



IMPACT OF TENURE SECURITY ON HOME-BASED ENTERPRISES: OBSERVATIONS FROM TWO INFORMAL SETTLEMENTS IN KHULNA

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Abstract

In Bangladesh, a widespread phenomenon of urban informal settlements is that the dwelling is not only used for shelter but also for income-generating activities, often referred to as HBEs (Home-based enterprises). These enterprises are themselves quite profitable to generate household income and meet the subsistence level of urban poor. However, the nature of HBEs often varies according to the different tenure conditions of settlements. The absence of tenure security coupled with fear of eviction discourages dwellers from investing in the spatio-physical development of housing, exacerbates the isolated nature of HBEs with less exposure to the streets, and hinders their access to credit, thereby impeding economic growth. To unfold this tenure-HBEs relationship, the study aims to investigate how the nature of HBEs is changing over time according to the various tenure forms, taking two informal settlements from Khulna as case studies. Firstly, this research identifies the typology of HBEs; secondly, it investigates the nature of HBEs; and finally, it assesses the economic contribution of HBEs under different tenure conditions. By adopting a mixed-method approach, this study collects both social and spatial data through face-to-face interviews, photographs, and observation. The study reveals that a certain degree of tenure security stimulates the nature of HBEs by scaling up the business, facilitating easy access to credits, initiating a well-connected spatial organization, and driving their spatio-physical and economic growth. The findings suggest that to strengthen the practice of HBEs in informal settlements, the government and concerned agencies should promote tenure upgrading and regularization programmes to generate livelihood opportunities.

Keywords: Home-based Enterprises (HBEs), Tenure Security, Urban Informal Settlements, Khulna (Bangladesh)

Introduction

In most developing countries, informal settlements have become an integral part of the urban landscape due to the rapid unplanned growth of urbanization and the lack of alternate housing opportunities (Mpembamoto et al., 2017; Williams et al., 2019). The United Nations predicts that over the following ten years, urbanization will increase, rising from 56.2 percent presently to 60.4 percent by 2030. 1.6 billion people, or 20% of the world's population, currently lack appropriate housing, with one billion of them living in informal settlements (UN-Habitat, 2020). Bangladesh has also been experiencing the proliferation of informal settlements. Currently, 1,800,486 people (507,486 households) reside in informal settlements (BBS, 2022). Being the 2nd largest division of Bangladesh, Khulna has 130,863 people (36,333 households) living in informal settlements (BBS, 2022). To ensure physical and social well-being, the people of informal settlements in Khulna have diverse needs for overcoming their state of deprivation through a sustainable urban livelihood. As the formal economic sectors have limited capacity to provide adequate jobs, the use of the home for both household and income-generating activities (HBEs) is an essential survival strategy for the urban poor (Gough & Kellett, 2001; Kovacic et al., 2019). Slum dwellers in Khulna are also adopting these HBEs as a means of surviving because of their ease of entry and relatively low overhead costs. Limited initial capital, informal skills, family-oriented labor, simple technology, and the use of a flexible built

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environment (fusion of household and productive activities) to avoid trade license fees are the fundamental characteristics of HBEs. Those characteristics boost the motivation of the dwellers to adopt HBEs as a survival strategy. However, the nature and growth of HBEs often vary according to the tenure conditions of settlements. Many studies argue that tenure insecurity is the main obstacle that prevents investment in properties (Boonyabancha, 2009; De Soto, 2000; Field, 2005; Sheuya & Burra, 2016). Lack of formal land ownership often discourages dwellers in these informal settlements from investing in the spatio-physical development of their housing, especially in HBEs (Adianto & Gabe, 2020). Consequently, the fear of evictions led the operators to adopt temporary building materials, limit income-generating space, and move into a more introverted spatial arrangement, thereby impeding the physical and economic growth of HBEs. In addition, the local government and NGOs are also reluctant to provide adequate services and infrastructure in these settlements due to tenure insecurity. The services and infrastructure that are provided by different organizations are limited to some shared toilets and tube wells. While the absence of legal land titles prevents the provision of essential infrastructure such as roads, drainage, electricity, and other facilities fundamental for the operation of a business. Additionally, lack of tenure hinders their access to formal financial institutions for the initial credit required to establish HBEs. This typically implies that the nature of HBEs in urban informal settlements and the tenure status are intricately intertwined. However, the economic benefits of HBEs are dependent on the intricate relationship between their nature and tenure forms. The absence of tenure security frequently shrinks the profit margin of HBE operators by impeding access to loans, disrupting visual and spatial linkages with streets and customers, and hindering spatio-physical growth to a certain extent (Adianto & Gabe, 2020). Thus, the purpose of this study is to examine how the nature of HBEs in informal settlements is changing according to the various tenure forms. This study has selected two informal settlements from Khulna city based on different (holding entitlements with a secured tenure-ship and illegal tenure) tenure status. In order to examine the above-mentioned issues, first the research finds out the typology and frequency (number) of HBEs, then it investigates the nature of HBEs in relation to tenure security, and finally, it assesses the economic contribution of HBEs in the context of different tenure conditions.

Literature Review

Urban informality is now widely acknowledged to be crucial for the global south, where populations and job demands are constantly growing faster. There is considerable evidence that informal employment is one of the most viable strategies for survival, particularly in countries that lack safety nets such as unemployment insurance and effective pension schemes (La Porta & Shleifer, 2014; Yasmeen, 2001). As a part of the informal economy and alternative strategies to survive in an urban context, home-based enterprises (HBEs) are generally regarded as micro- and small businesses that operate in or close to their homes rather than in a commercial or industrial building (Gough, 2010; Thai et al., 2022; Tipple, 2005). Despite the lack of services, poor housing conditions, and almost no empty spaces in dwelling units, a substantial number of informal settlement dwellers in Bangladesh utilize their living spaces for a wide range of economic activities (Ferdous, 2020; Ghafur, 2002).

The key factor driving the expansion of HBEs is the fact that a significant number of households in informal settlements are able to meet their household subsistence needs as an alternative survival strategy. This income is quite profitable to finance the construction of a dwelling and its spatio-physical improvement (Kellett & Tipple, 2000; Kovacic et al., 2019; Strassmann, 1987). Numerous studies, however, have drawn attention to the economic benefits of HBEs (Al-Naim & Mahmud, 2007), the relationship between HBEs and consolidation or transformation of housing (Gough & Kellett, 2001), and the effect of housing upgradation on HBEs (Mpembamoto et al., 2017). However, the impact of tenure security on the nature of HBEs in urban informal settlements has not received much attention. This knowledge gap is identified based on the general hypothesis of whether or not there is a relationship exists between tenure security and the nature of HBEs in this context.

In the informal sector, the nature of HBEs is determined by the occupational involvement of operators (Gough et al., 2003; Lawanson and Olanrewaju, 2012), access to credit (Lawanson, 2012; Van Gelder, 2009), spatial organization, and the spatio-physical growth of HBEs (Abed et al., 2022; Adianto & Gabe, 2020). Research revealed that in African cities, occupational involvement is relatively dynamic, with a large number of operators having more than one HBE (Gough et al., 2003; Lawanson, 2012; Majale, 2008; Yankson, 2000). However, according to Gough et al. (2003), most households in Madina and Mamelodi are purely involved with one HBE due to the greater

security of tenure. This is due to the fact that increased tenure security reduces the possibility of forced eviction and also allows access to essential services such as electricity, which is necessary for conducting HBEs (Gough et al., 2003). Lack of tenure security hinders the operators from solely concentrating on and investing in one business due to fear of possible eviction. Beside this, access to credit is considered crucial for business startup and expansion, as well as investments in housing improvement. It has been argued that people without titles are supposedly unable to obtain credit. Additionally, they are also unwilling to use their only asset as collateral to obtain a formal credit (Boone, 2019; Kamunge et al., 2014; Van Gelder, 2009). In most cases, in informal settlements, capital is obtained informally through family, friends, money lenders, and other business interests (Morgner et al., 2020; Tipple, 2005). Furthermore, scholars have drawn attention to the spatial organization (use of spaces, mode of operation, location, legality, and economic viability) associated with the HBEs (Avogo et al., 2017; Lawanson & Olanrewaju, 2012; Smit & Donaldson, 2011). Apart from these, HBEs contribute to the spatio-physical growth of housing (such as house finishing, interior partition, and vertical expansion) through the monthly surplus income and also offer more capacity for economic endeavors like renting out additional rooms and expanding the space for commodities and storage (Adianto & Gabe, 2020; Al-Naim & Mahmud, 2007). On the contrary, Adianto & Gabe (2020) countered that the lack of tenure security hinders the spatio-physical growth of housing despite the HBEs' promising contribution to monthly income. Several studies have claimed that enhancing the tenure security of informal settlements is essential to enhancing the living and economic conditions of informal settlers (Boonyabanha, 2009; Croese et al., 2016; Field, 2005; Handzic, 2010; Yankson, 2000). The key factor limiting the growth of HBE in informal settlements is the concern over possible eviction of the physical structures by the city authority. Eviction-related vulnerability discourages households from starting home-based businesses. However, despite growing interest in informal economic activities for poverty eradication, the complex form of tenure continuously shapes the nature of HBEs in the study context. To address this concern, this study attempts to investigate how the nature of HBEs differs from one informal settlement to another based on their different forms of tenure; therefore, understanding this relationship between HBEs and tenure is crucial for livelihood-driven housing development in informal settlements.

