1% lands were found as either pool, nor pond nor low land in character.

5.5 Surroundings of the lands or plots

5.5.1 Surrounding condition of plots

To understand the development potentiality of any land or plot, studying the condition of the nearby places is important. Generally a whole locality is developed altogether. If there is found major differences between the land or plot and its surroundings that may indicate something abnormal. For example if the nearer places are flat land but the plot is exceptionally low land and kept undeveloped for many years, there may have motivation for speculation. From the telephone survey of this study, it is found that, 67% lands have housing in the adjacent lands i.e. just next to the plots. And also 22% of the sample lands" surrounding plots are occupied by some building plus some vacant land which may be equivalent to flat land. That means in this study, about 89% (67+22) of the plots, as found in the telephone survey, has flat surrounding lands and rest of the 11% plots are low lands.

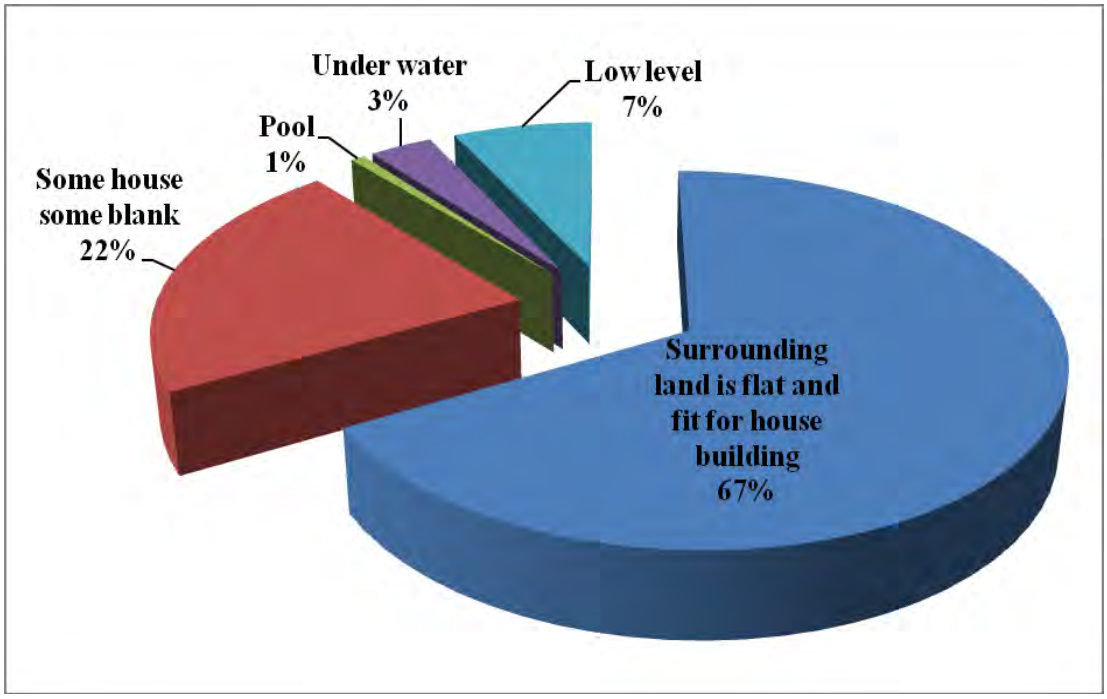


Figure 5.3: Present condition of adjacent land

Source: Telephone survey, January to June, 2015

Cross tabulation between the condition of the plot or land and surrounding lands can show the relationship among those. Chi-square test can be done in this regard.

Table 5.2: Cross tabulation between current condition of land and adjacent land

		Present condition of adjacent land					Total
		Flat and fit for house building	Some house some blank	Pool	Under water	Low level	
Current condition of land	Flat land for building house	178	45	1	1	6	231
	Pool	1	2	1	0	2	6
	Under water	1	4	0	6	3	14
	Low land	2	9	0	2	9	22
Total		182	60	2	9	20	273

Source: Telephone survey, January to June, 2015

In the above table if two categories namely flat land for housing and some house some blank are merged then the new category found can be named as Surrounding Land Flat. Similarly, if categories namely pool, under water and low level lands are merged, new category found which can be named as Surrounding Land Low. Thus a 2 by 2 table is found to conduct chi-square test (Table 5.3).

Table 5.3: Equivalent table of cross tabulation between the lands condition and surrounding condition

	Surrounding land flat	Surrounding land low level	Total
Plot flat	223	8	231
Plot low level	19	23	42
Total	242	31	273

Source: Telephone survey, January to June, 2015

By Fisher's exact test it is found that the one-tailed P value is less than 0.0001. That means the association between surrounding condition of lands and the plots condition is considered to be extremely statistically significant.

Here 19 plots are low leveled with its surrounding lands as flat. Also 8 plots are flat with surrounding lands as low level. There may be some abnormality in these 19 plots and 8 plots as those are not similar to those surroundings.

Now it should be noted that though most of the plots are ready for housing and surroundings are also developed, the plot owners are selling them. Of course there are some causes for selling lands including speculation which is discussed later on.

5.5.2 Adjacent road network

90% of the sample lands have connecting road and only 10% lands are there having no connecting road. This indicates that the plots or lands are potential for housing as most of those are having abutting road.

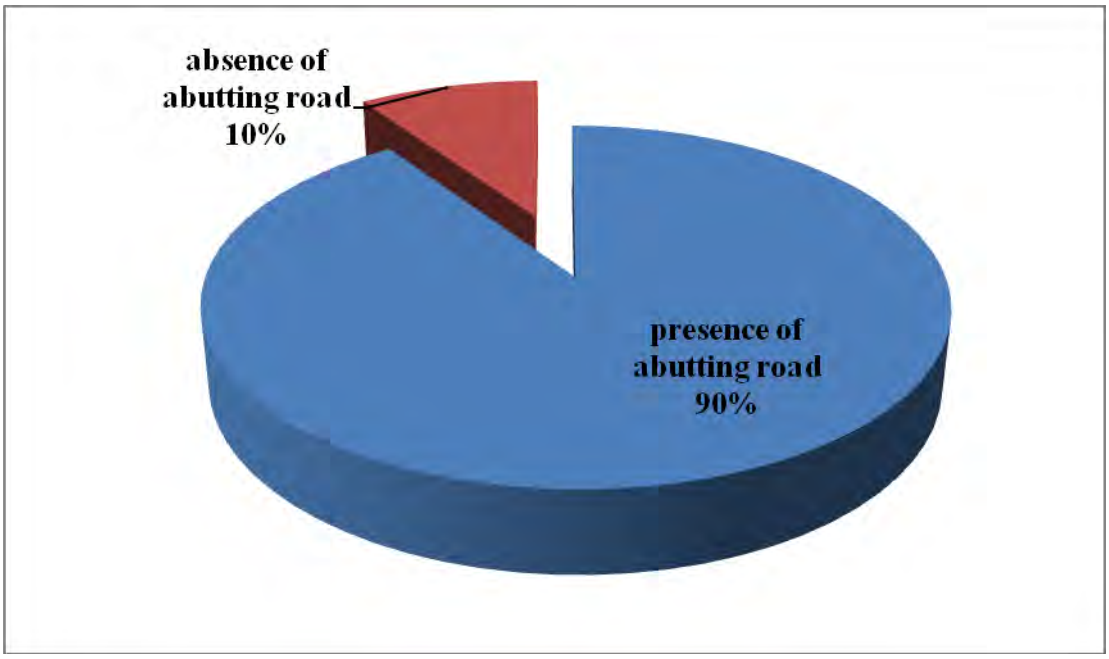


Figure 5.4: Presence of adjacent road to the plots/lands

Source: Telephone survey, January to June, 2015

Out of these roads 63% are pucca, 19% roads are with brick surfacing. Kutcha road is 16% and rest 2% road are demarcated but yet not built up.

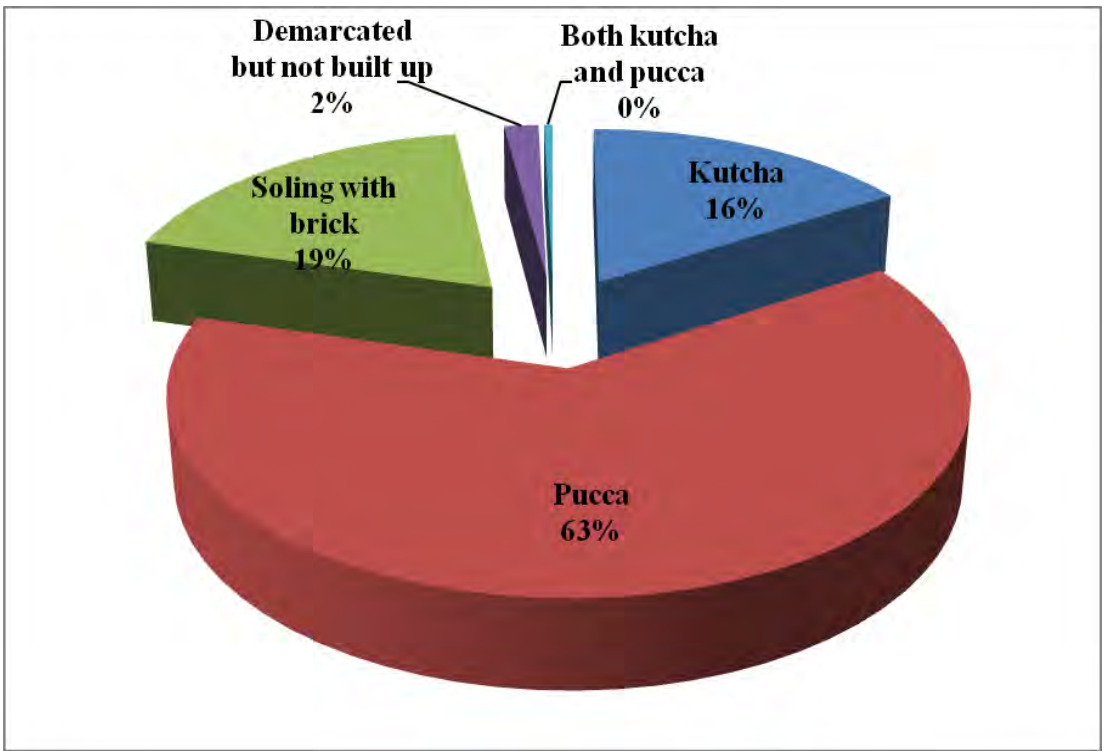


Figure 5.5: Condition of adjacent road Source: Telephone survey, Jan to June, 2015

5.6 Nature of development surrounding the project

From the table 5.4 it is found that 73.8% (194) lands/plots have houses nearby position and 26.2 % land do not have. If this 194 plots are analysed about attempt for housing or development there that may give a good result about the land holders intension with the lands.

Table 5.4: Existence of adjacent building to the plots

Does building exist on adjacent land		
	Frequency	Percentage
Yes	194	73.8
No	69	26.2
Total	263	100.0

Source: Telephone survey, January to June, 2015

This means that out of the 194 plots which have at least one house adjacent to them, in 13 plots owners attempted to build house and in 181 plots there were no attempt to build house. This may indicate that 181 plot holders kept their land vacant without building houses on those though their neighbors developed their own. So these 181 plot holders can be suspected that they had speculative intension.

On the other side, out of the 194 plot holders 150 did not even take initiative to develop their land. It also indicates the motive of suspected speculation. Next, the 44 plots, where owners developed their lands, were investigated more. It has been found that 48 percent of such plots were kept unsold even after their (land) development more than 5 years ago. In absolute figure, such plots are 21 in number (Appendix Table-5.7). Therefore these 21 plots can also be added with the previous 150 plots whose owners might have speculative motivation.

Again 70 plots have at least four adjacent houses. That means those plots are very much ready to build up habitat. But out of them, 53 plot owners did not take attempt to build house on those (appendix table 5.8). These plots may also be kept for speculation.

Here it is to be noted that adjacent house means the number of houses built very nearer to the plot or land advertised to be sold. It may be just abutting the plot or beside the access road to the plot.

Table 5.5: Cross tabulation of plots having houses built up adjacent to them and plots where owners attempted to build own houses or developed them

Number of plots having presence of house/s adjacent to them	Category	Attempted for building house	Land Developed
194	Yes	13	44
	No	181	150

Source: Telephone survey, January to June, 2015

5.7 Discussions based on the field inspection

5.7.1 Condition of the lands

Out of 30 samples for field survey, only 2 lands were not identifiable. One of those positions is in the river (the plot is located in the map prepared by the project authority but in reality this plot is located in the Balu river) and another is in the low area. Rest of 28 lands were identified and surveyed.

From the field survey, it is found that 60% of the sample lands are currently flat that is suitable for housing there, whereas 84.6% of the sample lands were found flat for housing at the time of telephone survey. 7% and 5.5% of the sample are found as wetland in the field survey and telephone survey respectively, which is nearly similar.

Table 5.6: condition of the plots got from field survey and telephone survey

Condition	Field survey		Telephone survey	
	frequency	percentage	frequency	Percentage
flat for housing	18	60	230	84.6
Wet land	2	7	15	5.5
Pond/river	3	10	6	2.2
Low land	6	20	21	7.7
Building	1	3	0	0

Source: Field survey, January to February, 2016 and Telephone survey, January to June, 2015

5.7.2 Abutting road category

Only 3 lands, among the selected lands for field survey, have no connection with road. Other 27 lands are connected with adjacent roads. Here 26.7% roads are pucca, 36.7% lands are kutcha and 26.7% are semi pucca roads (appendix table 5.11). This feature of the road indicates that the lands are very potential for housing because to choose a land for housing it is so much important that the land has an adjacent road.

5.7.3 Surrounding development

from the field survey (appendix table 5.12) it is found that 64.7% plot has 5 abutting plots. 38% lands have 5 developed abutting plots. 28.6% lands have one undevelopped abutting plot.

5.7.4 Building construction

From the field survey, this is found that out of 30 lands, only 9 plots have home in the abutting plots and rest of the 21 have no home consturcted in the abutting plots.

5.7.5 Plots through access road

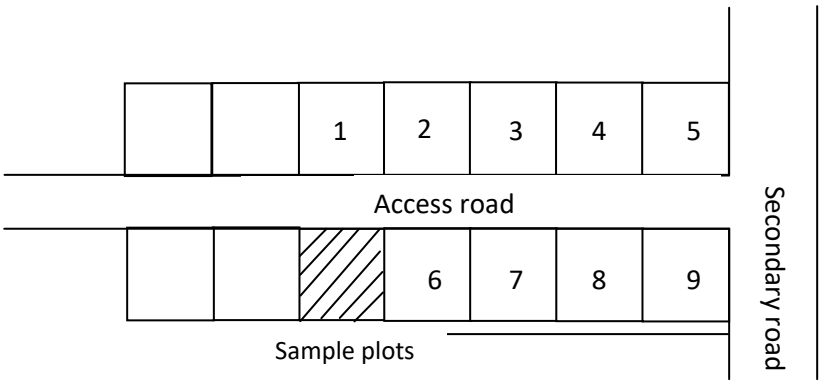


Figure 5.6: Plots through access road

Plots beside the access road of the sample land/plot were counted in the field inspection. For 47.8% sample plots, 11-15 plots have been found beside the access road. If the cumulative percentage is taken into consideration, it is found that, access roads of 91.3% sample plots contain less than 15 plots. This data indicates that the plots are not so far from the the nearer local and secondary road intersection.

Table 5.7: Number of plots through access road

	Number of plots in group	Frequency	Valid Percent	Cumulative Percent
Valid	0-5	2	8.7	8.7
	6-10	8	34.8	43.5
	11-15	11	47.8	91.3

	16-20	1	4.3	95.7
	21-25	1	4.3	100.0
	Total	23	100.0	
	System	7		
Total		30		

Source: Field survey, January to February, 2016

The number of plots and number of developed plots through the access road are grouped and cross tabulated. From the table below it is found that with the increase of the number of plot beside the access road the number of the developed plot is also increased.

Table 5.8: Cross tabulation between the developed plot and number of plots through access road

		Number of plots through access road					Total
		0-5	6-10	11-15	16-20	21-25	
Number of developed plot through access road	0-5	2	2	1	0	0	5
	6-10	0	4	4	0	0	8
	11-15	0	0	6	0	0	6
	16-20	0	0	0	1	0	1
	21-25	0	0	0	0	1	1
Total		2	6	11	1	1	21

Source: Field survey, January to February, 2016

5.7.6 Cross tabulation between the number of plots and number of plots where buildings have been constructed

Access road of total 15 sample plots have been found that have at least one plot consisting building on it. Out of 15 plots, which have at least one construction in its access road, 11 sample contains building less than or equal to 5. Table shows that with the increase of the number of plots in access road the construction rate is not increasing.

Table 5.9: Cross tabulation between the access plots and building constructed on access plot

		Number of construction in the acc plots			Total
		1-5	6-10	21-30	
access plots in group	1-5	1	0	0	1
	6-10	5	0	0	5
	11-15	4	3	0	7
	16-20	1	0	0	1
	21-30	0	0	1	1
Total		11	3	1	15

Source: Field survey, January to February, 2016

5.7.7 Walking time from intersection of the access road and the nearer secondary road

From the field survey (appendix table 5.13), it is found that 34.5 % sample plots are situated in 5 minutes walking distance from the intersection of the access road and the nearer secondary road. It is to be noted that all the sample lands are situated within the walking distance of 5 minutes.

5.7.8 Description of the intersection

From the previous section, it is known that 27 plots, among the field survey samples, have access road. Condition of the intersection of the access road and the nearer secondary road can indicate the importance of the position of the sample plots. There are highest 9 plots in the intersection of 8 (26.7%) sample land and least number of 5 plots in 4 sample lands intersection.

Whether the construction done or not in the plots beside the intersection is justified then this is found that only 8 intersection do not contain any building constructed in the plots. Total 50% intersections, related to the sample plots, hold 5 or 6 plots with building constructed. Also 11% intersection holds 3 plots with construction.

Table 5.10: Number of plot having building in the intersection of the access road and secondary road

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	8	26.7	29.6	29.6
	1	4	13.3	14.8	44.4
	3	3	10.0	11.1	55.6
	4	1	3.3	3.7	59.3
	5	5	16.7	18.5	77.8
	6	5	16.7	18.5	96.3
	8	1	3.3	3.7	100.0
	Total	27	90.0	100.0	
Missing	System	3	10.0		
Total		30	100.0		

Source: Field survey, January to February, 2016

5.7.9 Mode of transportation and distance of the nearer local and secondary road intersection from the nearest primary road

Different types of mode are available for transportation from primary road to the secondary and access road intersection. Among those modes, Buses, Laguna, Auto rickshow, rickshow etc are mentionable. Obviously, different types of modes need different period to reach. In 84.2 percent cases, it needs up to 30 minutes to go to primary road from the access road and secondary road intersection by rickshaw. In 87% case, auto rickshaw takes less than 20 minutes to reach from the intersection of the access road and secondary road to the primary road (appendix table 5.14).

