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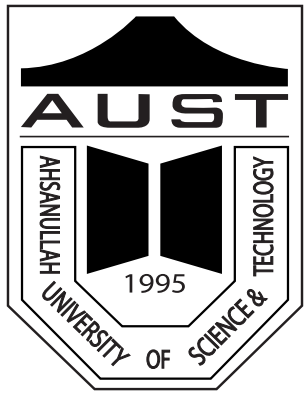

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Investigating the Potentiality of Home Based Workers in Urban Slum Area, Dhaka

Dr. Shehzad Zahir[1], Ar. Razia Sultana[2]

Abstract: *Home based work is indeed a significant component in the lives of many lower income households in the urban societies. However, in case of Bangladesh, the homebased workers are still unacknowledged in both local and national policy devising mechanism. Thus, the conditions, expectations and requirements of the HB workers demand inculcation of clear understanding so that the planners, architects, social workers and policymakers can include their issues and provide housing and community facilities to them. The study goes on to find the answers regarding the characteristics of homes which are dually used as dwelling and workplace. In order to undertake the research both quantitative and qualitative approach has been used. Data have been collected from a wide range of primary and secondary sources. Copious studies on 'Home' have been undertaken so far which mostly attempt to explicate homes as dwelling places, shelte rs, units of accommodation and key abode for social reproduction. However, the use of home as workplaces, and the contributions of the home based workers especially in the context of Dhaka city are highly under researched area. Therefore, research is needed to be undertaken for bringing these issues on the surface.*

Key words: *Home based Work, Dwelling, Urban Slum, Dhaka.*

Introduction

Bangladesh emerged as an independent country in 1971 in the global arena. For several decades it was portrayed as a country having a very bleak future with very little natural resources, perennially vulnerable to natural calamities with the added problems of over-population and high levels of poverty. Thus - ".... prospects for a future beyond mere survival had appeared as forbiddingly difficult for the new nation" (World Bank, 2013). Yet four decades later, Bangladesh is being praised as representing a success story among developing countries. Throughout the 2000-2010 decade, Bangladesh experienced steady and strong GDP growth of nearly 6% per year on average. In addition, Bangladesh also achieved better health outcomes, improved living conditions for the poor, lower childhood mortality, increased under-five vaccination rates for all children, increased literacy rates, and improved safety net coverage. These are impressive achievements (World Bank, 2013). In the background of impressive achievement, Dhaka, the capital city of Bangladesh, has been termed as one of the 'sick cities' of the world (Haque et al, 2014). It has the highest share of poor population compared to other cities as more poor people migrate to this than others. A survey conducted in 2015 shows that of a total of 4.94 crore poor people of the country, 15.9 million or 32.3% lived here (The Daily Star, 2014). Thus, the city face challenges that include

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high percentages of people living in slums, high cost of living and dominance of the informal sector, inadequate basic services (especially water, sanitation and energy), unplanned urban and pre-urban expansion, social and political conflict over land resources, a high level of vulnerability to natural disasters and poor mobility systems. Again, due to the lack of skills and financial capital, the migrants, from economically depressed regions, rely on their own initiatives which results in the rise of informal sectors. For many poor households, the dwelling is one of the few resources that they have to aid income-generation, either through passive activities such as renting out one or two rooms or more active home-based works (HBWs). HB workers have been able to consolidate their dwellings or homes through the incomes from it. Female members, especially, have been able to combine income generation activities with household chores, child-care and rearing, caring for the aged members of the family. HBWs, as an informal activity, are gaining importance for many households and this is of particular interest to the urban planning professional.

Home as a Workplace:

Since the dawn of human civilization home along with the basic work environment has been used as the workplace for men and women of all walks of lives. For instance, home has been used as the atelier of artisans, den of scholars or chamber of consultants. Working from home is quite compatible in many areas of life, especially for social interactions such as family commitments and maintaining relations with friends and relatives and at the same time allowing greater freedom and flexibility to work at one's own will and round the clock. Home space that can successfully contain a business and reduce variance between domestic and professional activities is particularly important for many women and particularly of the poor. For them, their home is often their primary or only base of economic empowerment.

This research aims to view Home as Workplace and an alternative source of employment in the context of Dhaka city, where the rate of unemployment or pseudo-employment witnesses an alarmingly high rate, compelling huge workforces redundant or underutilized. Relentless involvement with the have made the frequent mobility for women difficult. In this context, city dwellers belonging to the lower income threshold have the option to choose alternative income generating means by using their homes as workplaces. This option provides them the self-employment opportunity, enhance house hold income and maintain domestic responsibility staying away from hazardous transportation and considerable amount of transport cost. Living and working at the same place may unlock the entrepreneurial genius of the people and at the same time it can save valuable spaces and time.