Materials and Method

The purpose of the study is to examine how the nature of HBEs in urban informal settlements is changing according to the various tenure forms. Therefore, the research is conducted in two different informal settlements (Rupsha and Railway slum) based on the difference in tenure status in Khulna (see figure 01).

Rupsha slum

Rupsha slum is situated in the administrative unit of Ward No. 22 of the KCC (Khulna City Corporation) area, about 2.5 km southeast from the CBD, which is situated on the western bank of the Rupsha River. Rupsha slum, one of the densest informal settlements in Khulna, consists of approximately 3,700 families (having a total population of 15,876) living on an area of 2.48 hectares and occupying an estimated 6.13 acres (Haque et al., 2022; Jabeen, 2019). In addition to being in the vicinity of the main city center, where all kinds of trading and commercial activities take place, the informal settlement is located just two kilometers away. Approximately fifty percent of the residents are illiterate and unable to write their own identities. Day labourers make up the majority of settlement dwellers, with 60% working in the fish processing industry and the remainder working in shipyards, construction, lumber mills, and self-employment. Around 70% of the female residents of this slum are employed in income-generating activities both inside and outside the settlement (Parvin et al., 2016).

In the case of Rupsha slum, the land is partly owned by the government and partly by a religious organization, the Khulna Baptist Church Association (KBCA). There are numerous ambiguities regarding land ownership as both parties claim ownership of the land. In exchange for religious affiliation and social engagement in the mission's charitable services, settlers built their houses on KBCA's land in the 1930s. Later, the KBCA Mission Charitable Trust declared non-transferable verbal ownership since 1970. Besides, in the 1990s, the KCC gave residents the entitlements of holdings and collect tax from the residents on the basis of that entitlement (Parvin et al., 2013). About 50% of the homeowners asserted to have holding entitlement to the plots; 20% claimed to be in the process of transferring the leasehold from previous owners; and the remaining 30% appeared to be occupying

the plots illegally (Parvin et al., 2016). Dwellers are often afraid of eviction due to this contradictory ownership status. On the contrary, due to the local political leaders' commitment to legalization, there exists a strong perception of tenure security, which led to illegal actions including building permanent housing, renting it out, and even selling or transferring possession rights without any legal basis (Parvin et al., 2016). Therefore, the perceived security of tenure also encourages residents to carry out different income generating activities within the settlements by utilizing these possessions as assets.

Railway slum

Railway slum is one of the densely populated informal settlements of Khulna city, located on the bank of the Bhairab river under administrative ward no. 21 of KCC in Bangladesh. The CBD area is located near the site, within approximately 2 km. The case study area comprises an area of 0.15 sq. km. The area of this settlement is 21.67 acres. The settlement is a living place for 162 households with 632 people. The dwellers are mainly engaged in agriculture activities, industry, and service sector labor (Hossain & Rahman, 2021; Sikder et al., 2015).

In comparison to Rupsha, Railway slum has a different land tenure status. The Khulna Railway Authority owns the land. Most of the settlers living here migrated from rural areas due to unemployment (40%), landlessness (39%), and disaster (21%) (Sikder et al., 2015). The informal settlers occupy this public land because they enter here without any payments or middlemen. These occupants have been residing here without any legal tenure. Under these unsecured tenure conditions, the residents have faced several threats of eviction. However, the residents depend on the local political leaders to secure their land tenure. Local elected politicians from ruling parties persistently lobby the residents because they count this area as a vote bank. In spite of having no legal tenure, the people in this settlement are practicing HBEs activities to secure their livelihood and are also involved with housing development. These factors motivated the researcher to select this settlement as a case study area.

Data required (indicators/factors)

The context-specific attributes of HBEs identified in the literature review are applied to assessing the nature of HBEs in both settlements. But the definition, applicability, and pretension of these attributes may vary from settlement to settlement and context to context. Particularly for this study, these attributes are referred to as follows: occupational involvement, access to credit, nature of spatial organization, and spatio-physical growth.

Data collection method

By adopting a mixed-method approach, this study collects both social and spatial data to identify the typology and nature of HBEs through face-to-face interviews, photographs, and observation. Quantitative data were collected from close-ended questionnaires, and qualitative data were collected from interviews using both open-ended and semi-structured questionnaires. For data triangulation, photographs and observation methods were also applied in this research. Dwellers who were actively involved in HBE's activities were the focus of this research. As the study is conducted in two informal settlements in Khulna, the total population is divided equally between two geographic locations due to the dearth of research on HBEs in these settlements. From the theoretical observation of HBEs, it is evident that women carry out most of the informal activities. During the pilot survey, it was also observed that the number of female entrepreneurs was larger than that of male entrepreneurs (female: male =3:1). So, a total of 50 respondents were selected from the two settlements, among whom 18 were male and 32 were female. A dwelling unit from each topology of HBEs is selected to investigate the nature of spatial organization and spatio-physical consolidation.

Moreover, tenure is another factor that is considered when selecting the sample size. The research is conducted by including those residents who own their house. It was also noticeable during the pilot survey that, in both Rupsha and Railway slum, some residents live here on a rental basis. Though tenants are less involved with HBEs, and the spatio-physical consolidation of housing has less impact on those rental houses, the owner of the residents has been selected as the unit of sampling. In addition, the selection of samples also depends on the scale of HBEs. From theoretical observation, it is evident that the growth of HBEs has a major impact on spatio-physical development of housing. So, in both case study areas, those HBEs were selected whose scale is comparatively larger

than other enterprises. The selection of the HBEs scale is essential to understanding the variation in spatio-physical development in two different settlements.

Data analysis

For data analysis, statistical analysis is used in this research, along with morphological analysis. These analyses have been employed only at the dwelling unit level. In this research, the quantitative data have been displayed in a number of ways, such as a series of bar charts and frequency tables, to investigate the nature and economic contribution of HBEs. Spatial analysis is used for this research to understand the spatial nature of HBEs that are initiated by dwellers. To conduct this analysis, spatial mapping at the dwelling unit level was prepared for every selected topology of HBEs in both settlements. Photographs are also taken to document real-life situations and spatial qualities. For this research, these photographs have been used to document the use patterns of the spaces, the sequences of functional activities for HBEs, and the present condition of the dwelling unit in order to understand the spatio-physical development of housing. These photographs have been taken systematically in different parts of the dwelling, including the space of HBEs, the indoor and outdoor spaces where the work is carried out, the extended and altered portion of the house, the structures and construction techniques, and the services and infrastructure attached to the house where it was possible.

