Land Ownership of Climate Migrants in Dhaka City Slum

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ABSTRACT

An increasing number of Bangladeshis have recently migrated from rural to urban areas due to climate change is a matter of concern. Many people migrated from their place of origin to Dhaka city slums due to the influence of the climate and various economic and social reasons. Climate migrants start living in urban slums for a better and more secure life. They permanently reside and work in Dhaka without owning a house, but gradually, many acquire houses and land. The study provides information on the tenants' ownership of land in the slums of Dhaka. The purpose of this study is the process and financial challenges of land ownership and building houses in the slums of Dhaka city. This study examines land ownership patterns among climate migrants of the Korail slum in Dhaka city. Using a mixed-methods approach, including purposive sampling, key informant interviews, and in-depth qualitative interviews, the researcher investigated the process and challenges of acquiring land ownership. Results indicate that financial constraints and informal networks play crucial roles in land acquisition. These findings have implications for urban planning policies and climate migration management in rapidly growing cities.

Keywords: Climate migrants, land and house ownership, slum dwellers, Dhaka City.

INTRODUCTION

Urbanization is a worldwide phenomenon. For the first time in human history, the majority of people live in cities today as a result of growing urbanization around the globe, especially in increase to 3 billion people. developing nations (COHRE, 2008). According to projections, 66% of the world's population will reside in cities by 2050. In 2014, 82% of the population lived in metropolitan areas in Northern America, 80% in Latin America and the Caribbean, and 73% in Europe. Africa and Asia, on the other hand, are anticipated to become 56 and 64% urban, respectively, by 2050, despite still having a large rural population (UN, 2014).

One of a person's most fundamental needs is housing. Food, clothing, and shelter come in that order in terms of a person's basic necessities. Many people relocate to Dhaka each year in order to find work and support their daily lives. The city's area has increased dramatically at once as a result of the migration movement to Dhaka. As a result, the city's infrastructure is put under pressure as the population grows by more people each day. The basic rights and amenities of the inhabitants have not been provided by the city management authorities. Dhaka's population has multiplied despite the city's limited natural resources, such as its land, as we have seen over the past few decades (Khan, 2006).

Dhaka is the megacity with the greatest population growth in the world, drawing between 300,000 and 400,000 primarily impoverished migrants each year (Land Portal, 2007). Over the past 40 years, the landlords and municipal authorities have gradually constructed their homes and urban facilities. To offer services like gas, electricity, and water, they have self-organized. Non-governmental organizations (NGOs) have frequently offered significant assistance to aid in this process (Land Portal, 2019).

Although the story takes place in Karail, the largest informal settlement in Dhaka, it is not exclusive to that location. A billion people reside in such regions worldwide, and that number is expected to increase to 3 billion people in the following 30 years. Therefore, one of the main ways developing cities are created is through informal settlements. Slum removal, cookie-cutter high rises, periphery relocation, and back-to-village

schemes are examples of conventional planning methods that have frequently failed to manage them (Land Portal, 2019).

Poor, overcrowded conditions with informal and insecure tenure arrangements mark the housing situation in the Korail slum. Residents lack legal ownership, face the threat of eviction, and must navigate an informal market for housing. Financial challenges are immense, as low-income levels and access to formal financing are limited, forcing many to rely on informal loans to meet their housing needs. This study explores housing situations, ownership processes, and financial challenges comprehensively.

The present situation of Korail Slum

The Korail slum is located in the heart of Dhaka City (BBS, 2015). This land is owned by the Bangladesh Telephone and Telegraph Board, the Ministry of Public Works, and the Ministry of Science and Technology (CUS, 2009). Approximately 100 acres (BRAC, 2014). In Mohakhali, Korail Basti is sprawled over 90 acres of government property. (Hasan and Mollah, 2017).

Floating people began to live in the region, and by 1992-95, the entire area had been transformed into a slum (CUS, 2009). The sole scenario of the Korail slum category of dwellers and landowners is different.

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Objectives of the study

1. To explore the present housing situation in Dhaka city slums.
2. To understand the process of owning a house in Dhaka city slums.
3. To identify the challenge of the financial phase of land ownership and building houses is the city slum.

METHODOLOGY OF THE STUDY

Approach of Study

This research combines both quantitative and qualitative methods to explore the experiences of slum dwellers facing climate displacement. The quantitative approach is used to capture specific perspectives on their vulnerability to natural hazards and how this impacts their displacement. It also allows for comparing the living conditions of climate and non-climate migrants within Dhaka's slums. At the same time, the qualitative method emphasizes the natural flow of their social life, focusing on how they acquire land and houses amidst these challenges. Together, these methods offer a comprehensive view of the issue.

Study Site

General information has been collected from the Korail slums Mohakhali area of Dhaka where people migrated for climate change have been selected as the research area.

The researcher figured out that Korail (Figure 1) was the biggest and densest slum in Dhaka city. According to the report of the Census of Slum Areas and Floating Population 2014, the number of houses or Khana was 10,222, and the total population was 36719. Males were 19280, females were 17405, and Hijra was 34. However, the number of people who migrated to Korail because of climate change was not mentioned anywhere.

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Figure 1: Study area of the research: Korail slum

Source: Daily Star

After meeting with officials concerned in Dhaka's slum concerns, the researcher was reassured that Korail would be an appropriate location to seek for various types of climate migrants. This proved extremely effective, and the researcher finally conducted experiments in the Korail slum. Though the study followed purposive sampling to select respondents for the case study and snowball sampling for interviews, the researcher was fortunate enough to come across a large number of migrants who had recently moved due to climate change, and some of them migrated long ago, particularly those affected by Cyclones Sidr and Aila, Cyclone Mohashen, floods, riverbank erosion, sea level rise, drought, and soil salinity. The target groups of the respondents include lower-income persons who migrated from their homeland to Dhaka due to climate-related issues.