Methodology

In the research several research strategies have been used. Survey has been done to find out the social and economic aspects, livelihood, and profession attributes of this section of capital city dwellers, specifically the HB Workers, comprehensive survey works were conducted. Moreover, in the research, both semi-structured and unstructured interviews had been made out on HB workers. One-to-One interview had been performed most of the time, but few group discussions were also being comprehended. In this research, number of case studies had also been performed to some HB workers over a period of temporal variations.

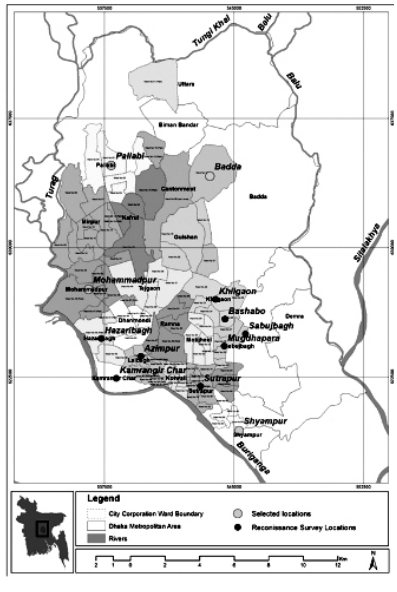
Target Population

Selection of target group of people or research interest, the researcher had followed a comprehensive approach with some sequential step based approach. These steps are listed as follows:

- Literature review on both national and international arenas had been done;
- The statistical database and reports from different census (Depends on availability of the census report) were overviewed;
- Finalizing the target group or interest people by identifying that stratum of population based on majority in numbers (involved in HBWs), role played in daily life, amount of contribution to household's main income, social integration by HBWs, contributing significant spatial and social dynamics in urban life or society etc.;
- In this research sample size had been determined using the formula with a confidence level of 95%, estimated margin of error as 5%, population assumed as 50% distributed. Using these parameters, the sample size reached to 349 (Raosoft Inc., 2004).

Identification and Selection of Research Area

Dhaka City Corporation (DCC) represents the appropriate urban environment within the whole country; the city possesses the extensive amount of "Economic Households". But, surveying and analyzing the whole city is an extensive and time consuming task. So, the extent of work had been narrowed down to reduce the load based on different logical assumptions, observations and hypotheses. According to Economic Census, 2001 and 2003 (Published in 2008) carried out by Bangladesh Bureau of Statistics (BBS), within Dhaka city seven top ranked thanas for informal home or premise based activities were first considered for selecting study area. Among them Pallabi, Mohammadpur, Badda, Shyampur had finally been selected as they are located almost in four sides of DCC: Pallabi at the North-West, Mohammadpur at the West, Badda at the North-east and Shyampur at the Southeast. Moreover, spatially they are located at almost the four distinct corners of the city (Map 1). If any cordon line connects them, it will turn into a rectangular/ trapezoidal form which indicatively covers the whole city.



Map 1: *Spatial distribution of HBWs hotspots within city (GIS database of DAP for Dhaka, 2006-2015)*

Study Area Profile

The four selected places as study areas are located within the jurisdictional boundary of DCC (135 sq. km). The whole DCC area consists of 98 wards and 16 major Thanas. In 2011, DCC area has been divided into two parts as Dhaka North City Corporation (DNCC) and Dhaka South City Corporation (DSCC). Three out of four selected places (Mohammadpur, Pallabi and Badda (partly)) fall within DNCC area and Shyampur in DSCC jurisdiction. These areas are governed by the corresponding thanas which are similar to their titles. Additional information of these areas is shown in Table 1.

Table 1: Administrative boundary information for the selected study area (BBS, 2015 & 2011)

Thana Name	Total Area (sq. km)	Population	Wards No. (City Corp.)	City Corp.
Mohammadpur	8.23	3,55,843	42, 44, 45, 46 (part), 47 (part), 51 (part)	DNCC
Pallabi	9.97	5,96,835	02, 03, 05, 06, 7 (part), 15 (part)	DNCC
Badda	34.31 (3.096 sq. km within City Corp. jurisdiction)	5,36,621	17 (part), 21	DNCC
Shyampur	2.17	1,84,062	83, 87, 88.	DSCC