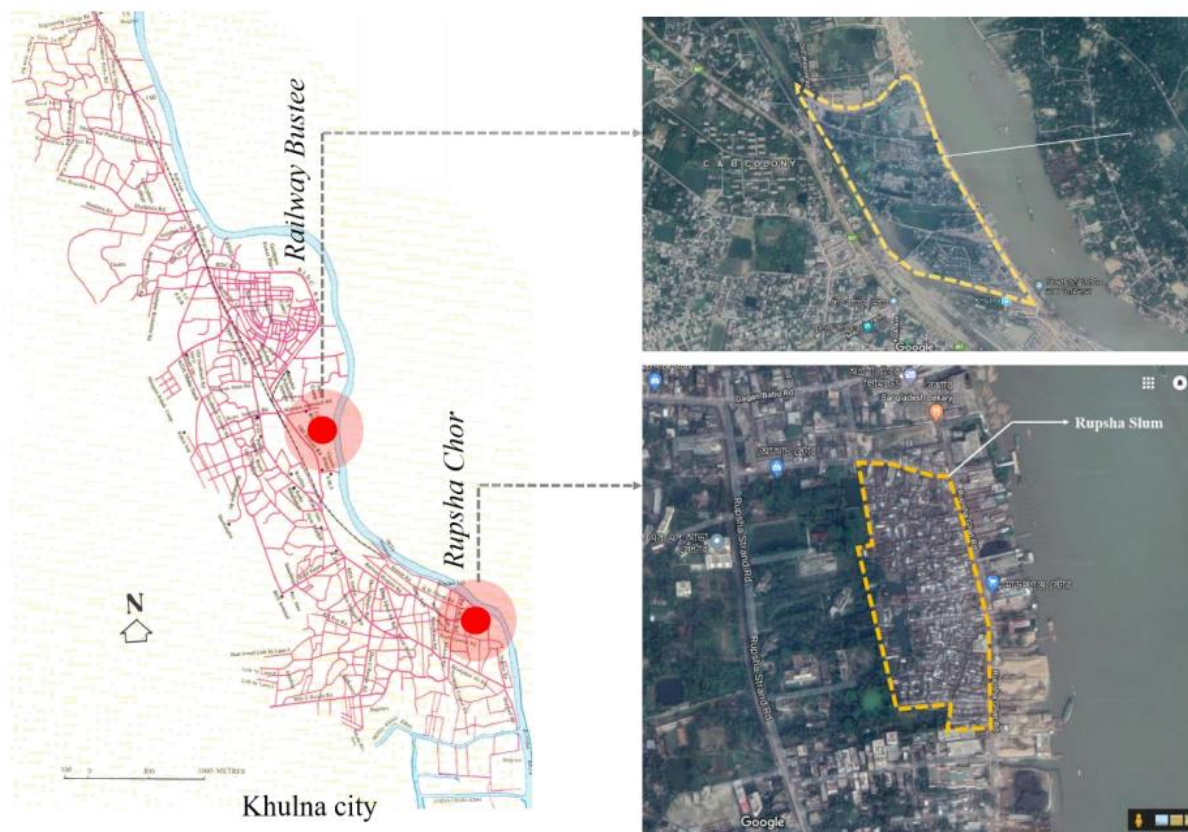


Figure 1. Location of Rupsha slum and Railway slum in Khulna

Results

Typology and frequency of HBEs

The use of homes for income-generating activities besides renting is widespread in Khulna city. The urban poor in Khulna City operate different types of HBEs. During the survey, it was found that there are twenty great varieties of HBEs, most of which are single-person or family-based enterprises. These occupations can be categorized as selling activities (retail shops, tea stalls, cakes and *pitbas*, small-scale fruit and vegetable selling), production and processing activities (food manufacturing shops, carpentry, sewing, small-scale food processing), plot-related activities (livestock rearing, vegetable production), service activities (salon, beauty parlor, washing or ironing clothes, electric rickshaw charging), social activities (teaching at home, coaching centers), and also renting of rooms. In this research, for the simplification of analysis, discussion, and presentation of the output, eight top-ranked occupations (based on frequency) are considered. The majority of the dwellers in Rupsha and Railway slum are involved with these occupations, which include retail shops, livestock farming, sewing, carpentry, food manufacturing shops, beauty parlors, teaching, and renting rooms.

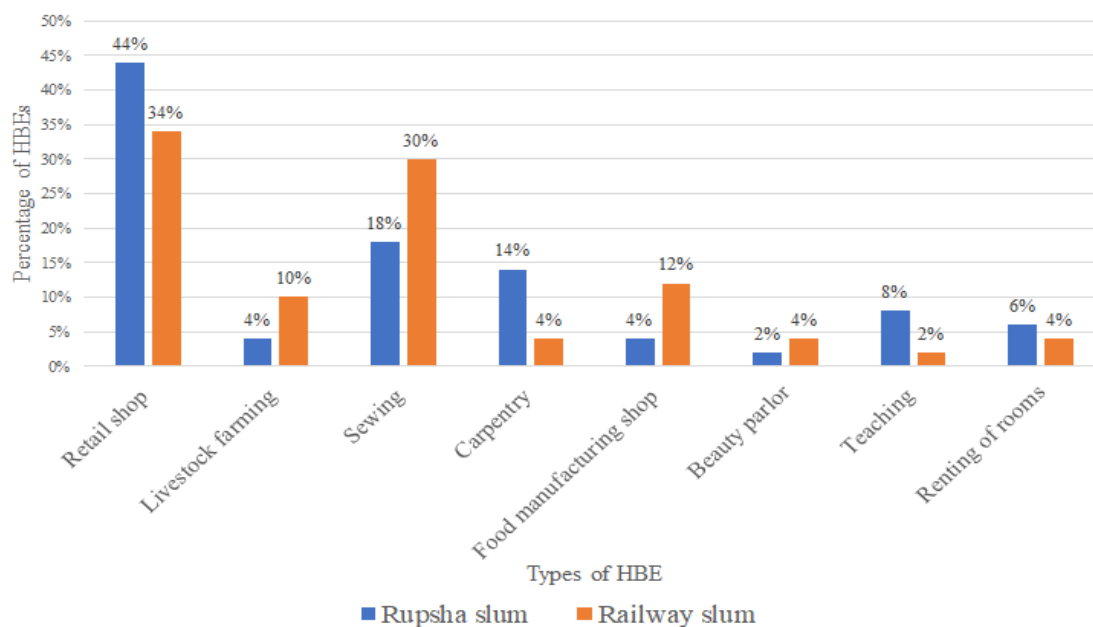


Figure 2. Distribution of respondents by occupation in Rupsha slum and Railway slum (Source: survey, 2018)

In Rupsha slum, HBEs are very common, while the majority of surveyed households are found to be operating one occupation, and the minority have operated more than one. Figure 2 shows that the most frequent enterprise is retail shops, mostly involving 44% of respondents, that are operated from the front room of their dwelling and dominate along the major roads, especially along the paved roads. The high prevalence of retail shops is due to the fact that entrepreneurs do not need any formal skills to operate these enterprises, but a certain management skill is required. Apart from retail shops, the informal settlers are overwhelmingly concerned with sewing (18%), mainly engaged with children's and women's wear and dresses. Besides, the sawmills along the Rupsha Ghat Road and the abundant space within the plots permit only 14% of respondents to be involved with carpentry activities. However, a low percentage is found in livestock farming (4%) and food manufacturing (4%) shops because these enterprises need a large amount of space to set up the livestock and furniture, which is not possible here because of the high density of physical structures. People sometimes rent rooms to start food manufacturing shops along the main Rupsha Ghat Road because these businesses need high visual permeability to

sustain themselves in this place. The lowest percentage of beauty parlours indicates that a certain level of formal training, initial capital, and linkage with customers within or without settlements are also necessary to sustain the business. Again, only 6% of people who have small families are involved with renting rooms.

On the other hand, the Railway slum indicated that there are heterogeneous types of activities emerging in this settlement. The more dynamic HBE activity was found in this settlement because of the migration of newcomers from the coastal area. Most of the businesses that operated in this area were established within the last 10 years. The demand for goods and services is changing gradually as more people come here. Besides, due to low initial capital, they don't concentrate on a single business but rather engage with more than one. The most common HBEs found in the samples are shown in figure 2. Among the HBEs, retail shops are the most prominent (34%). The entrepreneurs of retail shops are not only involved with the sale of factory-manufactured products such as sugar, chips, toothpaste, bottled drinks, etc. but are also engaged with making tea, selling cigarettes, renting a carom board at a corner, and sometimes operating a television with one or two benches to attract more customers. The second most dominant occupation is sewing, as 30% of respondents are engaged in the production of shopping bags from cement bags. According to the survey, a major portion of women, mostly female teenagers, are involved with shopping bag production. Another HBE that is mostly female-dominated is food-manufacturing shops (12%) involved with activities such as sales of cooking rice, vegetables, meat, etc. that are usually displayed on makeshift tables along the road frontage of their homes. As a result of the settlement's low physical density, the number of livestock farms and food manufacturing businesses is relatively higher than in the Rupsha slum. The lowest concentration of businesses found were beauty parlours, carpentry, and teaching. Still, only 4% of respondents are involved with renting rooms that are used for domestic purposes. Only a few people can use it for productive purposes (such as teaching) because they don't have the opportunity to modify the house as their business requires.