5.8 Justification of Telephone survey with the field survey

The analysis of the study was done basically based on the telephone survey data. To justify the data got from the telephone survey it was decided to do field inspection on 10% lands of the samples surveyed by telephone. Obviously lands for field survey were selected among the samples surveyed by telephone. To justify the actuality of information about the lands surveyed by telephone same lands/plots (30 lands) physically inspected have been cross checked for few parameters.

5.8.1 Current condition of lands

For phone survey flat land for building house have been found for 19 lands (79.2%) whereas for field survey this item have been found for 16 lands (69.6%). Four Low lands have been found for both type of surveying. This shows very similar result to each others.

Table 5.12: Current condition of the plots/lands found in both type of survey

	Phone survey data			**Field survey data**	
	Frequency	Valid Percent		Frequency	Valid Percent
Flat land for building house	19	79.2		16	69.6
Pool	0	0		1	4.3
Under water	1	4.2		2	8.7
Low land	4	16.7		4	17.4
Total	24	100		23	100
Missing	1			2	
Total	25			25	

Source: Telephone survey, January to June, 2015 and Field survey, January to February, 2016

5.8.2 Abutting road category

Abutting road category was surveyed in both cases. In phone survey 6 plots have been found which have pucca abutting road where as in field survey 7 plots have been found in this category. Plots with semi-pucca road (4) have been found same for both surveying. 10 plots have been found with kutcha abutting road in case of phone survey and in case of field survey this number has been found as 9.

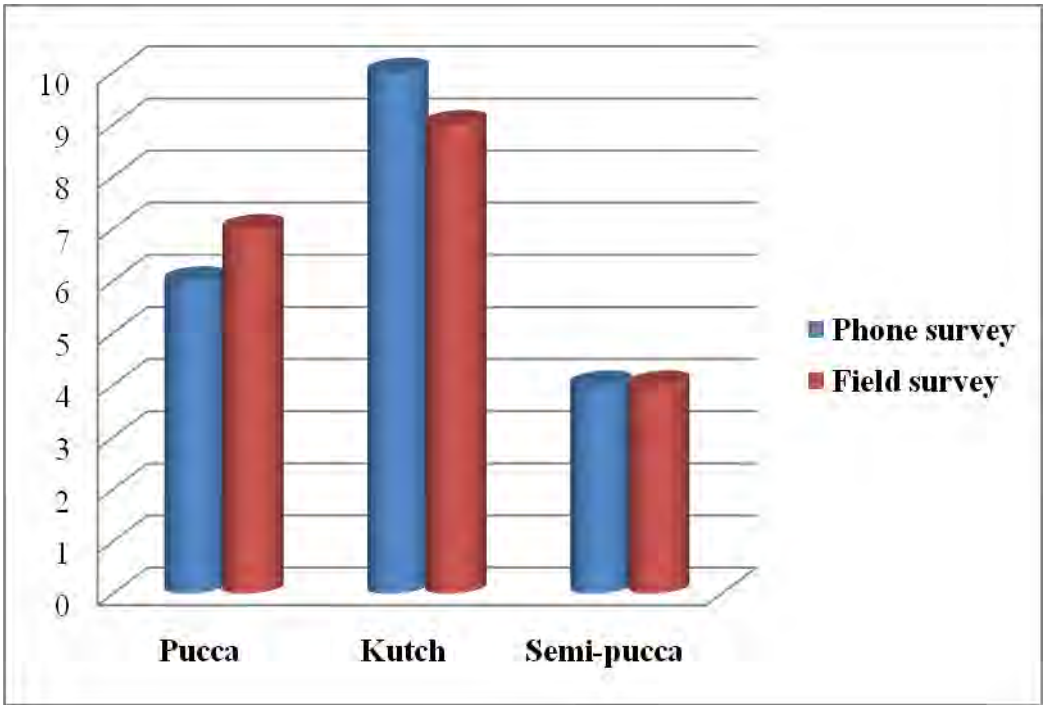


Figure 5.7: abutting road category of the plots found in phone survey and field inspection

Source: Telephone survey, January to June, 2015 and Field survey, January to February, 2016

5.8.3 Justification remark

These types of data have been found for two types of survey. Data have been found in field survey are very nearer to phone survey. As telephone survey have been conducted in 2015 and Field survey have been carried out in 2016 some difference can be found. Therefore, it can be told that phone survey is justified.

5.9 Conclusion

Analysis of the nature of land designated for sale reveals some clue to the speculation in some cases. The surrounding road network, adjacent development, condition of the land itself denotes the good housing potentiality of the lands. Despite these potentials owners are not building houses on those plots/lands. Keeping these lands un-built, undeveloped, unsold for a long time can raise questions regarding the motivation of the holders. In this study 84.4% land is flat and ready for housing. Size of the lands are mostly 3 katha (24.1%), 5 katha (19.1%), 2.5 katha (6.7%) which are very standard in our country for housing plots. 59.6% lands were initially flat. Other 38.4% lands were found either as pool, nor pond nor low land. 38.1% land holders attempted to develop their lands after having them in their ownership. About 89% lands have flat surrounding lands and rest of the 11% lands are low type lands. It is found that the sample plots condition and its surrounding condition is extremely statistically significant. In this study 90% of the lands have road connection. Mean of these roads width is about 30 feet. That shows the good road network to the lands. 73% (194) land/plot have houses in the nearby area. 93% plot holders kept their land vacant without building houses on those though their neighbors developed their own. These analysis gives clue that there might be speculative motif in holding the lands unsold.

CHAPTER SIX

PATTERN OF LAND/PLOT SALE AND NATURE OF SPECULATIVE BEHAVIOR

6.1 Introduction

Land holders own their lands in different ways like buying, inheritance etc. Generally people buy their lands for a specific purpose. It is expected that their selling behavior will be based on their initial intention. But if the intention expressed is not fully justified with their behavior pattern then that raise suspicion regarding speculation. But the justification of the intention of owning lands is not easy task rather that is related to different complex concerns. Also duration of keeping land unsold, cause of development of lands, causes of waiting for selling land after development, surrounding land development pattern etc are to be tested to have a picture of land selling pattern.

6.2 Source of land ownership

Lands have been owned by current land holders in different ways i.e. buying, inheritance, compensation from land project, allocation for government officers, and donation for freedom fighters and VIP allotment etc. In this study 82.1% land holders have got ownership of the lands through purchase and 15.3% have got through inheritance.

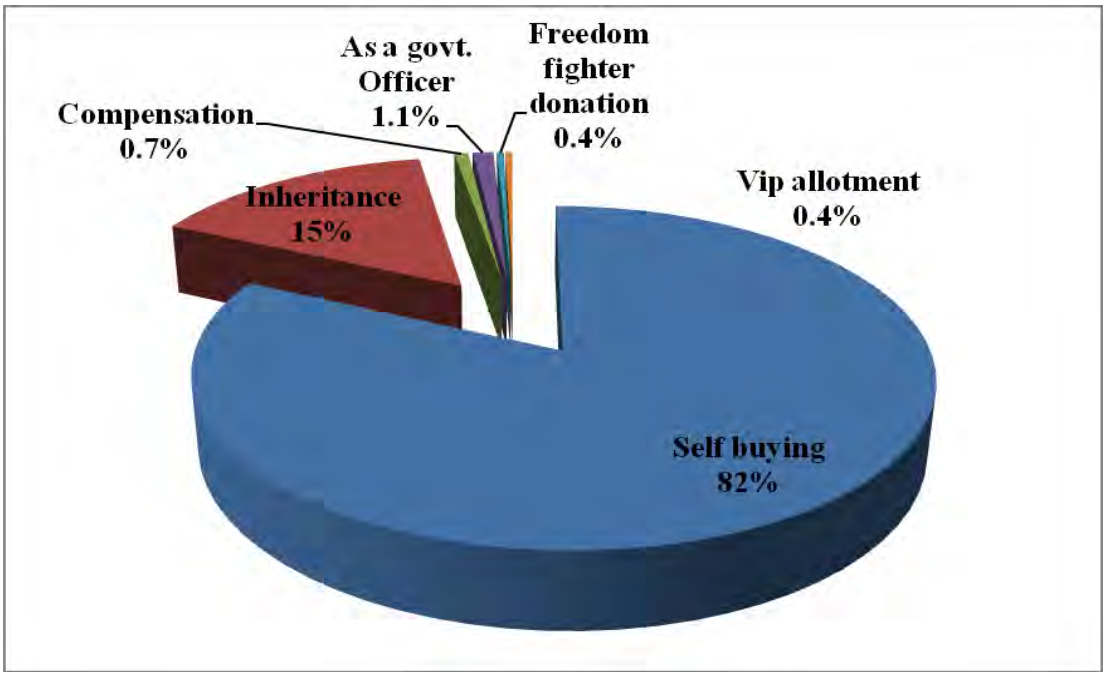


Figure 6.1: Source of land ownership Source: Telephone survey, January to June, 2015

Only 0.7% land holders earned the ownership of land as compensation. Their lands were occupied by new project like the Purbachal land project and that is why they were compensated by the project authority. Here allotment for government officer, donation for freedom fighters and allotment for VIPs are found in Purbachal Land Project only among the study area. In these sections total five lands are found as allotted which represents 2.6% of the total land holders in the study.

6.3 Time of land purchase and duration of holding land

It is found that on an average land owners have kept their lands 11.81 years after getting lands in their ownership i.e. on an average land parcels were bought 11.81 years back (appendix table- 6.2). After that period land holders have expressed their intention for selling it via newspaper advertisement. This time period is not short actually. Both mode and median for the duration ownership of land are 10 years. So it can be considered that keeping land under one"s own ownership for 10 years is a general tendency here. If it is so, 10 years could be a base year – if any holder keep land undeveloped or unsold beyond this limit s/he may be a potential speculator and if the length of ownership is less than 10 years s/he may be excluded from the list of potential speculators. Duration of the land ownership of the sellers has been categorized into different groups in the table 6.1. Duration of ownership three years or less is found highest - 21.9% land owners. Duration of ownership equal or less than 10 years is found 60.5% owners (cumulative frequency). 39.5% land holders hold their lands for more than 10 years who can be suspected as speculator based on duration of ownership

Table 6.1: Distribution of land holders based on duration of land holding

Duration of land holding (years)	Frequency	Percentage	Cumulative Percent
<3	46	21.9	21.9
3-5	22	10.5	32.4
5-8	25	11.9	44.3

8-10	34	16.2	60.5
10-15	37	17.6	78.1
15-20	14	6.7	84.8
20-25	11	5.2	90.0
25-50	20	9.5	99.5
>75	1	.5	100.0
Total	210	100.0	
Missing	74		
Total	284		

Source: Telephone survey, January to June, 2015

If the land holding period is justified with the ownership pattern then some special value might be found out. As the self buying and inheritance are the significant ownership patterns, justification are seen here for these two categories. According to the figure 6.2, lands with the ownership period of equal or less than 3 years and lands with the ownership period of 5 to 8 years are in highest number for the lands owned by purchase. Both of these are 22% of the sample. And 17% lands of the same ownership category are kept unsold for 8 to 10 years durations and also 10 to 15 years duration. While for inheritance, 28% lands are kept for 10 to 15 years and that is highest number in this ownership pattern. Second highest cases are found as 24% of lands in the duration of 20 to 30 years for inheritance lands. In case of self buying ownership lands, cumulative percentage of less than or equal to 10 years durational lands are 64%; while for the case of inheritance this amount is 28% only (appendix table-6.3). This analysis shows that lands owned by inheritance are kept unsold for longer period than the lands owned by purchase. It can be said that who buy their lands themselves are more eager to sell lands than those types of land owners who got the land as inheritance.

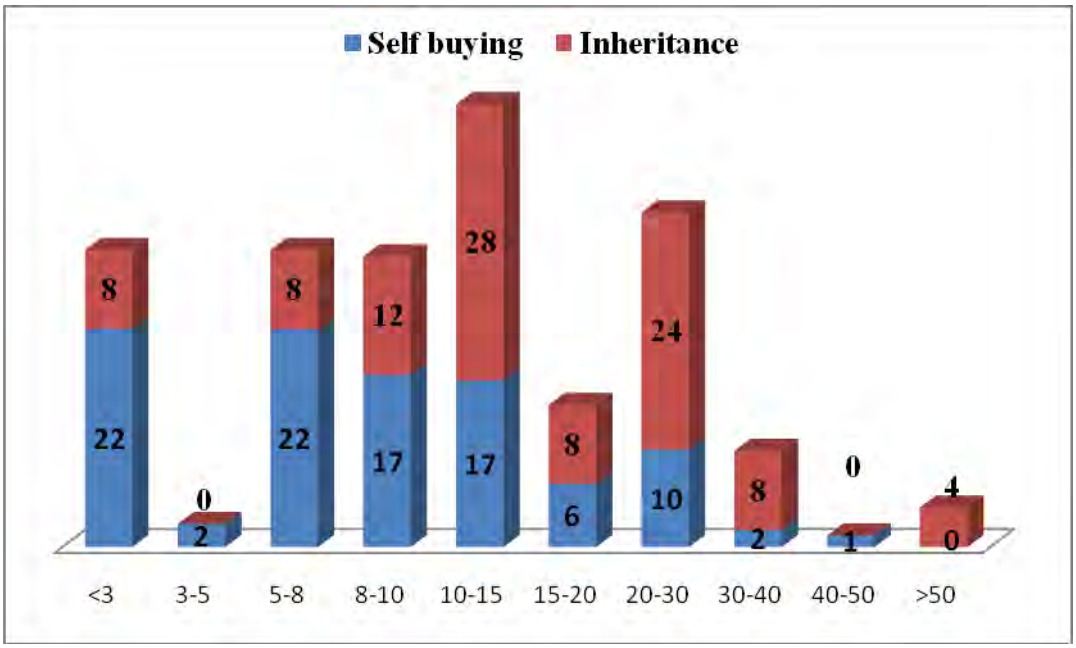


Figure 6.2: Duration of land keeping unsold according to different ownership pattern
Source: Telephone survey, January to June, 2015

6.4 Initial price of lands

Initial price of lands could not be known from all respondents because many of them have forgotten it. 101 respondents have answered to the the question regarding initial price. Among them only 5 persons are that type of land holders who got land as inheritance (appendix table 6.4). Mean initial value of the lands is Tk.14.43 lac per katha, where median is Tk 8 lac per katha and mode is Tk 1 lac per katha and Tk 2 lac per katha with frequency 10 for each case with standard deviation of 21.017. Here it is to be mentioned that 25, 50 and 75 percentiles are 3, 8 and 15 lac taka per katha respectively (appendix table- 6.5).

The chart of the initial price of the lands (chart 6.3) shows that the highest number of lands" (36) initial price is below or equal to 5 lac taka /katha.

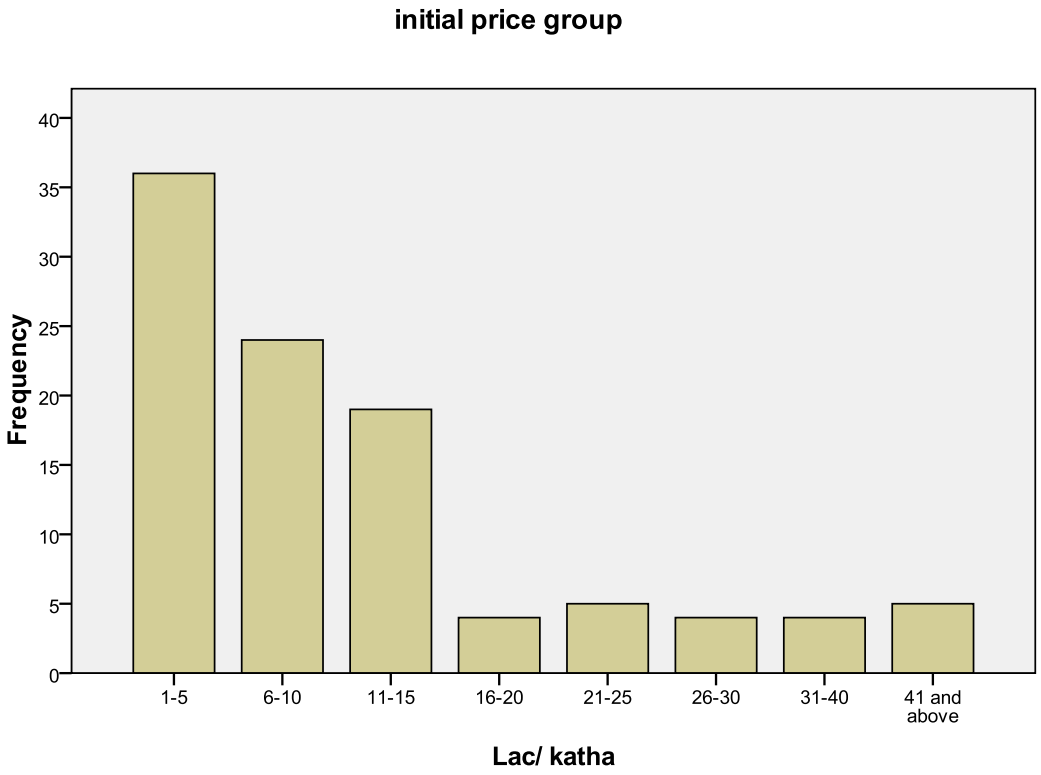


Figure 6.3: Initial price of the lands

Source: Telephone survey, January to June, 2015(January-June)

6.5 Initial purpose of having lands

Some specific purposes of buying land have been found; such as building house, regular business purpose, selling when price will rise, building industries, building commercial structure etc. Some of the land holders could not specify the reason of buying their land. Not only the land holders who have owned the land by buying but also other category land owners have responded to the question of the purpose of owning land. Here 50.4% respondents have told that they owned the land for building house on that. 26% land holders wanted to do regular business with the lands they received. 20.3% land holders very candidly expressed that the cause of their having plots was expectation to sell them when price would rise. 1.6% respondents (that is 4 land holders) could not identify any particular reason of having lands. Out of these four persons one bought his land by himself, two persons got the land as inheritance and one got the land as donation for the freedom fighter. Type of land owners who bought land but mentioned during telephone survey that he did not know the reason can be guessed as speculator. He might have

bought the land as he had money at hand and he wanted to make safe the money with lands.

Table 6.2: Distribution of land holders based on purposes of buying the land

Purpose of buying land	Frequency	Valid Percent
Building house	124	50.4
Regular business	64	26.0
Selling when price will rise	50	20.3
Building industry	2	.8
No purpose	4	1.6
Commercial building	2	.8
Total	246	100.0
99	38	
Total	284	

Source: Telephone survey, January to June, 2015

6.6 Initial and current price of lands

The mean price of lands at the initial time is Tk 14.43 lac per katha whereas currently that price is Tk. 54.28 lac per katha. Median values at initial and current price are 8.00 and 30.00 lac taka per katha respectively. Also current mode value (30.00) is far different from initial mode value (1.00). 25, 50 and 75 percentiles for the initial value of lands are 3.00, 8.00 and 15.00 lac taka per katha respectively whereas for current value these percentiles are 16.00, 30.00 and 60.50 respectively. These values show the increment of the values of lands with time. From the appendix table 6.6 it is seen that 82.2% of lands have initial price within 20.00 lac taka/katha. While only 31.9% lands are available currently under 20.00 lac/katha price.