Demographic Characteristics of the Respondents

HBWs were generally found as female dominated sector (Table 2). The researcher found most of the respondents as illiterate (about 54.7 %). About 41 % of them had knowledge of primary and secondary education. In addition, the rest had knowledge of higher secondary level and none of them had reached the graduation level (Table 3). Among both, only about 10-11 % have secondary level and higher secondary level of education. Moreover, illiteracy rate was higher in the female respondents than in the male respondents (Table 4). HomeNet (2016) in their surveys found that as many as 33% female respondents had primary level and about the same percentage had secondary level of education; nearly 13% of them had education of higher secondary level and/ or graduation level; some 8% had informal education, and about 15% were un-lettered. As against this, more than half of male respondents had primary level education one-quarter had secondary level education; some 12% had informal education and about 8% were un-lettered. None was from graduation level. More than half, about 65% of the respondents were between 21-35 years old. About 10% of the respondents were above 50 years old (Table 5). Therefore, the older member of the families can also take part in the HBWs and so as not to become a burden to the family. Again, among urban poor, percentage of living as single family was higher as living cost in Dhaka is high. For urban poor, the cost is more burden than others are. It was found that about one third of total respondents were living as single families. The rest were from joint families and other categories (Figure 1).

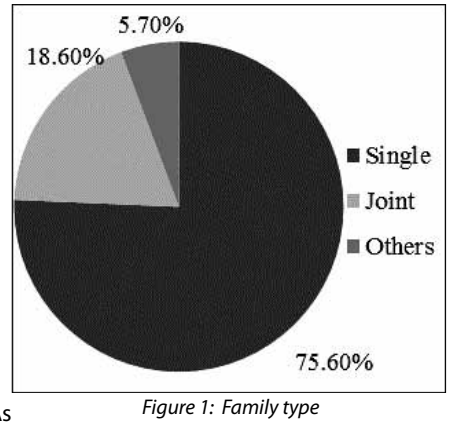


Figure 1: Family type

Table 2: Distribution of HB respondents by sex

Sex	Percentage
Male	43.8
Female	56.2

Table 3: Distribution of HB respondents by educational qualification

Educational qualification	Frequency	Percentage
Illiterate	191	54.7
Primary	122	35.0
Secondary	21	6.0
Higher Secondary	15	4.3
Total	349	100.0

Table 4: Distribution of HB respondents by sex and educational qualification

Sex	Illiterate	Primary	Secondary	Higher Secondary
Male	48.4%	41.8%	5.2%	4.6%
Female	59.7%	29.6%	6.6%	4.1%

Table 5: Distribution of HB respondents by age group

Age group	Frequency	Percent
>15	7	2.0
16 – 20	24	6.9
21-25	57	16.3
26-30	101	28.9
31-35	69	19.8
36-40	28	8.0
41-45	16	4.6
46-50	12	3.4
51-55	14	4.0
56-60	18	5.2
Above 60 years	3	.9
Total	349	100.0

Types of HB Workers

The researcher categorized the HBWs from different perspectives. Based on the occupation type they were categorized as Primary, Secondary or Supportive occupation. It was found that about 60% of the total respondents took HBW as their primary occupation. The rest got involved in HBWs as secondary occupation to support their living (Figure 2). Based on

involvement with other types of work, they were again categorized into certain categories. Those who involved only in HBWs were categorized as "Purely involved" and those involved in other NHBWs were categorized as "Partially involved". Among the respondents, most of the HB workers found from "Purely involved" category. The rest of the respondents sometimes got involved in other NHBWs to earn their living. (Table 6)

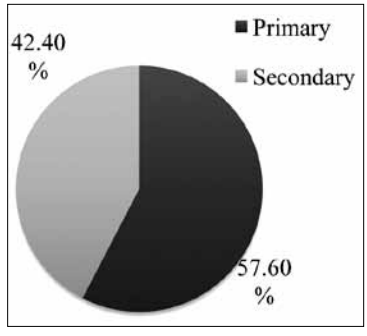


Figure 2: Occupation type

Table 6: Types of HB workers

Types of HB workers	Frequency	Percent
Purely involved	223	63.9
Partially involved	126	36.1
Total	349	100.0

From the perspective of the involvement type of HBWs the respondents were categorized as "Permanent" and "Seasonal" HB workers. Among the respondents, most of them (84.5%) were Permanent HB workers. (Table 7)

Table 7: Types of HB workers

Types of HB workers	Frequency	Percent
Permanent	295	84.5
Seasonal	54	15.5
Total	349	100.0