From the above discussion, it is found that in Rupsha, the establishment of HBEs is larger in scale than in Railway slum. It was observed during surveys that there are more HBE activities in Railway, but they are more marginal. Besides, the heterogeneity of activities is not only sustained at settlement level but also found at dwelling unit level.

Nature of HBEs in a relation with tenure security

There is a difference in tenure status between two settlements. In Rupsha, every household has a holding number with a secured tenure-ship whereas in Railway slum the residents have no legal tenure because the land is under the Railway authority. This tenure status directly impacts on the scale and space of HBEs as well as involvement and investment.

Occupational Involvement

This study categorizes home-based workers from different perspectives. They can be categorized into primary and secondary (supporting) occupations according to the occupation types. Based on quantitative data, it was found that in Rupsha, the majority (approximately 80%) of respondents take HBEs as their primary occupation. The remaining (about 20%) of the respondents got involved with HBEs as a secondary occupation. Whereas, in Railway slum, 64% of respondents got involved with HBEs as their primary occupation, and the remaining 36% took them as a secondary occupation (see fig. 3). The percentage of HBEs as a primary occupation is higher in Rupsha than in Railway slum. One of the main reasons for choosing HBEs as their primary occupation is land tenure security. Although other factors such as skills, location of the HBEs, and initial capital also influence the decision to pursue HBEs as a primary occupation, secured land tenure allows them to scale up the HBEs and invest more as there is no fear of eviction. Secure tenure also incentivizes the operators to solely concentrate on one HBE.

On the other hand, due to land tenure insecurity, slum dwellers are always in fear of eviction and are not interested in investing in the physical infrastructure development of HBEs. Thus, insecure tenure limits the growth of HBEs, and that's the reason why the operators who run HBEs take it as a secondary occupation. During the survey, it was also observed that many operators also converted their secondary occupation into a primary one due to having secured tenure. For instance, a livestock farmer in Rupsha slum was also involved in another occupation (*Chingri Bonik Shomiti*) in addition to his HBE. But now his profitable HBE forces him to leave the job and fully concentrate on the cattle business.

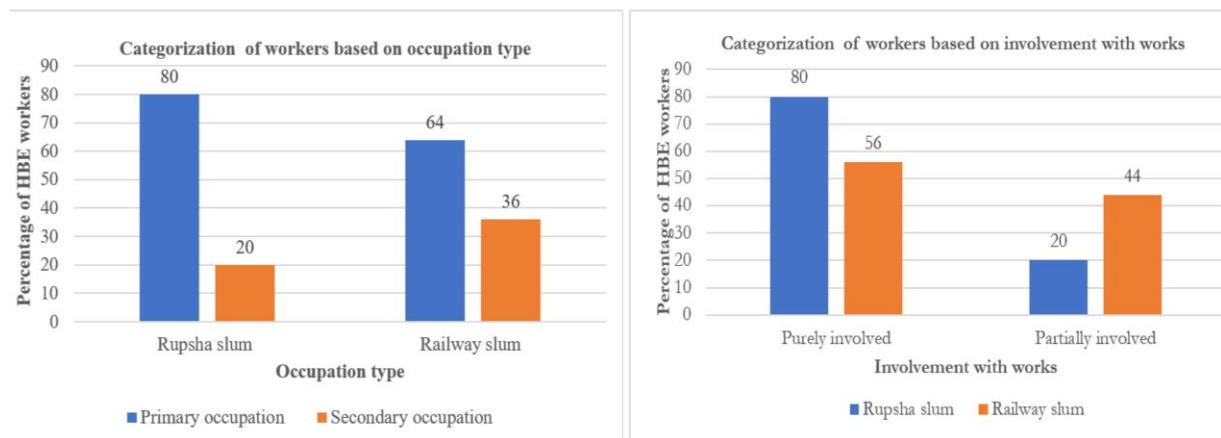


Figure 3. Left graph shows the categorization of workers based on occupation type and the right graph shows the categorization of workers based on involvement with works in Rupsha slum and Railway slum (Source: survey, 2018)

Based on their involvement in the types of work they do, HBE workers can be categorized as purely involved or partially involved. Those who are involved only in HBEs are categorized as "Purely involved," and those who are involved in other HBEs are categorized as "Partially involved." However, tenure security has a major impact on both types. Among the respondents in Rupsha, due to tenure security, the majority (about 80%) are purely involved with their HBEs, and the remaining (20%) are partially involved (see fig. 3). But in Railway, it is observable that this percentage is almost half because of tenure insecurity. About 56% of respondents are involved purely with HBEs, and another 44% are involved partially. In Railway, the fear of possible eviction limits the growth of HBEs, which is the main reason for partial involvement. The majority of respondents stated that if the eviction process occurred, the investment cost for the establishment of HBEs would be a burden for them. Another crucial reason for this partial involvement is the source of capital, which is also affected by tenure security. To establish a business on a large scale, residents often take out loans from different microcredit institutions. But to take a loan, they have to show the business or house as collateral to obtain the informal loan from microcredit institutions, which is often difficult for people who do not have any secured tenure.

From the discussion, it is also clear that the dwellers are significantly benefited by the profits of HBEs in Rupsha slum. Besides, in Railway slum, this profit level is comparatively lower than in Rupsha slum. That's why a small number of dwellers in this area are also partially involved with other businesses. Though among the respondents, most of the HBE workers were found to be in the "Purely involved" category, the remaining respondents sometimes got involved in other HBEs to earn their living.

Access to credit

Access to credit is assumed to be critical not only for business start-ups but also for their expansion. As an essential factor, it indicates whether a person can enter this business or not. Among the operators in both settlements studied, loans from NGO's are the major form of capital used by HBE entrepreneurs to start their businesses (see Table 1). Majority of the respondents noted that they obtained their initial capital by taking loans from non-government organizations that are coming to their settlement to give informal credit for different purposes such as business, improvement of houses, education, and so on. Among these NGO's, BRAC, Asha, *Unnoyan*, and *Shakti* are the most common forms of credit providers where the respondents can obtain a loan for business. As one respondent stated,

"Before starting this sewing activity within my house, I had taken formal training from BRAC in 2011. They had given me 1000 BDT for taking the training. But I needed more money to buy a sewing machine. Then I applied for a loan through BRAC. I was given a loan of 10,000 BDT, and I was given about 10 months to pay it back." (19-year-old tailor)

Some respondents in the Railway slum stated that, they are required to pledge their businesses or homes as collateral in order to obtain an informal loan from microcredit institutions, which is typically challenging for renters. In the case of tenants, they have to show the local people who have been living here for many years or relatives as guarantors to take the informal credit. In addition, the amount of loan that they have obtained from different NGOs ranges from 5,000 to 50,000 BDT, which is too small to invest in the business. As a result, most residents obtained the money from two or three microfinance institutions at the same time. Besides, it is also difficult for the operators of Railway slum to access credit from formal institutions. This is due to the fact that, most of them have not registered their enterprises. In addition, the small size of their enterprises, lack of legal tenure and collateral securities prevent them from accessing formal loans. Only a few people from Rupsha slum have been able to access official credit following legalization, while others have no access because households' economic characteristics and financing needs are incompatible with the operational procedures and lending requirements of the formal financial institutions. People who are deprived of accessing this formal loan stated that the government and private banks require indisputable land or home ownership as collateral security for bank loans.