Table 6.3: Comparison between the price of lands now and during the period of buying

Statistics		Price at the time of buying or getting land (Lac/ katha)	Present price (Lac/ katha)		Statistics		Price at the time of buying or getting land (Lac/ katha)	Present price (Lac/ katha)
N	Valid	101	210		Range		149	699
	Missing	183	74		Minimum		1	1
Mean		14.43	54.28		Maximum		150	700
Median		8	30		Percentiles	25	3	16
Mode		1[a]	30			50	8	30
a. Multiple modes exist. The smallest value is shown						75	15	60.5

Source: Telephone survey, January to June, 2015

From the chart 6.4 prepared based on the current price of land, it is found that highest number of lands i.e. 45 belong to price range of 21 to 30 lac per katha. And 41 lands fall under the price range from 1 to 10 lac per katha which can be treated as very lower price.

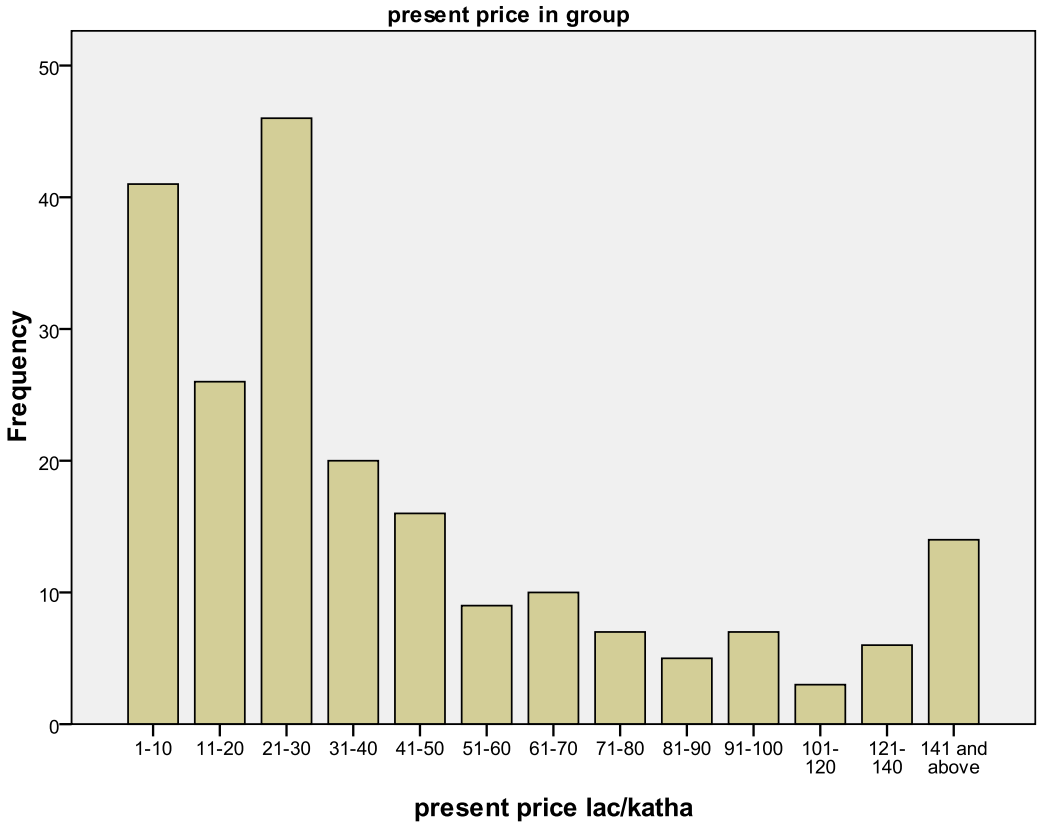


Figure 6.4: Current price of the advertised plots/lands

Source: Telephone survey, January to June, 2015

6.7 Change in land value

Generally land values have increased with time after owning the land. For more than 50% of plots/lands price have been increased more than 15 lac taka per katha between the period of ownership (initial) and the time of survey (which is January to June, 2015) (appendix Table- 6.7). It has been found the more is the length of ownership, the higher is the price increase. From the Pearson Chi-Square test appendix table-6.13) it is found that duration of land holding has strong positive relationship with price increase.

Price of the lands has increased in different range in the study area. Here 1-50% price increased (from initial price to current price) for 8% sample lands surveyed by telephone. 51 to 100% and 200 to 300% price have been increased for both 4% sample lands. It is also to be mentioned that there are 1% sample lands which price have been increased amazingly for more than 3000%.

Figure 6.5: Percentage increase of the price of the lands

Source: Telephone survey, January to June, 2015

6.8 Correlation between the price and the condition

Current condition of lands may have correlation with price increase. That is why a cross tabulation has been done between price increase and current condition of land. Also a chi-square test has been done. Chi-square test of the relation between current condition of land and price increment (appendix table-6.14) shows that there is strong relationship between those.

Table 6.4: Cross tabulation between distribution of increased price of lands and Current condition of land

	Current condition of land				Total
Distribution of increased price of lands **(lac taka/ katha)**	Flat land for building house	Pool	Under water	Low land	
<5	15	0	2	3	20
5-10	14	1	0	1	16
10-15	11	0	0	0	11
15-20	6	0	0	0	6
20-30	6	1	1	4	12
30-40	3	0	1	0	4
40-50	6	0	0	1	7
50-100	12	0	0	1	13
>100	3	0	0	0	3
Total	76	2	4	10	92

Source: Telephone survey, January to June, 2015

6.9 Development pattern of the land

From the telephone survey, it is found that 40.7% land holders have attempted to develop their land and 59.3% have not attempted to develop their land. Table 6.5 shows that, out of the developed lands, 40.6% lands have been developed by only filling up and 41.7 percent have been developed by only boundary wall erection. And more 15.6% lands have been developed by both filling up and boundary erection.

Table 6.5: Type of land development activity by the owner

Type of land development	Frequency	Valid Percent
Filling up land	39	40.6
Construction of boundary wall	40	41.7
Both 1 and 2	15	15.6

Improving access to the plot	1	1.0
Temporary kutcha building	1	1.0
Total	96	100.0
Missing	188	
Total	284	

Source: Telephone survey, January to June, 2015

Out of 284 lands only 16.1% land holders attempted to build house on their lands after 6.75 years from owning the lands in average and 81.9% land holder have not attempted to build house on their lands (Appendix Table 6.10).

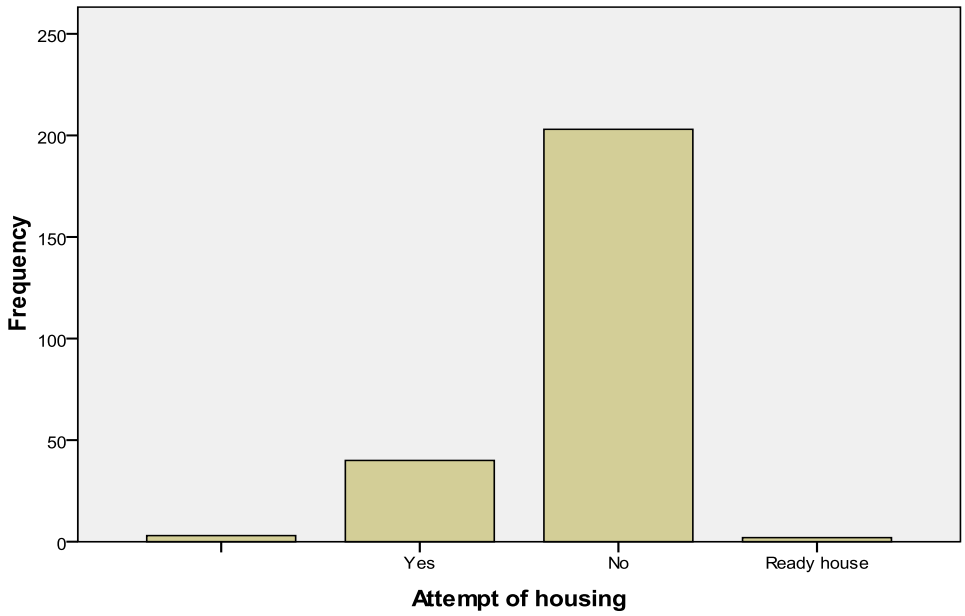


Figure 6.5: Attempted for housing or not Source: Telephone survey, January to June, 2015

6.10 How much time owners took to develop their plots

On an average, land holders developed their lands after 4.1429 years of owning lands. Here the maximum value of waiting to develop after owning land is 23 years. Here 50 and 75 percentiles data have been found as 3.0 and 7.5 years respectively. That means 25% land holders waited for more than 7.5 years to develop their plots. (appendix table 6.12)

6.11 Time passed after development of the plots

As some of the land owners waited to develop their lands after owning the lands, some of the land owners also waited to sell their lands after development of the lands for few years. Land owners waited 5.12 years (mean value) to give advertisement to sell their lands after development of the lands. Here the median value is 3.0 years. Survey data shows that land owners waited at least 1 year and at best 24 years after development of the land to sell. Here 50 percentile value is 3.0 years that means 50 percent land owners waited more than 3 years to sell their land after development of the land. And 25% land holders waited for more than 7.5 years to sell after development of their lands as the 75 percentile value is 7.00 years (appendix table 6.12) .

6.12 Comparison of the waiting period for selling land with intention to buy land

Three types of initial intention of owning the lands are found: to do regular business (broker), to sell land when price will rise, to build house on the land. Period of keeping land unsold may vary for these three types of land holders.

Land holders who owned the land for regular business purpose have intended to sell land 5.50 years (mean value) after from those owning time. Median of the data is 3.00 years. Its 25, 50 and 75 percentiles are 1.00, 3.00 and 8.25 years respectively. Whereas the land holders who owned/purchased their land to sell when price will be raised kept their lands for 12.13 years (mean value). Median of that is 12.00 years. Its 25, 50 and 75 percentiles are 3.75, 12.00 and 19.25 years respectively. These data show that who owned lands „to sale when price will rise" keep land unsold more than the land holders who owned land for regular business purpose. Difference between mean values of the two cases is 6.63 years that can be treated as maturity period of speculation, because land holders who just waited to price rise up to their expectation (speculators by definition) had kept land 6.63 years extra than regular business purposes period. That means speculators perhaps kept their lands unsold in average 6.63 years more than regular land businessmen.

Also the land holders who owned lands for housing kept their lands unsold for 12.65 years (mean value) which is very close to that of the 1st group. In this case, median and mode both are 10 years. Its 25, 50 and 75 percentiles are 6, 10 and 15 correspondingly. Those who intended to build house and who intended to sell at increased value kept their

lands unsold for about same period. This can be an indicator to suspect the response of the interviewee about their intention of buying lands for housing. Now it is needed to see the actual fact of those holders intention. For that „attempt to housing" is to be tested.

Table 6.6: Time taken for selling land for different initial intention of holders

Statistics		Years passed after getting land (Intention: Owned for regular business)	Years passed after getting land (Intention: Owned to sale when price will rise)	Years passed after getting land (Intention: owned land for housing)
Valid		46	38	102
Missing		18	12	22
Mean		5.5	12.13	12.65
Median		3	12	10
Mode		1	1, 4, 15	10
Std. Deviation		5.399	9.065	9.549
Percentiles	25	1	3.75	6
	50	3	12	10
	75	8.25	19.25	15

Source: Telephone survey, January to June, 2015

Respondents of the telephone survey who responded that they owned the lands for building houses were also asked whether they attempted to build house on those lands. According to table 6.7, 73.7% of them answered negative. That means only 25.4% of them attempted to build house on their land, though they have not finally built house. Only one respondent told that there was previously a ready house; so he did not attempt to build house there. That means this 73.7% (87 respondents) can be suspected as the speculators. Therefore who answered to sale land with price increment and 73.7% of the land holders, wanted to build house, are suspected speculators that counts 38 plus 87 equals to 125 out of 284. Also some of the respondents who answered for business purpose may hold some speculators.

Table 6.7: Attempt to build house

	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	30	24.2	25.4	25.4
No	87	70.2	73.7	99.2
Ready house	1	.8	.8	100.0
Total	118	95.2	100.0	
Missing	6	4.8		
Total	124	100.0		

Source: Telephone survey, January to June, 2015

6.13 Difference between initial and current price of lands with respect to intention to buy land

Different lands have been owned by the land holders for different initial intentions. Initial price and current price of different intentioned lands can be compared. It shows interesting result. The lands owned for business purpose had the highest initial price, but their current price is lowest among all the plots. It indicates that these land holders do not bother to keep their lands for extra high price rather they try to sell out after reasonable period (5.5 years on an average) and at the reasonable increase of price. They bought lands with higher price compared to others. The cause of high price may be because of recent (5.5 years ago on average) buying. Whereas who intended to sale their lands after increase of land price they bought lands with lowest price (9.53 lac/katha) and waited for greater price. Surprisingly those land holders who owned lands with intention of building houses keep their lands for highest land price (58.57 lac taka per katha).

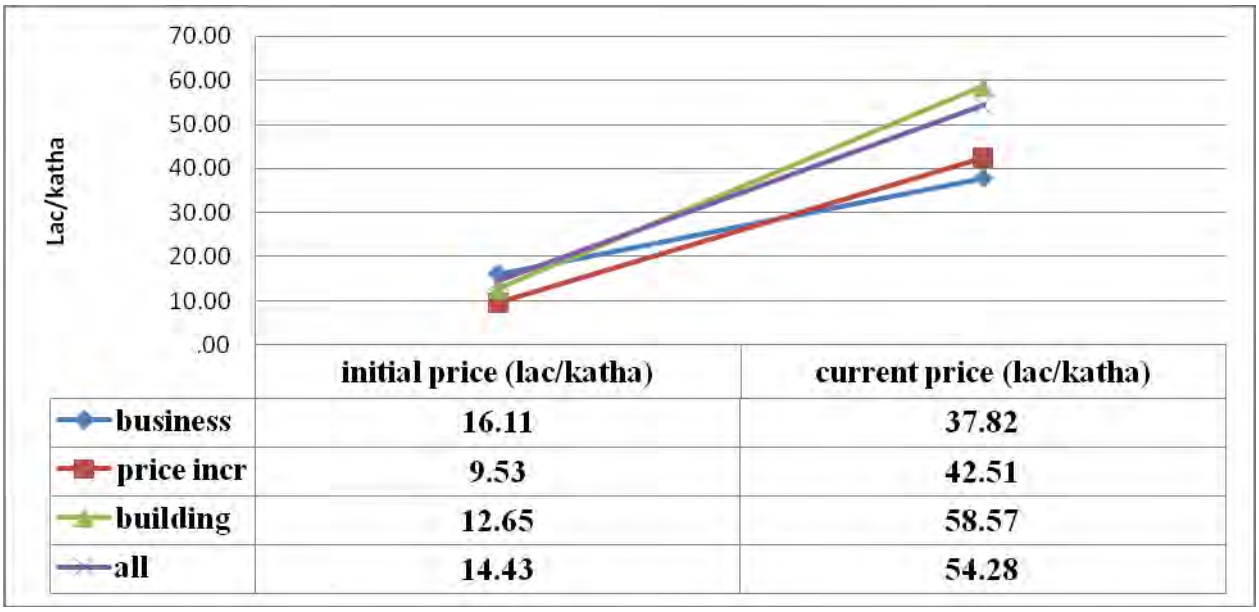


Figure 6.6: Initial and current price according to different initial intention

Source: Telephone survey, January to June, 2015

When land holders were asked over phone if they have at all tried to sell lands after attempt to develop lands, similar answer was found. From table 6.8, it is seen that land holder having business purpose do not keep their lands long time after land development as other land holders (with intention of land sale when price will raise and intention of house building) do.

Table 6.8: Delay (in year) after land development attempt by land holders with different initial intentions to buy lands

Statistics		With intention of business with lands	With intention to sale when price will raise	With intention to build house
Valid		19	7	24
Missing		45	43	100
Mean		2.84	5.28	5.20
Median		2.00	5.00	5.00
Mode		1.00	5.00	5.00
Std. Deviation		3.34	3.68	3.81
Percentiles	25	1.00	1.00	2.00

	50	2.00	5.00	5.00
	75	3.00	10.00	7.00

Source: Telephone survey, January to June, 2015

6.14 Intention of owning lands

Land holders may develop their land for housing or just for increase its value. Here this is found that 46.3% of the land holders who bought their lands for business purpose have developed their lands whereas only 5.6% of them attempted to make house on their lands. So, why did the businessmen develop their lands though they did not take initiative to build house? Therefore, there is a possibility that for rapidly increasing land value land businessmen may like to develop their lands after buying. 35.9% of the land holders who owned their lands to sell those when price will be raised have developed their lands whereas only 4% of them attempted for housing there. Motvation of these land holders in development also may be just to increase land value. Also 36% of the land holders who bought lands for building house have developed their lands where as only 25.4% of them attempted for housing. 74.6% of them have not attempted to fulfill their intention.

It is to be noted that businessmen (46.3%) developed their lands more than those who owned their lands to sale at increasing price (35.9%) and those who owned lands for housing (36%) there.

Table 6.9: Land development and housing attempt according to different initial intention of owning land

	Initial intention of owning land					
	Business purpose		**Selling at higher price**		**Building house**	
land developed	**Frequency**	**Valid Percent**	**Frequency**	**Valid Percent**	**Frequency**	**Valid Percent**
Yes	25	46.3	14	35.9	40	36
No	29	53.7	25	64.1	71	64
Total	54	100	39	100	111	100
Missing	10		11		13	

Total	64		50		124	
Attempt of housing?	**Frequency**	**Valid Percent**	**Frequency**	**Percent**	**Frequency**	**Valid Percent**
Yes	3	5.6	2	4	30	25.4
No	51	95.5	42	95.5	88	74.6
Total	54	100	44	100	118	100
Missing	10		6		6	
Total	64		50		124	

Source: Telephone survey, January to June, 2015

Table-6.10 shows that there are 24 land holders who both developed and attempted for making house in the developed land. And 57 lands have been developed but have not been attempted to build house there. 13 lands are there where housing attempt were taken but have not been developed; which might be developed prior time. 116 lands were not developed or further developed and housings were not attempted there also. From the above discussion it can be assumed that the 57 lands might just be developed for making price higher. This can be clearer if it is checked for different initial purposes of land owning.

Table 6.10: Cross tabulation of Land development and Attempt for making house

		Attempted for housing?		Total
		Yes	No	
Developed land	Yes	24	57	82
	No	13	116	132
Total		37	173	214

Source: Telephone survey, January to June, 2015

From the cross tabulation between land development activity and attempt to make house for different initial purpose of land owning it is seen that only 2 lands were both developed and housing attempt were taken for in case of business intension. For the lands owned for selling with higher price no single land was attempted for housing out of developed ones. For the lands owned for building purposes, out of developed 38 lands only 20 lands were attempted to housing. As in case of business purposed lands and

selling intension with higher prices, lands were developed but were not attempted for making house, it can be concluded that there are many lands those were developed not for housing but just for increasing values. This artificial value increasing process can be taken as the symptom of speculation.