From the perspective of dependency on works or raw materials, HomeNet (2016) categorized them as "Piece rate workers" and "Own account workers". Piece rate workers were completely dependent on the individual contractors/sub-contractors/middleman for verbal work order detailing work volume, wage rate, supply deadline, payment schedule, etc. Whereas the own account holders had options and choices, to a great extent, in these business elements. Among females, 89.32% belonged to piece rate and 10.68% were own account workers. Among males 73.17% belonged to piece rate and 26.83% were own account workers. From the perspective of time involvement, Home Net (2016) categorized HB workers into two broad categories: Primary occupation and Secondary occupation. Primary occupation included the occupations that demanded maximum time of the workers, while secondary occupation meant the additional source of work that took shorter time from the workers. Primary occupation was characterized by comparatively larger income. HomeNet (2016) found 88.8% belonging to primary occupation and 11.2% belonging to secondary occupation. In primary occupation, 90.76% were piece rate workers and 9.24% were own account workers. In secondary occupation, 83.93% were piece rate workers and 16.04% were own account workers.

Types of HBWs

Different types of HBWs were found among the urban poor in Dhaka city. During this study, 33 different occupations were found in four study areas (as sample) (Table 8). These occupations could be categorized into some major categories like cloth related (boutique, tailoring, jory/ karchupi, beads/puthi, benarosee loom etc.), transport related (rickshaw garage, rickshaw mechanic etc.), petty business related (groceries, tea-stall, cake/pitha making etc.) and so on. Among these occupations the highest number of workers belonged to embroidery/ jory/ karchupi (42 cases) related works and the lowest number of workers belonged to waste management at home (1 case).

Table 8: Distribution of respondents by occupation (Descending order)

Profession	Frequency	Profession	Frequency
Embroidery/ Jory/ Karchupi	42	Beauty Parlour	4
Tailor	41	Garments Backward and Block on Cloth/ Screen	4
Boutique	34	Broken Article Seller (Vangari)	4
Beads/ Puthi	30	Light Industrial Work	4
Carpentry	24	Quilt/ Katha	4
Grocers shop	24	Vegetable Shop	3
Benarosee Loom	23	Brick Chips	2
Paper Pack	20	Care of Vehicle Plugs	2
Cake/ Pitha/ Pickles/ Nut Fry	14	Ice seller	2
Tea Stall	12	Ice-Cream Frame Making	2
Rickshaw Garage & Mechanic	9	Making Trunk	2
Cooking	8	Renting out Rickshaws	2
Making of Stitch	8	Rickshaw Maker	2
Tuition	8	Shoe Maker	2
Bag and Sack Making	6	Waste Management	1
Fire wood/ Lakri	6		
Total			**349**

a=Frequency of the occupation and b=Percentage of the occupation among respondents

In this research, for the simplification of analysis, discussion and presentation of the output seven top-ranked occupations (each having more than 20 samples) were considered in some analyses. These seven occupations comprised more than 62% of all the occupations identified. Four of these sectors were female dominated. These were embroidery/ *jory/ karchupi,* tailor, boutique and beads/ puthi work (Figure 3). In these occupations about two third of the workers were found female. On the other hand, some occupations like carpentry and grocery shop had male percentage higher than the female.