Study Period

This study was conducted from September to December 2022, a time frame that was deliberately chosen to capture the post-monsoon season, which is particularly relevant for understanding the housing challenges faced by slum dwellers in Dhaka. This period often highlights the aftermath of environmental stresses such as flooding and storms, which can exacerbate housing insecurity, migration, and financial difficulties. By focusing on this time frame, the study aimed to observe the immediate effects of such climatic events on housing conditions and ownership processes. Moreover, conducting the research during this period allowed for in-depth analysis of how these factors influence migration patterns, community dynamics, and access to land and financial resources. This temporal context is essential to understanding the findings, as it directly impacts the nature of the challenges respondents face, particularly in the context of rebuilding lives after environmental shocks.

Incorporating this information into the broader discussion of the research methodology provides a clear rationale for the timing and its relevance to the study's objectives, while also situating the findings within a specific socio-environmental context.

Location of the Study Area

Korail, one of Bangladesh's largest slums, is located near the BRAC headquarters in Dhaka. Korail's residents primarily come from low-income areas in Bangladesh. Korail, covering 100 acres, is home to nearly 50,000 inhabitants (BRAC, 2014). It is also situated under the Dhaka North City Corporation. Korail slum is a ward under number 20. The latitude and longitude of the Korail slum area are 23.784822 and 90.404326 (Figure 2).

Figure 2: Korail slum Mohakhali

Source: Mapcarta

Population of the Study

The study population includes all climate migrants who moved to Dhaka City from different parts of Bangladesh due to the impacts of climate change. These respondents have faced various natural disasters in their regions, such as river floods, urban floods, flash floods, cyclones, storm surges, droughts, soil salinity, and riverbank erosion. These disasters, driven by climate change, forced them to leave their homes and seek refuge in Dhaka, highlighting the severe effects of climate change on vulnerable populations.

Sampling of the Study

Theoretically, the minimum sample required for a particular class is generally 50. The target proportion of the population, which we are interested to know is p if the target the population is known, then one should use it for the estimation of sample size. If it is not known, then one can consider it as 0.50. A convenience sampling procedure was adapted to collect data from climate migrants. There are 68 people in the sample which has been determined using the formula (Cochran, 1963).

$$n = \frac{z^2 pq}{e^2} \quad \text{---------- (1)}$$

Here,

n = Desired sample Size

Z = Standard normal deviate usually set as 1.96 which corresponds to the 95% confidence interval

p= Proportion in the target population estimated to have particular characteristic and here it takes to be 0.50 such that p+q = 1

e = Degree of accuracy which the consultant desired in the estimated proportion (here, the desired degree of accuracy is to be considered as 5%) Putting those values in above formula then get,

$$n = \frac{z^2 pq}{e^2}$$

$$n = \frac{(1.65)^2 \times 0.05 \times 0.05}{(0.01)^2}$$

$$n = 68$$

Population is infinity

e=0.05 (since the estimation should be within 10% of the actual value)

z=1.96 (as per the table of the area under normal curve for the given confidence level of 90%)

Therefore, it has become more accessible and more comfortable to conduct study in these areas. The desired number of samples was 68. As a result, 68 climate migrant and 68 non-climate migrant participants were interviewed. The respondents were between the ages of 20 and 50. Korail slum has several entries, and it is a combination of groups of slums that local dwellers use to address those slums as the block. There are five blocks in Korail, and this study is targeted to conduct the questionnaire survey in all blocks. The target respondent was the household head or his spouse. Five (5) respondents were interviewed as individual cases to represent actual factors of climate migration in the slums of Dhaka city.

Main Data Collection Technique

Primary data were gathered using a field study. The information was collected through an in-depth interview that complied with qualitative analysis. For this study, it was observed physically and in contact with selected cases. Primary data were collected from selected samples through face-to-face interviews using an interview schedule and observation. The focal point of the interview was decided based on the research objective, and the researcher explored the issue accordingly.

All key informant interviews in this study were cross-checked using the results of an in-depth interview schedule. KII (Key Informant Interview) was used to collect information about the process of owning land and houses of climate migrants. Interviews were collected with key informants at certain points of the migration routes of climate migrants. Five/5 key informants (such as a Ward Councilor, local Leader, climate migrant specialist, NGO representative, etc.) were conducted for KII in Dhaka city slum.

A pre-tested, modified, semi-structured interview schedule was designed based on the living conditions and process of owning land and houses of climate migrant and non-climate migrant people in Dhaka city.

Data Processing

Firstly, the collected data from the research area has been edited. Then, they are classified according to their characteristics. All respondents' data outcomes were analyzed using statistical techniques and frequency distribution. The collected data were processed with the help of Excel (2016 version), and the data were measured with numerical values against each variable item. To represent five special cases, the proper way of analyzing case studies was used to analyze the data.

Data Presentation

After analysis, qualitative data were presented descriptively, and a quantity of data was presented in the statistical line of the track. Quantitative data were presented using different data presentation methods, such as multivariate tables and figures (pie chart, bar chart, etc.).

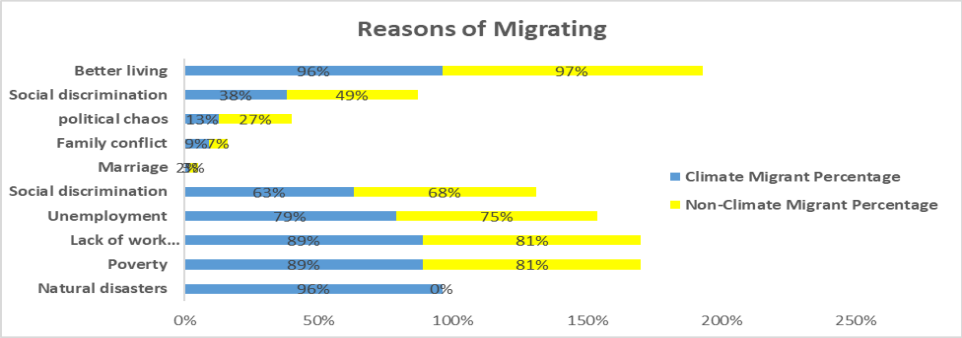
FINDINGS AND FIGURES

Migration is a selective process that depends on the community, family, or individuals. It also varies extensively from culture to culture. Several studies have shown that migration depends on socioeconomic, demographic, environmental, political, and cultural factors. Lack of work availability, unemployment, political chaos, social discrimination, social prejudice, fanaticism, poverty, marriage, family conflict, better living, better educational facilities, and natural disasters, e.g., floods, drought, river erosion, etc., also motivate migration. The current housing conditions in Dhaka city slums reflect significant challenges as residents navigate complex processes of land ownership and house construction, particularly in overcoming financial barriers.

Reasons of Migrating

Figure 3 shows the respondent's (climate migrants) and (non-climate migrants) reasons for migrating. Some of the concerns directly or indirectly force respondents to move from rural to urban areas.

Figure 3: Reasons of Migrating



Source: field survey, 2022

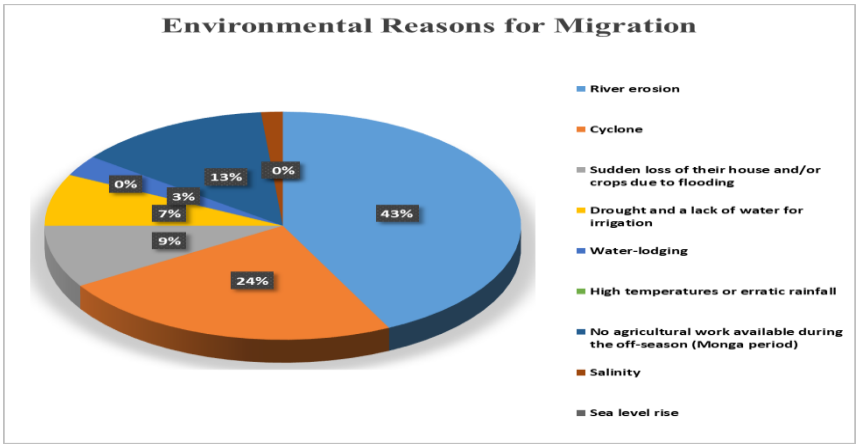
Figure 3 shows that the respondents of this study migrated because of various issues faced in their place of origin. The maximum of the respondents (climate migrants), 96%, migrated because of natural disasters, whereas no one faced that type of issue in their place of origin. The percentage of climate migrant respondents and non-climate migrants who migrated because of poverty, lack of work availability, unemployment, and social discrimination is almost similar. All types of respondents migrated because of better living (Figure 3).

The findings highlight that both types of respondents faced multidimensional challenges caused by social or political issues in their place of origin. In contrast, most of the climate migrant respondents migrated due to natural disasters. However, social and political factors significantly influence both sorts of migrant life, directly affecting their living conditions and identifying financial limitations in the city's slums.

Environmental Reasons for Migration

Figure 4 shows the environmental reasons for migrating. These findings present the inherent natural and environmental reasons that directly or indirectly prompt migration from rural to urban. The respondents of this study experience frequent natural disasters such as floods, cyclones, and droughts after being affected by any climatic conditions in their place of origin.

Figure 4: Environmental Reasons for Migration



Source: field survey, 2022

Figure 4 shows that the respondents of this study migrated because of river erosion, cyclones, sudden loss of their house and/or crops due to flooding, drought and a lack of water for irrigation, water-lodging, high temperatures or erratic rainfall, no agricultural work available during the off-season (Monga period), soil salinity and sea level rise. The majority (42.65%) of respondents migrated because of river erosion, followed by cyclones (23.52%) and then no agricultural work available during the off-season (Monga period) (13.24%) (Figure 4).

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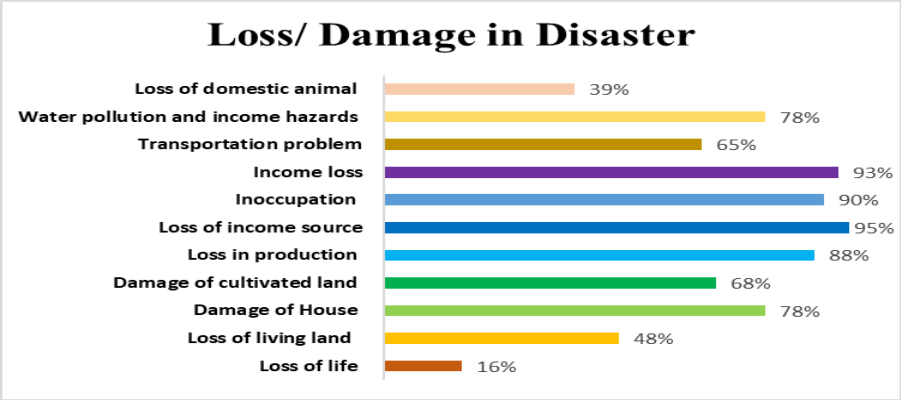
The findings highlight the respondents' complex challenges faced by climatic disasters in their place of origin. Many respondents migrated due to environmental factors such as river erosion, cyclones, flooding, and agricultural challenges, which directly affected their housing situation and identified financial barriers in the city's slums.

Loss/ Damage in Climate Effect

Figure 5 shows the respondent's loss/ damage in climate effect in their place of origin.

Figure 5: Loss/ Damage in Disaster (climate migrants)



Source: field survey, 2022 (Multiple Answers)

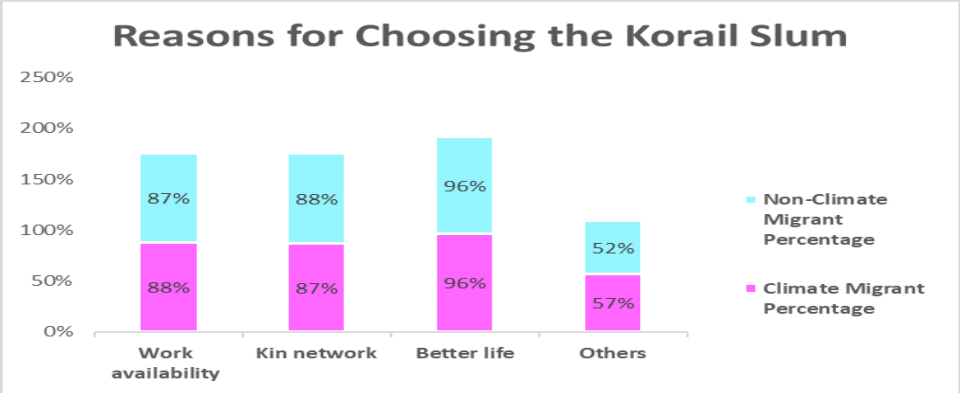
Figure 5 shows that 92% of the respondents (climate migrants) lost their income source after the climate effect, 89% lost their occupation, and 86% lost their production. During the disaster, 77% of houses and 69% of cultivated land were damaged, and 42% lost their living land. Besides, some of them (12%) lost any of their family members' lives (Figure 5).

The findings reveal the respondents' complex circumstances caused by a climatic crisis in their hometown. The majority of respondents (climate migrants) lost their income sources due to the effects of climate change. They also lost their homes and suffered damage to their living and farmed land. The findings directly forced them to migrate to Dhaka city slums, which created a financial crisis after migration and affected their present life and housing situation in their slum.

Reasons for Choosing the Korail Slum

Figure 6 shows reasons for choosing the Korail slum. There are several slums in Dhaka, and the respondents of this study chose the Korial slum for a better life.

Figure 6: Reasons for Choosing the Korail Slum



Source: field survey, 2022

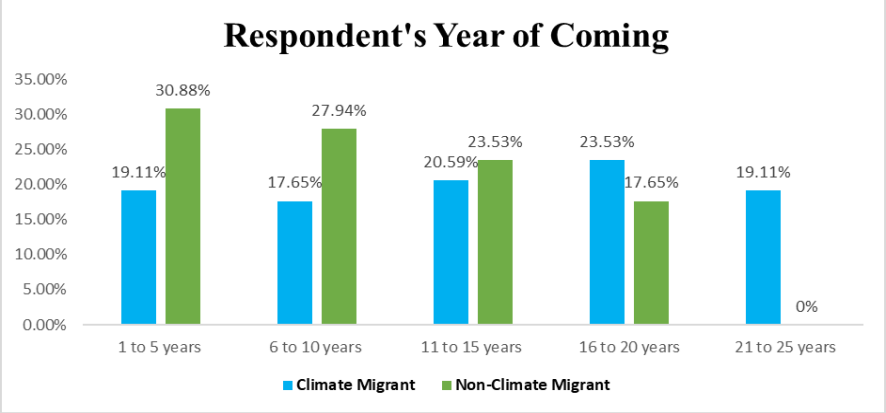
Figure 6 shows that 88% of the respondents (climate migrants) and 87% of respondents (non-climate migrants) chose the Korail slum because of work availability, while 87% of respondents (climate migrants) and 88% of respondents (non-climate migrants) had a kin network that performed a vital part in their decision. However, the majority (96%) of both the respondents (climate migrants and non-climate migrants) want to live a better life (Figure 6).

The findings that work availability and kin networks significantly influence migration decisions, as they highlight key factors that shape the housing situation, ownership processes, and financial challenges faced by slum dwellers in Dhaka, particularly in their pursuit of better living conditions. It observed that respondents who have migrated from the same place of origin also stay in the same area in the slum.

Respondent's Year of Coming

Figure 7 shows the respondent's year of coming. The findings of this figure present the comparison of (climate migrants) and (non-climate migrants) respondents' migration trends.

Figure 7. Respondent's Year of Coming



Source: field survey, 2022

Figure 7 shows that the number of respondents (climate migrants) was the same (19.11%) for those who migrated 1-5 years ago and 21-25 years ago, and 20.59% of respondents (climate migrants) migrated 11-15 years ago. 23.53% of respondents (climate migrants) came from their home districts before 16 to 20 years. Moreover, 17.65% of respondents (climate migrants) came from their homeland 6 to 10 years ago because of climate change. However, 30.88% of respondents (non-climate migrants) migrated 1-5 years ago, while no number of (non-climate migrant) respondents migrated to the Korail slum 21-25 years ago (Figure 7).

The findings highlight the comparison of climate migrants and non-climate migrants respondents' migration trends, which is a significant sign that climate migrants tenants want to be a house owner. In addition, most of them (climate migrants) lost their land or house in their place of origin, and most of them have no chance to return to their place of origin.

Socio-economic Condition of the Respondents

Table 1 shows the socioeconomic characteristics of respondents in the Korail slum, such as their occupation, workplace, mode of access to their workplace, monthly income, duration of living in the Korail slum, member of family members, category of tenure, etc.

Table 1. Summary of Socioeconomic Characteristics of Respondents

Family status	1. Average number of family members	4 to 7 people
	2. Average age of family head	38 years

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	3. Percentage of families with aged people	19.6%
	4. Percentage of families with children	89%
Living status	1.Average length of living in slum	16 years
	2. Information ownership of a house a. Informal owner b. Rented	34.7% 65.3%
	3.Family income 3,000 BDT ≤ 5,000 BDT 5,000 BDT ≤ 7,000 BDT 7,000 BDT ≤ 10,000 BDT 10,000 BDT ≤ 12,000 BDT 12,000 BDT ≤ 15,000 BDT 15,000 BDT ≤ 18,000 BDT 18,000 BDT ≤ 20,000 BDT	 0.5% 2.9% 7.3% 21.7% 40.2% 22. 4% 7.0%
Occupation	1. Formal job (Third-grade office employee, garment worker, social service worker) 2. Informal job (House or office maid, rickshaw puller, vendor, business in korail slum are, day laborer) 3. others or no job	18.3% 77.2% 4.3%
Workplace	1. In the Korail slum 2. Near the Korail slum (Gulshan area, Banani area, Niketon area, Mohakhali and DOHS area) 3. Far from Korail	67.1% 28.6% 4.1%
Access mode to workplace	Walking Using Boat Using Public transport Using personal transport	69.7% 9.5% 11.9% 1.0%
Present monthly house rent	2,500 BDT – 3,000 BDT 3,000 BDT – 3,500 BDT 3,500 BDT – 4,000 BDT 4,000 BDT – 5000 BDT 5,000 BDT – 6000 BDT More than 6000 BDT	9% 11% 13% 59% 5% 3%

Source: field survey, 2022

Table 1 shows the respondent's way of living. It had been found that 4 to 7 people was average number of family members. Average age of family head was 38 years. 19.6% of families with aged people. 89% of families with children. Average length of living of the respondents in slum was 16 years. 77.2% of respondents was doing informal job like house or office house cleaner or maid, day laborer, rickshaw puller, garment worker, vendor, or small business in the Korail slum. 67.1% of respondents worked inside the Korail slum whereas 28.6% of respondents worked Near the Korail slum such as Gulshan area, Banani area, Niketon area, Mohakhali and DOHS area. 69.7% of the respondents went to work by walking. However, 9.5% of them used boat for crossing the Banali Lake for going to their work place. 40.2% of respondents earned 12,000 BDT to 15,000 BDT in a month. 59% of respondents monthly house rent was 4,000 BDT to 5000 BDT. 65.3% of respondents lived in rented house whereas only 34.7% of respondents were informal owner of a house in the Korail Slum (Table 1).

The findings of table 1 explore the present housing situation in the Korail slum. Moreover, it also reflect that owing a house in the Korail slum is not so easy. Both sorts of respondents (climate migrants or non-climate migrants) socio-economic characteristics is almost parallel.

Duration of Tenancy for Involvement in the Housing Process

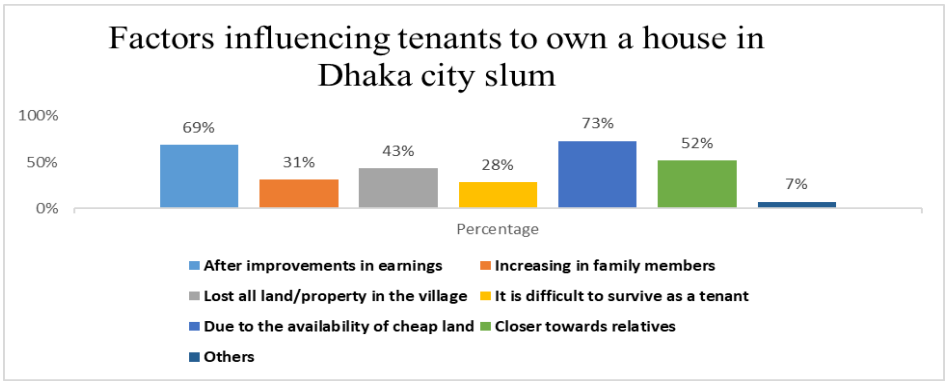
Owning a house in Dhaka city can also depend on the duration of the contract. The environment and social conditions must be dealt with by tenants who moved to Dhaka. They then attempt to acquire ownership simultaneously. An alternate way to address the housing shortage is through tenancy. People do not necessarily need to purchase a home in a city when they relocate there for a few years for a variety of reasons. When they desire to live somewhere permanently, the house is owned to be needed during that time.

The interesting situation in Dhaka City slum, however, is that most of the tenants are long-term residents. There have been many renters living here for 15 years. After 20 years of tenancy still, now they are a tenant. It indicates the painful reality that house ownership in Dhaka city slums is beyond their means. According to survey results, Most of the respondents who live in a rented house migrated 1 to 5 years ago and for those who migrated 16 to 20 years ago renting tendency is less among them. It is, therefore, obvious that the length of time spent in Dhaka does not play a significant role in land/house ownership. As a result, it is challenging to draw a connection between the length of the lease and home ownership.

Influencing Factors for Owning a House in Dhaka City Slum

Figure 7 shows the main factor influencing the ownership of a house in the Korail slum. Whatever the highest number of tenants was influenced by the matter of after improvements in earnings, those who lost everything in their homeland were more influenced to own a house.

Figure 7: Factors influencing tenants to own a house in Dhaka city slum



Source: field survey, 2022 (Multiple Answers)

Figure 7 shows that the main factor influencing respondents (climate migrants and non-climate migrants) house ownership in the Korail slum was the loss of land/property in the village (43%). It has been found that

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both types of respondents had a large amount of debt from neighbors or relatives in their place of origin. When they failed to repay their debt, they decided to migrate. Some of the non-climate migrant respondents lost their land and property to repay their debt. On the other hand, climate migrant respondents do not have a chance to return to their origin. However, the matter influenced the highest number (69%) of respondents (climate migrants and non-climate migrants) after improvements in earnings. Those respondents who had lost everything in their place of origin were interested in buying new land or a house. 73% of the respondents (climate migrants and non-climate migrants) were interested in buying land due to the availability of cheap land (Figure 7).

The findings reveal that the loss of land or property, compounded by debt, is a major factor influencing house ownership decisions among both climate and non-climate migrants in the Korail slum, aligning with the study's objectives of exploring housing conditions, understanding ownership processes, and identifying the financial challenges involved in land ownership and house construction.

Participation in the Selection of Land

Participation in the selection of land shows the decision hierarchy for the selection process. People prefer to buy their land through conversations. At the same time, they also get help from their friends and family. Sometimes, they also take help from neighbors to get general ideas about the land. In the study area, the majority of the tenants prefer to select their land to purchase.

Income Sectors and Selection of Land

Income increases motivate tenants to become owners. People with monthly incomes between BDT 15,000 and BDT 20,000 prefer to purchase their land or house in Korail slum from the local leader. A time-based agreement was made with the local leaders by purchasing the land. Some of them earned very little; however, they managed loans and bought land or a house. 10 years before, it was easy to get land from local leaders even though they earned less finance.

Participation in the House Ownership Process

Participation of tenants in the house owing process is divided into seven sections for analytical benefits.

Table 2: Different Stages of Participation in the House Owing Process

Stages	**House owing process**
First Stage	Saving money
Second Stage	Negotiate with friends, family members, relatives
Third Stage	Site selection
Fourth Stage	Purchase of land
Five Stage	Loan from relatives Lone from micro-credit co-optative organizations
Six Stage	Construction
Seven Stage	Installation of services Installation of fittings

Source: field survey, 2022

Figure 7 shows that the house-owning process in the Korail slum, as outlined in the stages, involves a sequence of steps that reflect the informal and community-dependent nature of land and house acquisition.

First Stage: Saving Money

The process begins with families or individuals saving money over time, often from their daily wages or earnings. Since most residents of slums like Korail have low-income jobs, this stage can take several years. Saving is crucial because formal financial institutions rarely provide loans to slum residents due to their lack of formal documentation or credit history.

Respondents faced challenges in first stage. Saving money is difficult due to the daily cost of living, healthcare, and education, making it hard to accumulate enough funds for house ownership.

Second Stage: Negotiating with Friends, Family Members, and Relatives

In this stage, residents seek assistance from their social network. They may negotiate informal loans, seek advice, or involve relatives in identifying available land or housing opportunities. Social connections play a significant role because formal financial avenues are often inaccessible.

In their second step, respondents tackled challenges. Relying on personal networks for financial support can strain relationships, and the informal nature of these transactions makes them unreliable, leading to potential conflicts or unfulfilled promises.

Third Stage: Site Selection

The potential homeowner begins the process of selecting a site for their house. Since formal planning is absent, site selection is influenced by proximity to work, schools, markets, or relatives. Factors such as the availability of basic services (water, electricity), safety, and the risk of eviction also play a role.

In their third stage, the response met some challenges. Land in slums is often informally owned or occupied, so residents have limited choices. There is also the risk of settling in areas prone to natural disasters like flooding, which further complicates the decision.

Fourth Stage: Purchase of Land

Once a suitable site is identified, the individual or family purchases the land. In Korail, most land transactions happen informally, without legal documentation or titles. This stage involves negotiating with informal landholders or local power brokers who control access to the land.

The response come across some challenges in their fourth stage. The lack of formal documentation means that the land purchase is always legally precarious, with the constant threat of eviction by authorities or disputes with other informal landowners.

Fifth Stage: Loan from Relatives and Micro-Credit Cooperative Organizations

After purchasing land, many families rely on loans to fund the construction of their home. Loans are often sourced from relatives, friends, or informal lenders. Some might turn to micro-credit organizations or cooperatives, which are accessible to slum dwellers even though interest rates can be high.

Respondents handled challenges in fifth stage. Loans from relatives or micro-credit organizations often come with high interest rates or social obligations. Defaulting on these loans can lead to significant social and financial consequences, further entrenching poverty.

Sixth Stage: Construction

Construction typically begins once the land is secured and funding is arranged. The houses in Korail slum are usually built using low-cost materials such as tin, bamboo, or wood. Families often rely on local labor, sometimes performing much of the construction themselves to save money.

Poor quality materials and lack of skilled labor result in fragile, temporary structures. These houses are vulnerable to damage from weather and wear, and repairs often represent an ongoing financial burden.

Seventh Stage: Installation of Services

After construction, the next step is installing basic services such as water, electricity, and sanitation. In Korail, these services are often accessed informally through illegal connections or by paying local intermediaries who control access to public utilities.

Due to the informal and unregulated nature of service installation, residents face unreliable service provision, frequent disruptions, and additional costs. Moreover, illegal connections can lead to safety hazards, including fires and electrocution.

Final Stage: Installation of Fittings

The final stage involves fitting the house with doors, windows, basic furniture, and other interior elements to make the house livable. This step depends on the availability of resources after the cost of land purchase, construction, and services installation.

Given the financial constraints, the installation of fittings is often delayed or done gradually over time as funds become available, resulting in homes that may remain incomplete or minimally furnished for years.

Findings highlighted that the house-owning process in the Korail slum is complex, informal, and heavily reliant on social networks, savings, and informal financial systems. Each stage reflects the financial and logistical challenges residents face in a system that lacks formal support, with housing ultimately being built through a combination of personal perseverance, community support, and piecemeal construction.

Transition Period after Disaster, Migration and from Tenant to be a House Owner

The situation of some respondents reflects the hardships faced by many displaced families in the aftermath of natural disasters like climatic event and their subsequent journey towards securing a new home in the slums of Dhaka. Natural disaster devastated some respondents family life. After disaster, survival in the village became untenable. Upon arriving in Dhaka, the woman and some of respondents family did not settle immediately in the Korail but stayed in another slum for a few months. This transitional period likely involved adjusting to the harsh urban environment, which would have been a stark contrast to their rural life. The move to the slums was a matter of necessity, driven by the lack of affordable housing options for respondents in their socioeconomic position. This interim period was probably marked by crowded living conditions, insecurity, and a struggle to find stable income and housing.

After passing several years of enduring hardships and navigating the precarious life in Dhaka's slums, some of the respondents finally saw an opportunity to secure land. This opportunity came through local leaders, who often play a central role in informal land allocation in slum areas like Korail. These leaders, sometimes acting as intermediaries between the residents and informal landowners or even as power brokers, provided the family with a chance to secure a plot. However, this was not a straightforward process. It required some of the respondents to take an active role in arranging the finances necessary to purchase the land.

Respondent turned to their relatives and a community cooperative microcredit organization for financial assistance. This highlights the strong reliance on informal social networks and community-based financial solutions in slums, where formal banking and loan facilities are often inaccessible. By piecing together funds from both her relatives and the microcredit organization, some of the respondents managed to raise enough money to purchase the land and construct a home.

A 50 year woman stated,

"*After the cyclone, my husband migrated alone to Dhaka city. I tried to survive to stay in our place of origin with my family. Six months later, all family members followed my husband. Before moving to Korail slum, we*

stayed few months in another slum in Dhaka. After 5 years of struggle, we got an opportunity to get land from local leaders. At the same time, I arranged money from my relatives and a community comparative microcredit organization and purchased land and built a house within 1 lac".

A 48 year woman mentioned,

"A l*ong time ago, my husband passed because of river erosion. My son, daughter and I left our place of origin because we lost everything. After coming to the korail slam we suffered a lot till having few options for our lives and livelihood. Somehow I arranged my daughter's wedding with a rickshaw puller. He is a hard worker and worldly. He arranged to manage one piece of land with 10 houses within 4 lac from local leaders. This land is government Kash land and the government can take over the land at any time. As a result, the fear of losing our home will always be there."*

The entire process - from surviving a natural disaster, migrating to an unfamiliar city, enduring years of uncertainty, and eventually securing land and building a home - as a lengthy and difficult journey. The situation in the life of one respondent was very different from the situation in the life of another. The respondent's life story reflects resilience, determination, and the ability to make use of limited resources while also shedding light on the precarious and informal nature of housing in Dhaka's slums. Despite the challenges, some of the respondent's ability to secure land and build a house represents a personal triumph over the adversities she and her family faced.

Expert Opinions

Expert opinions may apply to the challenges faced by climate migrant or non-climate migrant respondents in such settings.

1. Exploring the Present Housing Situation in Dhaka City Slums

Experts widely acknowledge that housing conditions in Dhaka's slums are characterized by overcrowding, poor infrastructure, and a lack of basic services. According to urban planners and housing researchers, most slum dwellings are made from temporary, low-quality materials such as tin sheets, bamboo, and plastic. These structures are often vulnerable to extreme weather conditions exacerbating the already precarious living situation of slum dwellers.

Many slums, including Korail, exist on government-owned or illegally occupied land, where residents have no formal property rights. This leads to a high level of insecurity, as slum dwellers are at constant risk of eviction. Experts argue that the informal nature of these settlements further isolates residents from essential services, such as sanitation, clean water, and electricity. Additionally, rapid urbanization and population growth in Dhaka have only worsened the housing crisis, creating a demand for affordable yet unavailable housing solutions.

2. Understanding the Process of Owning a House in Dhaka City Slums

The process of acquiring a house in Dhaka's slums is mostly informal and unregulated, which leads to multiple complexities. According to experts in urban informal economies, the process typically involves transactions mediated by local community leaders, middlemen, or "mastaans" (local strongmen). Migrants often pay these intermediaries to secure a small plot of land or a makeshift home, even though such payments do not guarantee legal ownership.

Social connections also play a key role in obtaining housing. Newcomers often rely on family members or acquaintances already living in the slum to navigate the informal housing market. However, this process is fraught with risks, as legal protections are minimal or nonexistent. Housing "ownership" in these areas is not recognized by formal institutions, leaving residents vulnerable to forced evictions by authorities or private developers.

3. Identifying the Financial Challenges of Land Ownership and Building Houses in the City Slums

Financial experts and development economists highlight that the biggest challenge for slum dwellers in Dhaka is the lack of access to formal financial services, which severely hampers their ability to own land or build sustainable housing. The absence of formal land titles means slum residents cannot access bank loans or mortgages, leaving them to rely on informal lending with high interest rates or savings from low-wage jobs.

The cost of building a house, even a temporary one, is a substantial burden for many slum dwellers. Rising construction costs, inflation, and material shortages only add to the financial strain. Experts point out that without governmental or non-governmental intervention in providing affordable housing options, slum dwellers are likely to remain trapped in a cycle of poverty, unable to secure permanent, safe homes.

To address these challenges, experts recommend policies focused on regularizing land tenure in slums, improving access to affordable housing finance, and investing in basic infrastructure.

DISCUSSION

Bangladesh experiences frequent natural disasters like floods, cyclones, and droughts. After being affected by any climatic event, people first try to adapt to the changing environment and stay at home. Those who have lost almost everything and cannot survive anymore leave their place of origin.

Most of the time, people want to live a better life. Besides, in any crisis period, poor people want to get help or assistance from rich relatives. Work availability and kin network played a significant role in choosing a migration place/city. Sometimes, kin networks help to provide information and facilitate the processing of house ownership.

Day by day, the proportion of migration increased because of climate change. The number of respondents (climate migrants) was the same for those who migrated 1-5 years and 21-25 years ago. However, the percentage of respondents (non-climate migrants) who migrated 1-5 years was higher than the percentage of (non-climate migrant) respondents who migrated 21-25 years ago to the Korail slum.

Most of the tenants in Dhaka city slums have migrated from multiple districts. They are staying in the city slum as a tenant for a long time. However, the reason of the respondents from Korail slum desired to own a house who lost everything in their place of origin due to climatic effects.

Owning a house is a complicated process, which is synchronized by various socioeconomic factors. The factors involved from the desire to own a house to completion. However, it is very difficult to identify the specific time when someone gets involved in the house ownership process.

The study identifies that the tenants face thousands of problems by the house owners. It makes their life more difficult to survive as a tenant. There are no rules and regulations to increase the house rent. It is a common scenario that tenants are the subjects of whims of house owners. A maximum of the rental households have an inadequate floor space problem and have a lack of other services. Most of the respondents spend nearly 50 percent of their monthly income for rent. These factors also enforce the tenants to own a house. However, most of them do not have the ability to do so.

The main factor influencing the ownership of a house in the Korail slum is the loss of land/property in the village. They do not have a chance to go back to their place of origin. The improvement of financial stability and strength triggers the desire to buy a house. The social network helps to get a plot in a convenient location.

The study findings also reflect that the tenants control the housing. However, the tenants eventually make an effort to own their house. It reveals that an overwhelming majority of the tenants had to desire to own their house. The study shows, usually it takes about 10 to 12 years to own a house. However, this period varies substantially. Some tenants even do not have the desire to own a house. For some migrants, it takes more than 20 years.

In the Korail slum, the process of acquiring land is often informal and lacks legal recognition. People often occupy land without legal ownership, typically by squatting on government or privately owned land. In many cases, residents pay local leaders or middlemen, known as "mastaans" or community influencers, to secure a piece of land. These figures informally manage land distribution and enforce local rules. Though there is no formal rent agreement, new settlers might pay a form of rent or a one-time bribe to those controlling the area. This payment ensures their stay and protects them from eviction threats. Often, people rely on family, friends, or acquaintances already living in the slum to guide them through the process of acquiring land and settling in the area. Since the land in Korail is occupied informally, residents do not have legal ownership or official land titles, making them vulnerable to eviction or land disputes. This informal and unregulated process reflects the broader challenges slum dwellers face regarding housing and land security.

Therefore, one of the main ways developing cities is created through informal settlements. Slum removal, cookie-cutter high rises, periphery relocation, and back-to-village schemes are examples of conventional planning methods that have frequently failed to manage them.

Last but not least, the experiences of the respondents highlight the immense challenges of displacement due to natural disasters, the precarious nature of housing in Dhaka's slums, and the resilience and resourcefulness required to navigate informal land ownership, ultimately reflecting both the hardships and personal triumphs of securing a home amidst adversity.

RECOMMENDATIONS

- Underprivileged people in slum area should be provided essential government assistance during a particular period.
- Decentralization of slum settlements to nearby cities can be considered.
- The National Housing Authority should continue to be the overseer of the National Housing Strategy and focus on a policy and regulatory role rather than implementing housing projects.
- Long-term financing facilities should be promoted, and a national savings scheme for housing should be introduced.

CONCLUSION

This study highlights the complex and challenging process of land and house ownership among climate migrants of the Korail slum in Dhaka. Many migrants face financial difficulties, prolonged periods of tenancy, and a lack of formal housing opportunities, but despite these obstacles, they strive to acquire land through informal networks and savings. The findings emphasize the need for better policies and government intervention to support these vulnerable populations, especially in terms of affordable housing and decentralization efforts. The informal settlements in Dhaka continue to grow, driven by socioeconomic and environmental pressures, making slum dwelling a widespread reality for many migrants. The findings of this study highlight the complex interplay between climate migration, urban poverty, and informal land markets in Dhaka. To address the housing crisis faced by climate migrants, policymakers must develop integrated strategies that consider both immediate housing needs and long-term urban resilience. Future research should explore how formalized land tenure systems could be adapted to accommodate the unique challenges faced by climate migrants in rapidly growing urban areas.

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