Table 6.11: Cross tabulation of land development and attempt of housing in case of different purpose of owning land

		Business purpose				**Selling at higher price**				**Building house**			
		attempted for housing		Total		Attempt for housing		Total		attempted for housing			Total
		Yes	No			Yes	No			Yes	No	Ready house	
land developed	Yes	2	19	21		0	13	13		20	18	0	38
	No	0	23	23		2	20	22		8	61	1	70
Total		2	42	44		2	33	35		28	79	1	108

Source: Telephone survey, January to June, 2015

6.15 Reasons for selling land

64.1% of the respondents have answered that they intended to sell their land in need of money. 29.3% lands have been advertised to sell for business purposes and 3.5% land owners want to sell land because they are going to live in abroad. Here 164 lands selling those have been advertised in the need of money can be suspected primarily. Here 164 lands have been advertised in the need of money, can be suspected primarily as under speculation motif. In this number some people may have speculative motif really. Among the business purpose selling (75) some may have speculative motif. Those are to be justified more.

Table 6.12: Frequency of causes of selling land

Cause of selling				
	Frequency	Percent	Valid Percent	Cumulative Percent
Needed money	164	57.7	64.1	64.1
To leave country	9	3.2	3.5	67.6
Business purpose	75	26.4	29.3	96.9
Others	7	2.5	2.7	99.6
To pay bank loan	1	.4	.4	100.0
Total	256	90.1	100.0	
Missing	28	9.9		
Total	284	100.0		

Source: Telephone survey, January to June, 2015

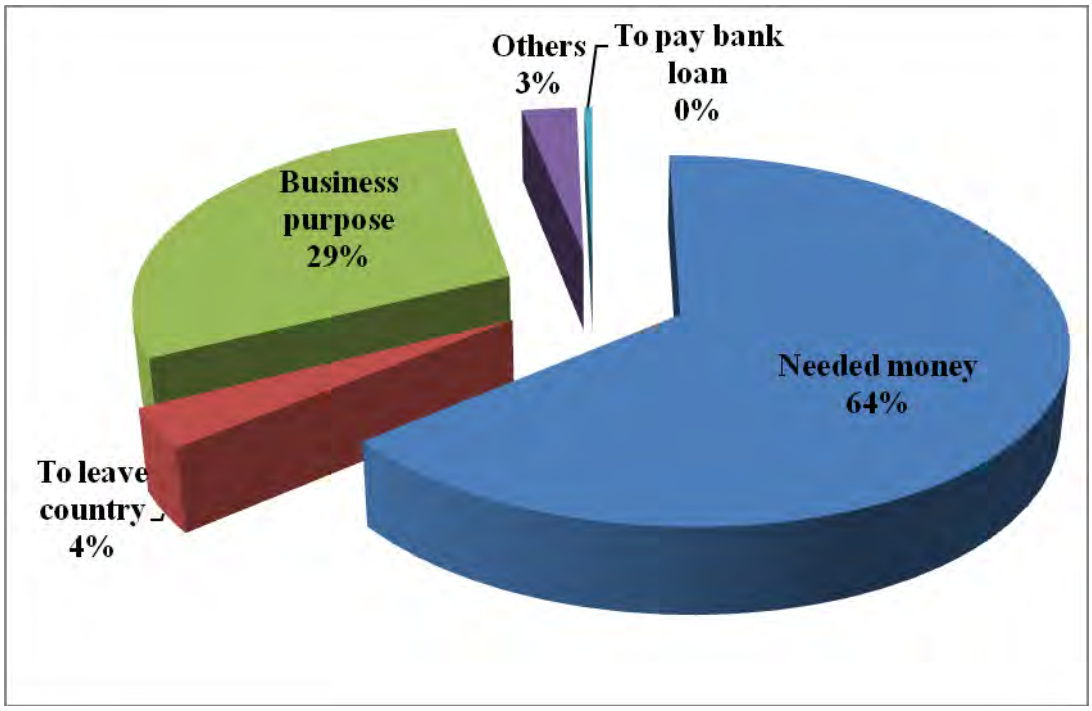


Figure 6.7: Frequency of causes of selling land

Source: Telephone survey, January to June, 2015

6.15.1 Relation between causes of selling and process of owning the land

Land owners have got their lands through different processes i.e. buying themselves, inheritance, and compensation by the project authority, allocation for government

officer, donation for freedom fighter and allotment for VIP. Out of this compensation, allocation for government officer, allocation for freedom fighter and VIP allotment can be grouped as specially allocated. From table 6.14, it is seen that specially allocated lands are not being used for housing. All lands are being intended to sell at the need of money. They might have not capacity to build house there or they did not need those for housing actually.

Table 6.13: Cross tabulation of Causes of selling and Process of owning the land

Cause of selling	Process of owning the land						Total
	Self buying	Inheritance	Compensation	As a govt. Officer	Freedom fighter donation	VIP allotment	
Needed money	126	25	2	3	1	1	158
To leave country	5	4	0	0	0	0	9
Business purpose	66	4	0	0	0	0	70
Others	3	3	0	0	0	0	6
To pay bank loan	1	0	0	0	0	0	1
Total	201	36	2	3	1	1	244

Source: Telephone survey, January to June, 2015

Table 6.14: Cross tabulation of Process of owning the land and attempt of housing

		Attempt of housing				Total
			Yes	No	Ready house	
Process of owning the land	Self buying	3	31	165	2	201
	Inheritance	0	7	23	0	30
	Compensation	0	0	2	0	2
	As a govt. Officer	0	0	1	0	1
	Freedom fighter donation	0	0	1	0	1
	VIP allotment	0	0	1	0	1
Total		3	38	193	2	236

Source: Telephone survey, January to June, 2015

6.15.2 Relation between Causes of selling and duration of land holding period

It was asked to the land holders that why they want to sell their land. Only 188 respondents have answered this question and thus the intensions behind the advertisements given to sell land have been found. Here the period of ownership is cross tabulated with the causes of selling land. From the table-6.15, lands to be sold in needed money and for business purpose are taken further to elaborate in table below (table 6.16 and table 6.17).

Table 6.15: Cross tabulation of Owning time passed and Causes of selling

		Cause of selling					Total
	Years	Needed money	To leave country	Business purpose	Others	To pay bank loan	
Duration of ownership period	<3	16	0	24	1	1	42
	3-5	4	0	1	0	0	5
	5-8	26	1	10	0	0	37
	8-10	24	0	4	3	0	31
	10-15	19	5	9	0	0	33
	15-20	8	1	3	0	0	12
	20-30	19	1	1	0	0	21
	30-40	5	0	0	0	0	5
	40-50	2	0	0	0	0	2
Total		123	8	52	4	1	188

Source: Telephone survey, January to June, 2015

43.09 % of the land holders (that is 53 in number) who intended to sell their land in need of money kept their lands unsold for more than 10 years. They may have speculative motivation.

Table 6.16: Duration of land ownership of the land holders who want to sell land in need of money

	Years	Needed money	Percentage	Cumulative percentage
Duration of land ownership	<3	16	13.01	13.01
	3-5	4	3.25	16.26
	5-8	26	21.14	37.40
	8-10	24	19.51	56.91
	10-15A	19	15.45	72.36

	15-20	8	6.50	78.86
	20-30	19	15.45	94.31
	30-40	5	4.07	98.37
	40-50	2	1.63	100.00
Total		123		

Source: Telephone survey, January to June, 2015

25 % of the land holders who intended to sell their land for business purpose kept their lands unsold for more than 10 years that is 13 in number out of 52. They may have speculative motif.

Table 6.17: Duration of land ownership of the land holders who want to sell land for business purpose

	Years	Business purpose	Percentage	Cumulative percentage
Duration of land ownership	<3	24	46.15	46.15
	3-5	1	1.92	48.08
	5-8	10	19.23	67.31
	8-10	4	7.69	75.00
	10-15	9	17.31	92.31
	15-20	3	5.77	98.08
	20-30	1	1.92	100.00
	30-40	0	0.00	100.00
	40-50	0	0.00	100.00
Total		52		

Source: Telephone survey, January to June, 2015

6.15.3 Relation between of selling and initial purpose of owning land

Among the respondents, six persons want to sell their lands because they are leaving country to be settled in abroad. All of them reported that they initially bought the lands for building house there. Another person has advertised to sell his land to pay bank loan who also bought the land for building house. These can be trusted. But 143 land holders want to sell their lands for need of money. Out of these 143, only 96 persons owned their lands for building house, 2 owned for building industry and 1 for making commercial

building. But among the rest of 44 persons, 14 owned their lands for regular business, 27 owned for selling with higher price and 3 persons not could fix the purpose. Therefore, these 99 (69.23%) persons, who owned their lands for building house or commercial building or industry but they are selling for just need of money, are not maintaining the initial intention.

Table 6.18: Cross tabulation of Cause of selling and Purpose of buying the land

		Purpose of buying the land						Total
		Building house	Regular business	Selling when price is raised	Building industry	No purpose	Commercial building	
Cause of selling	Needed money	96	14	27	2	3	1	143
	To leave country	6	0	0	0	0	0	6
	Business purpose	9	46	19	0	0	0	74
	To pay bank loan	1	0	0	0	0	0	1
	Others	2	1	1	0	0	0	4
Total		114	61	47	2	3	1	228

Source: Telephone survey, January to June, 2015

6.15.4 Relation between Causes of selling and attempt of land development

Out of 145 persons who want to sell their lands in need of money, only 54 (37.24%) persons developed their land before attempt of selling. 26 of business men out of 62 developed their lands before selling. These statistics show that a wide number of land sellers developed lands not to build house there rather to increase land value to sell.

Table 6.19: Cross tabulation of Cause of selling and Attempt of land development

		land developed		Total
		Yes	No	
Cause of selling	Needed money	54	91	145
	To leave country	3	6	9
	Business purpose	26	36	62
	To pay bank loan	1	0	1
	Others	3	3	6
Total		87	136	223

Source: Telephone survey, January to June, 2015

32 out of 38 land owners attempted for housing want to sell their lands in need of money. Besides, out of 151 persons, who want to sell their lands in need of money, only 32 attempted for housing and rest of 119 did not attempt to housing. For the business man, only 3 persons attempted for housing.

Table 6.20: Cross tabulation of Cause of selling and previous attempt of housing

		Attempted for housing?				Total
			Yes	No	Ready house	
Cause of selling	Needed money	0	32	119	0	151
	To leave country	0	2	4	1	7
	Business purpose	2	3	63	0	68
	Others	1	0	6	0	7
	To pay bank loan	0	1	0	0	1
Total		3	38	192	1	234

Source: Telephone survey, January to June, 2015

6.16 Conclusion

This study shows that in average land holders keep their lands unsold for 11.81 years. 39.5% land holders hold their lands for more than 10 years who can be suspected as speculator based on duration of keeping lands unsold and un-built. Duration of holding lands unsold has strong positive relationship to price of land increase. Some of the land holders developed their lands just to increase its value because in the study it is found that there is strong relationship between current condition of land and price increase. Very few land owners attempted to build house on their lands though that was after 6.75 years from owning. And who developed their lands they did it after more than 7.5 years from owning lands. The land holders, owned lands with the intention of housing, can be suspected about their intension because most of them had not attempted to build house there rather they waited to attempt for selling land with higher price. Actually it is suspected that the land holders owned their land just for profit maximization. Therefore this can be suspected that there may have strong speculation in different types of selling pattern in the land market of Dhaka.

CHAPTER SEVEN:

LAND SPECULATION -MAJOR FINDINGS AND POTENTIAL REGULATORY MEASURES

7.1 Introduction

Land speculation is found in the land market in Dhaka and its outskirt. Based on certain behavior of the individual land owners pattern of suspected speculation has been identified in this study.

7.2 Major findings about land speculation

In the previous chapters, the condition of lands and related selling behavior of its holders give idea about the land speculation. The condition of lands advertised to be sold and potential speculative behavior of the holders are discussed below.

7.2.1 Area of the plots

Median of the areas of the lands/plots to be sold is 4 katha, mean is 10.2937 Katha and mode is 3 katha (24.1% of respondents have lands/plots of 3 katha). 39% plots or lands are below or equal to three katha. Share of plots in categories of 3-4 katha, 4-5 katha, 5-7.5 katha, 7.5-10 katha, 10-20 katha size are 13%, 22%, 9%, 8% and 5% respectively.

7.2.2 Initial condition of lands and development thereby

59.6% lands were flat in initial period i.e. at the time of owning. Rest of the 38.1% plots were either pool, or pond or low land. Among those lands, 38.1% (90) landholders developed their lands later on.

7.2.3 Current condition of lands

84.4% (233 out of 284) of the lands or plots advertised to be sold are currently flat i.e. at similar elevation to the surroundings. In addition, 2.2% (6), 5.4% (15) and 8.0% (22) of the land holders surveyed by telephone (284) have plots which are currently pool or under water and low respectively.

In this study, 90% of the plots have abutting road and only 10% plot or lands have no road connection yet. Road connectivity is considered as a basic criterion for development of house in a plot. Therefore, this data indicates that most of the lands, advertised to be sold in the study area, are very important for housing. Mean width of these connecting roads is 29.94 feet. This information shows that most of the lands are ready to build house. However, in reality these lands are kept vacant, unproductive and unsold for long time in some cases.

7.2.4 Current condition of surrounding lands

About 89% of the plots, found in the telephone survey, have flat surrounding lands. Rests of the 11% plots have low surrounding land. Most of the lands or plots have great potential to be developed and to be built house on those. There are 19 plots which themselves are low or depressed but their surrounding lands/plots are high and flat. And there are also 8 plots which are flat, but their surrounding lands/plots are low. That means there may be some abnormality in these 19 plots and 8 plots as those are not as like their surroundings. These abnormalities create suspicion about speculative motivation of those land holders.

7.2.5 Surrounding housing and speculation

73% (194) land/plot have house(s) in surrounding land and 26.2 % land/plot do not have. Out of the 194 plots owners who have at least one house adjacent to their land/plot, only 13 owners attempted to build house on their plots. This may indicate that rest 181 plot holders may speculative intension.

Out of those 194 plot holders, 150 did not even take any initiative to develop their land. It also indicates their motive of suspected speculation. In addition, out of the rest 44 lands 21 were kept unsold even after 5 years of (land) development. Therefore, total 171 (150+21) lands/plots may be under suspicion.

Again, 70 plots have at least four adjacent houses. That means the areas of those plots are very much ready to build up habitat. Nevertheless, out of those 53 plot owners did not take attempt to build house on those. These plots may also be suspected under speculation.

Now it should be noted that although most of the surveyed plots are ready for housing therein and surroundings are developed, the plot owners want to sell those. Of course there may be some genuine causes (like emergency need for money, etc) for selling land. But motivation for speculation must also be included in the list of reasons.

7.2.6 Ownership pattern

82.1% land holders have got ownership of the lands by purchase and 15.3% have got as inheritance. That means most of the land holders have bought their lands on their own.

7.2.7 Duration of ownership

On an average land owners have kept their lands unsold for 11.81 years after getting lands in their ownership. 39.5% land holders hold their lands for more than 10 years who can be suspected as speculator based on duration of ownership. Landholders who got land by inheritance kept their lands unsold longer than self-buying landholders did.

7.2.8 Relationship between duration of land ownership and increase of land price

From the study, it is found that duration of holding lands unsold has strong positive relationship to price of land increment.

7.2.9 Relationship between duration of land ownership and increase of land price

Chi-square test of current condition of land and increase of price shows that there is strong relationship between those two.

7.2.10 Initial intention of land ownership

In this study, 50.4 % respondents have told that initial purpose of owning the land is housing therein. 26% land holders wanted to do regular business with the lands they bought or got by inheritance. 20.3% landholders expressed the cause of having lands simply that they wanted to sell the lands when the price will rise.

7.2.11 Attempt to make houses in land

Only 16.1% of sample landholders attempted to build house on their lands and 81.9% landholders have not attempted to build house on their lands. These housing attempted

landholders had taken attempt after 6.75 years (average period) from owning the lands. From this analysis, period of 6.75 years can be taken as normal period for housing. And if any land holders do keep land unbuilt more than this period, he/she may be suspected as land speculator. It is to be noted that 25% land holders waited for more than 7.5 years to develop their plots.

7.2.12 Initial intention of having lands and speculation

The respondents who answered that they bought land to sell them when price will rise (38 land holders) can be suspected as speculators. 73.7% (87 respondents) of the land holders, wanted to build house, have not attempted to build house on their plots are suspected speculators. These two types, if added i.e. 38 plus 87, account for 125 land holders, out of 284. And 25 % of the land holders, who intended to sell their land for business purpose, kept their lands unsold for more than 10 years (assuming keeping lands unproductive and unsold for more than 10 years as speculative behavior) that is 13 in number out of 52. They may have speculative motivation. 99 (69.23%) persons who owned their lands for building house or commercial building or industry have said that they are selling lands just for need of money i.e. they are not maintaining the initial intention.

7.2.13 Duration of land ownership before attempt to sell

Land holders who owned the land for regular business purpose have intended to sell land 5.50 years (mean value) after its owning time. Whereas the land holders who owned their land „to sell when price will rise" kept their lands for 12.13 years (mean value). Difference between mean values of the two cases is 6.63 years that can be treated as maturity period of speculation.

These data showzswwwet that who owned lands to sell when price will rise, keep land unsold more than the regular land business persons do. That means speculators perhaps kept their lands unsold 6.63 years more than regular land businessmen do.

43.09 % (that is 53 in number) of the land holders who intended to sell their land in need of money kept their lands unsold for more than 10 years.

25 % (13 out of 52) of the land holders, who intended to sell their land for business purpose, kept their lands unsold for more than 10 years. They may have speculative motivation.

Those who intended to build house and who intended to sale at increased value kept their lands unsold for the same period.

7.2.14 Waiting time of different initial intentioned land holders to get expected land value

Land holders owned lands for business purpose do not bother to keep their lands for extra high price rather they try to sell out after reasonable period (5.5 years in average) and at the reasonable increase of price. Whereas the land holders who intended to sell their lands „when lands price will rise" bought lands with lowest price (9.53 lac/katha) and waited for greater price hike. Surprisingly those land holders who owned lands with intention of building house they keep their lands for highest land selling price (58.57 lac taka per katha).

7.2.15 Speculative behavior of land holders

35.9% of the land holders (among those who owned their lands to sell those when price will be higher) have developed their lands whereas only 4% of them attempted for building houses there. Motive behind land development by these land holders may be just to increase land value.

36% of the land holders reported during telephone survey that they bought lands for building house. But it has been found next that only 25.4% of the respondents attempted for making houses. 74.4% of them have not attempted to fulfill their intention. There are also many land holders who developed land just to increase land value but not to build house there.

It is to be noted that businessmen (46.3%) have developed their lands more than those who owned their lands to sell when price would be raised (35.9%) and those who owned lands for housing (36%) there.

Lands initially bought just for business purpose and the lands initially owned with the intention of „selling when price will rise" were just developed but no attempt for building houses were found in many cases. That is why it can be said that there are many lands those were developed actually not for housing but just for increasing values. This artificial value increasing process can be indicator of speculation.