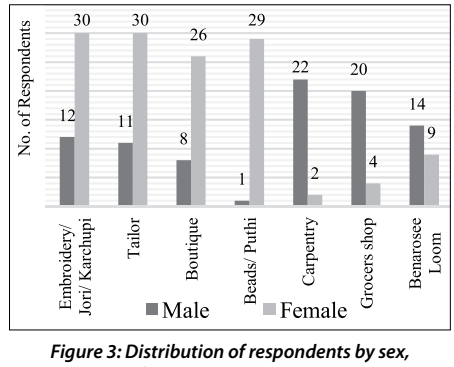


Figure 3: Distribution of respondents by sex, considering top seven occupation

Types of HBWs Scenario by Study Area

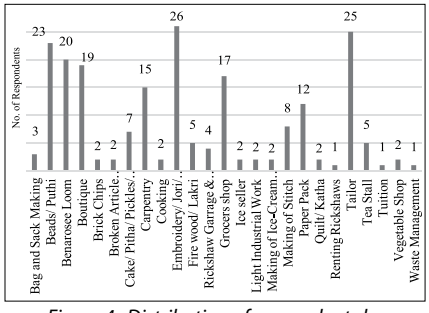


Figure 4: Distribution of respondents by occupation in Pallabi

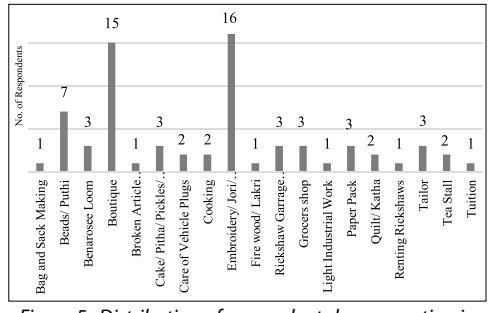


Figure 5: Distribution of respondents by occupation in Mohammadpur

In Pallabi, 26 different occupations were found (Figure 4). Among them most prominent sectors were embroidery/ jory/ karchupi, beads/puthi, benarosee loom and tailors. Almost one third of the respondents belonged to the above mentioned four sectors. Besides, about one fourth of all respondents at Pallabi belonged to grocery shop, carpentry and boutique type of occupations. Significant numbers of them were also from making of stitch and paper pack. As Pallabi was a comparatively larger thana than the other study areas, it played a significant role in the selection of top seven occupations. It had an influential impact on the number of occupation. For example, benarosee loom is a special occupation which is mainly found in Benarosee Palli in Pallabi (a few in Geneva Camp, Mohammadpur), and only because of the influence of Pallabi this type of occupation became one of the top seven occupations, though it was not found in another two locations.

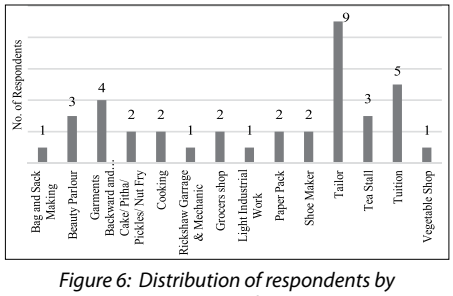


Figure 6: Distribution of respondents by occupation in Shyampur

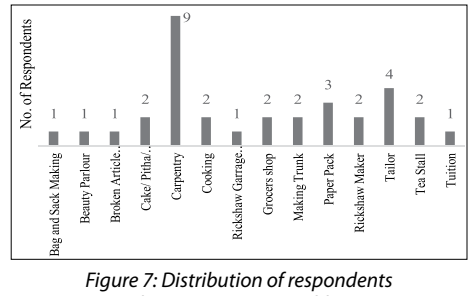


Figure 7: Distribution of respondents by occupation in Badda

In Mohammadpur, 20 different occupations were found (Figure 5). Here common typology of HB activities were embroidery, tailor, and boutique works. Newcomers in HB works were very few in this area as most of the embroidery and boutique workers inherit this occupation from their ancestors. Out of these, the only two categories covered more than 50% of HBWs. In Shyampur, 14 different occupations were found (Figure 6). Among them, the most prominent was tailoring. Shyampur was found as a less dynamic HB activity center from the perspective of newcomers. Like Mohammadpur, majority of grocers, tailors and boutique workers in Shyampur were working in same occupation from generation to generation. The other major category, found in Shyampur, was tuition. Block on cloth/screen was a new type of HBW which seemed to be emerging, acting as backward linkage of garments. In Badda 14 different occupations were found (Figure 7). Among them, the most prominent occupation was found as carpentry which was running with family friend relationship where new comers were always encouraged. Other major occupations were tailoring and paper packing.