Table 1. Initial capital sources for HBEs in Rupsha and Railway slum (Source: Field survey, 2018)

Access to Credit (Source)	<i>Rupsha slum</i> (Percentage)	<i>Railway slum</i> (Percentage)
Personal savings	34	16
Formal institutions	2	0
Loan from relatives, friends, or neighbors	4	8
Loan from NGOs	44	68
Hire purchase	0	8
Others	4	0
Total	100	100

Furthermore, it is also observed that, in spite of having tenure security, only a few people are interested or willing to access formal credit because they are reluctant to pledge their only asset as collateral. Instead, they may prefer the flexibility of informal arrangements with friends, relatives, neighbors, or other forms of alternative lending. Reasons for utilizing a social network for financing included a lack of access to credit with banks or credit unions, and the high interest rates on bank loans. Considering the importance of informal lending, the study found that hire-purchase arrangements are becoming increasingly popular in Railway slum. For example, in Railway slum, often the female tailors who are involved in shopping bag production buy a sewing machine through hire purchase arrangements from the middleman of the business. Later, they repay the amount from their monthly income. In both settlements, this widespread hire purchase system is quite supportive, especially for the women who have limited access to formal loans and have no information about the procedures for acquiring loans from formal institutions.

Nature of spatial organization

Home-based income generation is carried out not only within a given dwelling but also in its broader physical context (Ghafur, 2002). Dwellers in informal settlements in the context of Khulna not only use the limited dwelling space but also its courtyard and the lane or street (immediate to a given dwelling) abode for a wide range of productive activities in order to maximize their best possible opportunities. However, the activities carried out within a dwelling and their broader physical contexts in both settlements are quite similar, but the nature of spatial organization is relatively different.



Figure 4. Nature of required space for retail shop in Rupsha slum (Source: Field survey, 2018)

In Rupsha slum, the nature of the spatial organization for HBEs is more extrovert due to their ownership of possessions. Most of the HBEs are located on the ground floor along the streets, attached to the front room of the house, with a usable space of about 30 to 70 square feet. In most cases, it is observed that a partition wall separates the productive space but is spatially well connected with the domestic space. While domestic space is also used for the storage of HBE products. The majority of the traders use long shutters in front of the shop, which connects it spatially more with the streets and attracts more customers (see fig. 4). Mostly male operators dominate the front side of the road, which is adjacent to the main road, while female operators are concentrated at the middle and end portions of the road due to privacy. Those enterprises located near major thoroughfares frequently face the threat of eviction or tend to be invisible because most of the respondents admitted to not having registered their businesses with KCC. Tiple (2005) also draws attention to the similar point that HBEs sometimes tend to be 'invisible', not having licenses or formal contracts, unregulated, and uncounted by official statistics. More than half of the respondents noted that the reason for the insouciance of HBEs registration is to avoid the taxation fee and fee-free trade license, which are about 6 to 10 thousand BDT. Additionally, the small size and profitability margins of their enterprises prevent them from registering.

In Railway slum, the fear of possible eviction of their physical structures by the Railway Authority limits the growth of HBEs. In-depth interviews with the operators revealed that the majority of them are concerned about the fear of possible eviction of their physical structures due to the location and exposure level of the enterprises. Due to tenure insecurity and a lack of concern about the registration of HBEs, the nature of the required space for the majority of HBEs is relatively introverted here. Most of the enterprises are located along the streets, attached to the front rooms of the shops, with a space relatively larger than the Rupsha slum, ranging from 50 to 100 sq. ft. But the spatial connection is quite weak due to fear of possible eviction. In addition, to expand visual exposure as well as to connect spatially with the street and customers, sometimes the operators enlarge the front window of the dwelling,

which attracts the customer's attention towards the shop. But when they found a possible threat, they cut off the spatial linkage by enclosing a major portion of the window. This lack of exposure to the streets and customers not only leads to a sense of isolation but also limits the growth of HBEs. Most of the operators noted that the fear of eviction affects their abilities to expand their physical structures, thus buying fewer stocks to fill their shops. They also lamented that it negatively affects their abilities to fully invest in the enterprises, thus affecting their profit margins and growth. As expressed by one of the respondents as follows:

"The demand for the products of my business is growing gradually. This is the proper time to expand my business to meet the increasing demand of my customers. But I can't expand my shop because it is located on the street attached to the house. I fear that if I expand the shop, then the railway authority will demolish it someday." (30-year-old retailer)

Spatio-physical growth of HBEs

HBE's operation contributes to the incremental development of self-help housing in informal settlements. Most of the operators at first spatially extended their productive spaces for the development of their enterprise. The amount of monthly income becomes a considerable determinant for the spatio-physical growth of HBEs. In addition, another significant determinant that intrinsically affects the spatio-physical growth of HBEs is tenure security. Individual house ownership is the tenure arrangement that is most conducive to the spatio-physical development of HBEs. For the purposes of this study, the spatio-physical growth of HBEs refers to both the spatial and physical development of HBEs, which encompasses the amount of space that has increased and the upgrading of building materials since the initial establishment of the HBEs.

In Rupsha slum, the spatio-physical growth of HBEs is gradually increasing due to their entitlement to holdings by KCC. Most of the operators stated that holding entitlements reinforced their desire to add extra spaces for HBEs by extending the existing house horizontally or vertically. The overcrowded nature of the settlement and the small size of the plots (approximately 100 to 120 sq. ft.) influence the operator to concentrate more on vertical extension than horizontal. A few operators were involved in horizontal extension by extending the mezzanine floor of the dwelling unit. However, it is certainly difficult to determine the amount of usable productive space from domestic activities. It is also noticeable that spatial overlapping is one of the main strategies to run productive activities along with domestic activities. The majority of HBE operators not only use the HBEs space for productive purposes, but they also use the domestic space for HBEs to a certain extent. In most of the cases, at the initial phase of HBEs, the average built-up area was approximately 100 to 120 sq. ft. However, the existing average built-up area is approximately 180 to 250 sq. ft (see Fig. 5). From the above discussion, it is clear that legal land tenure is the main priority for the operators of Rupsha slum when considering the spatio-physical growth of HBEs.

Moreover, this existing spatio-physical improvement of HBEs benefits the owners by increasing their volume of trading. Besides, this improved house and productive space also attract more customers and provide better space for economic activities such as addition of rentable rooms and the spatial expansion of commodities and storage. Furthermore, tenure security also encourages the operators to use more permanent building materials as a strategy for the higher spatio-physical development of HBEs. In the initial phase of HBEs, the majority used temporary materials for the construction of productive space. Currently, they adopt RCC plinths, brick walls, wooden mezzanine floors, and corrugated iron sheets as roofing materials to consolidate the space of HBEs. That means a higher level of tenure security among operators, which accentuates the higher level of spatio-physical growth of HBEs in this settlement.

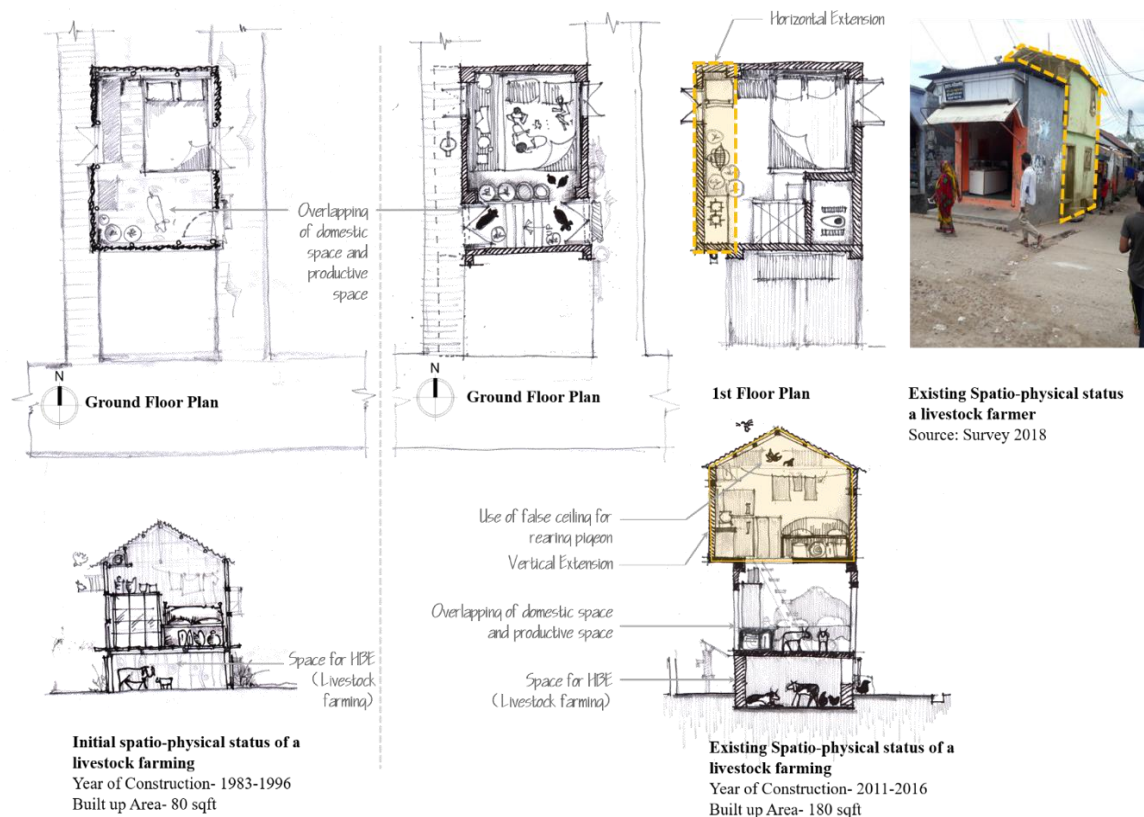


Figure 5. Spatio-physical growth of livestock farming in Rupsha slum (Source: Survey, 2018)

On the contrary, the relationship between tenure security and the spatio-physical growth of HBEs is much more complex than one might assume in Railway slum. Despite the resident's lack of recognition of land ownership, it does not affect the spatio-physical growth of HBEs. Here the spatio-physical growth of HBEs occurs, but the pattern of growth is quite different from the Rupsha slum. Due to the absence of land ownership, residents often extend their space horizontally by using temporary local materials (see Fig. 6). In most of the cases, at the initial phase of HBEs, the average built-up area was approximately 250 to 350 sq. ft.

Currently; the average built-up area is approximately 400 to 600 sq. ft. Only a few operators are involved with vertical extension, but the materials utilized are largely temporary. However, the threat of eviction is the primary concern for these operators who refuse to convert their HBE spaces into more permanent ones. Thus, this possible threat led the operators to adopt concrete plinths, corrugated iron sheets as walls, wooden mezzanine floors, and corrugated iron sheets as roofing material to consolidate the space of HBEs. The majority of the operators claimed that the reason for building a temporary structure for HBEs is that they can easily shift the shack rather than a brick house if the eviction process starts.

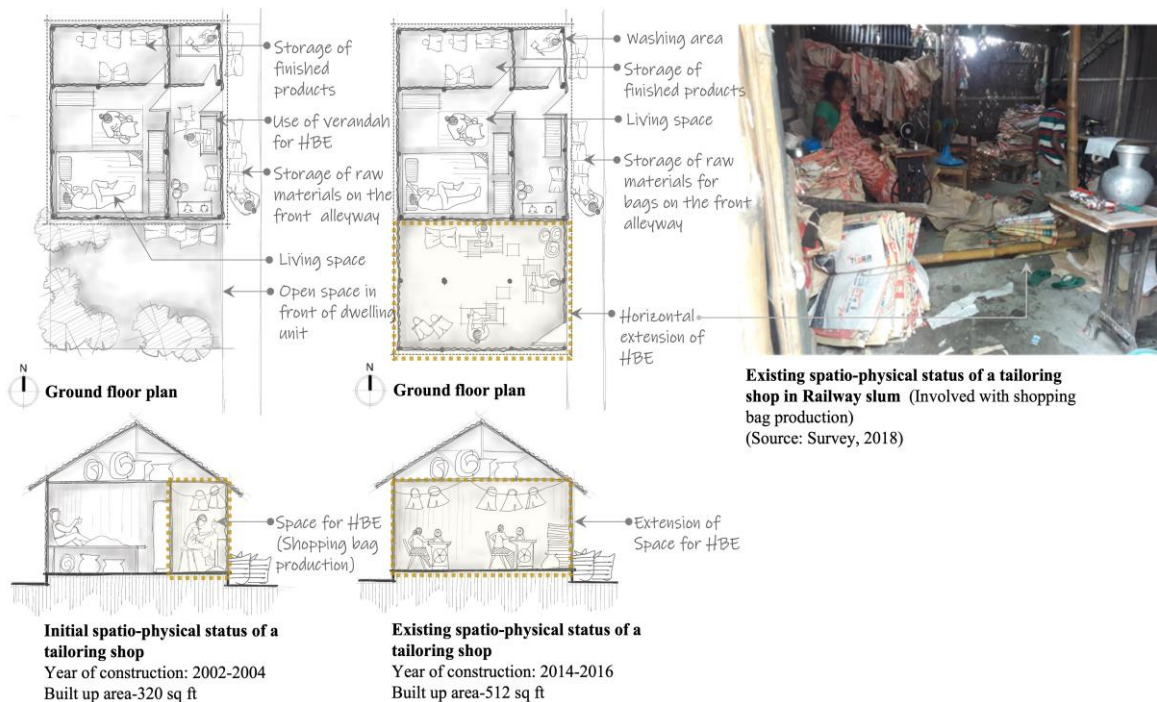


Figure 6. Spatio-physical growth of a tailoring shop in Railway slum (Source: Survey, 2018)

The above discussion indicates that the holding entitlements in Rupsha slum accentuate the spatio-physical growth of HBEs. On the other hand, in Railway slum, the operators also gradually develop their scale of HBEs, but the pattern of development is quite slow due to a lack of tenure security. This fact indicates that perceived tenure security plays a vital role in the spatio-physical development of HBEs.

Economic contribution of HBEs in relation to tenure security

The economic contribution of HBEs can be determined by their influence on monthly household income. However, this income generation by HBEs is considered as one of the major sources of finance for the urban poor in developing countries to earn or supplement their income. This form of income generation is the outcome of the dynamic manipulation of different relevant economic variables, in which women, in particular, play an important role. From previous discussion, it is evident that tenure status has a significant role in the growth and nature of HBEs. Consequently, the growth and nature of HBEs directly affect the income status of a household. To determine this impact of tenure on the economic contribution of HBEs, the researcher evaluates the contribution of HBEs to household income as well as the level of dependency on HBEs.

Contribution to Household Income

In informal settlements, income from HBEs makes up a major contribution to household sources of finance. The variation of income depends on occupational involvement, access to credit, the nature of spatial organization, and the spatio-physical growth of HBEs. From figure 7, it is clear that the average monthly income of the operators of the Rupsha slum is comparatively higher than that of the Railway slum. In Rupsha slum, operators who are involved in retail shops, foods manufacturing shops, carpentry, and livestock rearing have an average monthly income of approximately 10,000 BDT or above. The security of tenure is the reason behind the relatively higher monthly income in this settlement. Due to having holding entitlement, the majority of the respondents in Rupsha slum takes HBEs as their primary occupation and solely concentrate on business, which helps to increase the average monthly

household income. Besides, the operators who are purely involved in their business also significantly benefit from the profits of HBEs.

In addition, due to this holding entitlement, the operators of Rupsha slum can easily get access to the both formal and informal credit by showing their businesses or houses as collateral for loans. Therefore, they have the opportunity to readily expand their business. As a result, their monthly income level is also increasing. Besides, the nature of spatial organization in Rupsha is fairly extrovert due to having secure tenure. Additionally, the spaces of HBEs are quite well connected with the street and the community spaces, which attracts more customers to HBEs. Thus, their income level is increasing because they are selling more products. On the other hand, the majority of operators in the Railway slum earn approximately 7000 BDT or below that level per month on average. Several factors limit these income levels in the Railway slum, including partial participation in these enterprises as a result of insecure tenure and lack of access to formal and informal credit. In addition, the nature of the spatial organization of HBEs is introverted in Railway slum due to fear of possible eviction, which sometimes limits the profit margin level of the operators.

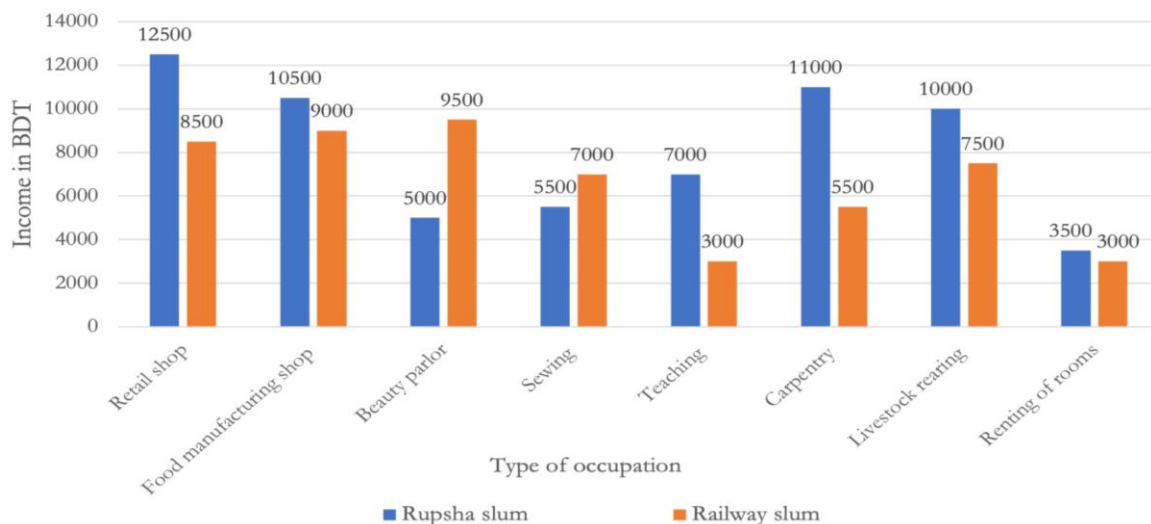


Figure 7. Average monthly HBE income of dwellers in Rupsha slum and Railway slum (Source: Survey, 2018)

Spatio-physical growth of HBEs is another parameter to measure the contribution of HBEs to household income. In Rupsha slum, the spatio-physical growth of HBEs is gradually increasing due to the entitlement of holdings by KCC. As a result, their scale of HBEs is quite large, which also benefits the owner by increasing their average monthly income. On the contrary, despite the lack of recognised land ownership in Railway slum, it does not affect the spatio-physical growth of HBEs. But this type of tenure limits the spatio-physical growth to a certain level, and the pattern of development is quite slow here. That's why only a few who have the scope to expand their business certainly extend their monthly income level to a certain level.

Dependency level on HBEs

As incomes are the primary focus of the study, the researcher considers simple questions on household income and HBE income for cross-checking. However, it is also clear that the household in each case is not only involved with a single business. So, the household income stated here does not only include HBE income but also other non-HBE income to better understand the dependency of HBE income on household income. However, the dependency of the households on the HBE can be realised by the total household income and income generated through the HBE in each case.

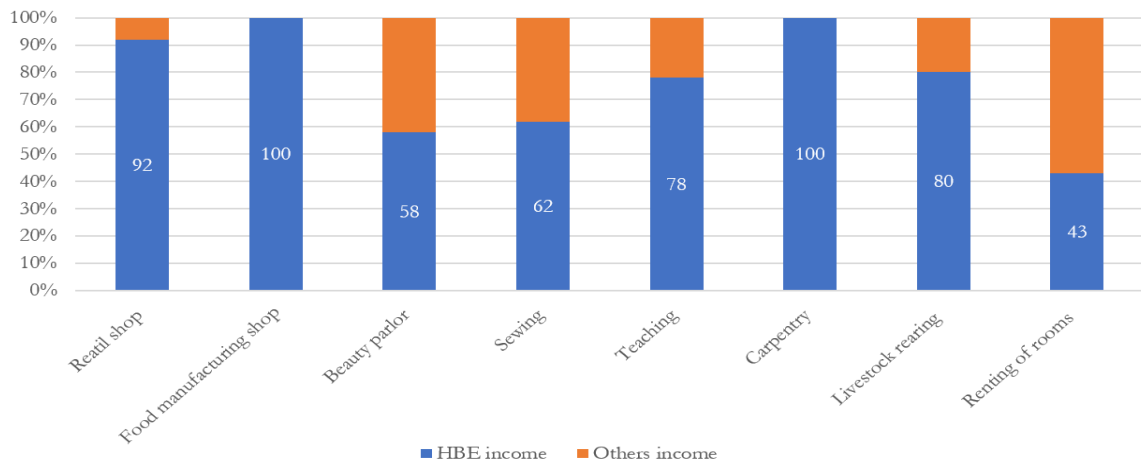


Figure 8. Dependency level of household on HBE income in Rupsha slum
 (Source: Survey, 2018)

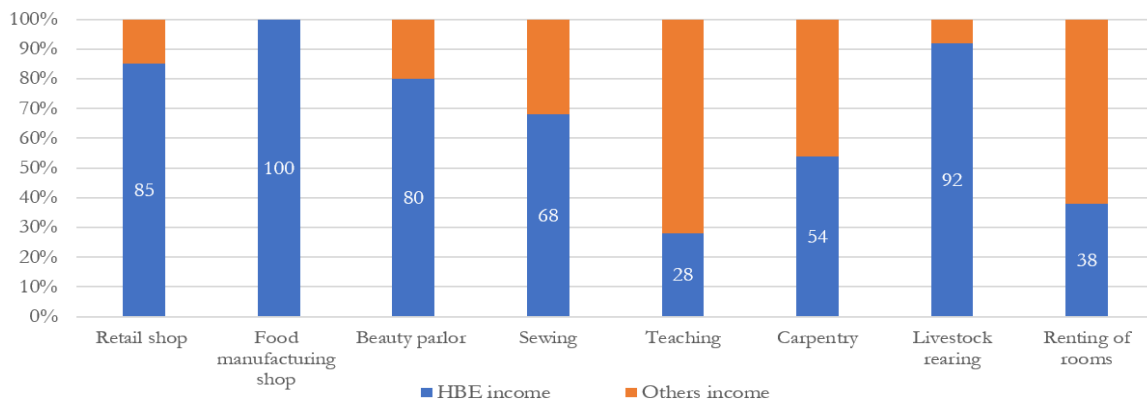


Figure 9. Dependency level of household on HBE income in Railway slum
 (Source: Survey, 2018)

From the field survey, it is evident that in Rupsha, some households involved with HBEs, such as carpentry and food manufacturing shops, are solely dependent on the HBE, while others are partially dependent. However, retail shops contribute 92% and livestock farming contributes 80% to a household's income (see Fig. 8). The lowest contribution is made by renting rooms. On the other hand, in Railway slum, some households are solely dependent on HBEs, such as food manufacturing shops (see Fig. 9). In comparison, livestock farming contributes 88%, retail enterprises contribute 86%, and beauty parlours contribute 80% to a household's income. Besides, the lowest contribution is made by carpentry, teaching, and renting rooms.

From the above discussion, it is clear that in the Rupsha slum, where de facto tenure is practiced, the growth of HBEs and income is comparatively higher than in the Railway slum, where tenure status is illegal. Though most of the households are more or less dependent on HBE income, in some cases, the dependency level on HBEs in Rupsha is slightly higher than in the Railway slum. This suggests that a household's monthly income and the level of dependency on HBEs increase when there is some form of tenure security.

Discussion

HBEs play a significant role in the informal sectors of the urban economy of Khulna. In informal settlements like Rupsha and Railway slum, HBEs are perceived as a survival strategy by many slum dwellers. However, the nature of HBEs varies from settlement to settlement. Existing literature discloses that tenure security plays a significant role in determining these differences in the nature of HBEs. It has therefore been the subject of this research to examine how tenure security impacts the nature of HBEs in urban informal settlements in Khulna.

Findings from the case study reveal that different types of HBEs are occurring within the dwelling units of both informal settlements in Khulna, most of which are single-person or family-based enterprises. The study also discloses that due to the entitlements of holding in Rupsha slum, the establishment of HBEs here is substantially larger in scale than in Railway slum. On the other hand, due to tenure insecurity in the Railway slum, there are heterogeneous types of activities emerging in this settlement that are more marginal. The fear of forced eviction prevents operators from concentrating on or establishing a single business. Therefore, it can be claimed that having some form of tenure enhances the establishment of HBEs, whereas insecure tenure tends to suppress the operator's concentration on more marginal businesses. This finding supports the argument that the introduction of secure tenure encourages HBE operators to establish businesses by increasing their income (Tipple, 2005; Van Gelder, 2009). Besides this, tenure has a major impact on occupational involvement (Abdillah & Manaf, 2022; Boone, 2019). During the survey, it was found that operators who have entitlements are taking HBEs as a primary occupation due to the fact that it incentivizes them to solely concentrate on one business. Consequently, tenure insecurity limits the growth of HBEs, leading to the operators taking it on as a secondary occupation. It is also observable that many operators also convert their secondary occupation into a primary one due to having secured tenure. In addition, holding entitlements encourages operators to purely engage in HBEs, whereas tenure insecurity leads to partial involvement.

It is also evident that in both settlements, access to credit for business start-ups and expansions entirely depends on tenure status. In Rupsha slum, the holding entitlements facilitate the operators access to formal loans because the government and private banks require indisputable land or home ownership as collateral security for bank loans. Furthermore, a lack of tenure security often excludes them from accessing formal loans. Without tenure security (land title), people are assumed to be unable to obtain a formal loan, which limits their ability to improve their housing and expand their own businesses (De Soto, 2000; Van Gelder, 2009). As a result, loans from microcredit institutions are the major form of capital used by entrepreneurs of HBEs to start their businesses. In some cases, however, the insecure tenure forces the operators to use the business or house as collateral to obtain an informal loan from a microcredit institution. Nevertheless, the nature of spatial organization is relatively different between the two settlements, even though both settlements carry out home-based activities within their dwellings and their broader physical context. In Rupsha slum, the nature of the spatial arrangement for HBEs is more extroverts and spatially more oriented towards the streets because of having ownership of their possessions. In contrast, the nature of the required space for the majority of HBEs in the Railway slum is relatively introverted, and the spatial connection is comparatively weak as a result of tenure insecurity. Findings from the study also depict that tenure security intrinsically affects the spatio-physical growth of HBEs. In Rupsha slum, the spatio-physical growth of HBEs is gradually increasing due to the entitlements of holdings from KCC. On the other hand, a lack of tenure security in Railway slum has a negative impact on the spatio-physical growth of HBEs. Thus, these findings indicate that legal tenure is the main priority for the operators when considering the spatio-physical growth of HBEs. The findings also suggest that tenure security and income from HBEs both encourage the delivery of self-help house development.

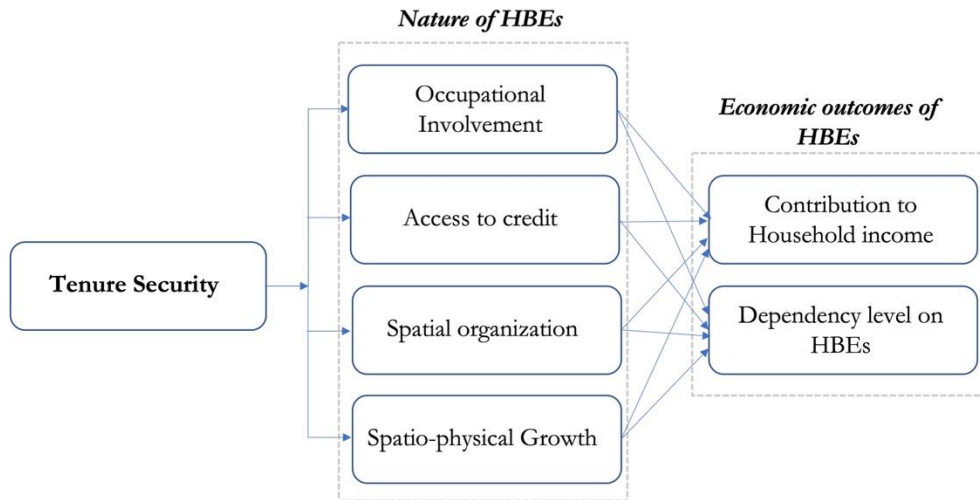


Figure 10. Interconnection between Tenure security and HBEs (Source: Author, 2018)

Furthermore, the case study also evaluates the contribution of HBEs to household income as well as the level of dependency on HBEs to determine the impact of tenure on the economic benefits of HBEs. It reveals that having tenure security leads to an increase in the average monthly income. A certain level of increased tenure security stimulates HBE operators to increase household income in informal settlements (Payne et al., 2009; Sheuya & Burra, 2016). For instance, due to having possessions, most of the respondents in Rupsha take HBEs as their primary occupation, are purely involved in them, and have access to both the formal and informal credit systems. Moreover, the large-scale and extrovert nature of HBEs resulting from this form of tenure benefit the owner by increasing their average monthly income. Insecure tenure, on the other hand, frequently limits the income level in Railway slum by impeding access to both formal and informal loans, introverting the spatial organization, and restricting spatio-physical growth to a certain level. It is also clear that in both cases, most households are more or less reliant on HBE income, implying that the operators gained significant benefits from HBE profits. In some cases, however, the dependency level on HBEs is higher in Rupsha than in Railway slum. The study reveals that certain levels of tenure security are interconnected with occupational involvement, access to credit, the nature of spatial organization, and the spatio-physical growth of HBEs (Figure 10). This suggests that a household's level of dependency on HBEs increases when there is some form of tenure security. So, there are substantial opportunities for HBEs, which vary depending on tenure in different settlements, but it can also be said that HBEs are an intrinsic part of their lives and households.

Conclusion

This research provides an assessment of how tenure security impacts the nature of HBEs in urban informal settlements. To visualize the impact, the study makes an attempt to understand the relationship between tenure security and the nature of HBEs at the household level in two different settlements. However, engagement in HBEs and tenure status are associated with a significant relationship. Findings from the research indicate that different implications of tenure status have a major impact on the nature of HBEs' operations in different settlements. Nevertheless, to strengthen the practice of HBEs as a means of increasing both livelihood opportunities and economic benefits for the urban poor, some recommendations regarding tenure status are required. This can provide a foundation for policymakers and built environment professionals to develop and implement some comprehensive policy guidelines to improve the productivity of land in the field of low-income housing while taking HBEs into consideration. Empirical findings from this research reveal that, despite the lack of government acknowledgement of land ownership, the Railway dwellers still operate HBEs for income generation, while their nature is comparatively different from Rupsha slum. Interestingly, this study suggests that a sense of tenure security

has a significant impact on HBEs over time. This is because the dwellers have a sense of belongingness because of their increasing length of stay on the land. Conversely, it is also apparent that, regardless of the continued operation of HBEs, the fear of forced eviction limits their expansion both spatially and physically. Therefore, the research recommends that the government should promote tenure upgrading and regularization programmes among the residents of informal settlements so that it will encourage the inhabitants to invest in HBEs. It is also necessary to provide basic infrastructure and services to accompany a tenure upgrade or regularization project. An assessment of local conditions and needs is necessary prior to the formulation of any policy related to tenure upgrading or regularization. For operational expediency, there should be flexible guidelines for each legal tenure situation while also considering the opinions of community and neighborhood leaders. Where the legalization of illegal tenure is difficult, the government should provide de facto tenure to households in informal settlements for a number of years, which would be an alternative strategy for the development of housing and HBEs. Furthermore, the research recommended that the government should provide guidelines to various finance and microcredit organizations regarding how to formulate HBE-friendly credit policies. In order to benefit entrepreneurs, formal institutions and non-governmental organizations should collaborate to develop a people-centered credit system to provide loans among operators and to increase the existing credit limit and the time of installment to repay credit. The research is conducted in two different informal settlements of Khulna based on tenure status, with a special emphasis on some selected HBEs. However, there are different types of settlements in Bangladesh depending on different HBEs and tenure forms. The selected cases have been chosen to express the nature of HBEs that are hidden within them, but they will not provide a broad scenario of Bangladesh. Besides, though the HBEs are female dominated in informal settlements, further research is encouraged to highlight the role of gender in this field.

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Conflict of Interests

The authors declare no conflict of interest.

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