7.2.16 About the land holders getting lands through special allocation process

Study shows that specially allocated lands are not being used for housing. All lands are being intended to sell at the need of money. They might not have capacity to build house there or they did not need those for housing actually.

7.2.17 Maturity period of speculation

Land holders who owned the land for housing had taken attempt to build house there after an average period of 6.75 years from owning the lands. From this analysis, 6.75 years can be taken as normal period of housing development. Moreover, if any land holders do keep land unbuilt and unproductive more than this period, he/she may be suspected as land speculator.

Some other data show that who owned lands „to sell when price will rise" keep land unsold 6.63 years more than the regular land business persons (mean value). That means speculators perhaps keep their lands unsold 6.63 years more than regular land businessmen do. For reaping an expected higher price, the land holders are waiting for extra 6.63 years. Therefore, these 6.63 years can be treated as maturity period of speculation.

Table 7.1: Number of land holders with suspected speculative motivation

Cases	Description	Basis	Sub percentage of speculation	Sub number	Estimated total number of speculators
Case-1	Hold their lands for more than 10 years	Based on duration of ownership	39.5% land holders	127 out of 210 valid data	127 (39.5%)
Case-2	Initial purpose of owning land to sale when price will raise	Intention of ownership		38	(38+87+13=) 138 (48.59%)
	Initial purpose of owning land was to build house on the plots but never taken initiative to build house there	Dissimilarities between intention of ownership and attempt	73.7% of the land holders, wanted to build house	87	
	Who intended to sell their land for business purpose but kept their lands unsold for more than 10 years.	Dissimilarities between intention of ownership and attempt	25 % of the land holders, Who intended to sell their land for business purpose	13	
Case 3*	Plots are low level with its surrounding lands flat.	Comparison with surrounding		19	27*
	Plots are flat with	Comparison		8	

	surrounding lands low level.	with surrounding			
Case 4	Having houses on adjacent land the plot is not attempted to housing	Comparison with surrounding		181	181 (63.73%)
Case 5	Having houses on adjacent land the plot is not attempted to be developed	Comparison with surrounding development		171	171 (60.21%)
Case 6**	Having at least four adjacent houses but the plots were not attempted to build houses on those.	Comparison with surrounding development		53	53**

* Here these two categories are not representing 100% sample lands; therefore, it will not be representative if percentage is calculated according to 284 lands.

** Here this data is also not representing 100% sample lands; therefore, it will not be representative if percentage is calculated according to 284 lands.

7.3 Regulatory measures to control the potential land speculation

It is found that sometimes land holders do potential speculation in the name of land business, housing or in any other way. Sometimes they do it consciously and sometimes not. To keep the land holders away from the potential speculative behavior, following regulatory measures can be adopted. From the findings about the behavior pattern of the suspected speculators these measures are recommended.

7.3.1 Fixation of period for land development

This study shows that, duration of holding land unsold has strong positive relationship to the price of land increment.

As mentioned in chapter 2.10.3 of this study, In King Abdullah Economic City, a period has been fixed for development of a land after its purchase otherwise the government will use its imminent domain. In Dhaka government can also fix the permitted period for lands to be kept unproductive, unsold, or undeveloped or housing. These periods can be different for different area based on the potentials of land of the area. Based on the maturity period (according to this study 6.63 years) of speculation for lands, the permitted period can be fixed up. This study can suggest this period as 6.63 years for Dhaka and outskirts.

7.3.2 Intervention to facilitate to construct building or Taxation

a. From the telephone survey it is found that on an average land owners have kept their lands unsold for 11.81 years after getting lands in their ownership. 39.5% land holders hold their lands for more than 10 years. To these period taxation on vacant land can be an effective tool.

Normally and regularly in American cities with their systems of land taxation, based on selling values and with their special assessments and interest on land values mounting up, owners are continually thinking of ways and means of getting a return by bringing land into use or better use. In fact taxation is a century old tool. In many places, it is scarcely an exaggeration to say that now owners were lying awaken nights thinking about ways of getting out their money by the utilization of the land (Ely, 1920, P-128).

b. Condition of the surrounding area of any plot can be considered as a parameter to judge potential of that plot. If surrounding plots are developed and houses have been building up on those, there is potential of development of the plot and housing can be done there. About 89% of the plots, as found in the telephone survey, have flat surrounding lands. That means most of the plots are in potential area and could have been developed. Therefore, city authority can make guiding rules for land development considering the development pattern of the

surrounding lands. If lands are kept vacant for long time even after houses are built up in their nearer plots, then this may be considered as a speculative motivation. Also if any plot is developed but no houses are built up on it, though nearer plots are not developed, that may also be considered as an abnormality. In these both condition, authority should interfere somehow. Proper suggestion and advice may be given to the land holders. If the land holders are not ill motivated but not capable for development, then development assistance i.e. loan can be extended to him. But if mal-intention is found, more tax can be applied to his/her land so that s/he can be compelled to change his decision of speculation.

c. In this study, 73% (194) lands/plots have one or more house(s) in their surroundings and 26.2 % land do not have. Out of the 194 plots which have at least one house adjacent to them, in 13 plots owners attempted to build house and in 181 plots there were no attempt to build house. So, this is found that potential speculators are keeping lands unsold and unbuilt. To control this, some sort of regulatory rules may be defined and executed. That rules can, for example, state that if houses are built in 50% of the lands just adjacent to the plots, the plot holders have to make house there within a fixed duration, otherwise they have to sell the plots; if not, tax will be applied in high rate.

7.3.3 Preparing the land use and land development policy of the places in proximity to new project

According to Fatta, (2014), "Speculation usually occurs when a new project is announced, or services are extended to a new part of the city within the urban growth boundary. Being equipped with new services, the property within the vicinity is predicted to increase in value. Speculators invest their money in that area." For example, a wide number of private land development projects are seen near the Purbachal New Town can support this happening. In addition, when a road is developed through an area, speculators try to get chance. In this study, 90% of the samples have abutting 30 feet wide road facilities in average. Plots with abutting road are more valued than plots having no abutting roads (appendix table 8.1). Therefore, speculators can try to buy lands beside the new road or new project when it is being constructed and wait to sell them later with higher price. Whereas authority develops any project or road network, to

facilitate people with need, because of speculators, needy people cannot buy lands there with reasonable price.

With the development of any (land use or road development) project, authority can give the land use policy for the nearer places. The land use and development provision can be given with time phase. So that, speculators do not buy the land nearer the project area with the intension of selling land just after completion of the project with higher price.

7.3.4 Consider ownership pattern and provide assistance thereby

In the study areas, 82.1% land holders have got ownership of the lands by purchase and 15.3% have got as inheritance. That means most of the land holders have bought lands on their own. In addition, this is found that land holders who owned the lands by inheritance keep their lands unsold for a longer time than that of those who bought lands by themselves. Therefore, for owners by inheritance, allowable time for keeping lands unsold can be more than the owners by purchase do. It can be argued that a section of owners of land who got ownership by purchase have more affordability; and conversely a section of inheritors may have less affordability. Therefore assistance i.e. loan can be extended more to the owners by inheritance to build up house there within the permitted period.

7.4 Conclusion

Lands are being sold and purchased regularly in the land market of Dhaka. But is several cases, actual needy people for building house are not getting land within their capacity because of high land price. Moreover, this price is being uprising artificially because of the speculation. Therefore, to ensure the citizens welfare these speculations have to be controlled. In this regard government can try to find out more ways and enact related laws.

CHAPTER EIGHT

CONCLUSION

In Urban land market, land buying and selling are general phenomena. When any abnormality takes place in any stage of the market then total system is hampered. Speculation is such a phenomenon, which is an abnormality in market system and causes distortion in the market. As Dhaka is a growing city with rapidly growing population, here lands are transferred from holders to holders. Studies show that land price is increasing with a huge rate in Dhaka. People need land for building houses, but many of them are not affordable for buying lands at such high price. Different studies indicate that land market cannot operate in its natural state as speculation, present in the land market in Dhaka, hampers the price of land. That is why the study has been carried out to test the speculation. .

Land holders are keeping lands unsold for on an average 11.81 years after getting lands in their ownership. Who got lands as inheritance, they have tendency to keep lands unsold for more duration. 28% lands are kept for 10 to 15 years and 24% of lands are kept unsold or unbuilt for 20 to 30 years for inheritance lands. Who owned the lands for making building on the plots, 73.7% of them have not attempted to make house on their lands and only 25.4% of them attempted to build house on their land, though they have not finally built house. 64.1% of the total respondents have intended to sell their land in the need of money though they primarily owned land for different purposes. 60.21% of the plots having houses on adjacent land is not attempted to be developed yet. All these behavior can prove that there is a huge number of speculators in the land market in Dhaka. However, unfortunately there is no regulatory rule to prohibit or control speculation. This is high time to study more on this issue and set rule to regulate the speculation and measures from different perspective are to be adopted to control speculation.

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Appendix A

(Belongs to chapter four: words in City Corporation, land advertisement statistics)

Table-4.1: Ward list of Dhaka North City Corporation

Zone Number and Name	Ward Number	Area (Sq km)	Nos of holding/ house	Ward Area Name
Zone-1 - (Uttara)	Ward No. 1	6.095	8,823	Uttara Model Town
	Ward No. 17	5.475	5,880	Kuril, Khilkhat, Nikunjo
Zone-2 - (Mirpur Pallabi)	Ward-No. 02	3.048	4,902	Mirpur section-12, Mirpur Ceramic
	Ward-No. 03	1.3444	3,150	Mirpur section-10
	Ward-No. 04	1.338	1,361	Mirpur section-14, Byshteki
	Ward-No. 05	1.3444	2,190	Mirpur section-11, Bawneabad Area
	Ward-No. 06	3.029	3,135	Mirpur section-6 & 7, Pollabi
	Ward-No. 07	1.875	2,981	Mirpur section-2, Rupnagar, Govt. housing Estate
	Ward-No. 08	3.776	3,040	Mirpur section-1, Box nagar, Zoo and Botanical Garden
	Ward-No. 15	5.806	3 729	Vasantek, Maticata, Manikdey, Barentek.
Zone-3 - (Gulshan)	Ward No. 18	1.749	3,344	Baridhara, Shahjadpur
	Ward No. 19	5.186	12,889	Gulshan, Banani
	Ward No. 20	1.729	4,062	Mohakhali, Niketan,
	Ward No. 21	1.449	4,648	Badda
	Ward No. 22	1.808	4,219	East rampura, Ulon, West Haji Para.
	Ward No. 23	0.855	1,782	Khilgaon B Zone, Purbo Haji Para, Chowdhury Para.
	Ward No. 24	3.075	1,656	Tajgaon I/A, Kunipara
	Ward No. 25	1.218	2,453	Azrat Para, Rasul bag, Tajgaon
	Ward No. 35	1.149	4,200	Boro Moghbazar, Eskaton
	Ward No. 36	0.769	2,225	Neyatola
Zone-4 - (Mirpur, Kazi Para, Gabtoli)	Ward No. 09	1.615	2,010	Golartek, Bagbari, Gabtoli Bus Terminal
	Ward No. 10	1.669	2,515	Gabtoli, Mirpur Colony, Darus Salam
	Ward No. 11	1.133	3,733	Paikpara
	Ward No. 12	1.697	3,266	Ahmed Nagar
	Ward No. 13	1.814	4,830	Monipur, Parer Bagh

	Ward No. 14	1.946	6,907	Kazipara, Sawrapara, Senpara-parbata
	Ward No. 16	33	4,559	Ibrahinpur, Kafrul
Zone- 5 - (Kawranbaz ar)	Ward No. 26	1.374	4,153	Kawranbazar, Tegturipara, Tejkunipara
	Ward No. 27	3.661	3,730	Razabazar, Monipuripara, Indra road
	Warc No. 28	1.528	1,719	Agargaon, Taltola Staff Quarter
	Ward No. 29	0.712	2,173	Mohammadpur
	Ward No. 30	2.383	5,742	Shamoli Ring road, Adabor, Shakertek
	Ward No. 31	0.629	2,450	Mohammadpur azam road, Jakir Hossain Road, Nazrul Islam Road.
	Ward No. 32	1.561	4,340	Lalmatia, Mad Gate, Khilgi Road, Babar Road, lqbal Road, Arongajeb Road, PC Culture
	Ward No. 33	5.592	4,287	Basila, Katasur, Mohammadia Housing, Basbari
	Ward No. 34	1.362	2 397	Jafrabad, Sultanganj, Rayer Bazar, Bibir Bazar, Madhu Bazar

Source: Official Website of Dhaka North City Corporation, Accessed on 2015

Table-4.2: Ward list of Dhaka South City Corporation

	বিলুপ্ত ওয়ার্ড নং	ঢাকা দক্ষিণ ওয়ার্ড নং	ওয়ার্ডের আওতাধীন এলাকা
অঞ্চল-১ শাহবাগ জোন	৪৯	১৫	ধানমন্ডি আ/এ, ধানমন্ডি রোড নং ১৫ ষ্টাফ কোয়ার্টার, রোড নং ১৫ পূর্ব রায়ের বাজার ও ঈদগাহ রোড, শেরেবাংলা রোড ও মিতালী রোড, হাজী আফসারবদ্দীন, হাতেমবাগ।
	৫০	১৬	ফ্রী স্কুল ষ্ট্রীট কাঁঠালবাগান, নর্থরোড, সার্কুলার রোড, গ্রীন কর্ণার, গ্রীন স্কয়ার (গ্রীন রোড), গ্রীন রোড পূর্ব, ওয়েষ্ট এন্ড ষ্ট্রীট (ওয়েস্ট স্ট্রীট), আল আমীন রোড, নর্থ সার্কুলার রোড, ফ্রী স্কুল ষ্ট্রীট (হাতিরপুল), ক্রিসেন্ট রোড।
	৫১	১৭	লেক সার্কাস উত্তর ধানমন্ডি ও আবেদ ঢালী রোড, বশির উদ্দিন রোড, উত্তর ধানমন্ডি, কলাবাগান, গ্রীন রোড পশ্চিম, গ্রীন রোড ষ্টাফ কোয়ার্টার, তলাবাগ, শুক্রাবাদ, সোবহানবাগ।
	৫২	১৮	নীলক্ষেত বাবুপুরা, সমাজ কল্যান ও গবেষনা ইনষ্টিটিউট, আইয়ুব আলী কলোনী রহিম স্কয়ার, বাংলাদেশ- কুয়েত মৈত্রী হল, সেন্ট্রাল রোড, নয়েম নিয়ে বার রোড, কলেজ স্ট্রীট, টি, টি কলেজ, গভঃ ল্যাবরেটরী স্কুল এলাকা এবং ঢাকা কলেজ, সাইন্স ল্যাবরেটরী ষ্টাফ কোয়ার্টার, এলিফ্যান্ট রোড, মিরপুর রোড, নিউ এলিফ্যেন্ট রোড, বিডিআর পিলখানা।

	৫৩	১৯	মিন্টু রোড, কাকরাইল, সার্কিট হাউস রোড, সিদ্ধেশ্বরী রোড ও লেন, মগবাজার এলিফ্যান্ট রোড, মগবাজার ইস্পাহানী কলোনী, নিউ ইস্কাটন রোড, ইস্কাটন গার্ডেন রোড, আমিনাবাদ কলোনী ও ইষ্টার্ণ হাউজিং এ্যাপার্টমেন্ট, বেইলী স্কোয়ার ও বেইলী রোড, বাজে কাকরাইল, ডি,আই,টি কলোনী ও পশ্চিম মালিবাগ।
	৫৬	২০	সেগুন বাগিচা, তোপখানা রোড, বঙ্গবন্ধু এ্যাভিনিউ ও রেস্ট হাউজ, টি, বি ক্লিনিক এলাকা, ঢাকা মেডিকেল কলেজ হাসপাতাল, ও আ/এ, হাইকোর্ট ষ্টাফ কোয়ার্টার ও সোহরাওয়ার্দী উদ্যান, ফুলবাড়ীয়া ষ্টেশন পূর্ব এলাকা, পশ্চিম ফুলবাড়ীয়া এবং সচিবালয় এলাকা, আব্দুল গণি রোড এবং সচিবালয় স্টাফ কোয়ার্টার, পশ্চিম পুরাতন রেলওয়ে কলোনী, রেলওয়ে হাসপাতাল এলাকা, ইস্টর্ন হাউজিং এবং টয়েনবি সার্কুলার রোড, রমনা গ্রীন হাউজ, ইঞ্জিনিয়ারিং ইউনিভার্সিটি এবং আবাসিক এলাকা, নজরৰল ইসলাম হল আহসান উল্যাহ হল, তিতুমীর হল, ঢাকা মেডিকেল কলেজ হোস্টেল (ফজলে রাব্বি হল), শেরবাংলা হল (প্রকৌশল বিশ্ববিদ্যালয়), সোহরাওয়ার্দী হল (প্রকৌশল বিশ্ববিদ্যালয়), শহীদুলাহ হল (ঢাকা বিশ্ববিদ্যালয), ফজলুল হক হল, ডঃ এম এ রশিদ হল, শহীদ স্মৃতি হল, প্রকৌশল বিশ্ববিদ্যালয় ছাত্রী হল।
	৫৭	২১	ঢাকা বিশ্ববিদ্যালয় আবাসিক এলাকা, জহুরৰল হক হল (ঢাকা বিশ্ববিদ্যালয়), সলিমুলাহ হল, স্যার এ, এফ রহমান হল, শামসুন নাহার হল, জগনড়বাথ হল, কবি জসিম উদ্দিন হল (ঢাকা বিশ্ববিদ্যালয়), মুক্তি যোদ্ধা জিয়াউর রহমান হল, সূর্য সেন হল, হাজী মোহাম্মদ মহসিন হল, বঙ্গবন্ধু শেখ মজিবুর রহমান হল, ময়মনসিংহ লেন, ময়মনসিংহ রোড, পি, জি ইনষ্টেটিউট, জাতীয় জাতীয় যাদুঘর অফিসার্স কোয়ার্টার, পি,জি হাসপাতাল ও কেন্দ্রীয় পাবলিক লাইব্রেরী, হাবিবুলাহ, আন্তর্জাতিক ছাত্রাবাস, রোকোয়া হল, পরিবাগ শাহ সাহেব রোড।
অঞ্চল-২ মতিঝিল জোন	**২৪**	**১**	**খিলগাঁও "এ" এবং সি জোন খিলগাঁও কলোনী "সি"**
	২৫	**২**	**গোড়ান**
	২৬	**৩**	**মেরাদিয়া**
	২৭	**৪**	**পূর্ব বাসাবো (হোল্ডিং নং- ২৯/১ হতে শেষ), পশ্চিম বাসাবো, উত্তর বাসাবো, দক্ষিণ বাসাবো, উত্তর-পূর্ব বাসাবো, মধ্য বাসাবো, বাসাবো ওহাব কলোনী, মাদার টেক।**
	২৮	**৫**	**মায়াকানন, সবুবাগ, উত্তর মুগদাপাড়া ডেপুটি কলোনী, আহম্মেদ বাগ, রাজারবাগ উত্তর ও দক্ষিণ, কদমতলা বাসাবো, পূর্ব বাসাবো (হোল্ডিং নং- ১-৫৯)।**
	২৯	**৬**	**মুগদাপাড়া**
	৩১	**৮**	**বাংলাদেশ ব্যাংক কলোনী এবং সোনালী ব্যাংক কলোনী, আর. কে মিশন রোড গোপী বাগ, কমলাপুর, মতিঝিল, বি রেলওয়ে ব্যারাক।**
	৩২	**৯**	**আরামবাগ, ফকিরাপুল, ফকিরাপুল বাজার এলাকা, মতিঝিল সি/এ, দিলকুশা সি/এ, বঙ্গভবন।**
	৩৩	**১০**	**মতিঝিল কলোনী, (হাসপাতাল জোন, আল হেলাল জোন ও আইডিয়াল জোন), এইচ টাইপ কোয়ার্টার, পোস্টাল কলোনী, টি এন্ড টি কলোনী, বাংলাদেশ ব্যাংক কলোনী।**