Types of HBWs Scenario by Occupation

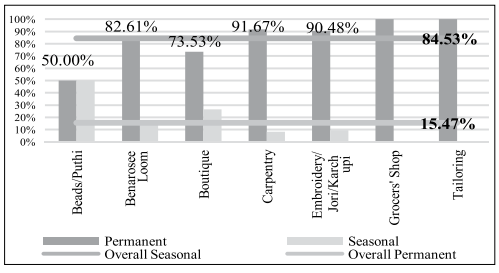


Figure 8: Distribution of respondents by nature of work

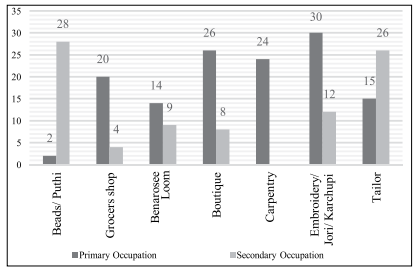


Figure 9: Distribution of occupation by the respondents' nature of involvement

Among 33 HB occupations, some of the occupations were like temporary or seasonal occupation (Figure 8). These seasonal occupations have a peak period about two or three times in a year when the demand of the finished good was high. So, to meet up the extra demand some people temporarily got involved in these occupations in peak period and rest of the year they were involved in other occupations. There were more than 84% of the HB workers in this study who did it as permanent and the rest 16% (approx.) as seasonal. Among the top seven occupations, HB workers involved in grocers' shops and tailoring mainly were permanent HB workers. HB workers from tailoring and grocers shop remain in their same occupation throughout the year. Besides, whereas HB workers involved in embroidery/ jory/ karchupi and carpentry had little significance on seasonal flow, beads/puthi occupation was taken as temporary works by majority of HB workers (50%). Again, dependency on HBWs varied from household to household. Some families took it as primary occupation while the rest as secondary occupation. Among the top seven occupations, HB workers from carpentry always took their occupation as primary occupation. Except beads/ puthi and tailoring, most of the HB workers from the rest of the 5 top occupations treated their occupations as primary occupation (Figure 9).

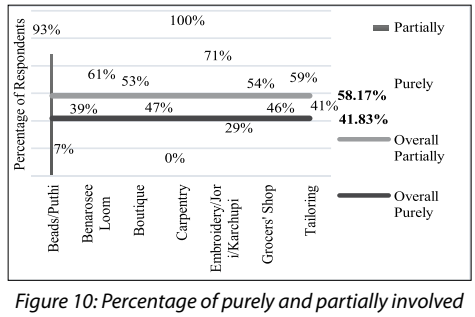


Figure 10: Percentage of purely and partially involved households in HB Work

HB workers involved in beads/puthi and tailoring mostly treated their occupations as secondary occupation. The cause behind this could be earning from these occupations were comparatively lower than from the others. Moreover, the supply of these works was not available all around the year. About half of the household was purely dependent on HBWs, which means total household income came from it. Some households did it as supporting job. For these households a portion of total household income came from HB income and the rest household income came from other sources of income. For purely HB workers, Total household income = Total HB income and for partially HB workers, Total household income > HB income. In the study, almost 42% households had a total household income equal to HB income (Figure 10). This means that they were purely dependent on HBWs. The rest 58% have other income sources other than it. From the figure 9 and 10, it had been clearly understood that HB workers involved in carpentry, were dependent only on this occupation. On the other hand, for beads/puthi workers, 93% of them were partially involved in this occupation. Except carpentry, maximum HB workers from the rest top six occupations were partially involved in the respective occupations.

Dwelling Characteristics of HB Workers

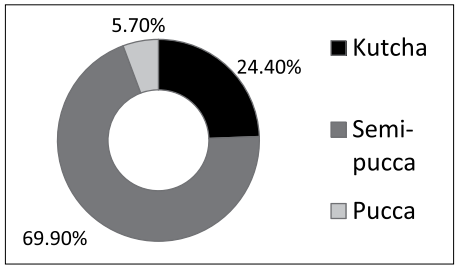


Figure 11: Distribution of tenancy status of HB workers

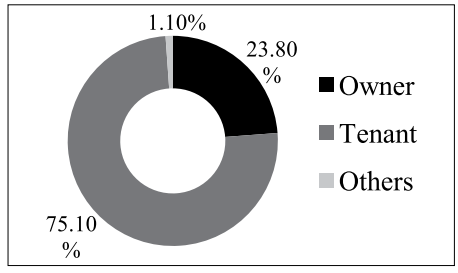


Figure 12: Distribution of dwelling types of HB workers

As expected, 75 % of HB workers lived in rented houses. 24% of them in their own houses which were aberrant in the context of whole Dhaka city (Figure 11). The reason behind this the finding might be that, people residing in "Geneva Camp" and slums adjacent to Benarosee Palli got their "Title". Alternatively, some of the respondents lived in the houses without payments though they were not the owners of the houses. They were categorized in "Others" section. According to HomeNet (2016), being poor and in solvent, majority of HB workers, as much as 76.8%, naturally lived in rented houses. Own dwelling of the HB workers or their family amounts to only 17%, around 5 % of whom are sheltered in government quarters and relatives' houses where rent does not become an overburden to them. Besides, it was also found that, about 70% of the respondents lived in Semi pucca house, whereas approximately 25% of them lived in kutcha house (Figure 12). They also found that, majority respondents, more than 50%, lived in semi pucca house, followed by 39% plus dwelling in pucca construction house and some 9% lived in Kutcha houses.