	৩৪	১১	শাহ্জাহানপুর, শাহজাহানপুর রেলওয়ে কলোনী, দক্ষিণ খিলগাঁও, খিলগাঁও বাগিচা, শহীদ বাগ, মোমেন বাগ, আউটার সার্কুলার রোড।
	৩৫	১২	মালিবাগ বাজার রোড, (মতিঝিল অংশ), মলিবাগ, বকশী বাগ, গুলবাগ, শান্তিবাগ, ইন্দ্রপুরী।
	৩৬	১৩	চামেলী বাগ ও আমিনবাগ, রাজার বাগ পুলিশ লাইন, পুরানা পল্টন জি.পি.ও, বায়তুল মোকাররম স্টেডিয়াম, (সুইমিং পুল, স্পোর্টস কাউন্সিল), আউটার স্টেডিয়াম, বিজয় নগর, নয়াপল্টন, পুরানা পল্টন লাইন, ট্রাফিক পুলিশ ব্যারাক, পুলিশ হসপিতাল ও সি এন্ড বি মাঠ, শান্তিনগর, শান্তিনগর বাজার এলাকা।
অঞ্চল-৩ লালবাগ জোন	৪৮	১৪	বীরবাস কাচড়া, গজমহল রোড, হাজারীবাগ, ট্যানারি এলাকা, জিকাতলা (তিন মাজার), দক্ষিণ সুলতানগঞ্জ, সোনাতনগড় (মেনেশ্বর), জিকাতলা ষ্টাফ কোয়ার্টার, মনেশ্বর (জিকাতলা), শিকারীটোলা, মনেশ্বর (১-৩৬), তলাবাগ এবং মিতালী রাস্তার অংশ, চরকঘাটা তলাবাগ এবং টালী অফিস রোড, দক্ষিণ মধুবাজার।
	৫৮	২২	মনেশ্বর রোড, মনেশ্বর লেন, বাড্ডানগর লেন, বোরহানপুর লেন কুলাল মহল লেন, কাজীরবাগ লেন, নবীপুর লেন, হাজারীবাগ লেন, হাজারীবাগ রোড, কালু নগর, এনায়েত গঞ্জ, গণকটুলী, ভাংগী কলোনী, নীলাম্বর সাহা রোড, ভাগলপুর লেন।
	৫৯	২৩	লালবাগ রোড (হোল্ডিং নং- ১৫৮-২৫৬), মেডিকেল ষ্টাফ কোয়ার্টার থেকে বিডিআর গেট নং-১, কাশ্মীরী টোলা লেন, হোসেন উদ্দীন খান লেন, ডুরি আঙ্গুল লেন, নবাবগঞ্জ রোড, নবাবগঞ্জ লেন, আব্দুল আজিজ লেন, ললিত মোহন দাস লেন, এম, সি রায় রোড, নতুন পল্টন লাইন, পিল খানা রোড , সুবল দাস রোড (হোল্ডিং নং- ৪৭, ৪৮ এবং ৪৯)।
	৬০	২৪	জগন্নাথ সাহা রোড (হোল্ডিং নং- ১১৪-৩১৫), শহীদ নগর, রাজ নারায়ন ধার রোড।
	৬১	২৫	জগন্নাথ সাহা রোড (হোল্ডিং নং- ১-১১৩), কাজী রিয়াজুদ্দিন রোড, লালবাগ দূর্গ এবং পুষ্পরাজ সাহা রোড, আতশ খান লেন, রাজশ্রী নাথ ষ্ট্রীট, হরমোহন শীল ষ্ট্রীট, গঙ্গারাম রাজার লেন, লালবাগ রোড (হোল্ডিং নং- ৪৮-১৫৭ এবং ২৫৭-৩২৫/১), নগর বেলতলী লেন, শেখ সাহেব বাজার, সুবল দাস রোড (হোল্ডিং নং- ৫৭-৪৯)
	৬২	২৬	আজিমপুর রোড (হোল্ডিং নং- ১-১৭৮), আজিমপুর এষ্টেট, পলাশী ব্যারাক পশ্চিম ও দক্ষিন, ইডেন মহিলা কলেজ হোস্টেল স্টাফ কোয়ার্টার এবং গাহর্স্থ অর্থনীতি কলেজ, বি.সি দাস স্ট্রীট, নিলক্ষেত সরকারি বাজার (আজিমপুর), লালবাগ রোড, (হোল্ডিং নং- ১-৪৭ এবং ১৫৮-১৯৯), ঢাকেশ্বরী রোড।
	৬৩	২৭	হোসনী দালান রোড, অরফানেজ রোড, কমল দাহ রোড, নাজিমুদ্দিন রোড (হোল্ডিং নং- ১-১২৪), গিরদা উর্দূ রোড, জয়নাগ রোড, বকসী বাজার রোড, বকসী বাজার লেন, আমালাপাড়া সিট রোড, তাতখানা লেন, উমেশ দত্ত রোড, নবাব বাগিচা, নূর ফাতা লেন, পলাশী ফায়ার সার্ভিস স্টেশন।

	৬৪	২৮	কে. বি. রবদ্র রোড, উর্দূ রোড, গৌড় সুন্দর রাম লেন, হায়দার বকস লেন, খাজে দেওয়ান প্রথম এবং দ্বিতীয় লেন, চক সার্কুলার রোড, আজগর লেন, হরনাথ ঘোষ রোড, হরনাথ ঘোষ লেন, খাজে দল সিং লেন, নন্দ কুমার দত্ত রোড।
	৬৫	২৯	ইসলাম বাগ, শায়েস্া খান রোড, রহমত গঞ্জ লেন, হাজী রহিম বকস লেন, ওয়াটার ওয়ার্কস রোড, হাজী কালু রোড, গণি মিঞার হাট, ফরিয়াপট্রি।
	৯১	৫৫	কামরাঙ্গীর চর
	৯২	৫৬	কামরাঙ্গীর চর ইত্যাদি
অঞ্চল-৪ কোতয়ালী জোন	৬৬	৩০	হাকিম হাবিবুর রহমান রোড, রাবার বোস ষ্ট্রীট, সোয়ারী ঘাট পূর্ব এবং পশ্চিম, রবই হাট্রা, বড় কাটারা, ছোট কাটারা, দেবীদাস ঘাট লেন, কমিটি গঞ্জ, চম্পাতলী লেন, জুম্মম বেপারী লেন, রজনী বোস লেন, রায় ঈশ্বরচন্দ্র শীল বাহাদুর ষ্ট্রীট, মহিউদ্দিন লেন, জাদব নারায়নদাস লেন, ইমাম গঞ্জ, মিটফোর্ড রোড।
	৬৭	৩১	মৌলভী বাজার, আজিজুলাহ রোড, বেগম বাজার, আবুল হাসনাত রোড, পদ্মলোচন রায় লেন, কে,এম, আজম লেন, নুর বক্স লেন, আলী হোসেন খান রোড, নাবালক মিয়া লেন, আর্মেনীয়াম ষ্ট্রীট, আবুল খায়রাত রোড, কেদীর নাথ দে লেন, আগা নওয়াব দেউড়ী, বেচারাম দেউড়ী, হাফিজ উলাহ রোড, গোলাম মোস্তফা লেন, ডি,সি, রায় রোড, শরৎচন্দ্র চক্রবর্তী রোড, এ, সি, রায় রোড, জেলা রোড, দিগু বাবু লেন, মকিম কাটারা, বি,কে, রায় লেন, সেন্টাল জেল, যোগেন্দ্র নারায়ণ শীল ষ্ট্রীট।
	৬৮	৩২	বংশাল রোড (হোল্ডিং নং- ৪৩/১-১০৮), কে,পি, ঘোষ ষ্ট্রীট, কসাইটুলী, গোবিন্দ দাস লেন, সৈয়দ হাসান আলী লেন, পি, কে, রায় লেন, হাজী আঃ রশিদ লেন, রায় বাহাদুর ঈশ্বর চন্দ্র ঘোষ ষ্ট্রীট, কাজী জিয়া উদ্দীন রোড, সামসাবাদা লেন, শাহ্জাদা মিয়া লেন, গোপী নাথ দত্ত কবিরাজ ষ্ট্রীট ও হরনী ষ্ট্রীট, বাগডাসা লেন, হায়বাৎ নগর লেন শরৎচক্রবর্তী রোড (হোল্ডিং নং-১৭-১০৩), কাজী মুদ্দিন সিদ্দিকী লেন, আকমল খান রোড, জিন্দবাহার লেন, জুমবালী লেন।
	৬৯	৩৩	বংশাল রোড (হোল্ডিং নং- ১০৯-২০৭/১), আলী, নেকী দেউরী, আব্দুল হাদী লেন, নবাব কাটারা, চানখার পুল লেন, আগামসীহ লেন (হোল্ডিং নং- ১-১৫), টিক্কাটুলী লেন, আগা সাদেক রোড, বি, কে, গাঙ্গুলী লেন, আবুল হাসনাত রোড।
	৭০	৩৪	সিদ্দিক বাজার, টেকের হাট লেন, নওয়াবপুর রোড (হোল্ডিং নং- ১৪৪-২২২), হাজী ওসমান গনি রোড (হোল্ডিং নং- ১ হইতে ১৬৫), নাজিরা বাজার লেন, লুৎফর রহমান লেন, কাজী আব্দুল হামিদ লেন, কাজী আলা উদ্দীন রোড, ফুলবাড়ীয়া পুরাতন রেলওয়ে ষ্টেশন (কোতোয়ালী অংশ)।
	৭১	৩৫	মালিটোলা লেন, মালিটোলা রোড, বংশাল রোড (হোল্ডিং নং- ১-৪২, ২১১-২৬৭), বংশাল লেন, গোলক পাল লেন, আনন্দ মেহান বসাক লেন (বাসাবাড়ী লেন), ভিতরবাড়ী লেন, গোয়াল নগর লেন, ইংলিশ রোড, পুরানা মোগলটুলী, নবাব ইউসুফ রোড, নবাবপুর রোড (হল্ডিং নং- ২২৬-২৮২), হাজী আব্দুলাহ সরকার লেন, ফ্রেঞ্চ রোড, হাজী মইনুদ্দিন রোড, নয়াবাজার সুইপার কলোনী।

	৭২	৩৬	আশেক লেন, বাধিকা মোহন বসাক লেন, হরি প্রসাদ মিত্র রোড, সৈয়দ আওলাদ হোসেন লেন, কোর্ট হাউস ষ্ট্রীট, উচ্ছব পোদ্দার লেন, প্রণব পোদ্দার লেন, রাখাল চন্দ্র বসাক লেন, বাঁশিচরণ সেন পোদ্দার লেন ইসলামপুর (হোল্ডিং নং- ৫৩-১১৭/২/৩), নবরয় লেন, কৈলাশ ঘোষ লেন, শাখারী বাজার (হোল্ডিং নং- ১-৬৫), রাজার দেউরী, জজকোর্ট, ডি, সি কোর্ট ও রায় সাহেব বাজার।
	৭৩	৩৭	আহসান উলাহ রোড, কবিরাজ লেন, জি. এল গার্থ লেন, সিমশন রোড, পটুয়াটুলী রোড, ইসলামপুর (হোল্ডিং নং- ১-৫২), পাটুয়াটুলী লেন, কুমারটুলী লেন, লিয়াকত এ্যাভিনিউ, নর্থব্রুক হল রোড (হোল্ডিং নং- ১-৩৮), ওয়াইজ ঘাট, রমাকান্দি লেন, লয়াল ষ্ট্রীট, পি, কে, রায় রোড (বাংলা বাজার), চিত্তরঞ্জন এ্যাভিনিউ, হকার্স মার্কেট, শাখারী বাজার (হোল্ডিং নং- ৬৬-১৪২)।
	৭৪	৩৮	মদন মোহন বসাক রোড (হোল্ডিং নং- ১-১৫/২ এবং ৩৬ হতে শেষ), লালচান মকিম লেন, গোপী বিষান লেন, গোপী মোহন বসাক লেন (হোল্ডিং নং-১-৩৫), তাহের বাগ লেন, শশী মোহন বসাক লেন গোয়াল ঘাট লেন, মুচী পাড়া, নরেন্দ নাথ বসাক লেন, নবাবপুর রোড (হোল্ডিং নং- ১-১৪৩), বি সি সি রোড (হোল্ডিং নং- ১-১৩৪), কাপ্তান বাজার (হোল্ডিং নং- ১-১০০), জুরিয়াটুলী লেন, জদুনাথ বসাক লেন, বনগ্রাম রোড (হোল্ডিং নং- ১-১৫৮), মহাজনপুর লেন, বনগ্রাম লেন, জোগী নগর রোড ও লেন, চন্দ্রনাথ বসাক ষ্ট্রীট, মদন পাল লেন।
	৭৮	৪২	কুঞ্জ বাবু রোড, গোবিন্দ দত্ত লেন, রঘুনাথ দাস লেন, রোকনপুর লেন, পাঁচ ভাই ঘাট লেন, নাসির উদ্দিন সরদার লেন, কার্কুনবাড়ী লেন, জনসন রোড, কাজী আবদুর রউফ রোড, নন্দলাল দত্ত লেন, নবদ্বীপ বসাক লেন, রাজচন্দ্র মুন্সী লেন, সুভাষ বোস এভিনিউ (লক্ষ্মী বাজার), হাজী মজিদ লেন।
	৭৯	৪৩	শ্যামা প্রসাদ চৌধুরী লেন, রূপলাল দাস লেন, পাতলখান লেন, ফরাশগঞ্জ লেন, ফরাশগঞ্জ রোড, উল্টিগঞ্জ লেন, মালাকার টোলা লেন, নর্থব্রুক হল রোড (হোল্ডিং নং- ৩৯-শেষ), মদন সাহ্ লেন, ঈশ্বর দাস লেন, হরিশ চন্দ্র বসু ষ্ট্রীট, প্রতাপ দাস লেন, বি, কে, দাস রোড, কে জি গুপ্ত লেন, জয়চন্দ্র ঘোষ লেন, প্যারীদাস রোড, গোপাল সাহা লেন, মোহিনী মোহন দাস লেন,পূর্ন চন্দ্র ব্যানার্জি লেন, রূপচান লেন, মুন্সী হরি মোহন দাস লেন, আনন্দ মোহন দাস লেন, শ্রীশ দাস লেন, হেমেন্দ্র দাস লেন, দিবেন্দ্র দাস লেন, শুকলাল দাস লেন।
অঞ্চল-৫ যাত্রাবাড়ী জোন	৩০	৭	মানিক নগর ,মানিক নগর মিয়াজান লেন, কাজিরবাগ
	৭৫	৩৯	কে.এম.দাস লেন, অভয়দাস লেন, টয়েনবি সার্কুলার রোড, জয়কালী মন্দির রোড হোল্ডিং নং- ১৯ হতে শেষ), ভগবতী ব্যানার্জী রোড, ফোল্ডার ষ্টীট (হোল্ডিং নং- ৯ হতে শেষ), হাটখোলা রোড (হোল্ডিং নং- ২-৪৪/৩), আর. কে. মিশন রোড (হোল্ডিং নং- ১-৯১/১)

	৭৬	৪০	দয়াগঞ্জ রোড, দয়াগঞ্জ হাটলেন, দয়াগঞ্জ জেলেপাড়া, নারিন্দা লেন, নারিন্দা রোড (হোল্ডিং নং -৫৪ হতে শেষ), শরৎগুপ্ত রোড, বসু বাজার লেন, মুনির হোসেন লেন, শাহ্ সাহেব লেন, মেথরপট্রি (উত্তর ও দক্ষিন), গুরবদাস সরকার লেন, করাতিটোলা লেন, স্বামীবাগ লেন (হোল্ডিং নং- ১৯ হতে শেষ), স্বামীবাগ নতুন বস্তি, স্বামীবাগ লেন (হোল্ডিং নং- ১-১৮)
	৭৭	৪১	লালমোহন শাহ্ স্ট্রীট, ভজহরি সাহা স্ট্রীট, দক্ষিন মসুন্দি, ওয়ারী ষ্ট্রীট, জয়কালী মন্দির রোড, (হোল্ডিং নং- ১-১৮) নবাব ষ্ট্রীট, মদন মোহন বসাক রোড, টিপু সুলতান রোড (হোল্ডিং নং- ১৫/৩-৩৭), (র‍্যান্ধিন ষ্ট্রীট, পদ্ম নিধি লেন, হরী ষ্ট্রীট ল্যান্ড অকসেন লেন, নারিন্দা রোড (হোল্ডিং নং- ১-৫৩), জোরপুল লেন ফোল্ডার ষ্ট্রীট (হোল্ডিং নং- ১-৪), চন্ডী চরণ বোস ষ্ট্রীট, হাটখোলা রোড এ্যান্ড বলধা হাউস (হোল্ডিং নং- ১), লারমিনি ষ্ট্রীট রাঁধা-শ্যাম সাহা ষ্ট্রীট।
	৮০	৪৪	কাঠের পুল লেন (বানিয়া নগর), ঠাকুরদাস লেন, জাস্টিস লালমোহন দাস লেন, ঋষিকোষ দাস রোড, বেগমগঞ্জ লেন, মিউনিসিপ্যাল স্টাফ কোয়ার্টার (বানিয়া নগর), তনুগঞ্জ লেন, ওয়াল্টার রোড, রেবতী মোহন দাস রোড (হোল্ডিং নং- ১-১৭৫)
	৮১	৪৫	ডিষ্ট্রিলারী রোড, দীন নাথ সেন রোড, ক্যাশাব ব্যানার্জী রোড (হোল্ডিং নং- ৯২-৯৯), শশীভূষণ চ্যাটার্জী লেন, রজনী চৌধুরী রোড, সাবেক সরাফৎ গঞ্জ লেন, সত্যেন্দ্র কুমার দাস রোড।
	৮২	৪৬	মিল ব্যারাক এ্যান্ড পুলিশ লাইন, ক্যাশাব ব্যানার্জী রোড (হোল্ডিং নং- ১-৮৭/২), অক্ষয় দাস লেন, শাঁখারী নগর লেন, হরিচরণ রায় রোড (হোল্ডিং নং- ১-১৪, ৪৯-৫৬), আলমগঞ্জ রোড, ঢালকানগর লেন (হোল্ডিং নং-১-৪৪, ৭১-১০৫), সতীশ সরকার রোড ।
	৮৩	৪৭	লাল মোহন পোদ্দার লেন, পোস্গোলা; ঢাকা কটন মিল্স, হরিচরণ রায় রোড (হোল্ডিং নং- ১৫-৪৮), বাহাদুরপুর লেন, গেন্ডারিয়া রাজউক পট ১ এবং ২, নবীন চন্দ্র গোস্বাসী রোড, ফরিদাবাদ লেন, বাংলাদেশ ব্যাংক কলোনী, ঢালকা নগর লেন (হোল্ডিং নং-৪৫-৭০)
	৮৪	৪৮	সায়েদাবাদ, উত্তর যাত্রাবাড়ী ১ এবং ২।
	৮৫	৪৯	ব্রাক্ষ্মণ চিরণ, ধলপুর।
	৮৬	৫০	পশ্চিম যাত্রাবাড়ী, এন্ড উত্তর-পশ্চিম যাত্রাবাড়ী, উত্তর যাত্রাবাড়ী, দক্ষিণ-পূর্ব যাত্রাবাড়ী, ওয়াপদা কলোনী, দক্ষিণ যাত্রাবাড়ী।
	৮৭	৫১	মীর হাজারীবাগ, ধোলাই পাড়, পাড় গেন্ডারিয়া।
	৮৮	৫২	মুরাদপুর- ১ (হোল্ডিং নং- ১-৪৬), মুরাদপুর ২, ৩ এবং ৪।
	৮৯	৫৩	পশ্চিম জুরাইন মুরাদপুর- ১ (হোল্ডিং নং- ১-৪৬)
	৯০	৫৪	করিম উলারবাগ, নতুন জুরাইন আলম বাগ, পশ্চিম জুরাইন (মাজার এলাকা সহ)

Source: Official Website of Dhaka South City Corporation, Accessed on 2015

Table-4.3: Ward wise distribution of lands advertised to sale according to different zones of Dhaka North City Corporation

	Dhaka North City Corporation			
Zone name	**Word Number**	**Zone number**	**Lands/plots counted**	**Zone Total**
Uttara Zone	NW1	NZ1	90	
	NW7	NZ1	5	
	NW17	NZ1	105	
	Uttara Zone Total			200
Mirpur-Pallabi Zone	NW2	NZ2	18	
	NW3	NZ2	2	
	NW4	NZ2	2	
	NW5	NZ2	14	
	NW6	NZ2	26	
	NW7	NZ2	4	
	NW8	NZ2	11	
	NW12	NZ2	2	
	NW15	NZ2	1	
	NW16	NZ2	1	
	Mirpur-Pallabi Zone Total			81
Gulshan Zone	NW18	NZ3	10	
	NW19	NZ3	14	
	NW21	NZ3	35	
	NW22	NZ3	55	
	NW24	NZ3	1	
	Gulshan Zone Total			115
Mirpur-Kazipara, Gabtoli Zone	NW10	NZ4	4	
	NW11	NZ4	2	
	NW12	NZ4	2	
	NW13	NZ4	5	
	NW14	NZ4	3	
	Mirpur-Kazipara, Gabtoli Zone Total			16
Mohammadpur-Kawranbazar Zone	NW26	NZ5	4	
	NW28	NZ5	4	
	NW29	NZ5	5	
	NW30	NZ5	4	
	NW31	NZ5	20	
	NW32	NZ5	2	
	NW33	NZ5	3	
	NW35	NZ5	1	
	Mohammadpur-Kawranbazar Zone Total			43
			Total	455

Source: Survey to the platforms of the lands advertisements, 2015

Table-4.4: Word wise distribution of lands advertised to sale according to different zones of Dhaka South City Corporation

Dhaka South City Corporation				
Zone name	**Zone number**	**Word Number**	**Lands/plots counted**	**Total**
Shahbag Zone	SZ1	SW15	11	13
		SW16	1	
		SW19	1	
		Shahbag Zone Total		
Motijheel Zone	SZ2	SW1	11	48
		SW4	18	
		SW5	5	
		SW6	1	
		SW8	8	
		SW12	5	
		Motijheel Zone Total		
Lalbagh Zone	SZ3	SW14	2	5
		SW23	1	
		SW25	1	
		SW27	1	
		Lalbagh Zone Total		
Kotwali Zone	SZ4	Kotwali Zone Total		0
Jatrabari Zone	SZ5	SW50	23	24
		SW54	1	
			Jatrabari Zone Total	
			total	90

Source: Survey to the platforms of the lands advertisements, 2015

Table-4.5: Distribution of lands advertised to sale according to different zones of outside of the city corporation area

Zone name	Lands/plots counted
Uttarkhan Zone	39
purbachol zone	119
Dakkhinkhan Zone	42
Demra zone	20
Dhamrai Zone	2
Dumni	65
Bhatara	3
Harirampur	9
Konda	12
Tegharia	12
Shuvadya	27
Kalindi	15
Kalatia	3
Sakta	11
Aminbazar	17
Ashulia	39
Hemayetpur	5
Savar	77
Total	517

Source: Survey to the platforms of the lands advertisements, 2015

Appendix B

(Belongs to chapter five: land location, area, development, cost)

Table- 5.1: Current condition of land

	Frequency	Valid Percent
Flat land for building house	233	84.4
Pool	6	2.2
Under water	15	5.4
Low land	22	8.0
Total	276	100.0
Missing	8	
Total	284	

Source: Telephone survey, January to June, 2015

Table- 5.2: Area of land

	Area in Katha	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.60	1	.1	.1	.1
	1.00	3	.3	.3	.4
	1.20	1	.1	.1	.5
	1.30	1	.1	.1	.6
	1.50	7	.7	.7	1.3
	1.60	2	.2	.2	1.5
	1.70	1	.1	.1	1.6
	1.80	6	.6	.6	2.1
	1.90	4	.4	.4	2.5
	2.00	28	2.6	2.7	5.2
	2.10	4	.4	.4	5.6

	2.20	3	.3	.3	5.9
	2.30	6	.6	.6	6.5
	2.40	7	.7	.7	7.2
	2.50	69	6.5	6.7	13.9
	2.70	5	.5	.5	14.3
	2.80	7	.7	.7	15.0
	3.00	249	23.3	24.1	39.1
	3.10	4	.4	.4	39.5
	3.20	2	.2	.2	39.7
	3.30	10	.9	1.0	40.7
	3.40	2	.2	.2	40.9
	3.50	36	3.4	3.5	44.4
	3.60	11	1.0	1.1	45.4
	3.80	8	.7	.8	46.2
	3.90	2	.2	.2	46.4
	4.00	57	5.3	5.5	51.9
	4.10	1	.1	.1	52.0
	4.20	6	.6	.6	52.6
	4.30	8	.7	.8	53.4
	4.50	8	.7	.8	54.2
	4.60	3	.3	.3	54.5
	4.70	2	.2	.2	54.7
	4.80	1	.1	.1	54.7
	5.00	197	18.4	19.1	73.8
	5.10	1	.1	.1	73.9
	5.30	3	.3	.3	74.2
	5.40	1	.1	.1	74.3

	5.50	10	.9	1.0	75.3
	5.80	5	.5	.5	75.8
	6.00	22	2.1	2.1	77.9
	6.10	9	.8	.9	78.8
	6.30	2	.2	.2	79.0
	6.40	2	.2	.2	79.2
	6.50	5	.5	.5	79.7
	6.70	2	.2	.2	79.8
	6.80	1	.1	.1	79.9
	7.00	8	.7	.8	80.7
	7.10	2	.2	.2	80.9
	7.30	5	.5	.5	81.4
	7.40	1	.1	.1	81.5
	7.50	17	1.6	1.6	83.1
	7.60	1	.1	.1	83.2
	7.80	3	.3	.3	83.5
	7.90	1	.1	.1	83.6
	8.00	10	.9	1.0	84.6
	8.20	1	.1	.1	84.7
	8.30	1	.1	.1	84.8
	8.50	5	.5	.5	85.3
	9.00	9	.8	.9	86.1
	9.10	5	.5	.5	86.6
	9.50	1	.1	.1	86.7
	9.70	1	.1	.1	86.8
	10.00	40	3.7	3.9	90.7
	10.30	1	.1	.1	90.8

	10.40	1	.1	.1	90.9
	11.00	2	.2	.2	91.1
	11.50	2	.2	.2	91.3
	11.80	1	.1	.1	91.4
	12.00	2	.2	.2	91.6
	12.10	2	.2	.2	91.8
	12.50	1	.1	.1	91.9
	12.70	1	.1	.1	92.0
	13.00	2	.2	.2	92.2
	13.30	2	.2	.2	92.3
	13.50	1	.1	.1	92.4
	13.90	1	.1	.1	92.5
	14.00	2	.2	.2	92.7
	15.00	4	.4	.4	93.1
	15.20	1	.1	.1	93.2
	15.80	1	.1	.1	93.3
	16.00	3	.3	.3	93.6
	16.40	2	.2	.2	93.8
	17.50	1	.1	.1	93.9
	17.60	1	.1	.1	94.0
	18.00	1	.1	.1	94.1
	20.00	13	1.2	1.3	95.3
	20.20	1	.1	.1	95.4
	21.00	1	.1	.1	95.5
	21.80	1	.1	.1	95.6
	24.00	1	.1	.1	95.7
	24.80	2	.2	.2	95.9

	27.90	1	.1	.1	96.0
	28.00	1	.1	.1	96.1
	29.10	1	.1	.1	96.2
	31.50	1	.1	.1	96.3
	32.00	1	.1	.1	96.4
	33.00	1	.1	.1	96.5
	36.40	1	.1	.1	96.6
	37.00	1	.1	.1	96.7
	39.40	1	.1	.1	96.8
	40.00	2	.2	.2	97.0
	42.00	2	.2	.2	97.2
	45.50	1	.1	.1	97.3
	47.30	1	.1	.1	97.4
	48.00	1	.1	.1	97.5
	48.50	2	.2	.2	97.7
	50.00	1	.1	.1	97.8
	54.50	1	.1	.1	97.9
	55.00	3	.3	.3	98.2
	57.60	1	.1	.1	98.3
	60.00	2	.2	.2	98.4
	66.00	1	.1	.1	98.5
	75.80	1	.1	.1	98.6
	80.00	2	.2	.2	98.8
	88.50	1	.1	.1	98.9
	93.30	1	.1	.1	99.0
	120.00	2	.2	.2	99.2
	121.20	2	.2	.2	99.4

	160.40	1	.1	.1	99.5
	197.00	1	.1	.1	99.6
	240.00	1	.1	.1	99.7
	542.40	1	.1	.1	99.8
	787.00	1	.1	.1	99.9
	1668.90	1	.1	.1	100.0
	Total	1032	96.6	100.0	
Missing	System	36	3.4		
Total		1068	100.0		

Source: Telephone survey, January to June, 2015

Table-5.3: Area of land in group

Area of plots/land	Frequency	Valid Percent
<=3	404	39.1
3-4	132	12.8
4-5	226	21.9
5-7.5	96	9.3
7.5-10	78	7.6
10-20	48	4.7
20-50	25	2.4
50-100	13	1.3
>=100	10	1.0
Valid Total	1032	100.0
Missing	36	
Total	1068	

Source: Telephone survey, January to June, 2015

Table-5.4: Present condition of adjacent land

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Surrounding land is flat and fit for house building	184	64.8	66.9	66.9
	Some house some blank	60	21.1	21.8	88.7
	Pool	2	.7	.7	89.5
	Under water	9	3.2	3.3	92.7
	Low level	20	7.0	7.3	100.0
	Total	275	96.8	100.0	
Missing	99	9	3.2		
Total		284	100.0		

Source: Telephone survey, January to June, 2015

Table-5.5: Condition of adjacent road

	Road type	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Kutcha	38	13.4	16.0	16.0
	Pucca	150	52.8	63.3	79.3
	Soling with brick	44	15.5	18.6	97.9
	Demarcated but not built up yet	4	1.4	1.7	99.6
	Both kutcha and pucca	1	.4	.4	100.0
	Total	237	83.5	100.0	
Missing	99	47	16.5		
Total		284	100.0		

Source: Telephone survey, January to June, 2015

Table-5.6: Year passed after development and housing attempt

		Year passed after attempt of housing	buytime_passed_grp	Year passed after development attempt
N	Valid	13	194	44
	Missing	181	0	150
Mean		3.0000		5.2727
Median		3.0000		3.0000
Mode		2.00[a]		1.00
Std. Deviation		2.27303		4.77086
Skewness		.604		1.352
Std. Error of Skewness		.616		.357
Kurtosis		-.260		1.243
Std. Error of Kurtosis		1.191		.702
Minimum		.00		1.00
Percentiles	25	1.5000		2.0000
	50	3.0000		3.0000
	75	4.5000		7.0000
a. Multiple modes exist. The smallest value is shown				

Source: Telephone survey, January to June, 2015

Table-5.7: Year passed after development attempt (only for the plots which have at least one adjacent house)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	10	5.2	22.7	22.7
	2.00	7	3.6	15.9	38.6
	3.00	6	3.1	13.6	52.3

	5.00	7	3.6	15.9	68.2
	7.00	5	2.6	11.4	79.5
	10.00	3	1.5	6.8	86.4
	12.00	1	.5	2.3	88.6
	13.00	1	.5	2.3	90.9
	14.00	1	.5	2.3	93.2
	15.00	1	.5	2.3	95.5
	16.00	1	.5	2.3	97.7
	20.00	1	.5	2.3	100.0
	Total	44	22.7	100.0	
Missing	System	150	77.3		
Total		194	100.0		

Source: Telephone survey, January to June, 2015

Table- 5.8 Attempt taken to housing in the plots advertised to sale (only those plots which have at least 4 adjacent buildings)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		3	4.1	4.3	4.3
	Yes	13	17.8	18.6	22.9
	No	53	72.6	75.7	98.6
	Ready house	1	1.4	1.4	100.0
	Total	70	95.9	100.0	
Missing	99	3	4.1		
Total		73	100.0		

Source: Telephone survey, January to June, 2015

Table-5.9. Attempt of land development

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	90	31.7	38.1	38.1
	No	146	51.4	61.9	100.0
	Total	236	83.1	100.0	
Missing	99	48	16.9		
Total		284	100.0		

Source: Telephone survey, January to June, 2015

Table- 5.10: Initial condition guessed

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		4	2.0	2.0	2.0
	Flat land for building house	117	57.4	57.6	59.6
	Pool	2	1.0	1.0	60.6
	under water	10	4.9	4.9	65.5
	Low land	70	34.3	34.5	100.0
	Total	203	99.5	100.0	
Missing	99	1	.5		
Total		204	100.0		

Source: Telephone survey, January to June, 2015

Table 5.11 abutting road category

Category	**Frequency**	**Percent**
Pucca	8	26.7
kutcha	11	36.7

semi pucca	8	26.7
No road	3	10.0
Total	30	100.0

Source: Field survey, January to February, 2016

5.12 Surrounding development got from field survey

	Number of abutting plot				Number of developed abutting plot				Number of undeveloped abutting plot			
	Number of plot	Frequency	Percent	Valid Percent		Frequency	Percent	Valid Percent		Frequency	Percent	Valid Percent
Valid	3	4	13.3	14.3	0	2	6.7	7.7	0	2	6.7	14.3
	4	2	6.7	7.1	1	1	3.3	3.8	1	4	13.3	28.6
	5	18	60.0	64.3	2	1	3.3	3.8	2	1	3.3	7.1
	6	1	3.3	3.6	3	5	16.7	19.2	3	3	10.0	21.4
	8	3	10.0	10.7	4	5	16.7	19.2	4	1	3.3	7.1
	Total	28	93.3	100.0	5	10	33.3	38.5	5	2	6.7	14.3
Non identifiable		2	6.7		6	1	3.3	3.8	6	1	3.3	7.1
Total		30	100.0		7	1	3.3	3.8	Total	14	46.7	100.0
					Total	26	86.7	100.0	System	16	53.3	
					System	4	13.3					
					Total	30	100.0					

Source: Field survey, January to February, 2016

Table 5.13 Walking time need to reach to the intersection of the access road and nearest secondary road

		Frequency	Valid Percent	Cumulative Percent
Valid	0	1	3.4	3.4
	0	1	3.4	6.9
	1	3	10.3	17.2
	2	1	3.4	20.7
	2	7	24.1	44.8
	3	3	10.3	55.2
	4	3	10.3	65.5
	5	10	34.5	100.0
	Total	29	100.0	
Missing	System	1		
Total		30		

Source: Field survey, January to February, 2016

Table 5.14 Needed time to go to nearest primary road intersection rickshaw

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		1	3.3	5.3	5.3
		4	13.3	21.1	26.3
		1	3.3	5.3	31.6
		5	16.7	26.3	57.9
		5	16.7	26.3	84.2
		1	3.3	5.3	89.5
		1	3.3	5.3	94.7
		1	3.3	5.3	100.0
		19	63.3	100.0	
Missing		11	36.7		

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		1	3.3	5.3	5.3
		4	13.3	21.1	26.3
		1	3.3	5.3	31.6
		5	16.7	26.3	57.9
		5	16.7	26.3	84.2
		1	3.3	5.3	89.5
		1	3.3	5.3	94.7
		1	3.3	5.3	100.0
		19	63.3	100.0	
Missing		11	36.7		
		30	100.0		

Source: Field survey, January to February, 2016

APPENDIX C
(Belongs to chapter six: pattern of sale of land/plots)

Table- 6.1: Process of owning the land

	Frequency	Percent
Self buying	220	82.1
Inheritance	41	15.3
Compensation	2	.7
As a govt. Officer	3	1.1
Freedom fighter donation	1	.4
VIP allotment	1	.4
Total	268	100.0
99	16	
Total	284	

Source: Telephone survey, January to June, 2015

Table- 6.2: Years passed after owning land

N	Valid	210
	Missing	74
Mean		11.81
Std. Error of Mean		.779
Median		10.00
Mode		10
Std. Deviation		11.288
Skewness		3.004
Kurtosis		17.593
Range		100
Minimum		0
Maximum		100
Percentiles	25	5.00
	50	10.00
	75	15.00