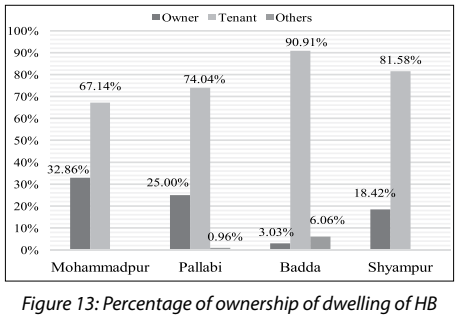


Figure 13: Percentage of ownership of dwelling of HB workers for different location

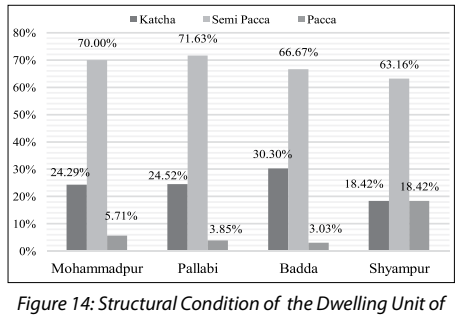


Figure 14: Structural Condition of the Dwelling Unit of Home-based Worker

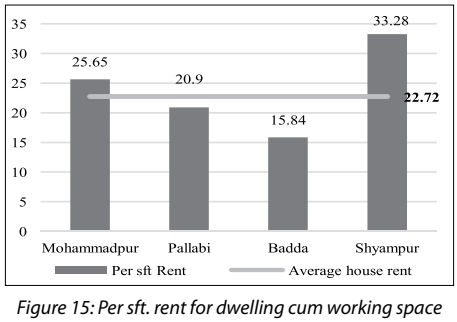


Figure 15: Per sft. rent for dwelling cum working space

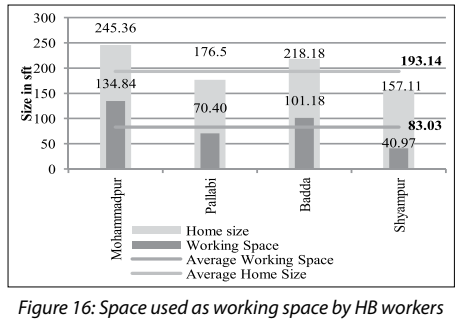


Figure 16: Space used as working space by HB workers according to location

Dwelling Characteristics Scenario by Area

Most of the HB households dwell in rental houses. They cannot afford a personal home. But, In Mohammadpur and Pallabi a significant number of household own their dwelling units as Bihari people living in those areas and they got the title of their land (Figure 13). As well as overall situation of Dhaka city, most of the dwellings were semi pucca in the four study areas. Among them, Badda had the maximum percentage of respondents having katcha dwelling. In Shyampur percentage of respondents dwelling in pucca houses was highest compared to other areas (Figure 14).

For HB workers, home is a combination of dwelling space and work space. Thus, home rent is a function of dwelling rent and work space rent. Housing rent for the dwellings varies from location to location. It is related to home space and location. Among the four locations, home rent in Shyampur was little bit higher than in the other three areas and higher than overall city average (Figure 15). In Mohammadpur area, house rent was also higher than the average. Home size is another important feature to understand the living standard. On an average, the HB workers used a home with a size of 193 sq. ft., whereas 83 sq. ft. of it was used as working space (Figure 16). The maximum average dwelling size was found in Mohammadpur, which was about 50sq. ft. higher than the average dwelling size. Average home size for Badda was also higher than overall average dwelling space. On the other hand, average dwelling sizes at Pallabi and Shyampur were below the average dwelling size measured on a whole. Again, average dwelling size used as working space was also higher in Mohammadpur and Badda than the overall average working space. However, for different occupations dwelling space used for working also varies. For carpentry, maximum amount of working space was needed. The amount is about five times greater than the others except Benarosee loom. Other than carpentry and benarosee loom, rest top five occupations used to work space varied between 30 and 45 sq. ft.

Further, HB workers of Shyampur lived in their residence for the maximum time, about 8 years, whereas HB workers from Mohammadpur and Badda lived in their same dwellings for about 5.5 years.

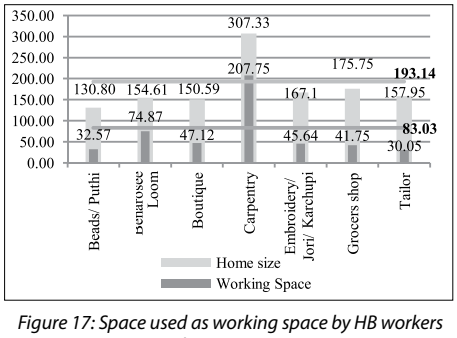


Figure 17: Space used as working space by HB workers according to occupation

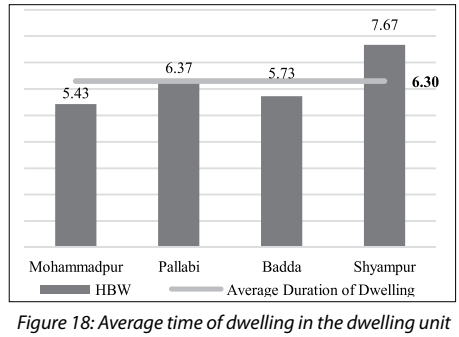


Figure 18: Average time of dwelling in the dwelling unit

Summary

Many of contemporary urban society with developing economy (e.g. Delhi, Islamabad, Kathmandu, Bangkok etc.), has started to realize the significance of HBWs in form of informal economic activities. In other sense it can be entitled as alternative way for job seekers or a way to upsurge individual or household income. HB workers do not have to get into the trouble of going outside of home for earning. And thus they do not create extra load on the present traffic. Besides they also got relieved from wasting time in traffic jam and others. Their energy, time and cost saved. But since Government of Bangladesh has yet to recognize them as a separate group, they do not get extra leverage from the Government and NGOs also. Besides, a number of diversification were found by the researcher among HB workers. So, in most of the cases the findings were varied from area to area or by profession to profession. As a result, sometimes it became difficult to generalize. But, at the same time some findings were the same for most of the HB workers regardless of their profession types or area of residing. More than half of the HB workers were between the age group 21-35, but most of them were illiterate, and the illiteracy rate was higher among women HB workers. Again, more than two third of them were found as living in semi pucca home as a tenant, whereas per sft. rent were found as varying among the study areas. Moreover, types of HBWs significantly varied among the different areas of Dhaka. HB workers used their home space in dual use. Regardless of area about half of their homes were used as workplace, which again varied with the change of types of HBWs. Again, most of the HB workers were doing their HBWs as their primary occupation and remained permanently in their jobs. Most of the time the purpose of doing HBWs was to maintain a livelihood. But, some also did HBWs as their secondary occupation. Besides, most of the HB workers were found to be female, which is a reflection of the fact that HBWs could work as an important source of self-dependency for women and thus create women empowerment. Some professions also found as female dominated. Being HB workers they could take care of their children easily and protect them from the vulnerability that surrounds the urban poor.

It is a common experience all over the world that the cities need a type of workers for its usual operation. But the authorities in most cases cannot pay adequately due to genuine reasons. In such case, in some cities the authorities make alternate arrangements for survival or better living of such workers. During British period, the personnel who were essential for cleaning the cities were given housing accommodation by the government. In the same way, the government ensured transport facilities such that the low-paid servicemen could keep their families in the villages and outskirts and could work in the city during working days. In the contemporary age similar situation in point of some poor personnel exists in Dhaka city also. However, the government does not have any program for helping them. Home-based work that they now do in their houses seem to have been the most appropriate solution to this problem. In the current paper the authors found that many home-based workers have made their own arrangements for survival or better living. Since the living of such persons in the cities seems essential and at the same time, the government does not have any program for their sustenance, the intelligent suggestion may be, to work for improving the environment in which they now do their home-based works. In this paper the authors endeavored to investigate the overall situation of the home-based workers in slums. These findings may be helpful in suggesting improved environment for such works.

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References:

BBS,. (2015). *Population and Housing Census, Community Report: Dhaka 2011* (pp. 40,140,156,188). Dhaka: Bangladesh Bureau of Statistics, Statistics and Informatics Division, Ministry of Planning.

BBS,. (2011). *Housing and Population Census, Dhaka, 2011*. Dhaka: Bangladesh Bureau of Statistics, Statistics and Informatics Division, Ministry of Planning. Haque et al., (2014). *Sick Cities: A Scenario for Dhaka City*. United Nations University International Institute for Global Health (UNU-IIGH).

HomeNet,. (2016). *Risks and Vulnerabilities of Home-Based Workers in South Asia, Dhaka City, Bangladesh*. Dhaka: Centre for Urban Studies.

Raosoft Inc.,. (2004). *Sample Size Calculator by Raosoft, Inc.. Raosoft.com*. Retrieved 5 May 2004, from http://www.raosoft.com/samplesize.html

The Daily Star,. (2014). Dhaka division home to highest number of poor. Retrieved from http://www.thedailystar.net/dhaka-division-home-to-highest-number-of-poor- 39031

World Bank,. (2013). *Bangladesh Development Series*. Retrieved from http://www- wds. worldbank.org/external/default/WDSContentServer/WDSP/IB/2015/08/10/090224b082df902f/1_0/Rendered/PDF/Bangladesh0dev00update00April020150.pdf.