Source: Telephone survey, January to June, 2015

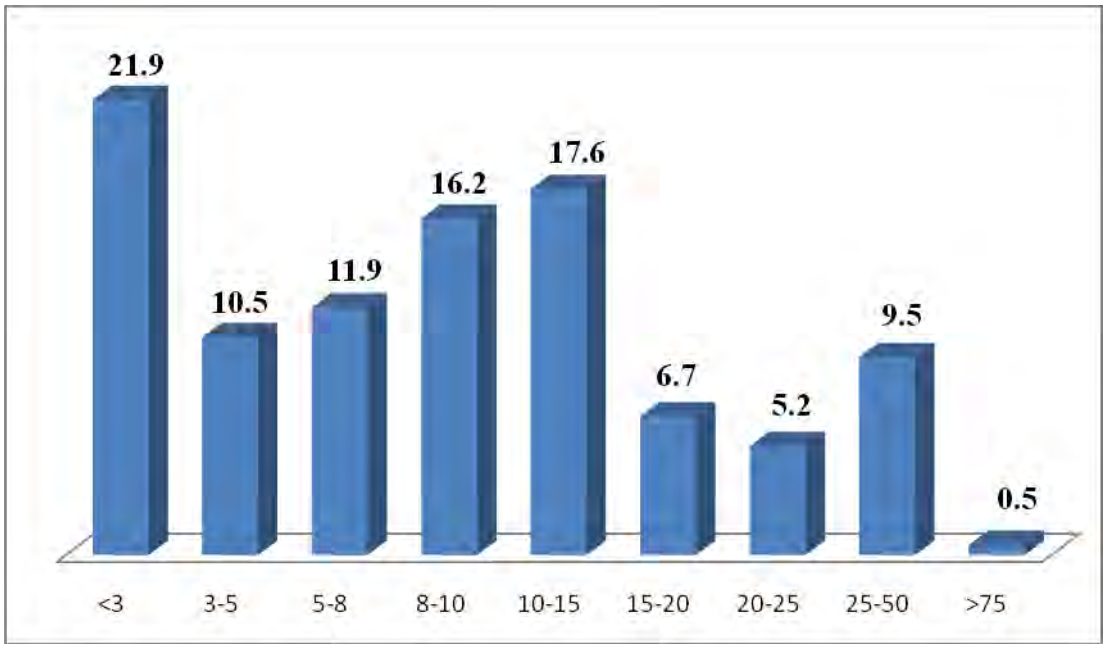


Figure 1: Percentages of lands in different ownership period
Source: Telephone survey, January to June, 2015

Table-6.3: Cross tabulation between ownership pattern and the period of keeping lands unsold

	Process of owning the land								Total
Duration of ownership	Self buying	Self buying %	cumulative self buying %	Inheritance	Inheritance	cumulative Inheritance	Compensation	As a govt. Officer	
<3	38	22	22	2	8	8	0	0	40
3-5	4	2	24	0	0	8	0	1	5
5-8	38	22	47	2	8	16	0	0	40
8-10	30	17	64	3	12	28	0	0	33
10-15	29	17	81	7	28	56	0	0	36
15-20	11	6	87	2	8	64	1	0	14
20-30	17	10	97	6	24	88	0	0	23
30-40	3	2	99	2	8	96	0	0	5
40-50	2	1	100	0	0	96	0	0	2
>50	0	0	100	1	4	100	0	0	1
Total	172			25			1	1	199

Source: Telephone survey, January to June, 2015

Table-6.4: Price at the time of buying or getting land (Lac/ katha) * Process of owning the land Cross tabulation

	Process of owning the land		Total			Process of owning the land		Total
price at the time of getting land (Lac/ katha)	Self buying	Inheritance			price at the time of getting land (Lac/ katha)	Self buying	Inheritance	
1	10	0	10		15	8	0	8
2	10	0	10		19	1	0	1
3	6	0	6		20	2	0	2
4	5	0	5		22	2	0	2
5	5	0	5		25	3	0	3
6	4	1	5		27	1	0	1
7	6	0	6		29	1	0	1
8	4	0	4		30	2	0	2
9	1	0	1		35	2	1	3
10	7	1	8		40	1	0	1
11	2	0	2		60	1	0	1
12	2	1	3		80	0	1	1
13	4	0	4		100	1	0	1
14	1	0	1		150	1	0	1
					Total	93	5	98

Source: Telephone survey, January to June, 2015

Table- 6.5: Initial price (Lac/ katha) counting

N	Valid	101		N	Valid	101
	Missing	183			Missing	183
Mean		14.43		Std. Error of Kurtosis		0.476
Std. Error of Mean		2.091		Range		149
Median		8		Minimum		1
Mode		1[a]		Maximum		150
Std. Deviation		21.017		Sum		1457
Variance		441.707		Percentiles	25	3
Skewness		3.973			50	8
Std. Error of Skewness		0.24			75	15
Kurtosis		19.92		a. Multiple modes exist. The smallest value is shown		

Source: Telephone survey, January to June, 2015

Table-6.6: Price of lands then and now

price at the time of buying or getting land (Lac/ katha)					Present price (Lac/ katha)				
Price (lac/ katha)	Frequency	Percent	Valid Percent	Cumulative Percent	Price (lac/ katha)	Frequency	Percent	Valid Percent	Cumulative Percent
1	10	3.5	9.9	9.9	1	1	.4	.5	.5
2	10	3.5	9.9	19.8	2	3	1.1	1.4	1.9
3	6	2.1	5.9	25.7	3	3	1.1	1.4	3.3
4	5	1.8	5.0	30.7	4	2	.7	1.0	4.3
5	5	1.8	5.0	35.6	5	9	3.2	4.3	8.6
6	5	1.8	5.0	40.6	6	4	1.4	1.9	10.5
7	6	2.1	5.9	46.5	7	3	1.1	1.4	11.9
8	4	1.4	4.0	50.5	8	5	1.8	2.4	14.3
9	1	.4	1.0	51.5	9	3	1.1	1.4	15.7
10	8	2.8	7.9	59.4	10	8	2.8	3.8	19.5
11	2	.7	2.0	61.4	11	1	.4	.5	20.0
12	3	1.1	3.0	64.4	12	5	1.8	2.4	22.4
13	4	1.4	4.0	68.3	14	2	.7	1.0	23.3
14	1	.4	1.0	69.3	15	2	.7	1.0	24.3
15	9	3.2	8.9	78.2	16	2	.7	1.0	25.2
18	1	.4	1.0	79.2	19	1	.4	.5	25.7
19	1	.4	1.0	80.2	20	13	4.6	6.2	31.9
20	2	.7	2.0	82.2	21	1	.4	.5	32.4
22	2	.7	2.0	84.2	22	7	2.5	3.3	35.7
25	3	1.1	3.0	87.1	23	3	1.1	1.4	37.1
27	1	.4	1.0	88.1	24	1	.4	.5	37.6
29	1	.4	1.0	89.1	25	13	4.6	6.2	43.8
30	2	.7	2.0	91.1	26	5	1.8	2.4	46.2
35	3	1.1	3.0	94.1	28	1	.4	.5	46.7
40	1	.4	1.0	95.0	30	15	5.3	7.1	53.8
60	1	.4	1.0	96.0	32	3	1.1	1.4	55.2
65	1	.4	1.0	97.0	33	1	.4	.5	55.7
80	1	.4	1.0	98.0	35	5	1.8	2.4	58.1
100	1	.4	1.0	99.0	40	11	3.9	5.2	63.3
150	1	.4	1.0	100.0	41	1	.4	.5	63.8
Total	101	35.6	100.0		45	3	1.1	1.4	65.2

Missing System	183	64.4			47	1	.4	.5	65.7
Total	284	100.0			48	1	.4	.5	66.2
					50	10	3.5	4.8	71.0
					55	2	.7	1.0	71.9
					60	7	2.5	3.3	75.2
					62	1	.4	.5	75.7
					65	4	1.4	1.9	77.6
					66	2	.7	1.0	78.6
					70	3	1.1	1.4	80.0
					75	5	1.8	2.4	82.4
					80	2	.7	1.0	83.3
					81	1	.4	.5	83.8
					85	2	.7	1.0	84.8
					90	2	.7	1.0	85.7
					97	1	.4	.5	86.2
					100	6	2.1	2.9	89.0
					110	1	.4	.5	89.5
					120	2	.7	1.0	90.5
					125	2	.7	1.0	91.4
					130	2	.7	1.0	92.4
					132	1	.4	.5	92.9
					140	1	.4	.5	93.3
					144	1	.4	.5	93.8
					150	3	1.1	1.4	95.2
					165	1	.4	.5	95.7
					179	1	.4	.5	96.2
					195	1	.4	.5	96.7
					200	2	.7	1.0	97.6
					250	1	.4	.5	98.1
					300	1	.4	.5	98.6
					529	1	.4	.5	99.0
					680	1	.4	.5	99.5
					700	1	.4	.5	100.0
					Total	210	73.9	100.0	
					System	74	26.1		

Source: Telephone survey, January to June, 2015

Table- 6.7: Increased price of lands in group

Price increment (Lac/katha)	Frequency	Valid Percent	Cumulative Percent
<5	20	21.7	22
5-10	16	17.4	39
10-15	11	12.0	51
15-20	6	6.5	58
20-30	12	13.0	71
30-40	4	4.3	75
40-50	7	7.6	83
50-100	13	14.1	97
>100	3	3.3	100
Total	92	100.0	
Missing	192		
Total	284		

Source: Telephone survey, January to June, 2015

Table-6.8: Increased price of lands in group * Years passed after getting lands Cross tabulation

	Years passed after getting lands								Total
Increased price of lands (lac/katha)	<3	3-5	5-8	8-10	10-15	15-20	20-30	30-40	
<5	9	1	3	3	2	0	1	0	19
5-10	4	0	5	4	3	0	0	0	16
10-15	1	0	4	2	0	0	3	0	10
15-20	2	0	3	0	0	1	0	0	6
20-30	2	0	2	1	4	0	1	1	11
30-40	1	1	0	0	0	1	0	0	3
40-50	0	0	1	1	4	0	1	0	7
50-100	1	0	0	3	5	2	2	0	13
>100	0	0	1	0	0	1	1	0	3
Total	20	2	19	14	18	5	9	1	88

Source: Telephone survey, January to June, 2015

Table- 6.9: Development after owning

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	-10.00	1	.4	2.0	2.0
	-5.00	1	.4	2.0	4.1
	-4.00	1	.4	2.0	6.1
	-3.00	2	.7	4.1	10.2
	.00	7	2.5	14.3	24.5
	1.00	9	3.2	18.4	42.9
	2.00	3	1.1	6.1	49.0
	3.00	3	1.1	6.1	55.1
	4.00	2	.7	4.1	59.2
	5.00	6	2.1	12.2	71.4
	7.00	2	.7	4.1	75.5
	8.00	1	.4	2.0	77.6
	9.00	3	1.1	6.1	83.7
	10.00	3	1.1	6.1	89.8
	12.00	1	.4	2.0	91.8
	16.00	1	.4	2.0	93.9
	17.00	1	.4	2.0	95.9
	19.00	1	.4	2.0	98.0
	23.00	1	.4	2.0	100.0
	Total	49	17.3	100.0	
Missing	System	235	82.7		
Total		284	100.0		

Source: Telephone survey, January to June, 2015

Table-6.10: Previous attempt of housing?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		3	1.1	1.2	1.2
	Yes	40	14.1	16.1	17.3
	No	203	71.5	81.9	99.2
	Ready house	2	.7	.8	100.0
	Total	248	87.3	100.0	
Missing	99	36	12.7		
Total		284	100.0		

Source: Telephone survey, January to June, 2015

Table- 6.11: How much time it took to take housing attempt

housing attempt after buying		
N	Valid	12
	Missing	28
Mean		6.7500
Median		5.0000
Mode		5.00

Source: Telephone survey, January to June, 2015

Table- 6.12 Time taken for development after buying land

Particulars		Years
N	Valid	49
	Missing	235
Mean		4.1429
Median		3.0000
Mode		1.00
Std. Deviation		6.17792
Maximum		23.00
Percentiles	25	.5000
	50	3.0000
	75	7.5000

Source: Telephone survey, January to June, 2015

Table 6.13: Relationship between duration of holding land unsold and change in land value (Chi-Square Tests)

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	81.613[a]	56	.014
Likelihood Ratio	78.045	56	.027
N of Valid Cases	88		
a. 72 cells (100.0%) have expected count less than 5. The minimum expected count is .03.			

Source: Telephone survey, January to June, 2015

Table-6.14 Chi-square test of current condition of land and price increase

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	24.626[a]	24	.426
Likelihood Ratio	25.433	24	.383
N of Valid Cases	92		
a. 30 cells (83.3%) have expected count less than 5. The minimum expected count is .07.			

Source: Telephone survey, January to June, 2015

APPENDIX D

(Belongs to chapter seven: Major findings)

Table 7.1: Cross tabulation of present price of land and presence of adjacent road

		Presence of adjacent road		Total
		Yes	No	
present price in group		4	0	4
	<11	26	7	33
	11-20	17	3	20
	20-30	33	4	37
	30-40	17	1	18
	40-50	11	1	12
	50-60	8	0	8
	60-70	8	1	9
	70-80	6	0	6
	80-90	5	0	5
	90-100	6	0	6
	100-150	9	0	9
	>150	9	0	9
Total		159	17	176

Source: Telephone survey, January to June, 2015

Table-6.13 Year passed after development attempt

Particulars		Years
N	Valid	56
	Missing	228
Mean		5.1250
Median		3.0000
Mode		1.00
Minimum		1.00
Maximum		24.00
Percentiles	25	1.0000
	50	3.0000
	75	7.0000

Source: Telephone survey, January to June, 2015

APPENDIX E-1
(Questionnaire format for telephone survey)

Questions	Questionnaire-1	Questionnaire-2	Questionnaire-3
Serial no			
Mobile no			
Name of the newspaper			
Date			
Page no			
Location of the land			
Amount of the land			
Current situation of land 1) Plain land suitable for housing 2) Pool 3) Under water 4) Low land 5) Jungle			
Surrounding situation of land 1) surrounding land is flat and fit for house building 2) Some house some blank 3) Pool 4) Under water 5) Low level 6) Jungle			

7) Total surrounding is full of house			
House built on surrounding 1) Yes 2) No			
Number of abutting house?			
Existence of adjacent road 1) Yes 2) No			
Type of abutting road 1) katcha 2) pucca 3) soling of brick 4) demarcated but not yet 5) both kacha and paka			
Width of abutting road (in foot)			
Way of getting land 1) self-buying 2) Inheritance 3) Compensation 4) as a govt. Officer 5) freedom fighter			

donation			
Years passed after getting land			
Current price			
Buying Price (Lac tk/ Katha)			
Purpose of buying land 1) building house 2) not building house 3) regular business 4) selling when price is raised 5) building industry 6) no purpose 7) commercial building			
Have you tried to build house? 1) yes 2) no 3) ready house			
If you tried to build house then how many years ago?			
Have you developed your land ever? 1) yes 2) no			
If yes, then what is the type of development? 1) filling up land 2) surrounded by boundary 3) both 1 and 2			

4) road 5) temporary kutcha building			
How many years ago you have developed?			
Cause of selling 1) need money 2) to leave country 3) business purpose 4) others 5) to pay bank loan			
Are we welcome to call you again? 1) yes 2) no			
Are you willing to help in case of physical survey? 1) yes 2) no			
Comment			

APPENDIX –E2

(Check list for field survey)

THESIS TITLE: A STUDY ON LAND SPECULATION BY INDIVIDUAL LAND HOLDERS IN DHAKA AND POTENTIAL REGULATORY MEASURES

(This survey is being conducted by Md. Sirajul Islam, Student no. 1009152014, for the thesis mentioned above to fulfill MURP degree under the department of Urban and Regional Planning (URP) of BUET.)

Plot description:

Reference number	Location area	Position

Respondents' description:

Name			
Contact number			
Details			

Features of the plot:

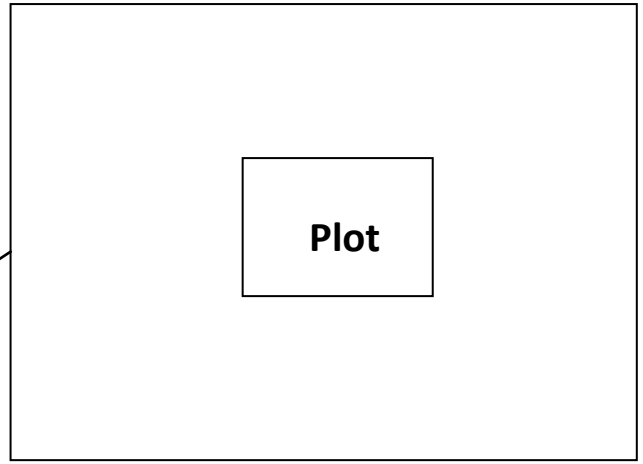
Shape	Special Description	Drawing

Identifiable: 1. Yes 2. Not

Condition: 1. Developed, 2. Leveled for housing, 3. Wet land, 4. Pond, 5. Wet land, 6. Low land, 7. Forest, 8. Others 9. Building

Who resides: 1. Owner, 2. Caretaker, 3. Temporary 4. None/ Vacant

Abutting road category: 1. Pucca, 2. Kutcha, 3. Semi pucca



Surrounding development:

Number of abutting plot:	Plot development related info		Home construction related info					Land/plot use
	Developed- Y/N	If yes, when?	Constructed? Y/N	Type of home- Pucca/ Kutcha	Constructed by- Owner, developer, other	When?	Who lives?	

Plots through access road:

Left side serial number	**Types of land/plot use**						**Type of use**			
	Plot developed		**Bldg/ housing constructed**		**occupied by**					
	Yes	**Not**	**yes**	**not**	caretaker	owner/other	Residential		Commercial	**Res+ com**
							slum	private		

Right side serial number	**Types of land/plot use**						**Type of use**			
	Plot developed		**Bldg/ housing constructed**		**occupied by**					
	Yes	**Not**	**yes**	**not**	caretaker	owner/ other	Residential		commercial	**Res + com**
							slum	private		

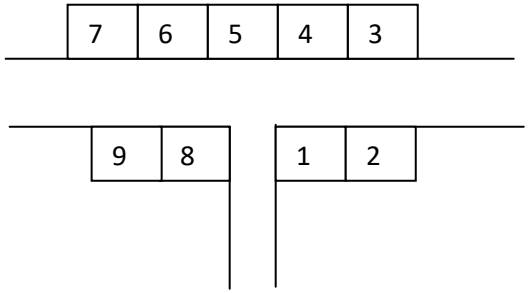
Plots through access road:

Left side serial number	**Types of land/plot use**						**Type of use**			
	Plot developed		**Bldg/ housing constructed**		**occupied by**					
	Yes	**Not**	**yes**	**not**	caretaker	owner/other	Residential		Commercial	**Res+ com**
							slum	private		

Right side serial number	**Types of land/plot use**						**Type of use**			
	Plot developed		**Bldg/ housing constructed**		**occupied by**					
	Yes	**Not**	**yes**	**not**	caretaker	owner/ other	Residential		commercial	**Res + com**
							slum	private		

Number of plot selling in the area in the last year?

Number of construction in the last year?



NEARER LOCAL AND SECONDARY ROAD INTERSECTION:

Walking time and distance-

One layer:

Number of plots:	**Plot developed**		**Constructed?**		**Type of bldg**			**Land/plot use**			
	Yes	**Not**	**Yes**	**Not**	**Pucca**	**Kutcha**	**semi pucca**	**Residential**	**commercial**	**Res+com**	**Othes (specify)**

TRANSPORTATION SYSTEM TO NEAREST PRIMARY ROAD INTERSECTION:

Option 1: Available mode: needed time: fair:

Option 1: Available mode: needed time: fair:

Option 3: Available mode: needed time: fair: