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THESIS

A STUDY ON RESIDENTIAL SHIFT OF THE REMITTANCE RECEIVING HOUSEHOLDS

KAUSIK DAS

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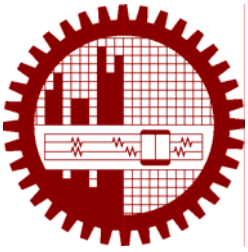

DEPARTMENT OF URBAN AND REGIONAL PLANNING
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By

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The thesis titled, **"A STUDY ON RESIDENTIAL SHIFT OF THE REMITTANCE RECEIVING HOUSEHOLDS**" submitted by **Kausik Das,** Roll No: 100615032(F),Session: October 2006, has been accepted as satisfactory in partial fulfillment of the requirements for the degree of **MASTER OF URBAN AND REGIONAL PLANNING (MURP)** on 4 May, 2010

BOARD OF EXAMINERS

Md. Musleh Uddin Hasan
Assistant Professor
Department of Urban and Regional Planning, BUET — Chairman &Supervisor

Dr. Sarwar Jahan
Professor and Head
Department of Urban and Regional Planning, BUET — Member(Ex-Officio)

Dr. Shakil Akther
Associate Professor
Department of Urban and Regional Planning, BUET — Member

Dr. Chowdhury Rafiqul Abrar
Professor
Department of International Relations, — Member (External)
Dhaka University
Director RMMRU, Dhaka

CANDIDATE'S DECLARATION

It is hereby declared that this thesis or any part of it has not been submitted elsewhere for the award of any degree or diploma.

_____

Kausik Das
Student No. 100615032
URP, BUET, Dhaka

Dedicated to

My parents

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Abbreviations

AHP	Analytical Hierarchy Process
BAIRA	Bangladesh Association of International Recruiting Agencies
BB	Bangladesh Bank
BBS	Bangladesh Bureau of Statistics
BIDS	Bangladesh Institute id Development Studies
BMET	Bureau of Manpower Employment and Training
CI	Consistency Index
CR	Consistency Ratio
CUS	Centre for Urban Studies
FGD	Focus Group Discussion
GoB	Government of Bangladesh
ILO	International Labour Organization
IOM	International Organization for Migration
INSTRAW	International Research & Training Institute for the Advancement of Women
KII	Key Informants Interview
KSA	Kingdom of Saudi Arabia
LGED	Local Government Engineering Department
MoEWOE	Ministry of Expatriate Welfare and Overseas Employment
NGO	Non Government Organization
NRB	Non-resident Bangladeshis
PRSP	Poverty Reduction Strategic Paper
RI	Random Index
RMMRU	Refugee and Migratory Movement Research Unit
SPSS	Statistical Package for Social Science
SVRS	Sample Vital Registration Survey
UAE	United Arab Emirates
UK	United Kingdom
UN	United Nations
UNDP	United Nations Development Programme
USA	United States of America
WB	World Bank

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Abstract

According to BMET, from Bangladesh over 6 million persons temporarily migrated to other countries and they sent US$ 56.99 billion remittance (7^{th} highest remittance earner in 2007) during 1976 to 2008. These remittances have significant impacts on income generation and poverty alleviation. Now question arises; does the remittance receiving households being economically empowered shift their residence from original locality to nearby towns or bigger cities or at least to growing rural centers (i.e. growth centers) in search of better facilities? If yes then how much influence does the remittance have on the decision of residential shift?

In such dilemma, traditional migration laws and theories put forward during the 50s-80s of the last century were reviewed and found that many of the points go in line with the residential shift and many does not due to remittance flow in the rural areas of Bangladesh. However, no study has been found to discuss the residential mobility of the remittance receiving households in Bangladesh. That is why this study would like to examine the dynamism residential shift of the remittance receiving household and causes behind it. It might contribute in formulation of policies and in designing of secondary and tertiary urban centers for redirecting people from original locality.

The study has been conducted through study of related literature, survey of migration statistics from different secondary sources and a questionnaire survey of 216 remittance receiving households from 3 upazilas of 3 Districts. In the very beginning of the study it has tried to discuss the dynamism of residential shift of remittance receiving households through Generic statistical analysis and complex Analytical Hierarchy Process (AHP) have been followed for analyzing and prioritizing the factors (push and pull) influence the shift to study the hypothesis.

It is found that 28% of the remittance receiving surveyed household has already shifted their residence after receiving remittances and 43% do have their future plan to shift their present residence in near future. Among them largest portion have their plan to shift in Dhaka city (37%) and district town (25%). And statistically (Chi Square Test) it was verified that the location of residential shift varies across the surveyed upazilas. Major considerations for residential shift (those who have already shifted) were

educational facility followed by staying close to relative, transportation facility, trade opportunities and security. Whereas while considering future residential shift, remittance receiving households mentioned better residence with urban amenities (62%) followed by educational facility (52%), trade opportunities (57%) and transportation facility (42%) would be their major concern. It was also revealed that respondent's considerations for residential shift were not consistent across the surveyed upazilas through Chi Square test. Then upazila wise relative weight of the factors was analyzed through AHP and found that respondents from three different upazila also prioritized the factors differently. Transportation (0.28), educational facility (0.28) and trade opportunities (0.29) were most important to the sampled respondents of Nabinagar, Hathazari and Chauddagram Upazila respectively compared to all other factors. Importance of investment and educational facility were evaluated as valued factors of residential shift everywhere.

Finally considering the relationship (relative weight) of residential shift and its influencing factors, government could take policies to develop small urban centers, satellite towns or could expand the small towns ensuring the urban services concerned by the study to fasten people in the small urban centers and to redirect people from shifting their residence to big cities like Dhaka, Chittagong etc.

Chapter One: Introduction

1.1 Background of the study

Due to acceleration in labor mobility, (foreign) remittance has been increasing considerably during the last three decades especially in developing countries (Buch *et al.*, 2002). As per calculation of Bangladesh Bureau of Manpower, Employment and Training (BMET, n.d.a), a total of 6,741,187 persons migrated temporarily from Bangladesh to other countries during the period from 1976 to 2009. The central bank estimates during 1976-2008 cumulative remittance from non-resident Bangladeshis (NRBs) to be at round US$ 67674.11 million (BMET, n.d.a). Flow of remittances (through formal channel) from NRBs has grown almost six times, from $1.1 billion in 2001 to $6.5 billion in 2007 and Bangladesh has been ranked 7th highest remittance earning country in the World (Vargas-Silva *et al.* 2009). According to the World Bank, in 2001 NRB-remittance was around 2% of Bangladesh's national GDP and in 2007 it stood to an impressive 8.8% (Hafiz, 2008) which was a silent economic revolution.

Studies (Siddiqui, 2003; Siddiqui and Abrar, 2003; and Afsar, 2003) have shown that remittances have significant positive impacts at households and community levels in poverty alleviation, income generation, accessing better health and education facilities and local commodity markets in source countries, especially in rural areas. Significant portion of remittance in Bangladesh is used predominantly for purchasing of land, home construction and repair. Murshid *et al.* (2002) stated that 15 to 40 percent and 10 to 30 percent is spent to buy land (outside the locality even at nearby town centers) and home respectively. A higher portion of remittance is used for household or personal consumption (IOM, 2006). In ISTRAW and IOM (2000) the figure (for household or personal consumption) is found 56 percent, whereas Afsar (2003) has mentioned consumption expenditure alone constituted 37-90 percent of the remittances. Investment in business or other productive purposes within the locality by remittance receiving households are found very negligible – four to five percent (Murshid *et al,* 2002; Siddiqui and Abrar, 2003). So there is limited or no financial return to the remitter or recipient (Faal, 2006).

So it can be said that the impact of remittance is two folds- both positive and negative. Parvin *et al.* (2008) and Murshid *et al.* (2002) stated that remittance stimulated consumptive and speculative expenditure is more than productive investment. And these speculative expenditures drain out money from the locality to nearby towns or bigger cities as well (McCormick and Wahba 2003). Again, more importantly, these remittance receiving households, being economically empowered tend to shift their residences from original locality to nearby towns or bigger cities or at least to growing rural centers (i.e. growth centers)in search of better facilities. Generally people migrate with the intention to move from places of lower opportunities in terms of wage, income, investment, education, health, housing, employment etc. to those of higher opportunities (Ghatak e*t al.* 1996)**.** But none of the traditional migration laws and theories (put forward during the 50s-80s of the last century) i.e. Zipf's Inverse distance law (1956), Ravenstein's Law of Migration, Harris Todaro Model (1970), Gravity model of migration, Stouffer's theory of intervening opportunities (1940), Lee's Push-pull theory (1967), Zelinsky's Mobility Transition Model (1971) have considered remittances inflow as a factor of this kind of shift. This is perhaps because remittance inflow was not a significant phenomenon in those days. Similarly, rural residential mobility is also the least studied issue in migration literature. Therefore, none of the studies (Hafiz, 2008; Siddiqui, 2003; Siddiqui and Abrar, 2003; Afsar, 2003; Murshid *et al.* 2002; IOM, 2006; ISTRAW & IOM, 2000) on Bangladesh have mentioned anything about remittance inflow as the cause of (Rural-Urban) migration or even as the cause of residential shift in the rural areas. But recent researchers like Haas (2007) have considered remittance as a factor which might eventually result in migration of the whole family to abroad. Remittance receiving households might shift their residence to earn better livelihood and living standard or to invest money where there are better opportunities. To address the relatively important factors of migration at local level the study applied Analytical Hierarchical Process. AHP enables the decision maker to express his qualitative judgment in a quantitative manner. Thus the decision makers can connect quantitative analysis and the subjective judgment of the factors. Therefore this research determined the relative weight of factors of the residential shift through AHP analysis.

1.2 Research hypothesis and questions

The hypothesis of the study is remittance inflow stimulates residential shift of the remittance receiving households and cause migration from local/original communities. So it is necessary to investigate the spatial consequence of remittance in Bangladesh: *is it causing residential shift of the whole family or at least, one or two members, to which destinations etc*? In this connection, it can also be thought that mobility of people in Bangladesh might depend on effective/prospective use of remittance. The following are the research questions this study explored for –

1. Number and percentage of people migrated from the village with respect to the total population
2. Number and percentage of people shifting their residence from the village after receiving remittance
3. Nature of the residential shift of the remittance receiving households
4. Identify the extent of effect of different factors on residential shift

1.3 Objectives

The aim of the study is to understand the rural residential shift due to (foreign) remittance inflows.

Specific Objectives are as follows:

- To study the nature of residential shift of the remittance receiving households in the study area.
- To assess the role of remittance as a cause of residential shift of remittance receiving households

1.4 Rationale of the study:

Major cities like Dhaka of Bangladesh are growing rapidly in comparison with smaller cities, towns and rural areas and turning to monocentriccity, and due to this unplanned urbanization thereby is declining the quality of urban life. The pressure on urban area will worsen day by day due to this unplanned rural urban migration until proper secondary and tertiary urban centers are designed. According to Waddington (2003) 17 PRSPs out of total 44 countries mention migration as a cause of rural urban ecological resources degradation. So it is crucial for public organizations and private developers as well as planners and policy makers to be aware of local level migration and its causes.

Nevertheless it is a matter of fact that there is no research to understand the phenomenon. Actually many studies in Bangladesh have been done to identify the impact of remittance on household and national economy but not on its impact on rural migration or residential shift at local level. This is why it should be paid more attention by the researcher as primeval researches ignore remittance as a factor of rural urban migration. On the other hand none of the migration theories pointed out remittance inflow as a cause of that shift. So policy makers and social spatial and economic planners should come forward to break such vicious circle and lead development towards balanced, sustainable and optimal form.

1.5 Scope and limitations of the study

Broadly this study is a micro level migration study. It would depict the nature of residential shift on that particular area. It put through light on the issues like residential mobility, permanent and temporary migration due to remittance inflow. It would also find out the causes and factors of residential shift of remittance receiving households, and which factors influence how much to make people think about residential shift. Basically it will help to understand the ignored cause of rural-urban migration which might give inputs to the rural development and decentralization policies of the Government while designing secondary and tertiary urban centers.

- Data of migration is not available especially at district level. The responsible organization publishes the data on the basis of rural –urban area. So it is needed to calculate district wise migration from raw data.
- Only three upazilas from three districts had been selected for this study. Therefore, it might not portray the typical scenario of the country.
- People did not feel free to cooperate because it involved financial matters which they were not comfortable to share. So there was a chance of data manipulation by the people that worsens the reliability of the data of small sample size.
- It was tough for the surveyors to have access into houses and collect the views of women as because people of Chuddagram and Hathazari Upazila were very much conservative and practices pardha. In spite of these social and cultural customs this study was able to ensure women voice
- A number of factors are associated with decision making of residential shift. It was not possible to address all the criteria for residential shift by the study. There

were great variances of choices among the individuals. Only some prominent spatial, social and physical factors obtained from questionnaire testing were considered in this study.

- The questionnaire of AHP is comparatively rigorous and complex to reply appropriately through proper understanding. And the consistency of determined relative weight of the factors of residential shift by AHP depends on complete logical values of each pair of attributes. As such single input of illogical value of any pair distorts the complete result. As the study depends on the responses of the households, the final output could be distorted. That's why to dig up the logical values of each pair, surveyors would consume much time on each AHP questionnaire to clarify to the household.

1.6 Organization of the thesis

Organization of the thesis is arranged by the following chapters.

Chapter one is introduction that represents background of the study, research hypothesis and questions, objectives of the study, rationale/significance of the study, scope and limitations of the study have also been discussed in the chapter. The chapter also guides the reader how the thesis has been organized.

Chapter two consists of intensive literature review and theoretical framework. The chapter attempts to clarify the terminologies regarding migration and remittance. Theories of migration as well as the theories of multi criteria decision making method AHP are also discussed in the chapter. This chapter tried to put light on the previous migration studies in Bangladesh, migration studies outside Bangladesh and migrant remittance situation in Bangladesh.

Chapter three is methodology that portrays a comprehensive process of conducting the study to achieve the objectives. This chapter represents sample design and basis for selecting the study areas. It also clarifies the process of data collection, data preparation and data analysis. Detailed application of AHP is found in this chapter.

Chapter four provides the study area profile and socio economic characteristics of the surveyed area. It also depicts the general information of the respondents.

Chapter five is composed of generic analysis. It portrays the basic information of the migrants and remittance receiving households. This chapter not only finds out the influence of remittance and remittance derived causes on the decision of residential shift but also the perception of the people about residential shift. Here changes in the livelihood due to inflow of remittance will also be portrayed.

Chapter six consists of the analysis of AHP model. It does not only reveal the relative weight of the factors of residential shift but also examines the consistency of the evaluation among the factors by the respondents.

Chapter seven concludes the summary of the findings, general observations of the respondent about remittance and local level migration. It also tries to sketch out some policy implications based on the study findings. The window of thinking regarding migration is also widened for further research in this chapter.

Chapter Two: Literature Review

2.1 Introduction

The review of the literature focused mainly on studies and papers written about migration and/or remittances in and outside Bangladesh. Unfortunately, data and information on international migration, internal migration and remittances in Bangladesh are relatively limited. Among the most important centers that have carried out research on the topic are the Refugee and Migratory Movement Research Unit (RMMRU) of the University of Dhaka and the Bangladesh Institute of Development Studies. Furthermore, the International Organization for Migration (IOM) and the International Labour Organization (ILO) have also commissioned a number of studies.

This chapter summarizes some studies related to remittance receiving households and migration scenario in Bangladesh. It also describes some general notions, theories and typologies of migration for the purpose of the study. This chapter is an initiative to explore the conventional understandings of migration particularly rural-urban residential issues and remittance inflow in Bangladesh.

2.2 Terminologies

This part attempts to clarify different terms frequently used in the study.

2.2.1 Remittance

There are several definitions of remittances. In the broadest sense, remittances refer to cash or in-kind transfers from one place to another. Different types of remittances can be distinguished: international or national, individual or collective, formal or informal, in kind or in cash or only financial. In this study, remittances refer to financial international transfers. It means money sent back to Bangladesh by nationals or emigrants from the country where they are living or working. According to the UN International Convention on the Protection of Migrant Workers' Rights, the term migrant workers refers to persons who are engaged in remunerative activities in a state of which he or she is not a national (UN General Assembly, 1990). Siddiqui (2003) defined international remittances as the portion of migrant workers' earnings sent back from the country of employment to the country of origin.

2.2.2 Residential shifts and its types

Residential shift is the movement of people across a specified boundary for the purpose of establishing a new or semi-permanent residence. According to the Bangladesh Bureau of Statistics (BBS, 1989:160) migrants are the people who change their residence for a period of six months or more. This study considers both permanent as well as temporary residential shift.

There are two basic types of residential shift studied by demographers

1. Internal residential shift

This refers to a change of residence within national boundaries such as between or within states, provinces, cities or municipalities. An internal migrant is someone who shifts his or her residence to a different administrative territory or within the administrative territory.

2. International residential shift

This refers to change of residence over national boundaries. An international migrant is someone who moves to a different country. International migrants are further classified as legal immigrants, illegal immigrants and refugees. Legal immigrants are those who moved with legal permission of the receiver nation, illegal immigrants are those who moved without any legal permission and refugees are those crossed an international boundary to escape persecution.

2.3 Theories of migration or residential shift

There are different theories which seek to understand who migrates and why. During the research work all the theories of migration were studied to find out whether any of them put light on the remittance as a factor of shifting residence or not. Following are some theories of migration put forward during the 50s-80s of the last century

2.3.1 Gravity Model

The gravity model referred by social scientists as the modified law of gravitation, takes into account the population size of two places and their distance. Since larger places attract people, ideas, and commodities more than smaller places and places closer together have a greater attraction, the gravity model incorporates these two features. The relative strength of a bond between two places is determined by multiplying the

population of city A by the population of city B and then dividing the product by the distance between the two cities squared (Matt Rosenberg n.d., Wapedia n.d.a)

2.3.2 Stouffer's theory of intervening opportunities (1940)

S. A. Stouffer states that The number of migrants moving from one town (i) to another (j) is directly related to the opportunities available at j but inversely proportional to the number of intervening opportunities between i and j.

As an illustration, a number of Jewish nineteenth-century migrants from Russia, bound for the New World, actually settled in the East End of London. The theory is also used to study patterns of consumer behavior; for shoppers living west of Poole, Bournemouth has more retail outlets, but Poole lies between them and Bournemouth, and thus gets more of their trade. The concept indicates that opportunities nearby are more attractive than slightly better opportunities further away. One drawback of this theory is the difficulty of measuring opportunities (Gibson, 1975, Stouffer, 1940).

2.3.3 Zipf's Inverse distance law (1956)

In 1949 G. Zipf states that the movement of people between two towns is inversely proportional to the distance between them (Population Geography n.d., Wapedia n.d.b)

2.3.4 Ravenstein's Laws of Migrations

In 1885 Ravenstein published a paper entitled "The Laws of Migration" in the Journal of the Statistical Society in UK. The laws are as follows

- The greatest body of migrants travel short distances.
- This produces currents directed towards great commercial centers.
- Each current has a compensating counter-current in the opposite direction.
- Both currents display similar characteristics
- Long distance movements are directed towards great commercial centers.
- People in urban areas migrate less than people in rural areas.
- Males migrate more over long distances and females migrate more over short distances.

Additions to these laws (Grigg, 1977)

- Most migrants are between 20-34 years of age.
- People mainly move for economic reasons.

- Urban housing development is inadequate for the influx of migrants so ghettos/shanties are formed.

2.3.5 Lee's Push-pull theory (1967)

Any migration is as a result of push forces at the origin and pull forces at the destination. Examples of push forces are famine, war and poverty. Examples of pull forces are availability of food, peace and wealth.

In 1966 Everett Lee reformulated Ravenstein's theory to give more emphasis to internal (or push) factors. Lee also outlined the impact that intervening obstacles have on the migration process. He argued that variables such as distance, physical and political barriers, and having dependents can impede or even prevent migration. Lee pointed out that the migration process is selective because differentials such as age, gender, and social class affect how persons respond to push-pull factors, and these conditions also shape their ability to overcome intervening obstacles. Furthermore, personal factors such as a person's education, knowledge of a potential receiver population, family ties, and the like can facilitate or retard migration. (Dorigo & Waldo, 1983)

2.3.6 Zelinsky's Mobility Transition Model (1971)

Migration is seen as an independent variable influencing social change. Focus is not only on effects of migration on places of origin and destination but on migrants themselves. Zelinsky suggested that there might be a transition to patterns of migration just as there is for demographic change. Zelinsky claimed "*there are definite, patterned regularities in the growth of personal mobility through space-time during recent history and these regularities comprise an essential component of the modernization process***"**

Zelinsky developed five phase model of mobility(rural-to-urban and urban-to-urban) transition parallel to vital transition both of which are considered as "essential components of the modernization process" (Zelinsky, 1971)

Phase 1: ***Pre modern traditional society*** **–** shows limited migration and circulation with society being restricted by customary practices

Phase 2: ***Early transitional society*** **–** shows a high fertility and population growth resulting in widespread migration, especially rural-urban migration, colonization of frontier lands and emigration and an increase in migratory circulation

Phase 3: ***Late transitional society*** shows reduced rates of natural increase accompanied by a slackening of three types of migration: rural urban, colonization of frontier lands and emigration. There is an increase in the volume and complexity of various forms of circulation

Phase 4: ***The advanced society*** shows a continued slackening of three types of migration – rural urban; colonization of frontier lands and emigration. Natural increase is limited as a result of reduced fertility and mortality and inter-urban and intra-urban migration replaces the rural/urban variety. Circulation continues to increase in intensity.

Phase 5: ***The future advanced society*** May be characterized by a general decline in migration although more may be of an inter-urban and intra-urban variety. Zelinsky predicts that some forms of circulation will decline and others increase.

2.3.7 Harris Todaro Model (1970)

Harris Todaro Model is an economic model used to explain some of the issues concerning rural urban migration. The main result of the model is that the migration decision is based on expected income differentials between rural and urban areas. Migration will further take place as long as expects wages in the urban sector, the wages in the rural sector exceeds (Harris and Michael 1970).

The Harris-Todaro model produced two powerful policy results. The first concerned a policy of formal sector job creation to employ the unemployed. Such a policy, they concluded, would increase the formal sector labor force by more than the number of new jobs created, thereby raising the number of urban unemployed. Thus, the solution to urban unemployment would not be urban employment creation. The second policy option considered was a policy of rural development. If such a program could increase the rural traditional sector wage, unemployment would then fall. Thus, in the Harris-Todaro model, the solution to urban unemployment would be rural development.

2.3.8 Theories of Economics and Migration

Economic theories of migration have only limited applicability in the area of forced migration, in which displaced persons often will have little or no time for deliberations of utility maximization.

First, neoclassical economic theory (Sjaastad, 1962; Todaro, 1969) suggests that international migration is related to the global supply and demand for labor. Nations with

scarce labor supply and high demand will have high wages that pull immigrants in from nations with a surplus of labor.

Second, segmented labor-market theory (Piore, 1979) argues that First World economies are structured so as to require a certain level of immigration. This theory suggests that developed economies are dualistic: they have a primary market of secure, well-remunerated work and a secondary market of low-wage work. Segmented labor-market theory argues that immigrants are recruited to fill these jobs that are necessary for the overall economy to function but are avoided by the native-born population because of the poor working conditions associated with the secondary labor market.

Third, world-systems theory (Sassen, 1988) argues that international migration is a by-product of global capitalism. Contemporary patterns of international migration tend to be from the periphery (poor nations) to the core (rich nations) because factors associated with industrial development in the First World generated structural economic problems, and thus push factors, in the Third World.

2.3.9 Theories of migration and the study context

Zipf's Inverse distance law and Gravity model of migration draw attention to the relative strength of the bond between two places. And the bond very much depends on the movement of the people and distances between the places. Besides this Stouffer's theory of intervening opportunities and Lee's Push-pull theory have had a discussion on the opportunities (pull factors) at destination, obstacles (push factors) at origin and the distance to intervene the opportunities. Others are based on diverse issues like migration characteristics (Ravenstein's Law of Migration), economics and international migration (Harris Todaro Model, neoclassical economic theory, world-systems theory, segmented labor-market theory). Zelinsky discussed on pattern of migration and mobility over time.

The dynamism of migration has changed over time. At present there are many issues that do not fit with the traditional migration laws and theories. Here, the study tries to flag some issues which might not be directly considered or be overlooked in the traditional theories. All the theories considered push factors as negative (war, famine, lack of job opportunities etc) phenomenon but there might be somewhere positive push factors (remittance inflow, knowledge, economic empowerment etc.) as well which is unnoticed. Many families in rural Bangladesh being economically empowered shift their residence to intervene the desired urban opportunities and facilities. In addition to that migration of

any household member to abroad could be one of the major factors for internal migration as well. So there might have some relations between international and internal migration which is also yet to be discussed in the theories. This study tries to explore the ignored causes of rural urban residential shift.

2.4 Migration and Remittance scenario in Bangladesh

Bangladesh is a major labor exporting country. Since the country's independence in 1971, around 7 million Bangladeshis went abroad. As per calculation of Bangladesh Bureau of Manpower, Employment and Training, a total of 6,741,187 persons migrated temporarily from Bangladesh to other countries during the period from 1976 to 2009 (BMET, n.d.a). The central bank estimates during 1976-2009 cumulative remittance from non-resident Bangladeshis (NRBs) to be at round US$ 67674.11 million (BMET, n.d.a).

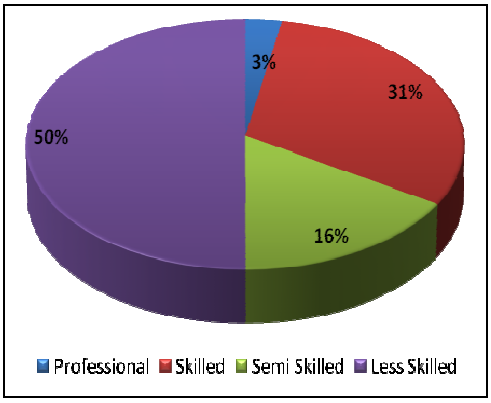
Table 2.1: Country wise % of migration from Bangladesh (from 1976 to 2009)

Country	% of migration	Country	% of migration
1. K.S.A	40.83	12. Italy	0.33
2. U.A.E	21.21	13. S.Korea	0.32
3. Malaysia	10.95	14. Brunei	0.29
4. Kuwait	7.65	15. Lebanon	0.27
5. Oman	5.09	16. Mauritious	0.19
6. S.Pore	3.83	17. UK	0.14
7. Others	2.46	18. Sudan	0.12
8. Qatar	2.30	19. Egypt	0.06
9. Bahrain	2.60	20. Yeman	0.02
10. Libya	0.96	21. Japan	0.01
11. Jordan	0.37		

Source: BMET, n.d.a

Figure 2.1:Level of manpower migrated (1976-2009)

Most international remittances come from the Middle East and thus from temporary migrant workers. In this regard Saudi Arabia accounts for more than 40 per cent followed by Malaysia 10.95%. In those countries 2.87% of the total amounts of migrants are employed as professionals, 31.04% as skilled, 16.08% as



Source: BMET, n.d.a

semi-skilled and 50.01% as unskilled (BMET, n.d.a).

Official estimates and the prevailing literature suggest that external labor migration is concentrated mainly in the districts of Sylhet, Chittagong, Noakhali, Comilla and Dhaka (Murshid *et. al.*, 2002). In certain instances, destination regions attract labor migrants from particular regions. The link between Sylhet and Tower Hamlets is without any doubt the best example. Migration to Rome, Italy can be traced back to Faridpur district. Female migrant workers come mainly from the greater Dhaka districts and nearby districts Munshiganj, Manikganjan, Chandpur (INSTRAW and IOM, 2000)

The total remittance sending picture of the Bangladesh people working in different countries for the last fiscal year is given below:

Table 2.2: Country wise percentage of remittance inflow in Bangladesh (1998 to October 2009)

Country	% of remittance	Country	% of remittance
1. K.S.A.	34.82	11. Italy	1.60
2. U.S.A.	15.26	12. Singapore	1.32
3. U.A.E.	13.20	13. Japan	0.41
4. Kuwait	10.85	14. Germany	0.26
5. U.K.	9.13	15. S.Korea	0.22
6. Qatar	3.60	16. Hongkong	0.13
7. Oman	3.43	17. Australia	0.12
8. Others	2.10	18. Iran	0.03
9. Malaysia	1.76	19. Libya	0.01
10. Bahrain	1.73		

Source: Bangladesh Bank, n.d.

Significant portion of the remittance came from Middle East as because around 70 percent of people migrated in those countries from Bangladesh. Major portion of remittance in Bangladesh is used predominantly for purchasing of land, home construction and repair. Murshid *et al.* (2002) stated that 15 to 40 percent and 10 to 30 percent is spent to buy land and home respectively. In ISTRAW & IOM (2000) it is found that 56 percent of remittance is used for personal and household consumption whereas Afsar (2003) has mentioned consumption expenditure alone constituted 37-90 percent of the remittances. Investment in business or other productive purposes within

the locality by remittance receiving households are found very negligible – four to five percent (Murshid *et al*, 2002; Siddiqui and Abrar, 2003).

2.5 Previous Migration Studies in Bangladesh

As a basis for a development of more effective secondary and tertiary urban center through decentralization policy in Bangladesh, it is important to explore population distribution and its implications on the national and regional economy. Beside this, it is also very important to discover who the migrants are and who might be. It is also necessary to find out migration patterns, explain the motives and causes of residential shift and condition in which migration occurs and where it occurs.

Unfortunately while there are number of descriptive studies such as CUS, 1982; 1988 and 1990 which explore migrant characteristics, there are few studies like Chaudhury & Curlin, 1975; Chaudhury, 1978 explaining the causes of migration from villages to Dhaka. Chowdhury (1978) in his study gave attention to the causes of out migration from rural Bangladesh. His main finding was that out migration from villages are governed primarily by rural push factors than the pull factors. Rather than income differential among regions as defined in the Harris Todaro Model, push factors like land scarcity, unequal distribution of land and high proportion of agricultural laborers are main reasons for out migration in Bangladesh as defined in his study.

Afsar (2000) argued that migrants often benefited more than non migrants because of their innovative and risk taking nature. The benefits included higher or regular income, gain in wealth, greater access to public services and education.

Mahbub (1997) in his study found that movement of people in future would be dominated by lower classes by analyzing six villages in three districts. He also found that low income to lower middle income people are highly mobile and lowest and middle income group are least mobile. Beside pattern analysis of commuting, he also depicted the characteristics of the commuter.

Hossain (2001) showed that majority of migrants were very young at the time of their first migration. Maximum migrants were in the age group 20-24 years. He also found the

rate of migration for graduates was the highest. His study found most migrants were involved with studies. Through multivariate logistic regression he found that out migration was significantly higher for the households having occupation other than agriculture and higher education attended.

Many of the studies (Murshid *et al.* 2002; Siddiqui, 2003; Siddiqui and Abrar, 2003; Afsar, 2005; IOM, 2006, ISTRAW & IOM, 2000; Parvin *et al*. 2008) only concern about the impacts of remittance on livelihood and its utilization pattern, but none of them consider it as a potential factor of internal migration. Again the study (Afsar, 2005) focused on migrant's characteristics, problems faced by migrants, consequences of migration, government, nongovernment and international policy issues etc. She explained development and migration linkage by illustrating remittance use, poverty and inequality in rural areas. She also pointed out some policy gaps. Her recommendation was to promote inter and intra regional equity in resource distribution. So to promote equity in resource distribution there will have inter and intra regional population distribution policy. But due to lack of studies in intra residential mobility it has not happened in Bangladesh. That is why intra regional population distribution policy is now considered as one the most significant phenomenon in Bangladesh. Lack of adequate data on migration from secondary sources (Bangladesh Bureau of Statistics & Bangladesh Manpower Employment and Training) can be put forward as one of the reasons for this vacuum also. It is widely acknowledged that consequences of internal migration vary significantly and consistently with the nature of migration Studies that attempt to explore cause and consequences of migration in Bangladesh are extremely rare.

In recent years migration due to climate change has increasingly became the main focus of the researchers. Herrmann and David (2009) in their paper "Environmental pressures and rural-urban migration: The case of Bangladesh" argued that frequent recurrence of natural disasters encourage people most to shift their residence.

2.6 Relevant studies outside Bangladesh

Migration studies in different regions have generally dealt with the economic aspects of migration. However, majority of these studies has dealt with the differentials and

determinants of migration focusing mainly on causes and consequences of migration. Though it was not possible to review all the migration literatures around the world but an intensive level was done to accumulate different findings from different arena. The aim of this review was to replicate those policy recommendations where it fits.

In the study “Rural-Urban Migration and Social Mobility in Third World Metropolises: A Cross-National Study” Hagen Koo (1978) synthesizes findings from several major Asian and Latin American metropolises and shares a cross-national test of the implicit two models the under privilege model which predicts that rural migrants enter the bottom rung of the urban occupational structure and suffer inequality in status attainment in the city and push up model which suggests that the influx of rural migrants provides a structural impetus to upward social mobility for the urban natives. After evaluating the author rejects both models and explicates structural reasons why the models do not hold true in Third World cities

The paper “Is there a Step-wise Migration in Nigeria?: A Case Study of the Migrational Histories of Migrants in Lagos” by Afolayan, A. A(1985) sets out to test whether or not the movement pattern of people in Nigeria is step-wise. The findings show that step-wise migration cannot adequately describe all the patterns observed. So the multi step migration is introduced which is the indication of the complexity of factors influencing human mobility behavior. Here the author critically observed the urban-urban, rural – urban movement patter for utilizing it as a basis for advocating for the development of intermediate urban centres.

Sylvia Chant (1998) demonstrates gender selectivity of population movement and shows that most women have little choice in determining decisions over their own or others' migration (or household arrangements). The paper concludes that governments and agencies could do more for gender equality by acknowledging the potentially transformative role of interventions.

The main focus of the paper “Rural Industrialisation and Internal Migration in China” by Zai Liang, Yiu Por Chen, and Yanmin Gu (2002) was to examine impact of rural industrialization on migration. China has, since the late 1970s, actively pursued a strategy of rural industrialization to avoid the problems of overcrowding and urban

unemployment that are associated with over urbanization by encouraging the development of rural industries which provide employment opportunities for the surplus labor in agriculture. Here the authors used robust estimation of logit models and found that rural industrialization did not have a statistically significant impact on the probability of either intra provincial or interprovincial migration. Thus the results cast some doubt about whether China could move on a unique path towards urbanization.

In the paper “The Determinants of Temporary Rural-to-Urban Migration in China” Haizheng Li and Steven Zahniser (2002) have revealed some interesting as well as paradoxical findings that an increase in farming income reduces the probability of migration, whereas the amount of land of households does not have a significant effect on migration in most provinces. It is also found that least-educated and most-educated members of rural society being less likely to migrate in most of the provinces in China.

In the paper “Rural-Urban Migration in Bolivia : Advantages and Disadvantages” the author L.E. Andersen(2002) argues that the negative effects of rural-urban migration are significantly smaller in Bolivia than in other Latin American countries and that the benefits are potentially large. In response to that statement Andersen recommends some polices such as i) to be capable of providing basic services for new arrivals ii) funds to municipalities should be dependent on population growth rates as well as population size iii) boarding schools of various types encourage good migration - they should be more widely applied to encourage beneficial migration. He also affirms that encouraging rural urban migration may be one of the cheapest way of reducing poverty as because economics of scale in cities bring economic opportunities and increase people`s income.

The paper “Pattern of local migration and their consequences in a rural Ethiopian population” by Peter Byass, Yemane Berhane, Anders Emmelin, and Stig Wall (2003) was based on the health consequences especially mortality and fertility rate of residents and in migrants due to local level migration.

The author Richard U. Agesa & Sunwoong Kim (2003) in the paper “Rural to Urban Migration as a Household Decision: Evidence from Kenya” tested the validity of the intertemporal expected-utility model using the migration data from Kenya and also gave a brief idea on split and family migration. The findings supported the predictions of the

theoretical model; specifically, the results suggested that a large number of dependents may increase the likelihood of split migration.

The paper by Robert E. Lucas Jr., 2004 was a theoretical study of rural-urban migration-urbanization - as it had occurred in many low-income economies in the postwar period. Here the author revealed the process as a transfer of labor from a traditional, land-intensive technology to a human capital-intensive technology with an unending potential for growth. This model has emphasized the role of cities as places in which new immigrants can accumulate the skills required by modern production technologies.

Lei Guang (2006) in his study highlighted and explained the state connection in China's rural-urban migration. Here the author had explored the role of China's rural local state-owned and urban state-owned units in its rural-urban migration process as most studies on Chinese migration had only focus on migrants moving from rural to urban areas through informal mechanisms outside of the state's control. Therefore in this study the author treated the Chinese state as an obstructionist force and dismissed its facilitative role in the migration process.

In the World Bank Policy Research Working Paper “Rural-Urban Migration In Developing Countries: A Survey of Theoretical Predictions and Empirical Findings” Somik V. Lall, Harris Selod and Zmarak Shalizi(2006) are basically trying to find out the answers of the following questions through studying the existing theoretical models, their conflicting policy implications and recent relevant empirical research

- To what extent is internal migration a desirable phenomenon and under what circumstances?
- Should governments intervene and if so with what types of interventions?
- What should be their policy objectives?

Based on the literature review finally they assess that migration can be beneficial or at least be turned into a beneficial phenomenon.

Johan Fredrik Rye and Arild Blekesaune (2007) argued that the tendency of inter-generational reproduction of social class status and lifestyles encourages members of rural upper classes to migrate to urban areas, to a greater extent than among young

people in the lower social classes to have the flavor of urban life, particularly to take-up educational opportunities.

In recent years many researcher like James Morrissey (2007) is highlighting climate change as one of the major factor for migration/displacement

2.7 Analytic Hierarchy Process (AHP)

In this particular study it was difficult to find out the most dominant causes of internal migration through general statistical analysis. In this regard Analytic Hierarchy Process (AHP) is introduced to discover which causes influence people how much to think of this shift.

AHP is one of Multi Criteria decision making method that was originally developed by Prof. Thomas L. Saaty. In short, it is a method to derive ratio scales from paired comparisons. The input can be obtained from actual measurement such as price, weight etc., or from subjective opinion such as satisfaction feelings and preference. AHP makes assessments, prioritization and selection among options more readily measurable. AHP allow some small inconsistency in judgment because human is not always consistent. The ratio scales are derived from the principal Eigen vectors and the consistency index is derived from the principal Eigen value. Application of AHP model particularly for this study will be described in the research design chapter.

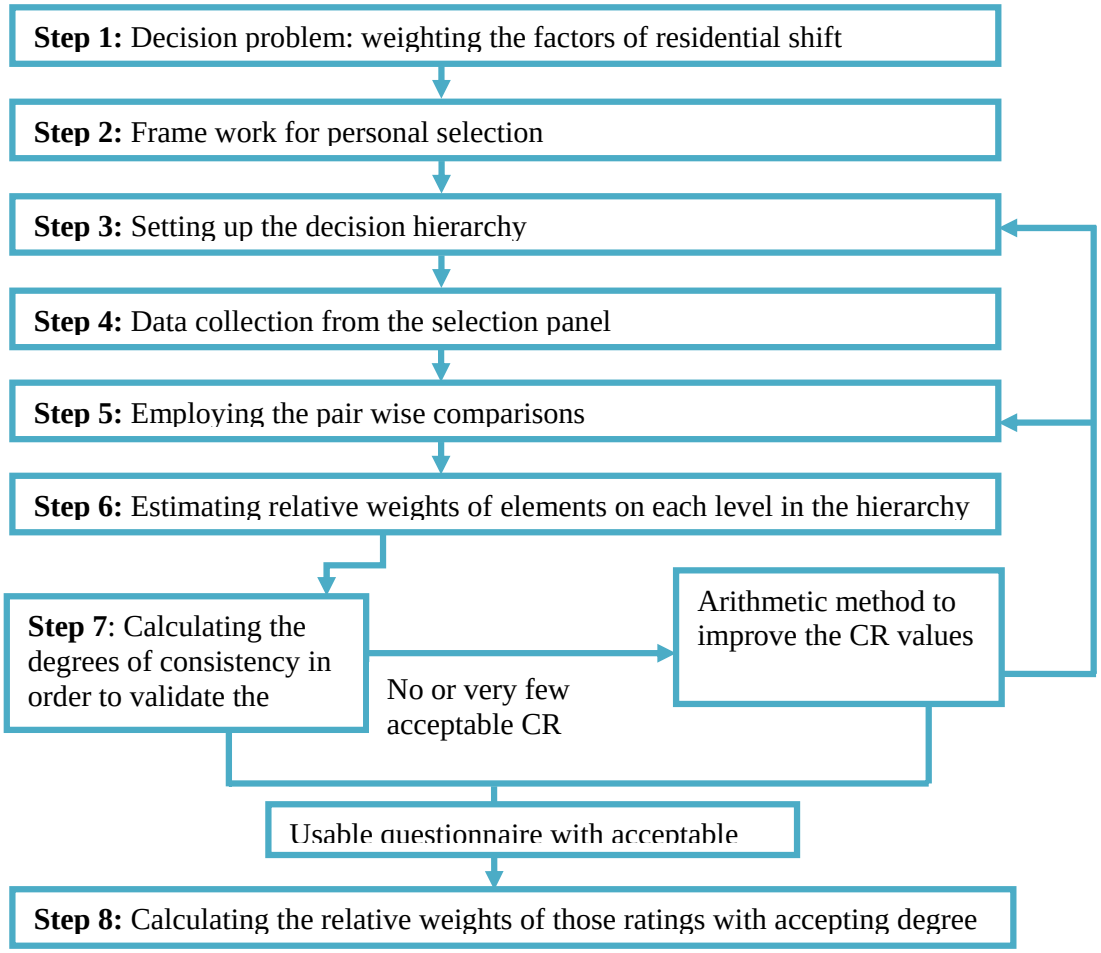
2.7.1 Steps of Analytic Hierarchy Process (AHP)

A step by step description of the AHP method according to Eddie,et al (2001) is given below.

Step1: Decision Problem: weighting the selection criteria

The decision problem should be defined clearly since it derives the whole process. Before the use of AHP, it must be ensured that it is an appropriate method for the study objectives. It should be clearly explained what the decision problems are and why AHP has to be used. After then subjective judgments are made to guess each element according to an absolute rating scale.

Figure 2.2: Steps of the AHP



Step 2: Framework for personal selection

This step decomposes the complexity of a problem into different levels or components and synthesizing the relation of the components.

Step 3: Setting up the decision hierarchy

In this step the systematic representation of the decision hierarchy is developed that represents the system of the problem. The formation of the hierarchy is based upon two assumptions, without which a problem cannot be dealt with using AHP;

(1) It is expected that each level in the hierarchy would be related to the elements at the adjacent levels. AHP recognizes the interaction between elements of two adjacent levels.

(2) There is no hypothesized relationship between the elements of different groups at the same level.

Step 4: Data collection from the selection panel

Data are obtained by direct questioning the group who are actively involved in the decision problem. A questionnaire is designed to collect data that are useful to assign weights to the elements of the decision hierarchy.

Step 5: Employing the pair-wise comparisons

The elements of each level of the decision hierarchy are rated using the pair-wise comparison. The Saaty's Scale (Saaty, 1980) of measurement used to rate the intensity of importance between two elements is adopted. After all elements have been compared with the priority scale pair by pair, a paired comparison or judgment matrix is formed.

Step 6: Estimating the relative weights of elements on each level in the hierarchy

After pair-wise comparison matrix is developed, a vector or priorities (i.e. a proper or eigen vector) in the matrix is calculated and is then normalized to sum 1.0 or 100 percent. This is done by dividing the elements of each column of the matrix by the sum of the column (i.e. normalizing the column); then, obtaining the eigen vector by adding the elements in each resulting row (to obtain "a row sum") dividing this sum by the number of the elements in the row (to obtain "priority or relative weight")

Step 7: Calculating the degree of consistency in order to validate the results

People might be inconsistent in evaluating the pair wise comparison and thus one of the important tasks of AHP is to calculate the consistency level of the estimated vector. Consistency Ratio (CR) is used to measure the consistency in the pair-wise comparison. Saaty (1990) has set acceptable CR values for different matrices, the CR values is:

(1) 0.05 for a 3-by-3 matrix

(2) 0.08 for a 4-by-4 matrix, and

(3) 0.1 for larger matrices

There are number of reasons for what results (CR value) may be inconsistent.

a) Clerical error: mistakes in data entry may cause inconsistency.
b) Lack of information: can cause the judgment to appear random resulting in a high inconsistent ratio.
c) Lack of concentration or of interest: it is often found when the respondent is fatigued or in a hurry or not in mood to fill up the questionnaire

d) Lack of consistency in the decision being modeled: the real world situations are rarely consistent by nature. The interesting example is when one has to compare three professional sports teams. The result of the game played by them are sometimes random like team 'A' defeats team 'B' and is defeated by 'C' where as team 'B' might have defeated team 'C'.
e) Inadequate model structure: ideally the complex decision is structured in a way that the elements in a level are comparable within an order of magnitude of different factors in the level above.

Step 8: Calculating this step relative weight of all those ratings with accepting degree of consistency for the selection criteria

In this step weight of all selection criteria are calculated. Then each criterion is given certain score and calculated the final score for each alternative.

2.7.2 Data Aggregation for AHP

If there is more than one respondent (or more than one group with a homogeneous elicitation) the different elicitations have to be aggregated. Although sophisticated techniques for numerical aggregation are available (Ball and Srinivasan, 1994), many studies use simple average measures. According to Nevalainen (1990) average should not be calculated; rather the median or the *Perth* -formula $(a+4b+c)/6$, when a is the smallest value, b the median and c the largest value of the observations (for details see 3.7). In this way extreme elicitations for a and c do not bias the calculations too much. Kauko (1997) also suggested this formula.

2.7.3 Mathematical Description of AHP

In this section, the AHP technique is discussed to show how it helps the decision according to Chaung, et al. (2005). Suppose that there are m objectives, the AHP technique performs the multi-objective decision by the following steps.

1. Complete the following pair-wise comparison matrix A for m objectives

$$A=\begin{bmatrix} a_{11} & a_{12} & \cdots\cdots & a_{1m} \\ a_{21} & a_{22} & \cdots\cdots & a_{2m} \\ \cdots & \cdots & \cdots & \cdots \\ a_{m1} & a_{m2} & \cdots\cdots & a_{mm} \end{bmatrix} \text{----------(1)}$$

Where, a_{ij} indicates how much more important the i^{th} location is than the j^{th} location requirement for construction the column vector of importance weighting of location requirements. a_{ij} indicates how much more satisfactory the i^{th} candidate location is than the j^{th} candidate location for a particular location criterion for making the optimal location decision.

For all I and j, it is necessary that $a_{ij} = 1$ and $a_{ij} = \frac{1}{a_{ji}}$

The possible assessment value of a_{ij} with the corresponding interpretation is shown below

Value of a_{ij}	**Interpretation**
1	Objective *i* and *j* are equal importance
3	Objective *i* is weekly more important than objective *j*
5	Objective *i* is strongly more important than objective *j*
7	Objective *i* is very strongly more important than objective *j*
9	Objective *i* is absolutely more important than objective *j*
2,4,6,8	Intermediate value

Appropriate rating among the attributes to each other between 1-9 is used for this study. For the values the verbal equivalences are given for this research: The assessment rating among the attributes used in the study

Verbal equivalences	**Value**
Extremely important	9
Strongly important	7
Slightly important	5
More than equal	3
Equal	1
Less than equal	1/3
Slightly unimportant	1/5
Strongly unimportant	1/7
Extremely unimportant	1/9

2. Divide each entry in column i of A by the sum of the entries in column i. This yields a new matrix Aw, in which the sum of the entries in each column is 1.

$$A_w = \begin{bmatrix} \frac{a_{11}}{\sum_{i=1}^{m} a_{11}} & \frac{a_{12}}{\sum_{i=1}^{m} a_{12}} & .... & \frac{a_{1m}}{\sum_{i=1}^{m} a_{1m}} \\ .... & .... & .... & .... \\ .... & .... & .... & .... \\ \frac{a_{m1}}{\sum_{i=1}^{m} a_{11}} & \frac{a_{m2}}{\sum_{i=1}^{m} a_{12}} & .... & \frac{a_{mm}}{\sum_{i=1}^{m} a_{mm}} \end{bmatrix} \text{----------(2)}$$

3. Compute c_i as the average of the entries in row i of A_w to yield column vector C

$$C = \begin{bmatrix} c_1 \\ ... \\ ... \\ c_m \end{bmatrix} = \begin{bmatrix} \frac{\frac{a_{11}}{\sum_{i=1}^{m} a_{11}} + \frac{a_{12}}{\sum_{i=1}^{m} a_{12}} + ... + \frac{a_{1m}}{\sum_{i=1}^{m} a_{1m}}}{m} \\ ..... \\ ..... \\ \frac{\frac{a_{m1}}{\sum_{i=1}^{m} a_{11}} + \frac{a_{m2}}{\sum_{i=1}^{m} a_{12}} + ... + \frac{a_{mm}}{\sum_{i=1}^{m} a_{mm}}}{m} \end{bmatrix} \text{----------(3)}$$

Where c_i represents the relative degree of importance for the i^{th} location requirement in the column vector of importance weighting of location requirement. c_i represents the evaluating score that the i^{th} candidate location is assessed for a particular location criterion for making the optimal location decision.

2.7.4 Consistency arguments

To check for consistency in a pair wise comparison matrix, the sub steps are performed as follows,

a) Compute largest Eigen Value, $\lambda_{\max} = c \times \left[\sum_{i=1}^{m} a_{11} + \sum_{i=1}^{m} a_{12} + ... \sum_{i=1}^{m} a_{1m} \right]$

It is obtained from multiplying the sum of columns of the complete comparison matrix with principle Eigen value of each factor.

b) Compute Consistency Index , $CI = \frac{\lambda_{\max} - n}{n-1}$

It represents the deviation or degree of consistency

c) Get the reference values of the *RI* (Random Index) for the different numbers of m.(Annex C, Table C5). It depends on the number of the attributes among which it is compared

d) Compute Consistency Ratio by comparing CI (Consistency Index) to the (Random Index) for the appropriate value of m to determine if the degree of consistency is satisfactory.

So, $CR = \frac{CI}{RI} = \frac{\frac{\lambda_{\max} - n}{n-1}}{RI}$

If CI is sufficiently small, the decision maker's comparisons are probably consistent enough to give useful estimates of the weights for the objective functions. If CR=<0.10, the degree of consistency is satisfactory, but CR>0.10, inconsistencies may exist, and the AHP may not yield meaningful results.

2.7.5 Advantage of AHP

AHP helps capture both subjective and objective evaluation measures, providing a useful mechanism for checking the consistency of the evaluation measures and alternatives suggested by the respondents thus reducing bias in decision making. The method AHP has two obvious and substantial benefits:

a) It allows for diversification of demand(and then indirectly also supply);
b) It ascertains an intangible element in relation to perceptions (Kauko, 2004).

According to Eddie et al. (2001) AHP has two advantages over the simple rating method.

a) First AHP adopts a pair wise comparison process by comparing two objects at one time to formulate a judgment as to their weight. With an adequate measurement this method is more accurate to achieve a higher level of consistency
b) Since it requires the respondents to think precisely before giving their answers. Usually the more a person knows about a situation , the more consistent results that can be expected from the person.

The main advantage of AHP is that it helps to determine relative intensives or weights of identified attributes on the basis of the subjective judgments by pair wise preference comparison of that attributes. By AHP it is possible to split a given goal into several sub criteria which are then cloud be assessed separately from each other.

Qualitative factors are crucial but often cumbersome and usually treated as part of management`s responsibility in analyzing results rather than quantified and included in a model formulation of the facility location problem (Lee, Green and Kim, 1981). Qualitative decision factors can be readily incorporated into facility location problems if the AHP is employed.

2.7.5 Criticisms of AHP

Although the AHP has been the subject of many research papers and the general consequences is that the technique is both technically valid and practically useful, there are critics of the method. Their criticisms have included:

a) Since there is no theoretical basis for constructing hierarchies, AHP users can construct different hierarchies for identical decision situations, possible producing different solutions
b) AHP rankings are claimed to be arbitrary because they are based on subjective opinions using a ratio scale
c) There are said to be flaws in the methods of combining individual weights into composite weights and
d) The process has no sound underlying statistical theory (Wikipedia,2008)

The method has certain problems however such as the inevitable lack of robustness. The inherent property of the AHP restricts the elements to compare to very few, and the inability to perform direct comparison of validity with results obtained with methods based on revealed choices and market outcome data (Kauko, 2007).

Chapter Three: Research Design and Methodology

3.1 Introduction

Research Method describes the procedures to organize and analyze the scattered ideas and views of the study. It also expresses some techniques of collecting, processing and analyzing the information. As a proper working procedure helps to accomplish the study smoothly, this study has also maintained a systematically arranged methodology for the achievement of desired output. The details of the methodology are as follows

3.2 Data sources

This research work is mainly dependent on primary data which had been collected through questionnaire survey of the households. Beside this, several Focus Group Discussions (FGDs) with local people, Key Informants Interviews (KII) with chairman/member of local government bodies, government officials, local businessman, and teachers etc., had also been conducted. Secondary data were also collected from different Organizations like IOM, RMMRU, BMET, BAIRA, BBS, Bangladesh Bank, LGED and from journals, newspapers, archives, books, seminar proceedings and research papers.

3.3 Reviewing of available literature

A comprehensive literature survey relevant to the study had been carried out with the help of reference materials including reports, thesis, journals, newspapers, internet and other supporting documents. Reports and newsletter from BBS, IOM, BIDS, UNDP, RMMRU, BMET helped to make develop an overall remittance scenario and its impact in Bangladesh. The literature survey helped to develop theoretical concept about the impact of remittance on remittance receiving households and also the overall migration in Bangladesh. At the same time it also helps to select the study area for this project.

3.4 Selection of the Study area

Among the 64 districts in Bangladesh, top 10 (Comilla, Chittagong, Dhaka, Brahmanbaria, Chandpur, Tangail, Noakhali, Munshigang, Sylhet and Manikganj) were selected based on the percentage of overseas employment (Annex D,Table D1). These top 10 districts were ranked based on the percentage of out migration and percentage of

households whose main income source is remittance**.** Lastly, from these 10 districts Comilla, Chittagong and Brahamanbaria were selected for this study. In each district the topmost or the next upazila (Chauddagram of Comilla, Nabinagar of Brahamanbaria and Hathazari Upazila of Chittagong) in terms of remittance (Annex D, Table D2) as main income source of households was selected.

Chauddagram of Comilla, Nabinagar of Brahamanbaria and Hathazari Upazila of Chittagong is composed by 47 unions and 3 pourashavas respectively. Total 206759 households, 64383 (BBS2007b:59) from Hathazari, 66685(BBS, 2006:29) from Chuddagram, and 75691(BBS2007a:34) from Nabinagar upazila, live in the study area. It would be a huge task to conduct survey over the whole upazilas. So among the 47 unions and 3 pourashavas the top most unions (Laur Fatehpur and Barikandi Union of Nabinagar Upazila, Gholpasha, Cheora and Jagannath Dighi Union of Chuddagram upazila and Uttar Madarsa and Dakshin Madarsha Union of Hathazari Upazila) of each upazila in terms of remittance as main income source of households were selected. After that finally among the 7 unions 14 easily accessible villages were randomly selected to do the survey. Then a sample (purposive random) household had been surveyed.

3.5 Sample size

For the purpose of determining the size of sample households, the following formula is used following Sufian (1998):

$$n0 = (Z\sigma /e)\ 2$$

Where,

n0= Crude sample size

Z = Confidence level (for 95% confidence level Z=1.96)

σ = Standard deviation = 3 [which has not been found from the sample to be drawn but from previous experience, Muhibbullah (1989)]

e = Error tolerance (its value will be ±0.4)

Here,

$$n0 = (1.96*3/0.4)2$$

$$n0 = 216.09 \approx 216$$

The crude sample size is then adjusted by the following equation

If,

n = Sample size

n0= Crude sample size = 216

N = Population size = 206759 (Total households of three selected upazilas)

$$n = n0 / (1+ n0/N) = 215.77 \approx 216$$

So, to conduct the questionnaire survey with 95% confidence level a total 216 households had been surveyed in the three study areas.

Table 3.1: Sample size determination strategy

Sl No	Upazilas	Total HH	% of Total HH	Sample size	Sampling Unit
1	Hathazari	64383	31	67	HHs
2	Chauddagram	66685	32	70	HHs
3	Nabinagar	75691	37	79	HHs
Total		206759	100	216	

3.6 Data collection:

In order to have an overall idea of settlement pattern, socio-physical appearance, environmental condition, physical features of the study area, reconnaissance survey was conducted at first with the help of some local people. They also helped to identify the remittance receiving households. This survey helped in planning the data collection procedure to conduct the entire survey work.

The questionnaire was prepared followed by a reconnaissance survey. After having discussion with experts and pre-testing with the help of a small survey team questionnaire was finalized. The survey was conducted during weekly holidays in the month of October and November in 2009. One respondent from each of the randomly selected household (having at least one migrant member) was surveyed. In case any household head were not found during survey, another earning member of the house was interviewed. Attempts were made to cover people from all socio- economic strata. The main purpose of conducting this questionnaire survey was to know about remittance receiving households and causes, pattern of their residential mobility.

Table 3.2 Summary of primary data collection strategy

Upz	Selected Unions	Selected Villages	Total HHs	Surveyed HHs		Sampling Method
				No	%	
Hathazari	Uttar Madarsa	Kulla	170	17	10	Purposive Random
		Munshigona	220	21	10	
	Dakshin Madarsha	Madhyamadarsha	750	11	1	
		Dakshinmadarsha	1200	18	2	
Chauddagram	Gholpasha	Amiratpur	150	8	5	Purposive Random
		Rajendrapur	245	13	5	
	Cheora	Kazipara	65	13	20	
		Rampur	62	13	21	
	Jagannath Dighi	Atakara	195	9	5	
		Noagram	307	14	5	
Nabinagar	Laur Fatehpur	Radhanagar	50	5	10	Purposive Random
		Fatehpur	358	37	10	
	Barikandi	Barikandi	550	33	6	
		Dolaiganj	60	4	7	
3 upzs	7 unions	14 villages	4382	216	5	

Source: Field Survey, 2009

An information seeking checklist was also prepared for FGD and Key Informants Interview (KII). For the purpose of the getting more detail general information of the study area, remittance inflow, its use and impact, migration pattern of the particular area, residential shift of the remittance receiving households several interviews and group discussion were conducted with formal and informal leaders of the community, aged person and NGO officials. It was found that there were several cases of migration (to metropolitan cities/nearby zila towns) involving shifting of all households (leaving none in the study area). In each study area one such different/special case was also studied. Three FGDs were also conducted in the three respective areas.

3.7 Data preparation

After getting all the relevant data from field through questionnaire survey it was compiled and checked. Before data analysis the collected primary data was prepared through qualitative and quantitative techniques. To determine the rating paired factors of residential shift each pair of attribute were aggregated in Perth Formula. For data aggregation in Perth formula the following stages were followed

1. ***Frequency determination:*** at first discrete (ungroup) frequency of the respondent's number who gave an assigned relative value of a pair of attributes has been determined.
2. ***Perth Formula Calculation:*** Then comparative values of each pair of the attributes have been calculated through Perth Formula (a+4b+c)/6, where a = lowest value, b= median, c= largest value
3. ***Final value of each pair of the attributes determination:*** for data analysis through AHP in data preparation stage the final values of each pair attributes are calculated.

3.8 Data illustration and report preparation:

In this study data has been analyzed in two different ways. First part consists of general analysis of the sample households. Second part of the study consists of determination of relative weight of the factors of residential shift by applying AHP

a. Generic analysis

During the analysis the hypothesis of this study was tested. A general analysis has been done encompassing the socio economic condition of the sample households, permanent and temporary migration, pattern of remittance inflow, asset accumulation, uses of remittance as well as its relative importance on residential shift. A detailed interpretation of analyzed data was done and presented as well to satisfy the research objective.

b. AHP analysis

Reviewing relevant literatures and past studies, from home and abroad, factors of residential shift were selected for AHP analysis. It had been used to determine prioritized options of the households for selecting residential location. Basically it is a decision support system that is based on mathematics and human psychology algorithm to measure the relative degree of importance of individual`s attitude among diverse alternatives (Satty, 1990). It is a powerful tool to measure the relative degree of importance according to the respondent's preferences in the situation of multiple objectives and diverse factors.

Chapter Four: Study Area

4.1 Introduction

This chapter describes the geographical location, socio-economic features of the three selected upazilas. It also describes the basic information about the respondents.

4.2 Geographical location of study the area

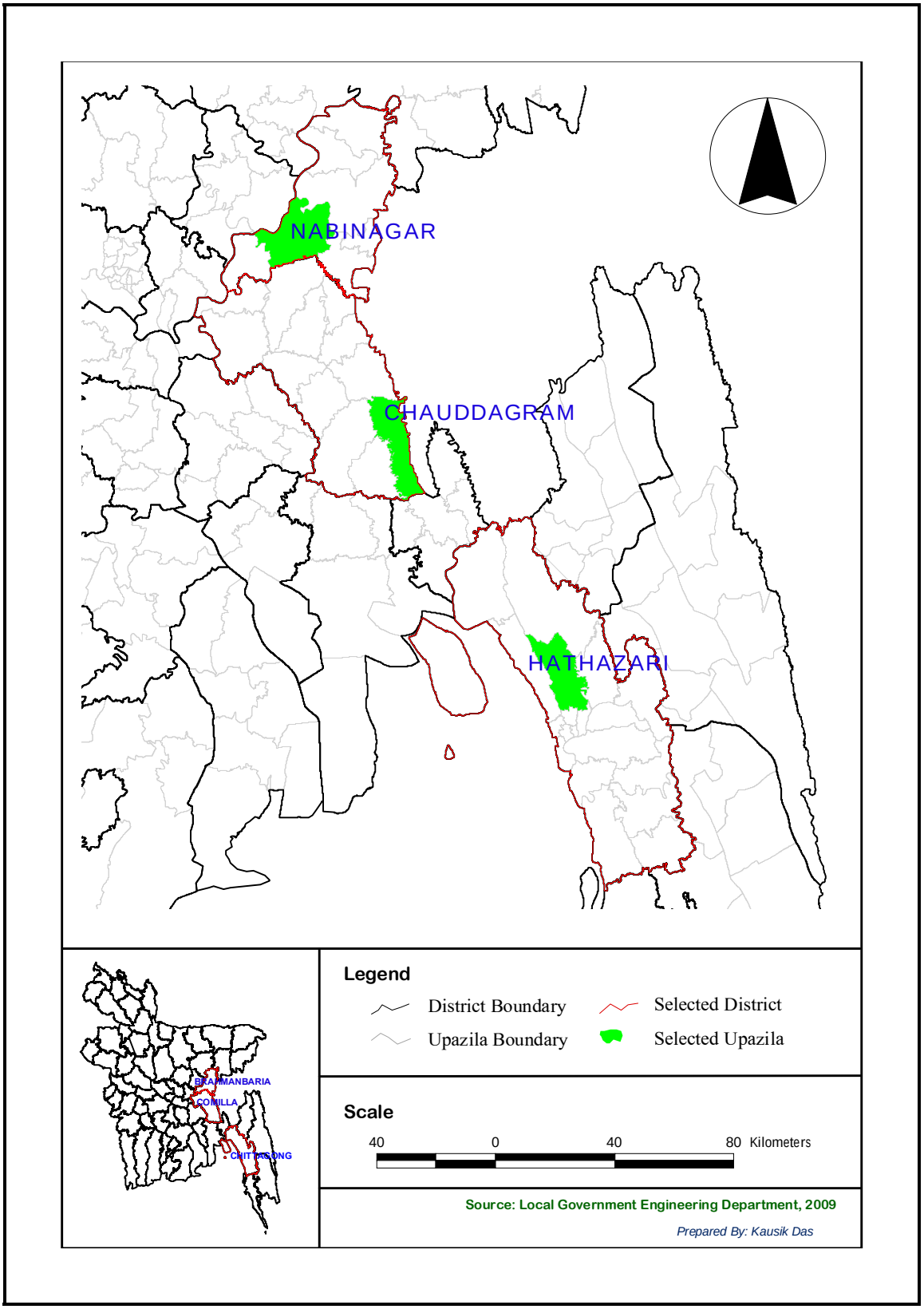
4.2.1 Hathazari Upazila

Hathazari thana was established in 1929 and was turned into an upazila in 1983. The upazila occupies an area of 246.32 sq.km. including 32.52 sq.km. forest. It is located between $22^0$24` and $22^0$38` north latitudes and between 91º41' and 91º54' east longitudes. The upazila is bounded on the north by Fatikchhari upazila, on the east by Fatikchhari and Rowzan upazilas, on the south by Bayjid Bostami and Chandgaon thanas and on the west by Sitakunda upazila. The main river of the Upazila is Halda and notable canals are Poragoli; Jalalabad hills, Rajbaijja hillock, Nachoinnah hillock. The upazila consists of 15 unions, 44 mauzas and 59 villages. (BBS, 2007b:59, Banglapedia n.d.a)

4.2.2 Chauddagram Upazila

Chauddagram thana was established in 1905 and turned into an upazila in 1983. The upazila occupies an area of 268.48 sq. km. with 0.33 sq.km. of forest area. It is located between 23°03' and 23°22' north latitudes and between 91°12' and 91°22' east longitudes. The upazila is bounded on the north by Comilla Sadar upazila, on the east by Tripura State of India, on the south by Feni Sadar and Daganbhuiyan upazila of Feni zila and on the west be Nangalkot and Laksam upazilas. The main rivers, found in the upazila are Dakatia and Kakari. Amandanga Shalban (shorea forest). The upazila consists of 14 unions, 388 mauzas and 434 villages. (BBS, 2006:29 , Banglapedia n.d.b)

Map 4.1: Location of the three selected upazilas



4.2.3 Nabinagar Upazila

Nabinagar upazila occupies an area of 353.66 sq. km. It is located between 23°45'and 24°00' north latitudes and between 90°50' and 91°51' east longitudes. The upazila is bounded on the north by Brahmanbaria Sadar and Raipura upazila, on the east by Brahmanbaria Sadar and Kasba upazilas, on the south by Muradnagar upazila of Comilla zila and on the west by Banchharampur upazila and Raipur upazila of Narsingdi zila. Main rivers that are noted in the upazila are Meghna, Pagla and Buri. The upazila consists of 20 unions, 9 wards, 145 mauzas, 18 mahallahs and 196 villages. (BBS, 2007a:34, Banglapedia n.d.c)

4.3 Demographic features of study the areas

According to the population census 2001, total household and population of Hathazari upazila is respectively 67147 and 403788 of which 206922 are male and 196866 are female. The average dwelling household size is 6. The decadal (1991-2001) population growth rate is 37.1 %. (BBS, 2007b:59-60)

Total household and population of Nabinagar upazila is respectively 75993 and 420383 of which 208347 are male and 212036 are female. The average dwelling household size is 5.6. The decadal (1991-2001) population growth rate is 11.05%. (BBS, 2007a:34-37)

Total household and population of Chauddagram upazila is respectively 67612 and 381548 of which 188248 are male and 193300 are female. The average dwelling household size is 5.53. The decadal (1991-2001) population growth rate is 14.90 %. (BBS, 2006:29-31)

4.4 Socio economic features of Nabinagar, Hathazari & Chauddagram

4.4.1 Housing Condition

Table 4.1: Main house of the dwelling household by type of structure

Upazila	Households by type of structures				
	Jhupri	Katcha	Semi Pucca	Pucca	Total
Hathazari	16.50	51.98	15.37	16.15	100
Chauddagram	6.00	83.91	7.71	3.38	100
Nabinagar	2.16	90.26	6.48	1.10	100

Source: BBS, 2006:30; BBS, 2007b:60; BBS, 2007a:35

Among housing structures kutcha structure is predominant in the three selected upazilas. Percentage distribution of main house of the dwelling households by type of structure is presented in the above table 4.1.

4.4.2 Educational status

According to the population census 2001, it is found that in Nabinagar upazila only 37.88% population aged 7 years and over is literate among them 40.23% are male, and 35.63% are female. The school attendance at the age group 5 to 24 for male was 46.22% and for female was 43.43% in 2001 *(BBS, 2007a:36).*

In Hathazari upazila it is found that 57.9% population aged 7 years and over is literate among them 61.1% is male and 54.6% is female. The school attendance at the age group 5 to 24 years for male and female was 50.7% and 44.4% respectively *(BBS, 2007b:61).*

In Chauddagram upazila it is found that only 50.87% population of aged 7 years and over was literate among them 52.82% was male and 49.02% was female. The percentage of school attendance at the age group 5 to 24 for male was 57.68 and for female was 52.48(*BBS, 2006:31).*

4.4.3 Main income source

As per BBS 2007b(page 60), 16.77% of the dwelling households in the Hathazari upazila depend on agriculture as their main source of income, with 7.74% on cropping, livestock & forestry, 0.64% on fishing & pisciculture and 8.39% as agricultural labour. Other sources of household income are as: non-agricultural labour 2.66%, business 17.44%, industry 0.73%, employment 23.80%, construction 1.91%, religious service 0.45%, rent & remittance 14.05%, weaving 0.23% transport & communication 5.54% and others 16.42%. In Hathazari upazila 45.93% of the households have their own agricultural land and 54.07% do not have it.

In Nabinagar upazila 53.51% of the dwelling households depend on agriculture as the main source of household income with 33.44% on cropping, livestock, forestry and fishery and

20.07% on selling agricultural labour. Other dwelling households reported earning main incomes are from non-agricultural labour 2.41%, business 16.29%, employment 7.54%, construction 1.40%, rent and remittance 8.94%, transport and communication 1.56% and remaining others 8.35%. In the upazila 58.95% of the households have their own agricultural land and 41.05% do not have it (BBS, 2007a:35).

In Chauddagram upazila 38.35% of the dwelling households depend on agriculture as the main source of household income with 21.27% on cropping, livestock, forestry and fishery and 17.08% on selling agricultural labour. Other dwelling households reported earning main incomes are from non-agricultural labour 2.80%, business 14.31%, employment 16.42%, construction 1.33%, religious service 0.30%, rent and remittance 11.07%, transport and communication 4.39% and others 11.03%. In Chauddagram upazila 59.84% of the dwelling households have their own agricultural land and 40.16% do not have (BBS, 2006:30).

4.5 Basic information of the respondents

For the purpose of conducting the present study 216 people from Chauddagram, hathazari and Nabinagar Upazila were surveyed. Among the surveyed people 83 %(180 out of 216) are male and 17% are female as because people were very much conservative there and also believe in veil custom. This scenario was very dominant in Hathhazari Upazila where only 12% respondents were women.

Table 4.2: Age-sex distribution of the respondent

Age group	Chauddagram			Hathazari			Nabinagar			Total		
	M	F	Total	M	F	Total	M	F	Total	M	F	Total
15-17	3	0	3	3	0	3	0	0	0	6	0	6
18-34	15	2	17	4	3	7	25	0	25	44	5	49
35-59	28	15	43	37	5	42	31	11	42	96	31	127
Above 60	7	0	7	15	0	15	12	0	12	34	0	34
Total	**53**	**17**	**70**	**59**	**8**	**67**	**68**	**11**	**79**	**180**	**36**	**216**

Source: Field Survey, 2009

Table 4.2 shows that around 60 percent of the respondents were under the age group 35-59 and 22 percent were under 18-34 age group. As most of the respondents were adult so it is

assumed that the responses (questionnaire both HHs and AHP) would be wise and thoughtful.

Table 4.3: Sex wise educational qualification of the respondent

Educational qualification	Chauddagram		Hathazari		Nabinagar		Total		
	M	F	M	F	M	F	M	F	Total
Illiterate	6	11	6	0	16	8	28	19	47
Primary	4	4	28	3	16	3	48	10	58
SSC	26	2	17	5	20	0	63	7	70
HSC	2	0	4	0	0	0	6	0	6
Graduate	13	0	4	0	13	0	30	0	30
Post Graduate	2	0	0	0	0	0	2	0	2
Vocational	0	0	0	0	3	0	3	0	3
Total	**53**	**17**	**59**	**8**	**68**	**11**	**180**	**36**	**216**

Source: Field Survey, 2009

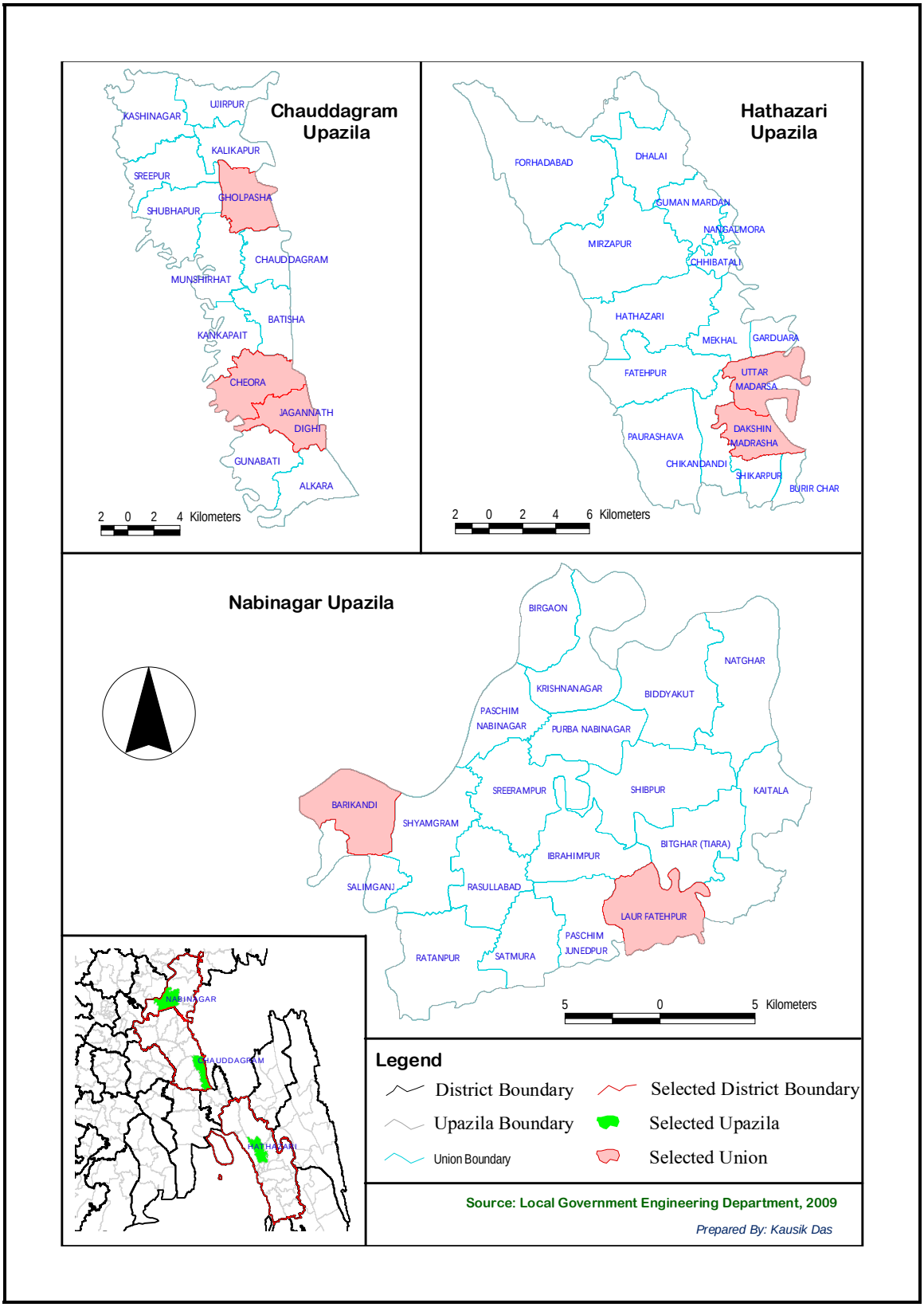
As for the level of educational attainment among the respondents, primary (27%) and SSC (32%) holders are the dominant group in the study area. 53% of the female respondent were illiterate. and only 19% of the female respondent had passed the SSC. Rate of female education is found worse in Nabinagar than the other upazilas. 14% of the total respondents were graduate. As most of the respondents are educated so it is expected that their responses would be consistent and honest. Among the respondent most of them were farmer (24%) and businessman (23%). Only 10 % respondents were service holder.

Table 4.4: Employment of the respondent

Occupation	Chauddagram	Hathazari	Nabinagar	Total
Farmer	5	42	4	51
Businessman	11	7	32	50
Unemployed	27	1	8	36
Home maker	11	5	7	23
Service holder	10	3	8	21
Shop keeper	1		14	15
Student	5	5		10
Carpenter		1	3	4
Dairy/poultry			3	3
Day labourer		3		3
Total	**70**	**67**	**79**	**216**

Source: Field Survey, 2009

Map 4.2: Location of the surveyed unions



4.6 Study areas at a glance

Table 4.5: Nabinagar, Hathazari & Chauddagram Upazila at a glance

Name of Upazila	Hathazari	Nabinagar	Chauddagram
Established On	1983	1983	1983
Area(sq km)	246.32	353.66	268.48
No. of Unions	15	20	14
No. of Villages	59	196	402
Population	403788	420 383	381 548
Population growth rate	3.2%	1.05%	1.4%
Density per sq km	1639	1189	1 421
Household	67147	75993	67 612
Household Size	6	5.5	5.6
No of educational institutions			
• *University*	*1*	*0*	*0*
• *College*	*7*	*4*	*7*
• *High school*	*35*	*25*	*54*
• *Primary School*	*134*	*199*	*150*
• *Madrasha*	*112*	*8*	*61*
Literacy rate (>7yrs)	57.9	37.9	50.87
Dominant Housing Structure (Katcha)	51.98%	90.26%	82.91
Main Income source agriculture	16.77	53.51%	38.35%
Main income source remittance	13.75%	8.84%	10.95%
Main source of drinking water (TW)	85.7%	93.63%	91.61%
Access to electricity	69.12%	30.55%	43.35%
Having sanitary latrines	54.16%	58.56%	69.42%

Source: BBS, 2006; BBS, 2007a; BBS, 2007b, Banglapedia n.d.a, Banglapedia n.d.b & Banglapedia n.d.c

Chapter Five: Migrants, Remittance and Residential Shift

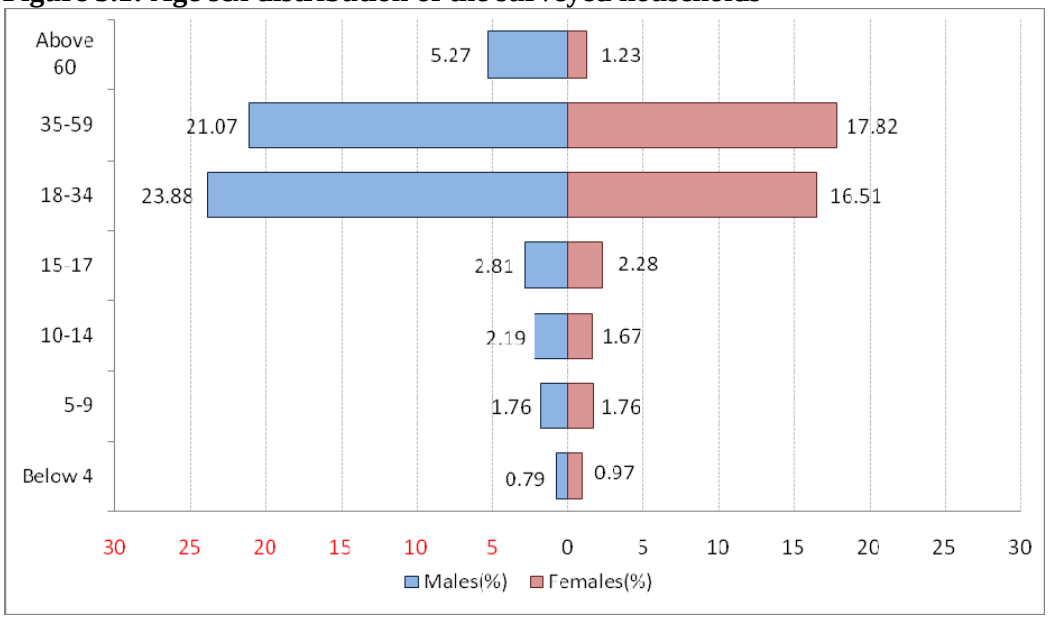
5.1 Introduction

This chapter is composed of general information of the remittance receiving surveyed households and their perception about residential shift. The importance/influence of remittance and remittance derived causes for residential shift is also tried to be found out in this chapter. This chapter also explores the changes in the livelihood of the remittance receiving households due to remittance inflow.

5.2 General information of the remittance receiving households

216 households from Chauddagram, Hathazari and Nabinagar Upazila were surveyed for conducting the present study. Figure 5.1 reveals that, the age group 18-34 is the most populous (40.39%) in either upazilas. 23.88% of male and 16.51% of female were in this age group. It was found in the national database that most populous age group of Chauddagram(24%), Hathazari(30%) and Nabinagar Upazila(22%) was 18-34 (Annex D, Table D7) which complies with the study findings. From the figure 5.1 it is found that the second most populous age group was found 35-59 (21.07% was male and 17.82% was female) which was very much similar with the community series of Chittagong (BBS, 2007b:171), Brahmanbaria (BBS,2007a:90) and Comilla (BBS,2006:150).

Figure 5.1: Age sex distribution of the surveyed households



Source: Field Survey, 2009

Table 5.1: Educational qualification of the surveyed HH (in percentage)

Educational Qualification	Chauddagram		Hathazari		Nabinagar		Total	
	M	F	M	F	M	F	M	F
Illiterate	2	4	1	2	4	7	7	14
Primary	3	4	4	5	8	4	16	12
SSC	5	4	5	5	5	4	15	12
HSC	3	1	5	0	1	1	9	2
Graduate	4	1	2	0	3	1	9	2
Post graduate	0	0	0	0	0	0	0	0
Vocational	0	0	0	0	1	0	1	0
Fazil	0	0	0	0	0	0	0	0
Total	17	13	17	13	23	16	58	42

Source: Field Survey, 2009

Considering the level of educational attainment among the surveyed households, the dominant groups in the study area was primary (28%) and SSC (27%) pass. 14 percent of the total population was found illiterate. As people below 5 years age are also counted here that is why the illiteracy rate is so high. Only 11% were found having higher secondary degree. Same figure stands for graduation as well. 2% were female had been graduated within the total 11%. Status of female was found worst in Hathahzari Upazila (Annex B, Table B2).

Table 5.2: Occupational pattern of the surveyed HH

Occupations	Chauddagram		Hathazari		Nabinagar		Total	
	F	%	F	%	F	%	F	%
Home maker	87	25	84	25	105	23	276	24
Unemployed[1]	73	21	56	16	88	20	209	18
Student	50	14	65	19	59	13	174	15
Service holder	70	20	64	19	29	6	163	14
Businessman	34	10	22	6	84	19	140	12
Farmer	28	8	45	13	7	2	80	7
Carpenter	0	0	1	0	29	6	30	3
Shop keeper	8	2	0	0	29	6	37	3
Dairy/poultry	0	0	0	0	11	2	11	1
Day laborer	0	0	3	1	8	2	11	1
Total	350	100	340	100	449	100	1139	100

Source: Field Survey, 2009

Largest portion of population in the surveyed upazilas were found home maker. In Nabinagar around 23%, in Hathazari and Chauddagram Upazila around 25% people were found homemaker. Because most of the female are illiterate (14% among 42%of total

[1] Here people from all ages were counted. Example; 2years children were counted as unemployed. That is why the rate is so high. If we consider age over 4years or 10 years then this figure will be less.

female population, Table: 5.1) and engage themselves in household work. Service and business were found most prominent occupations in Chauddagram Upazilas but the scenario is different in Hathazari Upazila where service holders and farmers were found two main occupations among the surveyed households. Varieties of occupations were found more in Nabiangar Upazila rather than the other two upazila. Farmers, day labourer, dairy/poultry owner were found 2% population of the surveyed households (Nabinagar upazila) each. Service holder, carpenter, and shopkeeper were found 18% (each occupation 6%) among the surveyed households in Nabinagar. Most of occupants in Nabinagar upazila are involved with saw-mill as their secondary occupation.

Table 5.3: Income- Expenditure of the surveyed household (in percentage)

Taka per month	Chauddagram		Hathazari		Nabinagar		Total	
	I	E	I	E	I	E	I	E
Below 10000	3	7	8	16	41	35	18	20
10001-15000	17	66	16	22	19	30	18	39
15001-20000	13	23	21	28	24	23	19	25
20001-25000	11	4	15	25	16	11	14	13
25001-30000	33	0	9	3	0	0	13	1
30001-35000	11	0	3	0	0	0	5	0
35001-40000	11	0	16	4	0	0	9	1
40001-50000	0	0	6	0	0	0	2	0
Above 50000	0	0	4	0	0	0	1	0
Total	100	100	100	100	100	100	100	100

Source: Field Survey, 2009

Table 5.3 depicts that 64% of the household's income was above 15,000 taka per month. In Nabinagar Upazila none of the households were found whose monthly income was above 25,000 taka. And 65% of the households found whose monthly expenditure were below 15,000 taka. Economic condition of household's of Nabinagar Upazila was found worse than the other two surveyed upazilas. Because in Chauddagram Upazila 55% household's monthly income was above 25,000 taka and 89% household's monthly expenditure was 10-20 thousands taka. In Hathazari Upazila 10% of the surveyed household's monthly income was above 40,000 taka and 7% household's monthly expenditure was around 25-40 thousand taka. Financial condition of the surveyed household's in Hathazari was found more balance than that of Chauddagram and Nabinagar upazila.

5.3 Basic information of the migrant

Table 5.4: Country wise percentage of migration

Country	Chu		Hat		Nabi		Total		National
	N	%	N	%	N	%	N	%	%
Arab Emirates	16	18	48	55	28	34	92	35	21.21
Saudi Arabia	41	47	17	19	25	30	83	32	40.83
Kuwait	20	23	3	3	0	0	23	9	7.67
Qatar	0	0	12	14	0	0	12	5	2.3
USA	4	5	9	10	0	0	13	5	
Malaysia	0	0	0	0	11	13	11	4	10.95
Singapore	0	0	0	0	8	10	8	3	3.83
South Africa	0	0	0	0	8	10	8	3	
South Korea	2	2	1	1	3	4	6	2	0.32
UK	2	2	1	1	0	0	3	1	0.14
Australia	2	2	0	0	0	0	2	1	
Oman	1	1	0	0	0	0	1	0	5.09
Total	**88**	100	**91**	103	**83**	100	**262**	100	

Source: Field Survey, 2009 and BMET 2009

Basically people send their children, relatives to such places where their relatives or known persons already live so that they can easily get jobs and find someone who can take care of them. From the 216 surveyed households total 262 men were migrated to abroad. Households having more than one migrant were found more often in Hathazari upazila. More than 64% migrants migrated to Saudi Arabia and Arab Emirates from the surveyed upazilas. From Bangladesh more than 60% migrant migrated to the very same country. About 90% of the total migrants migrated to the Middle East countries. 31% of the total migrants were SSC passed and 26% were found HSC passed (Annex B, B19). And 29% of the total migrants migrated during the age 21-25 years and 19% migrated below 20 ages (Annex B, B20). It is commonly found across the upazilas that most of the young people try to migrate in the Middle East countries leaving education.

Table 5.5: Year wise flow of migrants

Expenditure	Chauddagram		Hathazari		Nabinagar		Total	
	F	%	F	%	F	%	F	%
Before 1985	0	0	2	2	0	0	2	1
1986-90	2	2	3	3	0	0	5	2
1991-95	12	14	2	2	0	0	14	5
1996-2000	33	38	28	31	16	19	77	29
2001-05	33	38	47	52	25	30	105	40
After 2006	8	9	9	10	42	51	59	23
Total	**88**	100	**91**	100	**83**	100	**262**	100

Source: Field Survey, 2009

People from Hathazari upazila started to migrate before the other two upazilas. From the table 5.5 it can be stated that people started to migrate at a very high rate in the period of 1996 to 2000 which continued up to 2005. After 2005 this rate decreased a little. Before 1990 migration was a piece meal event not a national phenomenon (Annex B, B 5). But during the year 1993-95 the number of migrant booms from Bangladesh.

Table 5.6: Length of stay in abroad

Years	Chuddagram		Hathazari		Nabinagar		Total	
	F	%	F	%	F	%	F	%
Below 2	4	5	11	12	41	49	56	21
3-5 yrs	19	22	28	31	24	29	71	27
5-10 yrs	**46**	**52**	**40**	**44**	**12**	**14**	**98**	**37**
11-15 yrs	15	17	7	8	6	7	28	11
Above 16	4	5	5	5	0	0	9	3
Total	88	100	91	100	83	100	262	100

Source: Field Survey, 2009

37% of total migrants stayed abroad for the period of 5 to 10 years. In Chauddagram and Hathazari Upazila the highest percentage of the migrants (52% and 44% respectively) resided abroad for average 5 to 10 years. It is revealed from the table 5.5 that in Nabinagar Upazila only 7% of the migrants lived more than 10 years to abroad whereas the figure was 12% for Chauddagram and 13% for Hathazari upazila. In Nabinagar upazila half (49%) of the migrants were in abroad for below 2 years.

Table 5.7: Main reason for coming back to homeland

Causes for back	Chuddagram		Hathazari		Nabinagar		Total	
	F	%	F	%	F	%	F	%
To take care family	18	95	17	63	0	0	35	42
Unavailability of jobs	0	0	0	0	20	53	20	24
Irregular and ill payment	1	5	10	37	7	18	18	21
Illness	0	0	0	0	4	11	4	5
To get married	0	0	0	0	4	11	4	5
Illegal migrants	0	0	0	0	3	8	3	4
Yes(back to homeland)	***19***	***100***	***27***	***100***	***38***	***100***	***84***	***100***
Sub Total(back)	19	22	27	30	38	46	84	32
No(did not back)	69	78	64	70	45	54	178	68
Total	88	100	91	100	83	100	262	100

Source: Field Survey, 2009

Among the 262 migrants only 84 of them were permanently back to their homeland. In Nabinagar Upazila half of the migrants (46%) were back to their home land due to unavailability of jobs (53%), ill and irregular payment (18), illness (11%), to get married

(11%) and illegal migration (8%). From the FGD in Nabinagar Upazila it is found that those who were back to their native, migrated (78% migrants stayed below 5 years) after 1996. But in Chauddagram and Hathazari upazila most of them migrants were back because of taking care of their family (95% of Chauddagram and 63% of Hathazari).

Table 5.8: Source of money for migration

Source of money	Chuddagram		Hathazari		Nabinagar		Total	
	N	%	N	%	N	%	N	%
Agricultural land sell	37	42	40	44	65	78	142	54
Loan	28	32	40	44	48	58	116	44
Non agricultural land sell	13	15	8	9	8	10	29	11
Mortgage	6	7	0	0	8	10	14	5
Dowry	3	3	1	1	0	0	4	2
Savings	57	65	69	76	18	22	144	55

Source: Field Survey, 2009

***Percentage based on total migrants of the respective area (C 88, H 91, N 83)*

In our country the unemployment rate is high not only in urban areas but in rural areas also. The unemployed people in rural area find it easier to collect some amount money through loan or some other means and go for to abroad as unskilled labor. Most of the cases it doesn't require any special technical education. In the study area it is found that most of the family sell their agriculture land and take loan from others to arrange the money for migration. Among the 262 cases (no of migrants) 54% sold their agricultural land, 44% took loan from others and 55% of them used their deposit to arrange the money for migration. In Chauddagram and Hathazari Upazila 3% (out of 88) and 1% (out of 91) migrants were found who took dowry for arranging the money to go abroad respectively.

Table 5.9: Remittance and frequency

Amount	Monthly		Bimonthly		Quarterly		Half yearly		Yearly		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Below 10000	33	13	11	4	9	3	0	0	0	0	53	20
10001-20000	58	22	28	11	23	9	0	0	0	0	109	42
20001-30000	7	3	17	7	8	3	0	0	0	0	32	12
30001-40000	4	2	14	5	25	10	4	2	0	0	47	18
40001-50000	0	0	2	1	6	2	5	2	0	0	13	5
Above 50000	0	0	0	0	0	0	2	1	3	1	5	2
Total	102	39	72	28	71	27	11	4	3	1	258	100

Source: Field Survey, 2009

***Percentage based on total migrants of the study area (262). Here 258 is considered because 4 of the total migrants are student.*

Around half (42%) of the migrants send remittance up to 20000 Taka. Among the 42% remittance sender, 22% send monthly, 11% and 9% send bimonthly and quarterly respectively. It is found from the above table that those who receive large amount of remittance from abroad; receive it less frequent than those who get smaller amounts. Only 7% of the migrants send more than 40,000 taka at a time and among this 7%, 3% of them send it half yearly. Again if the lowest amounts of money send at a time is considered (below 10000), it is found that among the total 20%, 13% send this amount monthly, 45% bimonthly and 35% quarterly.

Table 5.10: Channels to send remittance

Channel	Chuddagram		Hathazari		Nabinagar		Total	
	N	%	N	%	N	%	N	%
Govt bank	46	52	29	33	44	53	119	46
Non govt bank	35	40	38	43	20	24	93	36
Hundi	7	8	8	9	8	10	23	9
Friends / relatives	0	0	13	15	11	13	24	9
Total	88	100	88	100	83	100	259	100

Source: Field Survey, 2009

Most of the migrant (46%) sent the remittance through Government owned bank as they are trustworthy to the common people. But in Hathazari Upazila it is found that most of the migrant (43%) sent remittance through non government/private bank. Very few numbers of the migrant send their earnings to the home land through hundi or relatives to. In Chauddagram upazila only 8% of the migrants preferred hundi as the means of remittance transportation.

5.4. Residential shift of the remittance receiving households

Generally being economically empowered, the remittance receiving households tend to shift their residences from locality to nearby towns or bigger cities or at least to growing rural centers in search of better livelihood, better service facilities and better trade opportunities.

Table 5.11: Residential shift of the remittance receiving surveyed households

Upazila	1 member		2 member		Whole family		Shift from HH		No shift		Total
	N	**%**	N	**%**	N	**%**	N	%	N	%	N
Chauddagram	5	**7**	0	**0**	19	**27**	24	**34**	46	**66**	70
Nabinagar	5	**6**	0	**0**	16	**20**	21	**27**	58	**73**	79
Hathazari	10	**15**	2	**3**	3	**4**	15	**22**	52	**78**	67
Total	20	**9**	2	**1**	38	**18**	60	**28**	156	**72**	216

Source: Field Survey, 2009

***Percentage based on the surveyed HHs of respective area(C 70, H 76 & N79).*

The above table 5.11 depicted that 34%, 27% and 22% households from Chauddagram, Nabinagar and Hathazari Upazila were shifted their residence after receiving remittance. Among the 34% shifted household of Chauddagram, 27% moved with whole family. Most of the shifted household from the study area moved with whole family except Hathazari Upazila. In Hathazari upazila among the 22% shifted household, 15% of them have only one member shifted. It is hypothesized that there is no significant difference in the frequency distribution of shifted households across the surveyed upazilas. It is expected that the tendency of residential shift does not vary with geographical entity.

Upazila	**Observed (Shifted HH)**	**Expected**	**Residual**
Chauddagram	24	20	4.0
Nabinagar	21	20	1
Hathazari	15	20	-5.0
Chi-Square[a]		***2.1***	
Df		***2***	
Asymp. Sig.		***.350***	

The significance level is greater than the critical value.05. So the null hypothesis is rejected which means that residential shift varies across surveyed upazilas.

Table 5.12: Location of Residential shift

Location	Chauddagram		Hathazari		Nabinagar		Total	
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**
In upazila	8	33	2	12	6	29	16	26
In district town	5	21	2	12	5	24	12	19
Abroad	2	8	10	59	0	0	12	19
In another union	6	25	1	6	4	19	11	18
Within the locality	1	4	0	0	5	24	6	10
Dhaka city	2	8	2	12	1	5	5	8
Total	**24**	100	**17**	100	**21**	100	**62**[2]	100

Source: Field Survey, 2009

Among the surveyed household, 26% shifted in upazila centre, 19% shifted in the district town and only 8% in Dhaka City. Here, distance might play an important role while choosing the residence as **Zipf's Inverse distance law** stated that movement of people inversely proportional to distance. Though district towns, bigger cities (*i.e.* Dhaka, Chittagong) generally have more opportunities and facilities than upazila centers and local growth centers but most of the household shifted their residence to upazila centre. The study finding complies with **Stouffer's theory of intervening opportunities**, which stated that opportunities nearby are more attractive than slightly better opportunities further away. Surprisingly it was found from the Table 5.12 that the 19% of the household people shifted to abroad which is more than double than the percentage who shifted to Dhaka city. It is hypothesized that there is no significant difference in choosing the location of residence across the surveyed upazilas. And so it is expected that the location of residential shift of the remittance receiving households had not been varied with geographical entity.

Location where shifted	***Chi-Square***	***df***	***Asymp. Sig.***	**Hypothesis**
Abroad	***5.333***	***1***	***0.021***	Accepted
Dhaka City	***0.400***	***2***	***0.819***	Rejected
District Town	***1.500***	***2***	***0.472***	Rejected
Upazila Centre	***3.500***	***2***	***0.174***	Rejected
Pourashava/another union	***3.455***	***2***	***0.178***	Rejected
Within the locality (Growth Centre)	***2.667***	***1***	***0.102***	Rejected

**Details are given in the Annex B, Table B 22*

The significance value of all the locations where people shifted their residence except the location 'abroad' is greater than the critical value.05. So the null hypotheses are rejected, which mean that people from the surveyed upazilas shifted their residence in diverse

[2] People form 60 households among the 216 surveyed households were shifted. But from two families more than one member shifted their residence. That is why here the figure stand 62.

locations in different number. But the null hypothesis for the location 'abroad' is accepted as the significance value is less than the critical value.

From the 19% surveyed household, single household member shifted their residence to abroad (Annex B, Table B7). It is found that migrants always try to take someone to abroad from his family whenever he gets a chance. Not only this, some people take this opportunity as a business. This was found a very common scenario in all the three upazilas especially in Hathazari and Chauddagram. From the FGDs it was found that migrants or their relatives take 2-3 hundred thousand taka for each people to make sure of their migration.

Table 5.13: Causes behind residential shift

Why shift	Chuddagram		Hathazari		Nabinagar		Total	
	R	%	R	%	R	%	R	%
Educational facility	10	42	7	47	7	33	24	40
Stay close to relatives	10	42	3	20	8	38	21	35
Transportation facility	6	25	3	20	7	33	16	27
Trade opportunities	8	33	2	13	5	24	15	25
Security problem	8	33	0	0	5	24	13	22
Better residence with urban amenities	7	29	5	33	5	24	17	28
Natural disaster	0	0	0	0	3	14	3	5
Stay near to work place	1	4	0	0	0	0	1	2

Source: Field Survey, 2009

***Percentage based on number of HHs from which residential shift has taken place (C24, H15 &N21)*

Among the 60 cases in the study area, most of the households shifted their residence to have better educational facility (40%) followed by to have better transportation facility (27%), better trade opportunities (25%) and to stay close to relatives (35%). It is found from the above table that in Chauddagram upazila the most stated cause was educational facility and relative's location of residence (42% each of 24 valid cases). In Hathazari upazila 47% household of 15 cases pointed out better educational facility and 33% stated residence with urban amenities as the main causes of residential shift. In Nabinagar upazila relatives location of residence (38% among 21 cases) and better transportation facility (33% among 21 cases) was mostly pointed out by the member of shifted household as the cause of residential shift. It is hypothesized that people responses were constant across the surveyed upazilas when they are asked to point out the cause of

residential shift. It is expected that people shifted their residence because of the same reasons across the upazilas.

Causes	Chi-Square	df	Asymp. Sig.	Hypothesis
Better residence with urban amenities	***.091***	***1***	***.763***	Rejected
Transportation facility	***1.625***	***2***	***.444***	Rejected
Educational facility	***.750***	***2***	***.687***	Rejected
Trade opportunities	***3.600***	***2***	***.165***	Rejected
Security problem	***.692***	***1***	***.405***	Rejected
Staying close to relatives	***3.714***	***2***	***.156***	Rejected
Natural disaster	Only one case, that's why could not be performed			
Staying near to work place	Only one case, that's why could not be performed			

**Details are given in the Annex B, Table B 21*

The significance value of all the causes is greater than the critical value.05. So the null hypotheses are rejected which mean that the causes of residential shift varies across surveyed upazilas.

5.5 Future plan of the surveyed households in residential shifting

Table 5.14 Future plan to shift from present residence

Upazila	Yes								Sub Total		No	
	1 mem		2 mem		3 mem		Whole family					
	N	%	N	%	N	%	N	%	N	%	N	%
Chauddagram	0	0	0	0	2	1	34	16	36	17	34	16
Hathazari	2	1	2	1		0	18	8	22	10	45	21
Nabinagar	0	0	0	0	0	0	35	16	35	16	44	20
Total	2	1	2	1	2	1	87	40	93	43	123	57

Source: Field Survey, 2009

Table 5.14 depicts the future plan of the remittance receiving household as regards to shift from current residence. 43% of the surveyed households have their plan to shift their residence in near future. Among this 43% of households, 40% will want to shift with the whole family. Those who want to shift their residence from Nabinagar upazila would move with the whole family. Individuals do not have any future plan to shift from Nabinagar.

It is hypothesized that there will be no significant difference in the frequency distribution while the household plan to shift their residence across the surveyed upazilas. It is expected that the tendency (future plan) of residential shift does not vary with geographical entity.

Upazila	Observed (Will Shift)	Expected	Residual
Chauddagram	36	31	5
Nabinagar	35	31	4
Hathazari	22	31	-9
Chi-Square		***3.935***	
Df		***2***	
Asymp. Sig.		***.140***	

The significance level is greater than the critical value 0.05. So the null hypothesis is rejected which means that the frequency of households who have planned to shift their residence in near future varies across upazila.

Table 5.15: Future preferred location for shifting

Locations	Chauddagram		Hathazari		Nabinagar		Total	
	N	%	**N**	%	**N**	%	**N**	%
Dhaka City	23	25	7	8	4	4	34	37
In District town	2	2	5	5	16	17	23	25
Abroad	11	12	6	6	0	0	17	18
In Upazila	0	0	4	4	7	8	11	12
In another union	0	0	0	0	8	9	8	9
Total	36	39	22	24	35	38	93	100

Source: Field Survey, 2009

Remittance receiving households of Hathazari upazila (24%) was found comparatively less interested to shift their residence in future than Chauddagram(39%) and Nabinagar (38%) upazila. Among the 39% household of Chauddagram upazila, those who want to shift their residence in the future, 25% have plan to shift in Dhaka city and 2% to abroad. But among the 38% household of Nabinagar upazila those who want to shift their residence in the future, 17% would like to shift in Nabinagar district and 9% and 8% to another union/pourashav and upazila centre respectively. People from Chauddagram upazila(25%) tend to shift their residence in Dhaka city more than that of Hathazari(8%) and Nabinagar(4%).

Table 5.16: Tendency of residential shift of the surveyed households

Tendency of shift	Chauddagram		Hathazari		Nabinagar		Total	
	N	%	N	%	N	%	N	%
Not shifted & will not shift	14	20	37	55	32	41	83	38
Not shifted but will shift	32	46	15	22	26	33	73	34
Shifted but will not shift	20	29	8	12	12	15	40	19
Shifted & will shift	4	6	7	10	9	11	20	9
Total	70	100	67	100	79	100	216	100

Source: Field Survey, 2009

Table 5.16 portrays the keenness of the surveyed remittance receiving households in shifting the current residence. Among 43% of the households whose who have their future plan to shift their current residence, 9% have already shifted their residence and again have a plan to shift in future. 34% of the household did not shift their residence yet but have a plan to do so. Among the 20 households (9%) who have already shifted their residence and will have a plan to shift, 90% of them would like to shift in upazila (45%) and district centre (45%) (Annex B, B8). The rest 10% (2 households) would like to shift abroad (Annex B, B8).

Again among the 60 household who have already shifted their residence, 40 households do not have any plan to shift their residence in near future. It is revealed from the above that 72% of the surveyed household did not shift their residence. But among this 72% of households, 34% will have a plan to shift their residence in near future. Rest 38% of the household (83) mostly from Hathazari and Nabinagar did not shift their residence yet and they do not have any plan to shift in near future. Those who have already shifted their residence and have a plan to shift in future are planning to shift in district town (45%), Dhaka City (45%) and abroad (10%) (Annex B, B8). Because most of their shifting was around the locality, to another union or upazila centre. Again those who did not shift their residence earlier but now have a plan to shift, would like to shift mostly in Dhaka City(34%) followed by district town(19%) and abroad(21%).

Table 5.17: Reasons for having a plan to shift in future

Reasons	Chauddagram		Hathazari		Nabinagar		Total	
	R	%	R	%	R	%	R	%
Better residence with urban amenities	32	89	22	100	4	11	58	62
Better trade opportunities	23	64	10	45	20	57	53	57
Better educational facility	10	28	13	59	25	71	48	52
Better transportation	6	17	3	14	30	86	39	42
Stay near to work place	2	6	3	14	7	20	12	13
Stay close to relatives	2	6	1	5	3	9	6	6
Security problem	4	11	1	5	0	0	5	5

Source: Field Survey, 2009

***% based on no. of HHs who want to shift from the respective area (C 36, H22, N35)*

Among the 93 cases those who will shift their in near future, most of the households stated better residence with urban amenities (62%) followed by better education facility

(52%), trade opportunities (57%), and better transportation facility (42%) are the major causes for which they want to shift their residence in future. It is found table that in Chauddagram Upazila 89% and 64% cases, those who want to shift in future, pointed out better residence with urban amenities and trade opportunities would be the prime cause of their residential shift. In Chauddagram upazila only 28% cases, who will shift their residence in near future, indicate educational facility as an important factor of residential shift, where as in Hathazari and Nabinagar upazila 59% and 71% cases point out the same. No one from Nabinagar upazila pointed out that security problem would be an important factor for residential shift. But 11% cases of Chauddagram and 5% cases of Hathazari stated security problem as one of their important considerations for future residential shift.

Table 5.18: Influence of remittance for shifting residence

Level of influence	Shifted & will shift		Shifted but will not shift		not shifted & will shift		Total	
	N	%	N	%	N	%	N	%
Very low (1-19)		0		0		0	0	0
Low(20-39)	2	2	0	0	7	5	9	7
Moderate(40-59)	2	2	14	11	16	12	32	24
High(60-79)	9	7	15	11	30	23	54	41
Very High(Above 80)	7	5	11	8	20	15	38	29
Total	**20**	**15**	**40**	**30**	**73**	**55**	**133**	**100**

Source: Field Survey, 2009

***Percentage based on the number of HHs who have already shifted their residence (60) and who have their plan to shift (73)*

It is revealed from the table 5.16 that remittance did not influence 38% of the surveyed household to think of shifting their current residence as because they did not shift their residence after receiving remittance and will not have a plan to shift in future. But remittance had different level of influence on the households those who have already shifted their residence and those who want to shift in near future. Among the surveyed households those who have already shifted their residence or will shift in future, 41% of them told that remittance inflow had influenced highly to make them think(different purposes) of it. Table 5.18 depicts that remittance inflow has influenced very high to 29% of surveyed households those who have already shifted or have a plan to shift in future for planning residential shift.

Table 5.19: Remittance and Residential Shift nexus

Status of residential shift	Remittance Receiving HHs		Non remittance receiving HHs		Total	
	F	%	F	%	F	%
Shifted	284	23	78	2	362	8
Not shifted	956	77	3064	98	4020	92
Total	**1240**	**100**	**3142**	**100**	**4382**	**100**

Source: FGD, 2009
(Percentage based on the number of households who received remittance and those who did not) Details Annex B, Table 5)

Table 5.19 illustrates that 8% of the total household in the study area (14 villages) have already shifted their residence from the locality. This figure goes up to 23% when remittance receiving household is considered. The tendency of residential shift found less among the households those who did not receive remittance from abroad. Because there were only 2% of the non remittance receiving household who shifted their residence. So it can be concluded from the above table that obviously there is a positive co relation between remittance earning and residential shift.

Table 5.20: Relation between income and influence to shift residence

Income of HH	High (60-79)		Low (20-39)		Moderate (40-59)		Very High (Above 80)		Total	
	N	%	N	%	N	%	N	%	N	%
Below 10000	0	0	7	5	15	11	0	0	22	17
10001-20000	12	9	2	2	15	11	3	2	32	24
20001-30000	37	28	0	0	2	2	17	13	56	42
30001-40000	3	2	0	0	0	0	13	10	16	12
Above 40000	2	2	0	0	0	0	5	4	7	5
Total	54	41	9	7	32	24	38	29	133	100

Source: Field Survey, 2009
***Percentage based on the number of HHs who have already shifted their residence (60) and who have their plan to shift (73)*

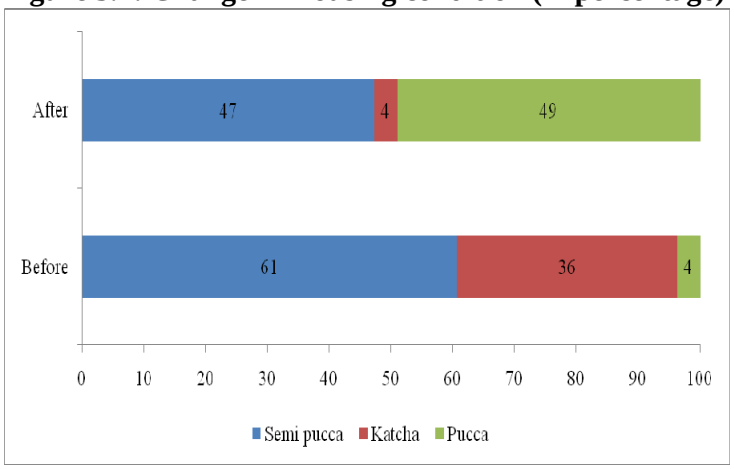
It is found from the above table 5.20 that among the 41% of households who want to shift in future, 28% of them have their monthly income of about 20-30 thousand taka firmly point the high influence level of remittance for residential shift. 29% of the households who want to shift in near future put remittance as a very high level influencer. Within this 29%, 14% have their monthly income of above 30 thousand taka per month. Most of the middle income group (upto 20 thousand taka per month) pointed out the influence level as moderate. It was revealed from the above table that there is a relation between monthly income of the households and residential shift (Annex B. B9). 58% of the surveyed households those who want to shift in future have their monthly

income of around 20-35 thousand per month. Whereas, only 12% of the remittance receiving household who want to shift in future have monthly income of below 10 thousand taka per month. From the above analysis it can be concluded that the increase of monthly income, increases the probability of shifting residence from current residence.

5.6 Impact of remittance

Impacts of remittances are two folds *i.e.* positive and negative. It has its impact on household, community and national level. Remittances have significant positive impacts at household such as poverty alleviation, income generation, accessing better health services and education facilities etc. This section of the chapter will try to find out the impacts of remittances on remittances receiving household.

Figure 5.2: Change in Housing condition (in percentage)



Source: Field Survey, 2009

Figure 5.2 depicts the overall changes in housing condition of the remittance receiving households. In Chauddagram upazila it is found that only 9% of the surveyed household had pucca house before receiving remittance and this figure rose up to 59% (Annex B, B12) when one of the household members went abroad. Remittance receiving surveyed households not only improved their houses but also installed tube-well for their own use. Table 5.21 reveals that those who used to fetch water (drinking) from neighbors tube well (74%), after receiving remittance they have installed their own tube well (32%). Now among the surveyed households 62% have their own tube well, but the figure was 26% before receiving remittance.

Table 5.21 Change in main source of drinking water in percentage

	Chuddagram		Hathazari		Nabinagar		Total	
	B	A	B	A	B	A	B	A
Individual TW	33	74	21	54	24	59	26	62
Neighborhood TW	67	26	79	46	76	41	74	38

Source: Field Survey, 2009

Table 5.22 Change in amount of agricultural land (in percentage)

Area in decimal	Chuddagram		Hathazari		Nabinagar		Total	
	I	D	I	D	I	D	I	D
Below 10	26	9	37	28	8	0	23	12
10-20	9	23	15	12	0	41	7	26
20-30	10	19	3	3	0	19	4	14
30-40	3	0	0	0	0	16	1	6
Above 40	0	3	0	1	0	16	0	7
Total	47	53	55	45	8	92	35	65

Source: Field Survey, 2009

Table 5.22 represents that 65% of the remittance receiving surveyed household's agricultural land decreased in different amount. There were only 35% of households whose agricultural land increased after one of the household members went abroad. It is very much interesting that in Nabinagar upazila 92% of the household's land decreased because most of them sold their agricultural land to arrange the money for migration. The percentage of the household whose agricultural land increased after migration was found higher than the percentage of the household whose land decreased only in Hathazari upazila. Not only agricultural land decreased of the surveyed households but also non agricultural land decreased (63%) as well (Annex B, B15).

Table 5.23: Number of earning member after receiving remittance

Upazila name	**1 increase**		**2 increase**		**No Change**		**Total**	
	N	%	N	%	N	%	N	%
Chauddagram	33	47	12	17	25	36	70	100
Hathazari	34	51	4	6	29	43	67	100
Nabinagar	40	51	0	0	39	49	79	100
Total	107	50	16	7	93	43	216	100

Source: Field Survey, 2009

Due to remittance inflow the number of earning member increases about half of the surveyed households. Most of the remittance recipient surveyed households make the unemployed member in the family involve in different income generating activities especially in business and shop keeping with the remitted money. The percentage of increase earning member in the family was found higher in Chauddagram (64%) than the other two upazilas.

Table 5.24: Change in food supply (in percentage)

Sources of food-stuff	Chuddagram		Hathazari		Nabinagar		Total	
	B	A	B	A	B	A	B	A
Partially from leased agricultural land and rest buy	20	47	12	40	0	32	10	39
Partially from own agricultural land & rest buy	7	39	4	22	39	39	18	34
Buy fully	7	7	7	22	8	16	7	15
Partially from own agricultural land & rest from leased land	26	7	25	10	25	13	25	10
Fully from own agricultural land	40	0	51	4	28	0	39	1
Total	100	100	100	100	100	100	100	100

Source: Field Survey, 2009

Table 5.24 depicts that before migration 40% of the households in Chauddagrm used to get their common food-stuff from their own agricultural land but after migration none of them. One of the main reasons behind that is decreasing agricultural land (agricultural land decreases 53% of HHs) of the remittance receiving households. Highest portion (47%) of the remittance receiving households from Chauddagram Upazila used to collect their common food-stuff (rice, vegetables, pulse etc.) partially from leased agricultural land and partially they buy. The scenario was found very same in Hathazari upazila (40% get their food stuff partially from leased agricultural land and partially they buy) where 45% remittance receiving household's agricultural land also decreased. It can be concluded that among the remittance receiving surveyed households those who were involved in cultivation earlier, now they are not involved in that. Most of the household now depend on the product of leased agricultural land and readymade food stuff (which they buy) whereas before migration most of them depend on their own agricultural land (39%).

Table 5.25: Status of loan of the surveyed households

	Chuddagram		Hathazari		Nabinagar		Total	
	Before	After	Before	After	Before	After	Before	After
Yes	0	39	1	32	7	49	8	120
No	70	31	66	34	72	23	208	88
Increase loan		0		1		5	0	6
Decrease loan						2	0	2
Total	70	70	67	67	79	79	216	216

Source: Field Survey, 2009

Table 5.25 contradicts with available reviewed literature. Because it portrays that number of households having loan have increased after one of the family member went abroad. It is found that among the 216 household now 128 households have had loan from banks or others. Only 8 of the surveyed households had their loan before one of the household members went abroad. Reason behind that is to arrange the large amount of money for migration they used to take loan (44%, Table 5.8). And year after year they were reimbursing it.

From the focus group discussion as well as from reviewed literature it is found that largest portion of remittance is used for consumptive purpose not for direct income generating purposes. Table 5.26 reveals that 80% of the total remittance was used in non productive (not income generating) purpose such as home stead purchase (6%), house purchase / repair (17%), land purchase (20%), payment of loan/mortgage (19%), purchasing basic needs (12%) and purchasing luxurious goods (6%).

Table 5.26: Sector wise use of remittance in percentage

Use	Min	Max	Median	Sum	Frequency	% of use
Land purchase	15	80	30	4320	126	20
Payment of loan/mortgage	10	50	40	4135	113	19
House purchase / repair	10	80	25	3660	139	17
Purchasing basic needs	10	40	20	2510	132	12
Business	5	50	20	2300	105	11
Home stead purchase	35	60	50	1200	26	6
Purchasing luxurious goods	5	30	15	1190	74	6
Savings	5	25	10	845	68	4
Agriculture	5	20	20	700	44	3
Apartment purchase	40	60	52.5	410	8	2
Poultry//dairy	10	20	10	205	15	1
Providing loan to others	10	15	15	80	6	0
Fisheries	15	15	15	45	3	0
Total				**21600**		**100**

Source; Field Survey, 2009

Table 5.27 depicts that 52 % remittance is used within the locality and this is because the surveyed households used the highest portion of the remittance in land purchase within the locality, house repair and other consumptive purposes. Around 31% of the remitted money is used for purchasing basic need and repayment of loan.

Table 5.27: Location of remittance use

Location	Frequency	Sum	Percentage
Within the locality	465	11330	52
In district towns	123	3420	16
Upazila centre	120	3180	15
Dhaka city	84	1800	8
Another union/pourashava centre	31	880	4
Abroad	13	485	2
Local hat bazaar	23	505	2
Total	859	21600	100

Source: Field Survey, 2009

5.7 Study findings compare with other literature

Afsar, R. (2000) in her study identified the motives for migration *i.e.* job search, better job, transferred by employer, education, river erosion, as accomplice of relatives to Dhaka where she found that job related motivations pre dominated in the reasons for migration followed by education and official purpose (transfer). Bhuyan et al. (2001) found that seventy-six percent of the respondents migrated for better economic conditions and only four percent of respondents said that they came to the city to "lead a better life," Ten percent appreciated the greater freedom for women in the cities. Eight percent said they migrated to get a better education. Again when he considered migration from urban area he found that twenty-eight percent migrated for lack of employment and 17 percent cited a lack of law and order. M. Z. Hossain (2001) in his study shows that it is the economic opportunity that played dominant role in migration decision. Over 38 percent of the respondents reported that they migrated due to poverty while another 30 percent did so to find out a better job opportunity. Only about 6 percent were migrated for higher studies. Besides, about 48 percent were found migrated to a particular destination place due to better opportunity.

Based on the above discussion it can be alleged that the findings of this study very much complies with the findings of other studies. Not only the causes for residential shift but also the migration rate due to different factors is very much relevant with the findings of this study. Most of the studies point out economic opportunities as the dominant factor for residential shift followed by better livelihood opportunities same as the findings of this particular study.

5.8 Conclusion

The main objective of this chapter was not only to investigate the rate of residential shift of remittance receiving households but also to explore the nature and dynamism of residential shift. In this particular study most identified causes for residential shift by those who have already shifted was better education facility followed by relative's location of residence, better transportation and trade opportunities. On the contrary, residence with better urban amenities was pointed out as the top most consideration followed by education facility, trade opportunities and transportation facility for future residential shift. Putting any recommendations to fasten people in their locality, it is very much essential to identify the relative importance of the factors of residential shift. The next chapter will attempt to find out the comparative importance of those causes through AHP model as it is not possible to prioritize the causes precisely from generic analysis.

Chapter Six: Prioritizing factors of residential shift by AHP Model

6.1 Introduction

Complex problems of choice are so often tangles that human minds are not capable of considering all the factors and their effects simultaneously. To solve complex problems they do not need a more complicated way of thinking. Rather they need to review their problems in an organized framework, elaborated in a new way that makes it possible for decision makers to capitalize on their valuable personal knowledge. The analytical Hierarchy Process (AHP) is such an organized framework which had been applied for this analysis.

In this chapter some of the decisive factors for residential shift *i.e*. better residence with urban amenities, trade opportunities, better educational facility, staying close to relatives, staying near to workplace, security and disaster have been analyzed to prioritize according to the responses of remittance receiving households. This chapter attempts to address comparative importance of the selected attributes. The study reveals that relative magnitude of these indicators varies across upazilas. The main purpose of the AHP model was to investigate respondent's considerations and psychological dynamics in residential location choice.

6.2 Factors influencing residential shift

There are many tangible & intangible factors that influence remittance receiving households to shift their residence. The factors may vary from region to region. That's why 3 FGD in three selected upazilas were conducted to map out the factors. Then a questionnaire was prepared for AHP analysis incorporating the factors. 21 respondents(10% of total 216 questionnaires survey, Satty1990) were asked to evaluate their identified criteria *i.e.* better residence with urban amenities, trade opportunities, better educational facility, staying near to work place, transportation, relatives reside there, natural disaster and security problem in pairs. To determine the rating of each factor, pair wise evaluations were aggregated and then relative weight of each attribute was calculated.

6.3 Prioritize factors influencing residential shift in Chauddagram

This part of the chapter has determined the relative weight of the factors influencing residential shift. Aggregated value of each pair is presented in the below pair wise comparison matrix (Table 6.1).

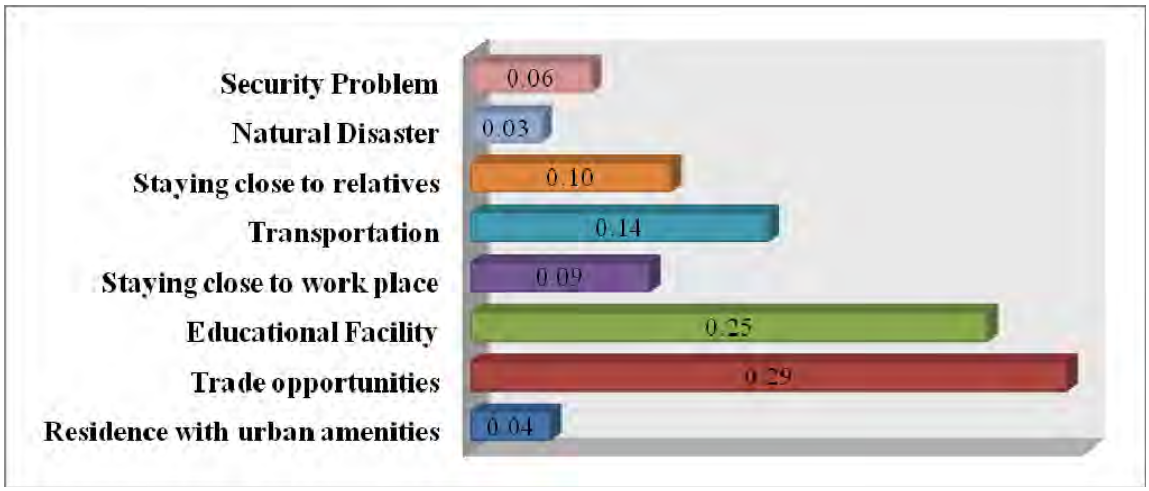
Table 6.1: Pair wise comparison matrix of the factors influencing residential shift

	1	2	3	4	5	6	7	8
1. Residence with urban amenities	1.00	0.17	0.21	0.74	0.15	0.75	0.74	0.30
2. Trade opportunities	5.88	1.00	1.19	3.00	2.89	5.00	6.33	6.67
3. Educational Facility	4.76	0.84	1.00	7.00	1.22	4.53	5.00	3.67
4. Stay near to work place	1.35	0.33	0.14	1.00	0.75	0.67	3.67	3.33
5. Transportation	6.67	0.35	0.82	1.33	1.00	0.65	5.00	3.00
6. Stay close to relatives	1.33	0.20	0.22	1.49	1.54	1.00	3.33	2.53
7. Natural Disaster	1.35	0.16	0.20	0.27	0.20	0.30	1.00	0.44
8. Security Problem	3.33	0.15	0.27	0.30	0.33	0.40	2.27	1.00

Source: Field Survey, 2009

From the comparison matrix it is clearly found that better residence with urban amenities is evaluated less important than trade opportunities. On the other hand transportation facility is evaluated more important than better residence with urban amenities (6.67:1), staying near to work place (1.33:1), natural disaster(5:1) and security problem(3:1) by the remittance receiving households of Chauddagram whereas it is considered less important than better trade opportunities (0.35:1) and better educational facility(0.82:1) in ordinal scale. Again Natural disaster and security problem both are evaluated less important than all other factors except better residence with urban amenities by the surveyed households. People from Chauddagram(surveyed HHs) stated that staying near to work place had been less prior than better trade opportunities (0.33:1),better education(0.14:1), transportation (0.75:1) and relative's residence (0.67:1) to them while shifting their residence. In this way the pair wise matrix gives the aggregated importance of each factor compared to all other factors in an ordinal scale.

Figure 6.1: Weight of the factors influencing residential shift (Chauddagram)



Source: Author's calculation (Annex e: Table C4)

Figure 6.1 shows the relative importance of each factor by normalizing the comparison matrix in Table 6.1(See Annex C, Table C4). Among the 8 most important factors (*i.e.* trade opportunities, educational facility, transportation facility, staying near to work place, natural disaster, security problem, relative's residence and residence with urban amenities) trade opportunities seems to be the strongest decisive factor for the sampled households of Chauddagram Upazila. General analysis of occupational patterns of the upazila shows the fact that 30 percent of the sampled people are service holder and business man. Most of the service holders have other earning sources (business) rather than service. Beside this after remittance inflow, the number of earning member has increased among 64% of the surveyed household. As a result they prefer to live close to the business place where there is a better trade opportunities that's why it has got top most priority. From the relative weight of the factors it is found that trade opportunities is about **7.5** times prior (0.29÷0.04) than residence with urban amenities, **8.45** times (0.29÷0.03) than natural disaster, **4.98** times (0.29÷0.03) than security problem. Furthermore better trade opportunities is **3.34** times (0.29÷0.09), **2** times (0.29÷0.14), **2.99** times (0.29÷0.10) prior than staying near to work place, transportation and relative's location of residence respectively. So according to sample survey of Chauddagram Upazila, people's top most priority was better trade opportunities rather followed by better education facility ,transportation, relative's location of residence, staying near to work place, security problem, better residence with urban amenities and

natural disaster. Again priority of relative's residence against staying near to work place and natural disaster against better residence with urban amenities were found almost same.

6.4: Consistency check of the responses (Consistency Ration of Chauddagram)

Apart from the relative weight, it would be justified if the responses of the respondent are consistent. In this section of the chapter consistency of the responses of Chauddagram has been checked. If the value of Consistency Ratio is smaller or equal to 10%, the inconsistency is acceptable. If the Consistency Ratio is greater than 10%, it is needed to revise the subjective judgment (Satty, 1990).

We know consistency ration, $CR = \frac{CI}{RI} = \frac{\frac{\lambda_{max} - n}{n-1}}{RI}$

Where, **CI** = Consistency Index (Deviation or degree of consistency),

RI = Random Index which depends on the number of the attributes (here n=8) among which it is compared (See Annex C, Table C5),

λ_{max} = largest Eigen Value. It is obtained from multiplying the sum of columns of the complete comparison matrix (Annex C, Table: C3) with principle Eigen value of each factor (Annex C, Table: C4).

Here,

λ_{max} =

(25.68×0.04)+(3.20×0.29)+(4.06×0.25)+(15.14×0.09)+(8.08×0.14)+(13.30×0.10)+(27.34×0.03)+(20.94×0.06)

= 8.86194

n= 8

RI= 1.41 (Annex C, Table: C5)

So, CR= 0.087 or 8.7%

According to the Satty's statement the responses are accepted. From the above calculation it can be conclude that the evaluation of the households of Chauddagram about factors of residential shift is consistent.

6.5 Prioritize factors influencing residential shift in Hathazari

As per the evaluation of surveyed household from Hathazari Upazila, the relative weight of the factors which influence them to shift their residence are analyzed. Aggregated value of each pair is portrayed in the below pair wise comparison matrix (Table 6.2).

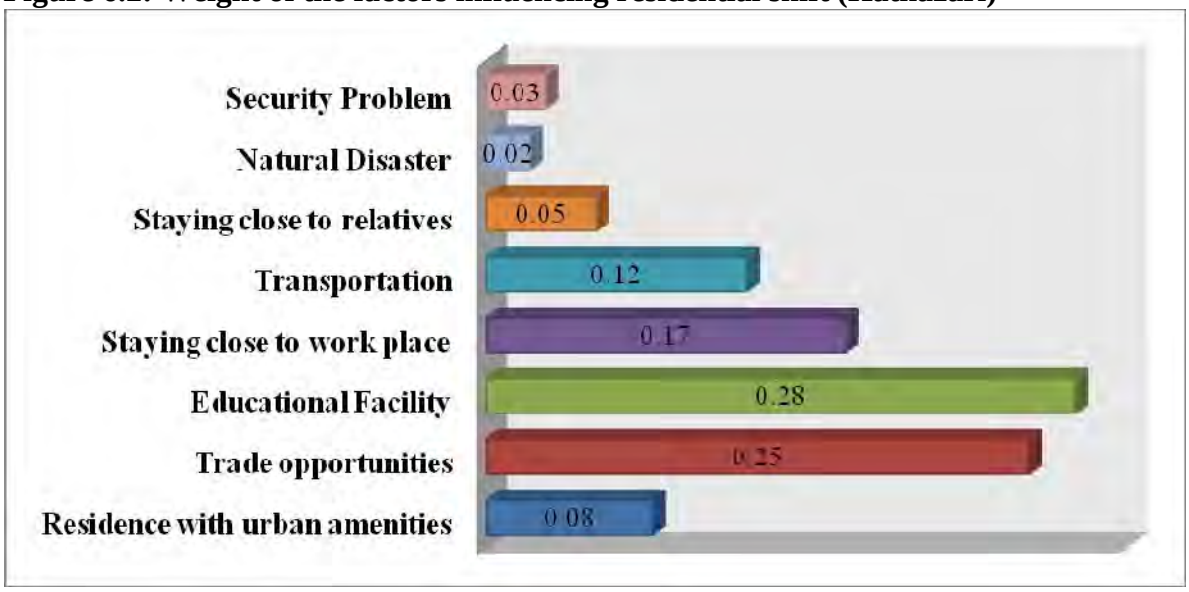
Table 6.2: Pair wise comparison matrix of the factors influencing residential shift

	1	2	3	4	5	6	7	8
1. Residence with urban amenities	1.00	0.17	0.15	0.31	0.42	3.00	5.00	5.00
2. Trade opportunities	5.83	1.00	1.22	0.78	3.33	5.00	8.67	8.33
3. Educational Facility	6.90	0.82	1.00	2.67	3.00	5.00	8.67	7.33
4. Staying near to work place	3.24	1.29	0.38	1.00	0.89	3.33	6.67	7.00
5. Transportation	2.38	0.30	0.33	1.13	1.00	3.00	5.33	5.00
6. Staying close to relatives	0.33	0.20	0.20	0.30	0.33	1.00	3.33	3.00
7. Natural Disaster	0.20	0.12	0.12	0.15	0.19	0.30	1.00	0.41
8. Security Problem	0.20	0.12	0.14	0.14	0.20	0.33	2.44	1.00

Source: Field Survey, 2009

From the first row of the Table 6.2 it is observed that residence with urban amenities is comparatively less important than trade opportunities (0.17:1), education facility (0.15:1), staying near to work place (0.31:1) and transportation facility (0.42:1) to the people of Hathazari Upazila while making decision to shift their residence. On the contrary it is found more significant than location relative's residence (3:1), threats of natural disaster (5:1) and security problem (5:1). The comparison matrix clearly shows that education facility is evaluated more important than all other factors (Row 3 of Table: 6.2) except trade opportunities in the ordinal scale. It is also derived from the above table that threats of natural disaster did not contribute much on the surveyed communities compare to other factors as the communities are less vulnerable to natural disaster. Threat of natural disaster is found less important than all other identified factors. On the other hand transportation is evaluated more important than better residence with urban amenities (5.83:1), official(1.13:1), natural disaster(5.33:1), security problem(5:1) and location of relative's residence (3:1) by the remittance receiving households.

Figure 6.2: Weight of the factors influencing residential shift (Hathazari)



Source: Author's calculation (Annex C: Table C9)

After synthesizing the responses (pair wise comparison) from Hathazari Upazila by AHP, considering 8 factors of residential shift, the final results is presented in the figure 6.2. Among the 8 most important factors (*i.e.* trade opportunities, educational facility, transportation facility, staying near to work place, natural disaster, relative's residence, residence with urban amenities and security problem) better education facility seems to be the most important factor for the sampled households of Hathazari Upazila and it is **3.53***(0.28÷0.08)*, **1.09***(0.28÷0.25)*, **1.64***(0.28÷0.17)* ,**2.26***(0.28÷0.12)*, **5.33***(0.28÷0.05)*,**13.45***(0.28÷0.02)*, **9.86***(0.28÷0.03)* times prior than residence with urban amenities, trade opportunities, staying near to work place, transportation facility, relative's location of residence, threats of natural disaster and security problem respectively. The above figure depicts that threats to natural disaster was the most unimportant factor to the inhabitants of Hathhazari as the upazila is less vulnerable to natural disaster. From the generic analysis it is found that only 10% people are illiterate and according to BBS, 2001 the figure is 57.9% (population aged 7 years and over) where the school attendance rate was around 50%. Based on the above statement it is very much clear that most of them are educated or have that passion to be educated. That's why the surveyed households might prioritize education facility as the most decisive factor for residential shift. They also put staying near to work place as the third top most factors while thinking of residential shift. It is found from the reconnaissance

survey that there were a very small number rural markets in unions and many bridges, culverts, roads were broken that is why they prioritize transportation facility as the fourth important factor.

6.6: Consistency check of the responses (Consistency Ration of Hathhazari)

Here the responses of the surveyed households of Hathazari will be evaluated whether it is accepted or not?

λ_{max} = multiplying the sum of columns of the complete comparison matrix (Annex C, Table: C8) with principle Eigen value of each factor (Annex C, Table: C9)

=(20.08×0.08)+ (4.02×0.25)+(3.53×0.28)+(6.47×0.17)+(9.36×0.12)+(20.97×0.05)+(41.11×0.02)+(37.08×0.03)

= 8.768

So, CR= 0.078 or 7.8 % (Accepted as CR is below 10%)

So it can be concluded that the pair wise evaluation of the factors influencing residential shift from the respondents of Hathazari upazila were consistent. (For details calculations please see 6.4)

6.7 Prioritize factors influencing residential shift in Nabinagar

This part of the chapter is going to find out the relative importance/weight of the factors influencing residential shift of the remittance receiving households from Nabinagar upazila. The pair wise evaluation of the factors are shown in the below comparison matrix Table 6.1.

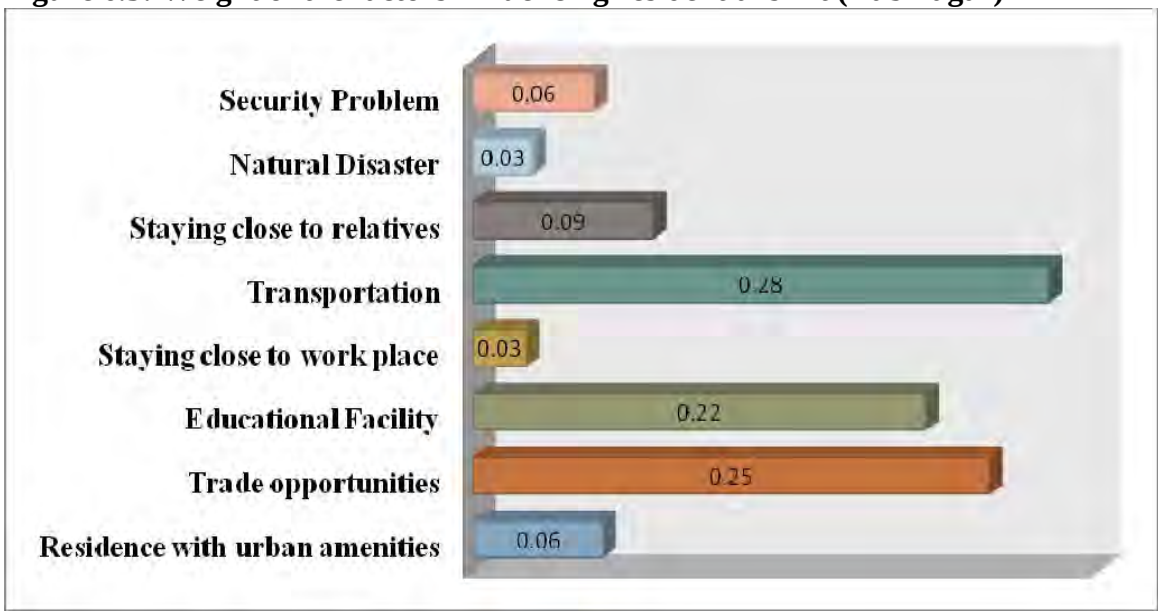
Table 6.3: Pair wise comparison matrix of the factors influencing residential shift

	1	2	3	4	5	6	7	8
1. Residence with urban amenities	1.00	0.21	0.32	4.67	0.17	0.65	1.67	0.89
2. Trade opportunities	4.72	1.00	1.11	7.00	0.89	5.00	7.00	5.00
3. Educational Facility	3.09	0.90	1.00	6.67	1.22	3.33	6.67	3.67
4. Staying near to work place	0.21	0.14	0.15	1.00	0.14	0.21	0.75	0.42
5. Transportation facility	6.00	1.13	0.82	7.41	1.00	5.00	8.33	7.33
6. Staying close to relatives	1.53	0.20	0.30	4.72	0.20	1.00	5.33	1.53
7. Natural Disaster	0.60	0.14	0.15	1.33	0.12	0.19	1.00	0.32
8. Security Problem	1.13	0.20	0.27	2.38	0.14	0.65	3.14	1.00

Source: Field Survey, 2009

Each row of the Table 6.3 shows the evaluation of all factors against with other factors. The above comparison matrix depicts that transportation facility is evaluated more important to the sampled respondents of Nabinagar Upazila compared to all other factors. Residence with urban amenities is found comparatively less important than trade opportunities (0.21:1), education facility (0.32:1), transportation facility (0.17:1), relative's location of residence (0.65:1) and security problem (0.89:1). According to the respondent of Nabinagar Upazila staying near to work place was less important than all other factors for shifting residence. On the contrary trade opportunities was found more important to them while thinking about residential shift than all other factors except transportation facility. It is also revealed from the above comparison matrix that education facility is evaluated a little less important than better trade opportunities (0.90:1) but more important than staying near to work place (6.67:1), transportation facility (1.22:1), relative's location of residence (3.33:1), security problem (3.67:1) and threats of natural disaster (6.67:1) by the remittance receiving households of Nabinagar.

Figure 6.3: Weight of the factors influencing residential shift (Nabinagar)



Source: Author's calculation (Annex C: Table C13)

The priority vector (Annex C: Table C13) shows relative weight among the factors that influence residential shift of the surveyed households in Nabinagar. In Nabinagar Upazila the surveyed households prioritize transportation facility as their top most

priority (27.54%) followed by trade opportunities (24.71%), educational facility (21.66%), relative's location of residence (8.62%), residence with urban amenities (6.21%), security problem (5.81%), natural disaster (2.89%) and staying near to work place (2.55%). Their prime concern was transportation facility while they think of shifting their residence. According to them it takes more than 3 hours to reach Comilla District and more than 5 hours to reach Dhaka. Along with that roads are not only broken as well as risky. Though there are some direct bus services from Dhaka to Nabinagar but they are very few in number and starts twice a day. Others are very uncomfortable and bad in condition. That's why they put transportation facility as the most decisive factor for residential shift. Comparing to the population, the number of high schools (25 in number); colleges (4 in number) are not sufficient and well equipped. This was also another very important factor to them while thinking of shifting their residence for the sake of their children and next generation. Trade opportunities is found very important to all. Through AHP analysis it can be evaluated more than ranking. As the relative weight is a ration scale so it can be divided among them to compare among themselves. For example, transportation facility is **3.2**(.275÷0.087) times more important than relative's location of residence to the surveyed people of Nabinagar upazila. Trade opportunities and education facility was **0.9**(0.25÷0.28) and **0.79**(0.22÷0.28) times less important than transportation facility to the respondent.

6.8: Consistency check of the responses (Consistency Ration of Nabinagar)

Here the responses of the surveyed households of Chauddagram will be evaluated whether it is accepted or not?

λ_{max} = multiplying the sum of columns of the complete comparison matrix (Annex C, Table: C12) with principle Eigen value of each factor (Annex C, Table: C13).

= (18.29×0.06)+(3.93×0.25)+(4.12×0.22)+(35.17×0.03)+(3.87×0.28)+(16.04×0.09)+(33.89×0.03)+(20.16×0.06)

= 8.49 (For details calculations please see 6.4)

So, CR= 0.05 or 5% (Accepted as CR is below 10%)

So it can be concluded that the pair wise evaluation of the factors influencing residential shift from the respondents of Nabinagar upazila were very much consistent. Comparing

the result from the other two consistency test(6.4 & 6.6) it is found that the pair wise evaluation of the factors influencng residential shift from Nabinagar upazila is more consistent.

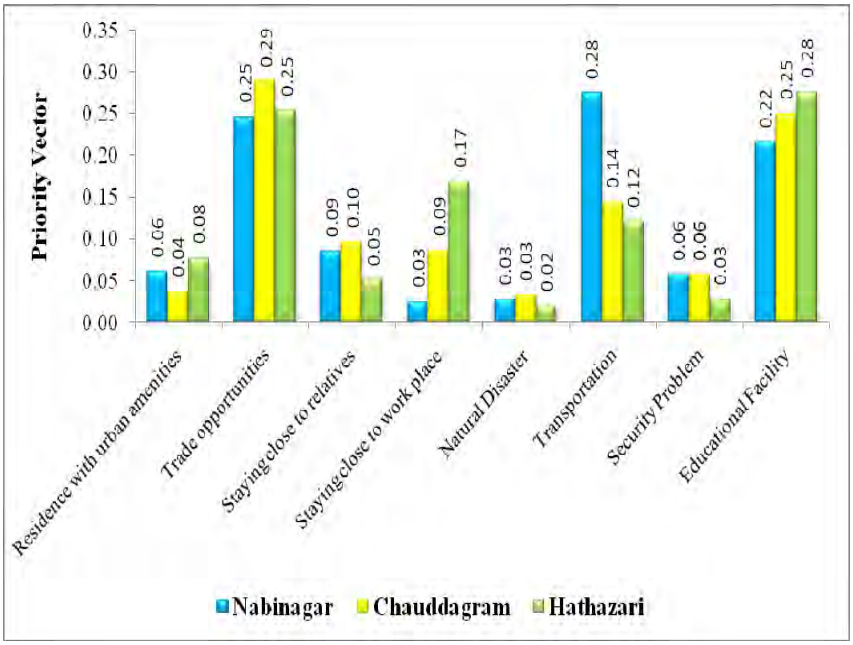


Figure 6.4: Upazila wise comparison among the importance of the factors

The figure 6.4 evidently portrays the importance of the 8 identified factors to the surveyed people of Nabinagar, Hathazari and Chuddagram upazila for residential shift. And the importance or weight of these factors varies with different geographical entity. In this particular study it is found that the importance of some factors *i.e.* trade opportunities and education facility were ahead of others everywhere. So it can be concluded that remittance receiving households put top most priority on educational facility and trade opportunities while they are thinking to shift their residence. Followed by them (factors), transportation facility plays a more vital role to the people of Nabinagar upazila than the other two. Staying near to work place as a factor of residential shift also varies quiet sharply across the three surveyed upazilas.

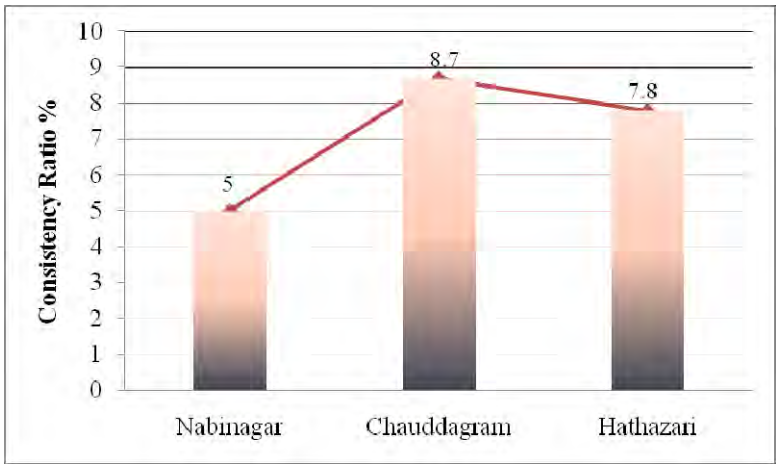


Figure 6.5: Upazila wise comparison of Consistency Ration

Apart from the importance analysis, it is very important to investigate how much consistent the

responses were or how much consistently the pair wise comparison was done by the surveyed households. Figure 6.5 clearly depicts that more consistent evaluation among the factors was done by Nabinagar Upazila followed by Hathazari and Chauddagram.

6.9 Comparison between AHP findings and generic findings

From the AHP analysis it is found that in Chauddagram Upazila trade opportunities was the top most consideration (relative weight 0.29) for residential shift followed by better education facility(relative weight 0.25 and better transportation facility(relative weight 0.14). Again from the generic analysis it is found that 89%, 64% and 28% of cases those who want to shift in future pointed out better residence with urban amenities, better trade opportunities and better education facility as the prime cause of their residential shift. Those who have already shifted their residence pointed out better educational facility (42% cases), transportation facility (25% cases), trade opportunities (33% cases) and residence with urban amenities (25%) were the most influencing factors for residential shift. So evidently it can be concluded that findings from both corner very much complimentary to each other.

In Hathazari Upazila 47% of the surveyed households (15 cases, who already have shifted) pointed out better educational facility and 33%, 20%, 13% household stated better residence with urban amenities, better transportation facility and trade opportunities were the main causes for residential shift respectively. Again 28% cases, of those who want to shift in near future, evaluated educational facility as one of the important factors of residential shift which clearly complies with the AHP findings. It was found that educational facility (relative weight 0.28) and trade opportunities (relative weight 0.25) were the top most considerations to the respondent from Hathazari upazila.

Better transportation facility, educational facility and trade opportunities were found to be the most prior considerations from both AHP and generic analysis to the respondents of Nabinagar upazila for residential shift.

Chapter Seven: Policy Implications and Conclusion

7.1 Introduction

This concluding chapter is not only composed of the key findings on migrants and their livelihood pattern but also the impacts of remittance on both household and community level. From the chapter five it is revealed that remittance inflow influences households to migrate to nearby big cities. So the pressure on urban area will be worsen day by day due to this unplanned rural urban migration until proper secondary and tertiary urban centers are designed. To break such vicious circle and lead development towards a balanced, sustainable development, this study tries to draw some implications of its major findings for policy makers and planners.

7.2 Snap shot of the key findings

7.2.1 Impact of remitted money in households and community level

- The study has found that most of the surveyed households went to the middle-east countries and get small amounts (62% below 20thousand) as most of them are unskilled
- Only 17% migrants were found graduate. Most of the migrants were SSC (31%) and HSC (26%) passed.
- Highest percentage of the migrants were migrated during the age 21-25 years (29%) and 19% migrated below 20 ages (Annex B, B20).
- Observation shows that among the remittance-receiving villages there are shortages of agricultural land along with agricultural labour or farming households. Because of selling of agricultural land to arranging money for migration.
- It has been found that remittance has both negative and positive impacts on the socio-economic life of the people of the surveyed households. Though it has helped to lead a better livelihood but at the same time has shattered the future of many youth (they are interested to migrate in abroad rather that to be educated). Most of them are leaving higher education uncompleted and are trying to leave the country. Some also do not work as they are getting enough

money from abroad. Thus unemployment and illiteracy are generating highly in this area. Another negative impact of remittances is a possible dependency on this money flow and inflation.

- Research findings suggest that these remittance receiving households spend a large portion (80%) of the money in non-productive consumption sector such as home stead purchase, house purchase / repair, land purchase, payment of loan/mortgage, purchasing basic and luxurious goods and persuade them to indulge idle or less industrious activities.
- In the context of Bangladesh land is the safest and most profitable investment for an individual. Therefore most of the households chose to invest in all kinds of land – arable, homestead, commercial etc. Some of them have been successful in releasing mortgaged land. They have also mortgaged in land as an income-earning avenue.

7.2.2 Importance of remittance derived factors for residential shift

- In chapter five it is found that already 28% households had shifted their residence after receiving remittances. Largest portion of the remittance receiving households had migrated in another union/pourashava, upazila centre and district town (18, 26&19% respectively).
- In addition, another 43% of the total households do have their future plan to shift their present residence in near future. Among them largest portion have their plan to shift in district town (25%) and Dhaka city (37%).
- Major considerations for residential shift (better trade opportunities, better educational facility, better transportation facility, better residence with urban amenities, security etc.) of the remittance receiving households were also identified in the study.
- 41% of the households, those who had already shifted their residence or do have a plan to shift in future, identified the influence level of remittance was high (60-79) while making decision to shift from current residence. And another 29% of households evaluated the level of influence very high (above 80) while making decision to shift the residence.

- A correlation was found between the amount of income and tendency of residential shifting. Increase of monthly income also enhances the probability of residential shifting.
- In this particular study it is found that importance or weight of the factors which influences residential shift varies across different geographical entity. Remittance receiving households put top most priority on education and trade opportunities followed by transportation, staying near to work place, staying close to relatives, security and natural disaster while they were thinking to shift from current residence.
- While identifying the relative importance of the factors influencing residential shift, the pair wise comparisons of the factors were found (5% inconsistency level) more consistent in Nabinagar Upazila than in Chauddagram (inconsistency level 8.7%) and Hathazari upazila (inconsistency level 7.8%)

7.3 Policy interventions

In Bangladesh there is no realistic policy measure to cope with the rapid urbanization resulting from rural urban residential shift. There were some sporadic attempts like decentralization and development of growth centers in rural area by the government to fasten people in their locality. It was found in different literature that direct controls such as police registration, travel restriction, location specific passes, employment limitations, ration cards and enforced resettlement programmes often do more harm than good(Waddington,2003). Considering the problems of direct policy implication and application in Bangladesh, some indirect policy options based on the key findings are put here

7.3.1 Policy interventions required based on the key findings

- **Educational Facility:** Educational facility was found one of the most decisive factors for residential shifting. 40% of those who have already shifted their residence (Table 5.13) and 52% of those who will shift their residence in near future (Table 5.17) pointed out educational facility as one of the major causes for residence shift. So the study recommends creating provision for higher and

quality educational facilities in unions where population pressure is relatively low and from where people want to shift their residence in search of better educational facilities. Better educational institutions might play an important role to fasten people in their locality

- **Transportation Facility:** One of the most effective indirect policy to fasten people in their locality might be to provide better transportation facility such as roads, bridges, culverts etc in the lest developed areas and areas from where people want to shift their residence due to worse transportation facilities. 86% of the households in Nabinagar who have their plan to shift their residence (Table 5.17) pointed out worsen transportation facility will be one of the most influential factor for residential shifting. Pucca road in Nabinagar is comparatively found less than the other two upazilas (pucca road 111 km in Chauddagram & pucca 13 km Nabinagar). Most of the bridges and roads were found under construction for years in Hathazari Upazila. So it should be paid serious attention to fasten people in their locality.
- **Promote commercial activities through infrastructure development:** Remittance receiving households put emphasis on trade opportunities and banking facilities for expanding their commercial activities. 57% of those who have their future plan to shift their residence evaluated better trade opportunities as one of their major concern. So in light of this the local government should take some necessary steps to functioning the existing bazaars and growth centers through infrastructure development and ensuring utility services. Then it might act as a growing point of service delivery of rural area. It will create new marketing opportunities and will enhance the exchanging of information. This will enlighten the people about new ideas and encourage them in investing.
- **Social Security:** Now-a-days security for the migrant's family has also become a burning issue as 22% the households those who have already shifted their residence (Table 5.13) pointed out security problem was one of their major cause. In this regard community based social security system could be introduced in the locality and that should be legally recognized. Beside these, police booth or small

police camp could be located from where people already shifted or will have a plan to shift their residence due to security problem.

7.3.2 Broader policies having implication of the residential shift

Apart from the specific policy interventions based on the findings, it is also tried to delineate some broader policy issues which might not directly derive from the findings but have a strong influence on rural urban residential shift. As a long term sustainable initiatives to fasten people in the locality and to redirect people from bigger cities these policies might play a very important role.

- **Designing secondary and tertiary towns:** Government should take policies to develop small urban centers, satellite towns or expand the small towns ensuring the urban services pointed out by the remittance receiving households. This will help not only to fasten people in the small urban centers but also to redirect people from shifting their residence to big cities like Dhaka, Chittagong etc.
- **Decentralization of industries:** Where industrial developments are concerted, different types of non agricultural activities are likely to occur. So scope of trade and employment opportunities will be increased. To fasten people in a particular place industrialization might be one of the strongest weapon. Ample opportunities were found in Nabinagar Upazila (Brahmanbaria District) as the upazila has water transportation route (waterways 56 nautical mile) which is very much viable for transportation of raw materials for industries. If the inland water transportation facility in Nabinagar is improved then it will be a very appropriate place of industries.
- **Comprehensive rural development policy:** Rural development policies like rural resettlement policies, inter sectoral development policies, provision of public services and amenities in rural areas, administrative and industry decentralizations, land reform, development of rural non-farm activity, price support for agricultural products to raise rural incomes are very important. Government should have a special policy package for the people of rural areas not only to fasten people or to redirect people in the locality but also for a balanced sustainable development for the country.

7.4 Conclusion

Due to tremendous urbanization pressure resulting from rural urban residential shift in Bangladesh, larger cities become unable to cater for basic services and facilities to the citizens and also have failed to provide employment opportunities whereas small towns and rural areas are declining due to rapid and large out migration. And as migration or residential shift is right of the people, so it should not be prohibited or controlled directly. Now it becomes essential for our country to formulate indirect control policy reducing pressure on certain unbar centers and ensuring benefits of migration. The present study was undertaken in order to contribute a greater understanding on the dynamism of rural-urban residential shift due to remittance inflow; one of the most significant but less studied areas. The research examined the influence of remittance on the residence shifting decision of remittance receiving households by AHP method as well as by generic statistical analysis. The study intends to provide some insights on the dynamism of rural urban residential shift which eventually assists in better policy formulation.

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Annex A: Questionnaires

A1: Questionnaire for Household Survey

Department of Urban and Regional Planning
Bangladesh University of Engineering and Technology (BUET),
Dhaka, Bangladesh.

Questionnaire on

A study on residential shift of the remittance receiving households

A Case Study of Comilla, Brahmanbaria and Chittagong District

(All information will solely be used for research purpose only)

District: Comilla/Chittagong/Brahmanbaria **Union:** **Village:** **Date:**

Name of the respondent: ---------- **Cell no:**.....
(Preferably household head)
Age: _____**Sex:**_____ **Religion:**_____

1. GENERAL INFORMATION ABOUT HOUSEHOLD

Sl. No.	Name	Age	Sex	Marital Status	Relation with HH	Level of education	Employ ment	Income (monthly)	Family expenditure (monthly)
1									
2									
3									
4									
5									
6									
7									

Gender: 1 = Male, 2 = Female
Marital Status: 1=Married, 2= Single, 3=Divorced
Relation: 1 = Wife, 2 = Brother, 3 = Sister, 4 = Son, 5 = Daughter, 6 = Others (Specify)
Level of education: 1 = Illiterate, 2 = Primary, 3 = SSC, 4 = HSC, 5 = Graduate, 6 = Post Graduate,7=Vocational, 8=dakhil, 9= Alim, 10= Fazil, 11= kamil, Others (Please Specify)
Employment: 1 = Day labourer, 2 = Farmer, 3 = Rickshaw puller, 4 = Business, 5 = Dairy/poultry, 6 = Service Holder, 7= Fisherman, 8=Mason, 9= Carpenter, 10=Shop Keeper, 11= Driver, 12=Dairy/Poultry,13= others (Specify)

2. Basic information of remittance sender(s)

SL No	Year of migration	Destination	Age During migration	Education during migration	Source of money for migration	Reasons for migration	Length of stay in abroad in yrs(if returned)	Reason for coming back to home country

SI: It will be based on Qu no. 1
Source of money for migration: Multiple answers

3. Economic information of remittance sender(s)

SL No	Profession		Monthly income		Average amount of remittance send to	Frequency	Channel
	Before Migration	After migration	Before Migration	After Migration			

Si: It will be based on Qu no. 1, After information will be now at abroad/returning home both will be considered

Frequency: 1 = Monthly, 2 = Bimonthly 3=Quarterly, 4 = Half Yearly, 5 = Yearly
Channel: 1 = Govt Bank, 2 = Non-govt bank, 3= Formal non-bank channel, 4= Hundi, 5 = Friends/Relatives, 6 = others (Specify)

4. History of residential shift of household/family remittance sender(s)

Place	Distance from present residence	Year	How many years reside there	Why shifted

Causes for shift: 1 = residence with urban amenities, 2 = trade opportunities, 3= educational institutions, 4= Staying near to work place, 5 = transportation facility, 6 = to stay close to relatives, 7= Disaster, 8=Security problem(Threats of extortionists), others (Specify)

5. Have any member(s) of your household have migrated from village after one of the family member gone abroad?

a. Yes b. No

5(a). If yes, then

Sl no	Year	Why	Where

Where: 1= Within locality, 2= another union , 3=upazila centre, 4= in the district town, 5= Dhaka City,6= Abroad, 7=others (Please specify)

6. Do you/any of your household member(s) have any plan to shift from present residence currently?

a. Yes Whole HH ☐ Partially (specific no) ☐ **b.** no

6 (a). If yes, then

Sl no	Where	Why

7. Do you think that remittance inflow make you think for residence outside the village?

a. Yes b. No

7 (a). If yes, then how much did it influence to make you think:

7 (b). If no, then why are you(your HH member) shifting residence

Sl no	Causes for shifting of residence (except remittance inflow)

8. Change in the status of the remittance receiving HH (before and after migration of the 1st remittance sender)

Sectors	Condition		Comments
	Before	After	
Amount of agricultural land holding (in decimal)			
Amount of non agricultural land holding (in decimal)			
Housing condition			
Sanitation			
Source of water supply			
Source of daily food supply for HH			
Electrification			
Loan (Tk.)			
Schooling (if any member in school going age)			
No. of Employed person in family			
Unemployed person			
Most Used of transport mode by HH memebers			
Any other important Change (Please mention)			

Housing condition: 1 = Kutcha, 2 = Semi pucca, 3 = Pacca
Sanitation: 1 = Sanitary, 2 = Insanitary
Source of water supply: 1 = Individual tube well, 2 = Neighbours tube well, 3 =Pipeline service, 4= others (Specify)
Food supply: 1. Fully from own agriculture land, 2. Partially from own agriculture land, rest from leased land, 3. Partially from own agriculture land and buy rest, 4. Buy fully, 5. Partially leased partially buy
Electrification: 1 = Yes, 2 = No
Transport mode: 1 = on foot, 2 = Rickshaw, 3 = Cycle, 4 = Van, 5 = Motor Cycle, 6 = Private Car, 7=Others (Specify)
Responsible for the change: 1= Remittance inflows, 2=Increase employed person, 3= Education, Others Please Specify
Schooling: 1=No, 2=Public, 3=Private, 4= Kindergarten, 5= Madrasa

9. Profession scenario of all HH members

Sl no	Profession and place of activity/office		Responsible for the change
	Before	After	

Si: It will be based on Qu no. 1

10. USE/INVESTMENT OF REMITTANCES

Which Sector/item	What Amount	Nature of investment	Where	Distance in km	When (Year)	Return (Annually)

Sector: 1 = Purchasing basic needs, 2 = House purchase/repair, 3 = Land purchases, 4 = Homestead purchase, 5 = Payment of loan/Mortgage, 6 = Purchasing luxurious goods, 7 = Saving, 8 = Agriculture, 9 = Business(please Specify), 10 = Home based informal works, 11 = Poultry/dairy, 12 = Fisheries, 13 = Industries, 14 = Providing loan to others, 15= others (Specify)
Where: 1= Within locality, 2= another union , 3=upazila centre, 4= in the district town, 5= Dhaka City, 6= others (Please specify)
Nature of investment: 1=thyself, 2= in joint venture with others

11. Is there any of your HH members involved with you?

a. Yes b. No

11 (a).If yes then how?

……

12. Do you have any future plan to invest in any sector which you think productive or income generating?

a. Yes b. No

12 (a). If yes, then

Which Sector	What Amount	Where	When (Year)

12 (b). If no, then why

……

13. Overall Comments on agriculture, residential shift (only for Remittance earner/ whole family shift to another place)

- **Agriculture**

- **Residential Shift**

Identity of the interviewer:

Time:

Date:

Signature:

Thank you for your valuable time and attention

A2: Questionnaire for AHP Model

Generally different factors influence you to shift your residence. Please give a tick mark in the proper place considering which factor affects most comparing to the other

	Extreme	Very strong	Strong	Moderate	Equal	Moderate	Strong	Very strong	Extreme	
Residence with urban amenities	9	7	5	3	1	3	5	7	9	Trade opportunities
Residence with urban amenities	9	7	5	3	1	3	5	7	9	Educational facility
Residence with urban amenities	9	7	5	3	1	3	5	7	9	Staying near to work place
Residence with urban amenities	9	7	5	3	1	3	5	7	9	Transportation facility
Residence with urban amenities	9	7	5	3	1	3	5	7	9	To stay close to relatives
Residence with urban amenities	9	7	5	3	1	3	5	7	9	Natural disaster
Residence with urban amenities	9	7	5	3	1	3	5	7	9	Security problem
Trade opportunities	9	7	5	3	1	3	5	7	9	Educational facility
Trade opportunities	9	7	5	3	1	3	5	7	9	Staying near to work place
Trade opportunities	9	7	5	3	1	3	5	7	9	Transportation facility
Trade opportunities	9	7	5	3	1	3	5	7	9	To stay close to relatives
Trade opportunities	9	7	5	3	1	3	5	7	9	Natural disaster
Trade opportunities	9	7	5	3	1	3	5	7	9	Security problem
Educational facility	9	7	5	3	1	3	5	7	9	Staying near to work place
Educational facility	9	7	5	3	1	3	5	7	9	Transportation facility
Educational facility	9	7	5	3	1	3	5	7	9	To stay close to relatives
Educational facility	9	7	5	3	1	3	5	7	9	Natural disaster
Educational facility	9	7	5	3	1	3	5	7	9	Security problem
Staying near to work place	9	7	5	3	1	3	5	7	9	Transportation facility
Staying near to work place	9	7	5	3	1	3	5	7	9	To stay close to relatives
Staying near to work place	9	7	5	3	1	3	5	7	9	Natural disaster
Staying near to work place	9	7	5	3	1	3	5	7	9	Security problem
Transportation facility	9	7	5	3	1	3	5	7	9	To stay close to relatives
Transportation facility	9	7	5	3	1	3	5	7	9	Natural disaster
Transportation facility	9	7	5	3	1	3	5	7	9	Security problem
To stay close to relatives	9	7	5	3	1	3	5	7	9	Natural disaster
To stay close to relatives	9	7	5	3	1	3	5	7	9	Security problem
Natural disaster	9	7	5	3	1	3	5	7	9	Security problem

Annex B:

B1: Age-sex structure of the surveyed HH

Age Group	Chauddagram				Hathazari				Nabinagar				Total			
	M	F	T	%	M	F	T	%	M	F	T	%	M	F	T	%
Below 4	1	4	5	1	0	3	3	1	8	4	12	3	9	11	20	2
5-9	2	5	7	2	6	7	13	4	12	8	20	4	20	20	40	4
10-14	5	4	9	3	9	8	17	5	11	7	18	4	25	19	44	4
15-17	8	10	18	5	13	8	21	6	11	8	19	4	32	26	58	5
18-34	85	59	144	41	78	46	124	36	109	83	192	43	272	188	460	40
35-59	77	68	145	41	73	67	140	41	90	68	158	35	240	203	443	39
Above 60	19	3	22	6	18	4	22	6	23	7	30	7	60	14	74	6
Total	197	153	350	100	197	143	340	100	264	185	449	100	658	481	1139	100

Source; Field Survey, 2009

B2: Educational qualification of the surveyed HH

Educational	**Chauddagram**				**Hathazari**				**Nabinagar**				**Total**			
Qualification	**M**	**%**	**F**	**%**	**M**	**%**	**F**	**%**	**M**	**%**	**F**	**%**	**M**	**%**	**F**	**%**
Illiterate	25	2	50	4	9	1	26	2	50	4	81	7	84	7	157	14
Primary	37	3	44	4	49	4	56	5	94	8	41	4	180	16	141	12
SSC	53	5	42	4	58	5	52	5	61	5	45	4	172	15	139	12
HSC	32	3	10	1	53	5	4	0	16	1	7	1	101	9	21	2
Graduate	45	4	7	1	28	2	5	0	31	3	11	1	104	9	23	2
Post graduate	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0
Vocational	3	0	0	0	0	0	0	0	8	1	0	0	11	1	0	0
Fazil	0	0	0	0	0	0	0	0	4	0	0	0	4	0	0	0
Total	197	17	153	13	197	17	143	13	264	23	185	16	658	58	481	42

Source; Field Survey, 2009

B3: Income of the surveyed households

Income	**Chauddagram**		**Hathazari**		**Nabinagar**		**Total**	
	F	%	F	%	F	%	F	%
Below 10000	2	3	6	8	32	41	40	18
10001-15000	12	17	11	16	15	19	38	18
15001-20000	9	13	14	21	19	24	42	19
20001-25000	8	11	10	15	13	16	31	14
25001-30000	23	33	6	9		0	29	13
30001-35000	8	11	2	3		0	10	5
35001-40000	8	11	11	16		0	19	9
40001-50000		0	4	6		0	4	2
Above 50000		0	3	4		0	3	1
Total	70	100	67	100	79	100	216	100

Source; Field Survey, 2009

B4: Expenditure of the surveyed households

Expenditure	Chauddagram		Hathazari		Nabinagar		Total	
	F	%	F	%	F	%	F	%
5001-10000	5	7	11	16	28	35	44	20
10001-15000	46	66	15	22	24	30	85	39
15001-20000	16	23	19	28	18	23	53	25
20001-25000	3	4	17	25	9	11	29	13
25001-30000	0	0	2	3	0	0	2	1
35001-40000	0	0	3	4	0	0	3	1
Total	70	100	67	100	79	100	216	100

Source; Field Survey, 2009

B5: Remittance Migration Nexus

Unions	Villages	Total HHs	Remittance Receiving HH	Total Shift	Remittance receiving & Shifted
Uttar Madarsa	Kulla	170	82	31	28
	Munshigona	220	103	25	16
Dakshin Madarsha	Madhyamadarsha	750	255	101	89
	Dakshinmadarsha	1200	402	57	48
Gholpasha	Amiratpur	150	32	13	8
	Rajendrapur	245	54	14	10
Cheora	Kazipara	65	17	10	8
	Rampur	62	12	11	3
Jagannath Dighi	Atakara	195	46	21	14
	Noagram	307	53	20	17
Laur Fatehpur	Radhanagar	50	11	8	6
	Fatehpur	358	73	19	16
Barikandi	Barikandi	550	87	29	19
	Dolaiganj	60	13	3	2
7 unions	14 villages	4382	1240	362	284

Source: FGD, 2009

B7: Location of residential shift (already shifted)of the households

	Member 1		Member 2		Whole family		Total	
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Within the locality	0	0	0	0	6	16	6	10
In another union	0	0	0	0	11	29	11	18
In upazila	2	10	1	25	13	34	16	26
In district town	5	25	1	25	6	16	12	19
Dhaka city	1	5	2	50	2	5	5	8
Abroad	12	60	0	0	0	0	12	19
Total	**20**	100	**4**	100	**38**	100	**62**	100

Source; Field Survey, 2009

B6: Residential shift of the remittance receiving households

Upazila	Village Name	No of member shift			Shift from HH	No shift	Total
		1	2	Whole family			
Chuddagram	Amiratpur			2	2	6	8
	Atakara	1		2	3	6	9
	Rajendrapur			3	3	10	13
	Rampur	2		2	4	9	13
	Kazipara	1		6	7	6	13
	Noagram	1		4	5	9	14
Sub Total		***5***	***0***	***19***	***24***	***46***	***70***
Nabinagar	Radhanagar	1		2	3	2	5
	Barikandi	2		6	8	25	33
	Dolaiganj			1	1	3	4
	Fatehpur	2		7	9	28	37
Sub Total		***5***	***0***	***16***	***21***	***58***	***79***
Hathazari	DakshinMadarsha	2			2	16	18
	Kulla	3	2	1	6	11	17
	Madhyamadarsha	2		2	4	7	11
	Munshigona	3		0	3	18	21
Sub Total		***10***	***2***	***3***	***15***	***52***	***67***
Total		**20**	**2**	**38**	**60**	**156**	**216**

Source; Field Survey, 2009

B8: Location of future shifting

	Shifted & will shift		not shifted & will shift		Total	
	N	%	N	%	N	%
in another union	0	0	8	11	8	9
in upazila	0	0	11	15	11	12
in district town	9	45	14	19	23	25
dhaka city	9	45	25	34	34	37
Abroad	2	10	15	21	17	18
Total	20	100	73	100	93	100

Source; Field Survey, 2009

B9: Income vs future plan of residential shift

	Shifted & will shift		not shifted & will shift		Total	
	N	%	N	%	N	%
Below 5000	0	0	3	3	3	3
5001-10000	0	0	8	9	8	9
10001-15000	4	4	12	13	16	17
15001-20000	5	5	1	1	6	6
20001-25000	3	3	23	25	26	28
25001-30000	2	2	17	18	19	20
30001-35000	0	0	9	10	9	10
35001-40000	2	2	0	0	2	2
40001-50000	2	2	0	0	2	2
Above 50000	2	2	0	0	2	2
Total	20	22	73	78	93	100

Source; Field Survey, 2009

B10: Income Vs level of influence in residential shift

	High (60-79)		Low (20-39)		Moderate (40-59)		Very High (Above 80)		Total	
	N	%	N	%	N	%	N	%	N	%
below 5000	0	0	3	2	0	0	0	0	3	2
5001-10000	0	0	4	3	15	11	0	0	19	14
10001-15000	3	2	2	2	15	11	2	2	22	17
15001-20000	9	7	0	0	0	0	1	1	10	8
20001-25000	18	14	0	0	1	1	12	9	31	23
25001-30000	19	14	0	0	1	1	5	4	25	19
30001-35000	3	2	0	0	0	0	7	5	10	8
35001-40000	0	0	0	0	0	0	6	5	6	5
40001-50000	1	1	0	0	0	0	3	2	4	3
Above 50000	1	1	0	0	0	0	2	2	3	2
Total	54	41	9	7	32	24	38	29	133	100

Source; Field Survey, 2009

B11: Income Vs level of influence in residential shift

	Chuddagram		Hathazari		Nabinagar		Total	
	Before	After	Before	After	Before	After	Before	After
Katcha	16	4	32	0	29	4	77	8
Semi pucca	48	25	33	26	50	51	131	102
Pucca	6	41	2	41	0	24	8	106
Total	70	70	67	67	79	79	216	216

Source; Field Survey, 2009

B12: Change in housing condition

	Chuddagram				Hathazari				Nabinagar				Total			
	Before		After		Before		After		Before		After		Before		After	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Katcha	16	23	4	6	32	48	0	0	29	37	4	5	77	36	8	4
Semi pucca	48	69	25	36	33	49	26	39	50	63	51	65	131	61	102	47
Pucca	6	9	41	59	2	3	41	61	0	0	24	30	8	4	106	49
Total	70	100	70	100	67	100	67	100	79	100	79	100	216	100	216	100

Source; Field Survey, 2009

B13: Change in source of drinking water

	Chuddagram				Hathazari				Nabinagar				Total			
	B		A		B		A		B		A		B		A	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Individual TW	23	33	52	74	14	21	36	54	19	24	47	59	56	26	135	63
Neighborhood TW	47	67	18	26	53	79	31	46	60	76	32	41	160	74	81	38
Total	70	100	70	100	67	100	67	100	79	100	79	100	216	100	216	100

Source; Field Survey, 2009

B13a: Change in food supply

	Chuddagram				Hathazari				Nabinagar				Total			
	B		A		B		A		B		A		B		A	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Fully from own agricultural land	28	40	0	0	34	51	3	4	22	28	0	0	84	39	3	1
Partially from own agricultural land & rest from leased land	18	26	5	7	17	25	7	10	20	25	10	13	55	25	22	10
Partially from own agricultural land & rest buy	5	7	27	39	3	4	15	22	31	39	31	39	39	18	73	34
Partially from leased agricultural land rest buy	14	20	33	47	8	12	27	40		0	25	32	22	10	85	39
Buy fully	5	7	5	7	5	7	15	22	6	8	13	16	16	7	33	15
Total	70	100	70	100	67	100	67	100	79	100	79	100	216	100	216	100

Source; Field Survey, 2009

B14: Change the amount of agricultural land

Land in decimal	Chuddagram				Hathazari				Nabinagar				Total			
	I		D		I		D		I		D		I		D	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Below 10	18	26	6	9	25	37	19	28	6	8	0	0	49	23	25	12
10-20	6	9	16	23	10	15	8	12	0	0	32	41	16	7	56	26
20-30	7	10	13	19	2	3	2	3	0	0	15	19	9	4	30	14
30-40	2	3	0	0	0	0	0	0	0	0	13	16	2	1	13	6
Above 40	0	0	2	3	0	0	1	1	0	0	13	16	0	0	16	7
Total	**33**	47	**37**	53	**37**	55	**30**	45	**6**	8	**73**	92	76	35	140	65

Source; Field Survey, 2009

B15: Change the mount of non agricultural land

Land in decimal	Chuddagram				Hathazari				Nabinagar				Total			
	I		D		I		D		I		D		I		D	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Below 10	10	14	41	59	24	36	41	61	20	25	47	59	54	25	129	60
10-20	8	11	5	7	1	1	0	0	4	5	0	0	13	6	5	2
20-30	2	3	2	3	0	0	0	0	8	10	0	0	10	5	2	1
30-40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Above 40	2	3	0	0	1	1	0	0	0	0	0	0	3	1	0	0
Total	22	31	48	69	26	39	41	61	32	41	47	59	80	37	136	63

Source; Field Survey, 2009

B16: Use of remittance in percentage (average)

Use	Min(a)	Max(c)	Median(b)	Sum	Frequency	%
Agriculture	5	20	20	700	44	3
apartment purchase	40	60	52.5	410	8	2
Business	5	50	20	2300	105	11
Fisheries	15	15	15	45	3	0
home stead purchase	35	60	50	1200	26	6
house purchase / repair	10	80	25	3660	139	17
land purchase	15	80	30	4320	126	20
payment of loan/mortgage	10	50	40	4135	113	19
poultry//dairy	10	20	10	205	15	1
providing loan to others	10	15	15	80	6	0
purchasing basic needs	10	40	20	2510	132	12
purchasing luxurious goods	5	30	15	1190	74	6
Savings	5	25	10	845	68	4
Total				21600		100

Source; Field Survey, 2009

B16 (a): Use of remittance

Use	Below 10 %	10-25%	26-40%	41-55%	55-70%	Above 70%	Total Responses
Purchasing basic need	19	106	7	0	0	0	132
House purchase /repair	6	77	52	0	0	4	139
Land purchase	0	40	60	17	6	3	126
Home stead purchase	0	0	12	10	4	0	26
Payment of loan/mortgage	11	8	63	21	10	0	113
Purchasing luxurious	10	61	3	0	0	0	74
Savings	37	29	0	0	0	0	68
Agriculture	11	33	0	0	0	0	44
Business	25	48	28	4	0	0	105
Poultry/dairy	8	7	0	0	0	0	15
Fisheries	0	3	0	0	0	0	3
Providing loan to others	2	4	0	0	0	0	6
Apartment purchase	0	0	2	2	4	0	8
Total	129	416	227	54	24	7	859

Source; Field Survey, 2009

B17: Location and percentage of remittance use

	Within the locality	Local hat bazaar	Another union	Upazila centre	District town	Dhaka city	Abroad	Total
Below 10	60	3	2	17	8	39	2	131
10-25	257	12	19	51	57	17	3	416
26-40	115	8	6	37	46	15	0	227
41-55	20	0	0	11	8	9	6	54
55-70	6	0	4	4	4	4	2	24
Above 70	7	0	0	0	0	0	0	7
Total	465	23	31	120	123	84	13	859

Source; Field Survey, 2009

B18: Transport used by the respondent

	Chuddagram		Hathazari		Nabinagar		Total	
	Before	After	Before	After	Before	After	Before	After
On foot	40	11	25	13	34	23	99	47
Rickshaw	12	20	16	2	17	24	45	46
Cycle	14	6	14	2	24	9	52	17
Van	0		11		4		15	0
Motor cycle	2	17	1	10	0	23	3	50
Tempo	2	16	0	40	0		2	56
Total	**70**	**70**	**67**	**67**	**79**	**79**	**216**	**216**

Source; Field Survey, 2009

B19: Educational qualification of the migrants

Educational Qualification	Chauddagram		Hathazari		Nabinagar		Total	
	N	%	N	%	N	%	N	%
Illiterate	2	2	0	0	0	0	2	1
Primary	12	14	9	10	28	34	49	19
SSC	29	33	24	26	28	34	81	31
HSC	24	27	41	45	4	5	69	26
Graduate	21	24	16	18	8	10	45	17
Vocational	0	0	1	1	11	13	12	5
Fazil	0	0	0	0	4	5	4	2
Total	88	100	91	100	83	100	262	100

Source; Field Survey, 2009

B20: Age of the migrants the migrants

Educational Qualification	**Chauddagram**		**Hathazari**		**Nabinagar**		**Total**	
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Below 20	18	20	6	7	27	33	51	19
21-25	33	38	23	25	21	25	77	29
26-30	14	16	26	29	19	23	59	23
31-35	13	15	26	29	9	11	48	18
36-40	10	11	8	9	0	0	18	7
Above 40	0	0	2	2	7	8	9	3
Total	88	100	91	100	83	100	262	100

Source; Field Survey, 2009

B21: Chi-Square Test for variability check with the causes for residential shift across upazilas

Residence with urban amenities			
Upazila	**Observed Responses**	**Expected**	**Residual**
Hathazari	5	5.5	-.5
Nabinagar	0		
Chauddagram	6	5.5	.5
Chi-Square[a]	***.091***		
Df	***1***		
Asymp. Sig.	***.763***		
Transportation Facility			
Upazila	**Observed Responses**	**Expected**	**Residual**
Hathazari	3	5.3	-2.3
Nabinagar	7	5.3	1.7
Chauddagram	6	5.3	.7
Chi-Square[a]	***1.625***		
Df	***2***		
Asymp. Sig.	***.444***		
Educational Facility			
Upazila	**Observed Responses**	**Expected**	**Residual**
Hathazari	7	8.0	-1.0
Nabinagar	7	8.0	-1.0
Chauddagram	10	8.0	2.0
Chi-Square[a]	***.750***		
Df	***2***		
Asymp. Sig.	***.687***		
Trade opportunities			
Upazila	**Observed Responses**	**Expected**	**Residual**
Hathazari	2	5.0	-3.0
Nabinagar	5	5.0	.0
Chauddagram	8	5.0	3.0
Chi-Square[a]	***3.6***		
df	***2***		
Asymp. Sig.	***.165***		
Security Problem			
Upazila	**Observed Responses**	**Expected**	**Residual**
Hathazari	0		
Nabinagar	5	6.5	-1.5
Chauddagram	8	6.5	1.5
Chi-Square[a]	***.692***		
df	***1***		
Asymp. Sig.	***.405***		
Staying close to relatives			
Upazila	**Observed Responses**	**Expected**	**Residual**
Hathazari	3	7.0	-4.0
Nabinagar	8	7.0	1.0
Chauddagram	10	7.0	3.0
Chi-Square[a]	***3.714***		
df	***2***		
Asymp. Sig.	***.156***		

B22: Chi-Square Test for variability check with the location of residential shift across upazilas

Abroad			
Upazila	**Observed Responses**	**Expected**	**Residual**
Hathazari	10	6.0	4.0
Nabinagar	0		
Chauddagram	2	6.0	-4.0
Chi-Square[a]	***5.333***		
Df	***1***		
Asymp. Sig.	***.021***		
Dhaka City			
Upazila	**Observed Responses**	**Expected**	**Residual**
Hathazari	2	1.7	.3
Nabinagar	1	1.7	-.7
Chauddagram	2	1.7	.3
Chi-Squarea	***.400***		
Df	***2***		
Asymp. Sig.	***.819***		
District Town			
Upazila	**Observed Responses**	**Expected**	**Residual**
Hathazari	2	4.0	-2.0
Nabinagar	5	4.0	1.0
Chauddagram	5	4.0	1.0
Chi-Square[a]	***1.500***		
Df	***2***		
Asymp. Sig.	***.472***		
Upazila			
Upazila	**Observed Responses**	**Expected**	**Residual**
Hathazari	2	5.3	-3.3
Nabinagar	6	5.3	.7
Chauddagram	8	5.3	2.7
Chi-Square[a]	***3.500***		
df	***2***		
Asymp. Sig.	***.174***		
Pourashava / Another union			
Upazila	**Observed Responses**	**Expected**	**Residual**
Hathazari	1	3.7	-2.7
Nabinagar	4	3.7	.3
Chauddagram	6	3.7	2.3
Chi-Square[a]	***3.455***		
df	***2***		
Asymp. Sig.	***.178***		
Within the locality (Growth Centre)			
Upazila	**Observed Responses**	**Expected**	**Residual**
Hathazari	0		
Nabinagar	5	3.0	2.0
Chauddagram	1	3.0	-2.0
Chi-Square[a]	***2.667***		
df	***1***		
Asymp. Sig.	***.102***		

B23 : Chi-Square Test for variability check with the causes for residential shift across upazilas

Residence with urban amenities			
Upazila	**Observed Responses**	**Expected**	**Residual**
Hathazari	5	5.5	-.5
Nabinagar	0		
Chauddagram	6	5.5	.5
Chi-Square[a]	***.091***		
df	***1***		
Asymp. Sig.	***.763***		
Transportation Facility			
Upazila	**Observed Responses**	**Expected**	**Residual**
Hathazari	3	5.3	-2.3
Nabinagar	7	5.3	1.7
Chauddagram	6	5.3	.7
Chi-Square[a]	***1.625***		
df	***2***		
Asymp. Sig.	***.444***		
Educational Facility			
Upazila	**Observed Responses**	**Expected**	**Residual**
Hathazari	7	8.0	-1.0
Nabinagar	7	8.0	-1.0
Chauddagram	10	8.0	2.0
Chi-Square[a]	***.750***		
df	***2***		
Asymp. Sig.	***.687***		
Trade opportunities			
Upazila	**Observed Responses**	**Expected**	**Residual**
Hathazari	2	5.0	-3.0
Nabinagar	5	5.0	.0
Chauddagram	8	5.0	3.0
Chi-Square[a]	***3.6***		
df	***2***		
Asymp. Sig.	***.165***		
Security Problem			
Upazila	**Observed Responses**	**Expected**	**Residual**
Hathazari	0		
Nabinagar	5	6.5	-1.5
Chauddagram	8	6.5	1.5
Chi-Square[a]	***.692***		
df	***1***		
Asymp. Sig.	***.405***		
Staying close to relatives			
Upazila	**Observed Responses**	**Expected**	**Residual**
Hathazari	3	7.0	-4.0
Nabinagar	8	7.0	1.0
Chauddagram	10	7.0	3.0
Chi-Square[a]	***3.714***		
df	***2***		
Asymp. Sig.	***.156***		

Annex C: Prioritize factors influencing residential shift

C1: Pair wise evaluation of the factors influencing residential shift (Chauddagram)

			R 1	R 2	R 3	R 4	R 5	R 6	R 7	a (Lowest)	b (Median)	c (Largest)	(a+4b+c) /6
Residence with urban amenities	Vs	Trade opportunities	0.14	0.14	0.2	0.33	0.3	0.14	0.11	0.11	0.14	0.33	0.17
Residence with urban amenities	Vs	Better Educational Facility	0.2	0.11	0.2	0.2	0.33	0.11	0.33	0.11	0.2	0.33	0.21
Residence with urban amenities	Vs	Staying near to work place	1	0.33	0.33	3	0.11	0.2	0.2	0.11	0.33	3	0.74
Residence with urban amenities	Vs	Transportation	0.11	0.11	0.14	0.14	0.14	0.2	0.14	0.11	0.14	0.2	0.15
Residence with urban amenities	Vs	Staying close to relatives	0.33	0.2	0.33	1	0.33	0.33	3	0.2	0.33	3	0.75
Residence with urban amenities	Vs	Natural Disaster	0.14	0.33	0.14	0.33	0.33	0.2	3	0.14	0.33	3	0.74
Residence with urban amenities	Vs	Security Problem	0.14	0.33	0.33	0.33	0.33	0.2	0.33	0.14	0.33	0.33	0.30
Trade opportunities	Vs	Better Educational Facility	0.33	0.14	3	1	1	3	1	0.14	1	3	1.19
Trade opportunities	Vs	Staying near to work place	3	5	5	3	3	1	1	1	3	5	3.00
Trade opportunities	Vs	Transportation	5	1	5	3	0.33	3	5	0.33	3	5	2.89
Trade opportunities	Vs	Staying close to relatives	3	5	5	7	5	3	3	3	5	7	5.00
Trade opportunities	Vs	Natural Disaster	7	5	7	7	5	3	7	3	7	7	6.33
Trade opportunities	Vs	Security Problem	7	5	7	7	5	5	7	5	7	7	6.67
Better Educational Facility	Vs	Staying near to work place	7	9	7	5	7	7	9	5	7	9	7.00
Better Educational Facility	Vs	Transportation	1	1	3	0.33	1	3	1	0.33	1	3	1.22
Better Educational Facility	Vs	Staying close to relatives	3	5	5	0.2	0.33	5	7	0.2	5	7	4.53
Better Educational Facility	Vs	Natural Disaster	5	3	7	7	5	3	3	3	5	7	5.00
Better Educational Facility	Vs	Security Problem	5	3	3	7	5	3	3	3	3	7	3.67
Staying near to work place	Vs	Transportation	1	1	0.2	0.33	3	0.2	0.33	0.2	0.33	3	0.75
Staying near to work place	Vs	Staying close to relatives	0.33	0.2	0.2	0.2	3	0.33	0.2	0.2	0.2	3	0.67
Staying near to work place	Vs	Natural Disaster	5	3	3	5	7	3	3	3	3	7	3.67
Staying near to work place	Vs	Security Problem	5	3	3	5	3	3	3	3	3	5	3.33
Transportation	Vs	Staying close to relatives	3	0.11	0.14	0.2	3	0.2	0.33	0.11	0.2	3	0.65
Transportation	Vs	Natural Disaster	5	7	5	3	5	3	3	3	5	7	5.00
Transportation	Vs	Security Problem	3	5	3	5	3	1	3	1	3	5	3.00
Staying close to relatives	Vs	Natural Disaster	3	3	5	5	3	3	5	3	3	5	3.33
Staying close to relatives	Vs	Security Problem	3	0.2	0.2	1	3	3	3	0.2	3	3	2.53
Natural Disaster	Vs	Security Problem	0.33	0.33	1	0.33	0.3	0.33	0.33	0.3	0.33	1	0.44

C2: Pair wise reciprocal matrix of the factors influencing residential shift (Chauddagram)

	1	2	3	4	5	6	7	8
1. Residence with urban amenities	1.00	0.17	0.21	0.74	0.15	0.75	0.74	0.30
2. Trade opportunities		1.00	1.19	3.00	2.89	5.00	6.33	6.67
3. Better Educational Facility			1.00	7.00	1.22	4.53	5.00	3.67
4. Staying near to work place				1.00	0.75	0.67	3.67	3.33
5. Transportation					1.00	0.65	5.00	3.00
6. Staying close to relatives						1.00	3.33	2.53
7. Natural Disaster							1.00	0.44
8. Security Problem								1.00

C3: Pair wise complete comparison matrix (Chauddagram)

	1	2	3	4	5	6	7	8
1. Residence with urban amenities	1.00	0.17	0.21	0.74	0.15	0.75	0.74	0.30
2. Trade opportunities	5.88	1.00	1.19	3.00	2.89	5.00	6.33	6.67
3. Better Educational Facility	4.76	0.84	1.00	7.00	1.22	4.53	5.00	3.67
4. Staying near to work place	1.35	0.33	0.14	1.00	0.75	0.67	3.67	3.33
5. Transportation	6.67	0.35	0.82	1.33	1.00	0.65	5.00	3.00
6. Staying close to relatives	1.33	0.20	0.22	1.49	1.54	1.00	3.33	2.53
7. Natural Disaster	1.35	0.16	0.20	0.27	0.20	0.30	1.00	0.44
8. Security Problem	3.33	0.15	0.27	0.30	0.33	0.40	2.27	1.00
Total	25.68	3.20	4.06	15.14	8.08	13.30	27.34	20.94

C4: Estimated/normalized relative weight (Chauddagram)

	1	2	3	4	5	6	7	8	Principle Eigen /Priority Vector
1. Residence with urban amenities	0.04	0.05	0.05	0.05	0.02	0.06	0.03	0.01	**0.04**
2. Trade opportunities	0.23	0.31	0.29	0.20	0.36	0.38	0.23	0.32	**0.29**
3. Better Educational Facility	0.19	0.26	0.25	0.46	0.15	0.34	0.18	0.18	**0.25**
4. Staying near to work place	0.05	0.10	0.04	0.07	0.09	0.05	0.13	0.16	**0.09**
5. Transportation	0.26	0.11	0.20	0.09	0.12	0.05	0.18	0.14	**0.14**
6. Staying close to relatives	0.05	0.06	0.05	0.10	0.19	0.08	0.12	0.12	**0.10**
7. Natural Disaster	0.05	0.05	0.05	0.02	0.02	0.02	0.04	0.02	**0.03**
8. Security Problem	0.13	0.05	0.07	0.02	0.04	0.03	0.08	0.05	**0.06**
Total	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**

C5: Random Consistency Index (RI)

N	1	2	3	4	5	6	7	8	9	10
RI	0	0	0.58	0.9	1.12	1.24	1.32	1.41	1.45	1.49

C6: Pair wise evaluation of the factors influencing residential shift (Hathazari)

			R 1	R 2	R 3	R 4	R 5	R 6	R 7	a (Lowest)	b (Median)	c (Largest)	(a+4b+c)/6
Residence with urban amenities	Vs	Trade opportunities	0.14	0.2	0.14	0.14	0.33	0.3	0.14	0.14	0.14	0.33	0.17
Residence with urban amenities	Vs	Better Educational Facility	0.11	0.14	0.11	0.2	0.14	0.11	0.2	0.11	0.14	0.2	0.15
Residence with urban amenities	Vs	Staying near to work place	0.2	0.33	0.33	0.33	0.2	0.2	0.33	0.2	0.33	0.33	0.31
Residence with urban amenities	Vs	Transportation	1	0.33	0.2	0.2	0.33	0.2	0.33	0.2	0.33	1	0.42
Residence with urban amenities	Vs	Staying close to relatives	3	1	3	3	5	5	3	1	3	5	3.00
Residence with urban amenities	Vs	Natural Disaster	5	3	5	7	7	5	7	3	5	7	5.00
Residence with urban amenities	Vs	Security Problem	3	3	7	5	5	5	3	3	5	7	5.00
Trade opportunities	Vs	Better Educational Facility	1	0.33	1	0.33	1	3	0.33	0.33	1	3	1.22
Trade opportunities	Vs	Staying near to work place	0.33	1	0.33	3	0.33	1	0.33	0.33	0.33	3	0.78
Trade opportunities	Vs	Transportation	3	5	3	3	5	5	3	3	3	5	3.33
Trade opportunities	Vs	Staying close to relatives	5	3	3	7	5	5	7	3	5	7	5.00
Trade opportunities	Vs	Natural Disaster	9	9	7	9	7	9	7	7	9	9	8.67
Trade opportunities	Vs	Security Problem	9	9	7	9	5	9	5	5	9	9	8.33
Better Educational Facility	Vs	Staying near to work place	3	3	1	3	1	3	3	1	3	3	2.67
Better Educational Facility	Vs	Transportation	5	5	3	3	5	1	3	1	3	5	3.00
Better Educational Facility	Vs	Staying close to relatives	7	5	5	5	7	7	3	3	5	7	5.00
Better Educational Facility	Vs	Natural Disaster	9	9	9	9	7	9	9	7	9	9	8.67
Better Educational Facility	Vs	Security Problem	7	7	7	9	9	9	7	7	7	9	7.33
Staying near to work place	Vs	Transportation	0.33	1	0.33	1	1	0.33	1	0.33	1	1	0.89
Staying near to work place	Vs	Staying close to relatives	3	3	3	5	3	3	5	3	3	5	3.33
Staying near to work place	Vs	Natural Disaster	9	7	5	7	3	7	7	3	7	9	6.67
Staying near to work place	Vs	Security Problem	7	7	5	7	9	7	9	5	7	9	7.00
Transportation	Vs	Staying close to relatives	3	3	1	3	5	3	3	1	3	5	3.00
Transportation	Vs	Natural Disaster	5	7	5	7	5	5	7	5	5	7	5.33
Transportation	Vs	Security Problem	3	5	5	5	7	5	5	3	5	7	5.00
Staying close to relatives	Vs	Natural Disaster	3	3	5	3	5	3	3	3	3	5	3.33
Staying close to relatives	Vs	Security Problem	3	3	3	5	1	3	3	1	3	5	3.00
Natural Disaster	Vs	Security Problem	1	0.2	0.33	1	0.14	1	0.2	0.14	0.33	1	0.41

C7: Pair wise reciprocal matrix of the factors influencing residential shift (Hathazari)

	1	2	3	4	5	6	7	8
1. Residence with urban amenities	1.00	0.17	0.15	0.31	0.42	3.00	5.00	5.00
2. Trade opportunities		1.00	1.22	0.78	3.33	5.00	8.67	8.33
3. Better Educational Facility			1.00	2.67	3.00	5.00	8.67	7.33
4. Staying near to work place				1.00	0.89	3.33	6.67	7.00
5. Transportation					1.00	3.00	5.33	5.00
6. Staying close to relatives						1.00	3.33	3.00
7. Natural Disaster							1.00	0.41
8. Security Problem								1.00

C8: Pair wise complete comparison matrix (Hathazari)

	1	2	3	4	5	6	7	8
1. Residence with urban amenities	1.00	0.17	0.15	0.31	0.42	3.00	5.00	5.00
2. Trade opportunities	5.83	1.00	1.22	0.78	3.33	5.00	8.67	8.33
3. Better Educational Facility	6.90	0.82	1.00	2.67	3.00	5.00	8.67	7.33
4. Staying near to work place	3.24	1.29	0.38	1.00	0.89	3.33	6.67	7.00
5. Transportation	2.38	0.30	0.33	1.13	1.00	3.00	5.33	5.00
6. Staying close to relatives	0.33	0.20	0.20	0.30	0.33	1.00	3.33	3.00
7. Natural Disaster	0.20	0.12	0.12	0.15	0.19	0.30	1.00	0.41
8. Security Problem	0.20	0.12	0.14	0.14	0.20	0.33	2.44	1.00
Total	20.08	4.02	3.53	6.47	9.36	20.97	41.11	37.08

C9: Estimated/normalized relative weight (Hathazari)

	1	2	3	4	5	6	7	8	Principle Eigen /Priority Vector
1. Residence with urban amenities	0.05	0.04	0.04	0.05	0.04	0.14	0.12	0.13	0.08
2. Trade opportunities	0.29	0.25	0.35	0.12	0.36	0.24	0.21	0.22	0.25
3. Better Educational Facility	0.34	0.20	0.28	0.41	0.32	0.24	0.21	0.20	0.28
4. Staying near to work place	0.16	0.32	0.11	0.15	0.09	0.16	0.16	0.19	0.17
5. Transportation	0.12	0.07	0.09	0.17	0.11	0.14	0.13	0.13	0.12
6. Staying close to relatives	0.02	0.05	0.06	0.05	0.04	0.05	0.08	0.08	0.05
7. Natural Disaster	0.01	0.03	0.03	0.02	0.02	0.01	0.02	0.01	0.02
8. Security Problem	0.01	0.03	0.04	0.02	0.02	0.02	0.06	0.03	0.03
Total	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

C10: Pair wise evaluation of the factors influencing residential shift (Nabinagar)

			R 1	R 2	R 3	R 4	R 5	R 6	R 7	a (Lowest)	b (Median)	c (Largest)	(a+4b+c) /6
Residence with urban amenities	Vs	Trade opportunities	0.14	0.2	0.33	0.2	0.14	0.2	0.14	0.14	0.2	0.33	0.21
Residence with urban amenities	Vs	Better Educational Facility	0.14	0.2	0.33	1	0.14	1	0.14	0.14	0.2	1	0.32
Residence with urban amenities	Vs	Staying near to work place	5	3	3	4	5	5	5	3	5	5	4.67
Residence with urban amenities	Vs	Transportation	0.14	0.2	0.33	0.11	0.14	0.2	0.14	0.11	0.14	0.33	0.17
Residence with urban amenities	Vs	Staying close to relatives	0.14	0.11	0.33	1	0.2	3	0.14	0.11	0.2	3	0.65
Residence with urban amenities	Vs	Natural Disaster	1	3	1	5	3	1	1	1	1	5	1.67
Residence with urban amenities	Vs	Security Problem	1	0.33	0.33	1	1	1	0.33	0.33	1	1	0.89
Trade opportunities	Vs	Better Educational Facility	1	0.33	1	0.33	5	0.33	0.33	0.33	0.33	5	1.11
Trade opportunities	Vs	Staying near to work place	5	7	7	9	7	9	7	5	7	9	7.00
Trade opportunities	Vs	Transportation	1	0.33	0.33	1	1	1	0.33	0.33	1	1	0.89
Trade opportunities	Vs	Staying close to relatives	3	3	5	5	7	3	5	3	5	7	5.00
Trade opportunities	Vs	Natural Disaster	7	9	7	9	5	7	5	5	7	9	7.00
Trade opportunities	Vs	Security Problem	3	5	7	7	5	5	5	3	5	7	5.00
Better Educational Facility	Vs	Staying near to work place	5	7	7	3	7	9	7	3	7	9	6.67
Better Educational Facility	Vs	Transportation	1	0.33	3	1	0.33	1	0.33	0.33	1	3	1.22
Better Educational Facility	Vs	Staying close to relatives	5	3	3	3	3	3	5	3	3	5	3.33
Better Educational Facility	Vs	Natural Disaster	7	9	7	9	5	3	5	3	7	9	6.67
Better Educational Facility	Vs	Security Problem	3	3	3	7	5	5	3	3	3	7	3.67
Staying near to work place	Vs	Transportation	0.11	0.14	0.14	0.11	0.14	0.11	0.14	0.11	0.14	0.14	0.14
Staying near to work place	Vs	Staying close to relatives	0.14	0.33	0.33	0.14	0.2	0.14	0.2	0.14	0.2	0.33	0.21
Staying near to work place	Vs	Natural Disaster	1	0.33	3	0.2	1	0.2	0.2	0.2	0.33	3	0.75
Staying near to work place	Vs	Security Problem	0.2	0.33	0.33	0.2	0.33	1	0.2	0.2	0.33	1	0.42
Transportation	Vs	Staying close to relatives	5	5	7	3	4	7	5	3	5	7	5.00
Transportation	Vs	Natural Disaster	9	9	5	9	7	7	9	5	9	9	8.33
Transportation	Vs	Security Problem	9	9	7	7	7	7	7	7	7	9	7.33
Staying close to relatives	Vs	Natural Disaster	7	5	5	5	5	7	7	5	5	7	5.33
Staying close to relatives	Vs	Security Problem	1	1	3	0.33	0.33	5	0.2	0.2	1	5	1.53
Natural Disaster	Vs	Security Problem	0.2	0.33	0.2	1	0.14	0.11	0.33	0.11	0.2	1	0.32

C11: Pair wise reciprocal matrix of the factors influencing residential shift (Nabinagar)

	1	2	3	4	5	6	7	8
1. Residence with urban amenities	1.00	0.21	0.32	4.67	0.17	0.65	1.67	0.89
2. Trade opportunities		1.00	1.11	7.00	0.89	5.00	7.00	5.00
3. Better Educational Facility			1.00	6.67	1.22	3.33	6.67	3.67
4. Staying near to work place				1.00	0.14	0.21	0.75	0.42
5. Transportation					1.00	5.00	8.33	7.33
6. Staying close to relatives						1.00	5.33	1.53
7. Natural Disaster							1.00	0.32
8. Security Problem								1.00

C12: Pair wise complete comparison matrix (Nabinagar)

	1	2	3	4	5	6	7	8
1. Residence with urban amenities	1.00	0.21	0.32	4.67	0.17	0.65	1.67	0.89
2. Trade opportunities	4.72	1.00	1.11	7.00	0.89	5.00	7.00	5.00
3. Better Educational Facility	3.09	0.90	1.00	6.67	1.22	3.33	6.67	3.67
4. Staying near to work place	0.21	0.14	0.15	1.00	0.14	0.21	0.75	0.42
5. Transportation	6.00	1.13	0.82	7.41	1.00	5.00	8.33	7.33
6. Staying close to relatives	1.53	0.20	0.30	4.72	0.20	1.00	5.33	1.53
7. Natural Disaster	0.60	0.14	0.15	1.33	0.12	0.19	1.00	0.32
8. Security Problem	1.13	0.20	0.27	2.38	0.14	0.65	3.14	1.00
Total	18.29	3.93	4.12	35.17	3.87	16.04	33.89	20.16

C13: Estimated/normalized relative weight (Nabinagar)

	1	2	3	4	5	6	7	8	Principle Eigen /Priority Vector
1. Residence with urban amenities	0.05	0.05	0.08	0.13	0.04	0.04	0.05	0.04	0.06
2. Trade opportunities	0.26	0.25	0.27	0.20	0.23	0.31	0.21	0.25	0.25
3. Better Educational Facility	0.17	0.23	0.24	0.19	0.32	0.21	0.20	0.18	0.22
4. Staying near to work place	0.01	0.04	0.04	0.03	0.03	0.01	0.02	0.02	0.03
5. Transportation	0.33	0.29	0.20	0.21	0.26	0.31	0.25	0.36	0.28
6. Staying close to relatives	0.08	0.05	0.07	0.13	0.05	0.06	0.16	0.08	0.09
7. Natural Disaster	0.03	0.04	0.04	0.04	0.03	0.01	0.03	0.02	0.03
8. Security Problem	0.06	0.05	0.07	0.07	0.04	0.04	0.09	0.05	0.06
Total	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Annex D: Secondary Data

D1: District wise migration and remittance scenario

Sl no	Districit Name	% of overseas employment	% Out Migration	% of household whose main income source is remittance
1	Comilla	11.71	3.44	4.70
2	Chittagong	9.14	7.18	6.34
3	Dhaka	6.56	2.21	2.60
4	Brahmanbaria	5.76	1.81	4.56
5	Chandpur	5.07	0.78	4.35
6	Tangail	4.83	1.68	2.04
7	Noakhali	4.08	4.81	7.81
8	Munshigang	3.49	0.00	5.79
9	Sylhet	2.95	2.00	10.30
10	Manikganj	2.88	0.00	2.02
11	Feni	2.83	1.16	11.53
12	Narsingdi	2.80	2.10	2.98
13	Gazipur	2.68	1.55	2.57
14	Narayanganj	2.63	3.50	3.18
15	Lakshmipur	2.50	0.87	5.95
16	Moulovibazar	2.20	2.05	4.64
17	Mymensingh	1.96	6.94	0.34
18	Kishoreganj	1.77	3.18	0.00
19	Faridpur	1.68	1.90	1.50
20	Barisal	1.50	1.26	1.96
21	Bogra	1.46	1.312	0.49
22	Madaripur	1.26	1.422	0.77
23	Hobiganj	1.25	1.144	1.72
24	Shariatpur	1.18	1.904	2.71
25	Coxsbazar	1.07	1.289	1.73
26	Nawabganj	1	0.209	0.6
27	Sunamganj	0.94	1.602	2.16
28	Jessore	0.83	1.242	0.49
29	Pabna	0.72	0.621	0.39
30	Jamalpur	0.69	0	0.24
31	Kushtia	0.69	1.405	0.4
32	Bhola	0.67	1.213	0.35
33	Jhenaidah	0.62	0.94	0.3
34	Naogaon	0.6	0.464	0.15
35	Pirojpur	0.6	0.958	0.91
36	Gopalganj	0.55	2.073	0.64
37	Meherpur	0.53	0.476	0
38	Natore	0.51	0.424	0.26
39	Narail	0.5	1.533	0.8
40	Sirajganj	0.48	0.273	0.42
41	Jhalokhati	0.44	2.502	1.61
42	Razbari	0.4	1.091	
43	Satkhira	0.39	0.987	0.2
44	Bagerhat	0.35	2.253	0.3
45	Barguna	0.35	1.573	

46	Gaibandha	0.31	2.874	0.17
47	Rajshahi	0.29	1.016	0.19
48	Magura	0.28	0.389	0.36
49	Khulna	0.26	2.833	0.34
50	Patuakhali	0.26	0.662	0.31
51	Joypurhat	0.23	0.174	0.18
52	Chuadabga	0.22	0.581	0.23
53	Nettrokona	0.21	1.376	0.17
54	Dinajpur	0.18	0.97	0.11
55	Sherpur	0.17	0.139	0.09
56	Rangpur	0.16	0.999	0.13
57	Thakurgaon	0.12	1.028	0.08
58	Kurigram	0.1	0.923	0.21
59	Nilphamari	0.05	1.01	0.11
60	Bandarban	0.03	2.589	0.16
61	Khagrachari	0.03	2.485	0.27
62	Lalmonirhat	0.03	0.697	0.14
63	Panchagarh	0.01	0.848	0.09
64	Rangamati	0.01	2.351	0.59

Sources:
% of overseas employment (BMET n.d.b)
% out Migration (BBS, 2004)
% of household whose main income source is remittance (BBS, 2001)

D2: Upazila Wise % of HH whose main income source remittance

Sl no	Upazila	Total HH	% of HH main income source remittance
Chittagong			
1	Sandwip Upazila	51698	15.36
2	Hathazari Upazila	64383	13.75
3	Boalkhali Upazila	35888	12.89
4	Raozan Upazila	55716	12.64
5	Fatikchhari Upazila	74580	12.04
6	Rangunia Upazila	53686	10.77
7	Mirsharai Upazila	67813	8.73
8	Satkania Upazila	58247	6.04
9	Sitakunda Upazila	58356	5.79
10	Lohagara Upazila	45450	5.06
11	Karnafuli Upazila	31148	4.70
12	Patiya Upazila	59464	3.62
13	Anowara Upazila	39996	3.47
14	Chandanaish Upazila	34088	3.18
15	Banshkhali Upazila	70080	1.45
Comilla			
1	Chauddagram Upazila	66685	10.95
2	Nangalkot Upazila	56887	8.31
3	Barura Upazila	64241	7.10
4	Meghna Upazila	19085	6.14
5	Laksam Upazila	105899	6.02
6	Muradnagar Upazila	83252	4.73

7	Chandina Upazila	55247	3.84
8	Homna Upazila	33894	3.22
9	Debidwar Upazila	66369	2.83
10	Daudkandi Upazila	82098	2.76
11	Brahmanpara Upazila	30952	1.84
12	Comilla Adarsa Sadar Upazila	108351	1.82
13	Burichong Upazila	44096	0.96
Brahmanbaria			
1	Nabinagar Upazila	75691	8.84
2	Akhaura Upazila	22499	7.89
3	Kasba Upazila	46829	6.34
4	Banchharampur Upazila	50991	5.53
5	Ashuganj Upazila	26090	3.39
6	Brahmanbaria Sadar Upazila	108464	2.53
7	Sarail Upazila	48441	2.27
8	Nasirnagar Upazila	46902	0.94

Sources: BBS (2006), BBS (2007a), BBS (2007b)

D3: Union Wise % of HH whose main income source remittance

Sl no	Upazila	Total HH	% of HH main income source remittance
Nabinagar Upazila			
1	Laur Fatehpur Union	3222	18.03
2	Barikandi Union	2898	15.32
3	Salimganj Union	2427	14.67
4	Shibpur Union	5138	13.66
5	Ratanpur Union	4457	13.15
6	Junedpur Union	3062	13.06
7	Sreerampur Union	2955	12.22
8	Bitghar (Tiara) Union	4232	11.93
9	Nabinagar Paurashava	7425	10.29
10	Shyamgram Union	4495	9.57
11	Rasullabad Union	3205	9.39
12	Ibrahimpur Union	2138	8.98
13	Purba Nabinagar Union	1834	8.89
14	Satmura Union	2726	7.48
15	Paschim Nabinagar Union	2739	6.97
16	Kaitala Union	4062	5.79
17	Biddyakut Union	4182	3.63
18	Birgaon Union	2864	3.21
19	Natghar Union	3678	0.76
20	Barail Union	3124	0.13
21	Krishnanagar Union	4828	0.04
Chauddagram Upazila			
1	Gholpasha Union	3967	20.29
2	Cheora Union	4896	19.18
3	Jagannath Dighi Union	4228	17.57
4	Shubhapur Union	6974	15.16
5	Munshirhat Union	4997	14.59
6	Kalikapur Union	2911	13.05

7	Kankapait Union	4177	12.16
8	Chauddagram Union	4158	11.95
9	Kashinagar Union	5219	11.07
10	Ujirpur Union	4365	10.68
11	Sreepur Union	4785	7.88
12	Batisha Union	4616	3.10
13	Gunabati Union	5745	0.89
14	Alkara Union	5647	0.55
Hathazari Upazila			
1	Uttar Madarsa Union	4005	40.25
2	Dakshin Madarsha Union	3124	29.93
3	Nangalmora Union	1296	28.40
4	Burir Char Union	3357	26.36
5	Shikarpur Union	3332	22.75
6	Dhalai Union	6513	20.10
7	Guman Mardan Union	2506	19.91
8	Chhibatali Union	1516	17.28
9	Forhadabad Union	4838	17.16
10	Chikandandi Union	6518	9.21
11	Mirzapur Union	6377	8.20
12	Garduara Union	1923	4.47
13	Hathazari Union	8169	1.54
14	Mekhal Union	4768	1.05
15	Fatehpur Union	6141	0.11

Sources: BBS (2006), BBS (2007a), BBS (2007b)

D4: Country wise Wage Earners Remittance Inflows USD in millions

Country	Total	%
Bahrain	864.15	1.73
Kuwait	5416.3	10.85
Oman	1711.26	3.43
Qatar	1799.75	3.60
K.S.A.	17389.98	34.82
U.A.E.	6590.85	13.20
Libya	6.06	0.01
Iran	13.34	0.03
Australia	60.73	0.12
Hongkong	66.65	0.13
Italy	800.93	1.60
Malaysia	879.71	1.76
Singapore	657.91	1.32
U.K.	4560.91	9.13
U.S.A.	7622.49	15.26
Germany	130.81	0.26
Japan	206.07	0.41
S.Korea	111.18	0.22
Others	1049.98	2.10
Total	49939.06	100.00

Source: Bangladesh Bank (n.d.)

D 5: Top Recipients of Remittances, 2007

Country	$ Billion
1. India	27.0
2. PRC	25.7
3. Mexico	25.1
4. Philippines	16.9
5. Poland	10.7
6. Romania	8.5
7. Bangladesh	6.6
8. Indonesia	6.1

Source: World Bank, 2009

D6: Year wise migrants

Year	Professional	Skilled	Semi-skilled	Less-skilled	Total
1976	568	1775	543	3201	6087
1977	1766	6447	490	7022	15725
1978	3455	8190	1050	10114	22809
1979	3494	7005	1685	12311	24495
1980	1983	12209	2343	13538	30073
1981	3892	22432	2449	27014	55787
1982	3898	20611	3272	34981	62762
1983	1822	18939	5098	33361	59220
1984	2642	17183	5484	31405	56714
1985	2568	28225	7823	39078	77694
1986	2210	26294	9265	30889	68658
1987	2223	23839	9619	38336	74017
1988	2670	25286	10809	29356	68121
1989	5325	38820	17659	39920	101724
1990	6004	35613	20792	41405	103814
1991	9024	46887	32605	58615	147131
1992	11375	50689	30977	95083	188124
1993	11112	71662	66168	95566	244508
1994	8390	61040	46519	70377	186326
1995	6352	59907	32055	89229	187543
1996	3188	64301	34689	109536	211714
1997	3797	65211	43558	118511	231077
1998	9574	74718	51590	131785	267667
1999	8045	98449	44947	116741	268182
2000	10669	99606	26461	85950	222686
2001	5940	42742	30702	109581	188965
2002	14450	56265	36025	118516	225256
2003	15862	74530	29236	134562	254190
2004	12202	110177	28327	122252	272958
2005	1945	113655	24546	112556	252702
2006	925	115468	33965	231158	381516
2007	676	165338	183673	482922	832609
2008	1864	281450	132825	458916	875055
Total	179910	1944963	1007249	3133787	6265909

Source: BMET, 2009

D7: Sex age group wise population (in percentage)

Locality Name / Age group	Chauddagram Upazila		Nabinagar Upazila		Hathazari Upazila	
	M	F	M	F	M	F
0-4 years	7	7	8	8	6	5
5-9 years	8	7	9	8	7	6
10-14 years	8	7	7	7	8	7
15-17 years	3	3	3	3	4	4
18-34 years	10	14	9	13	15	15
35-59 years	9	9	9	9	9	9
60 + years	4	3	4	3	3	3

Source: BBS, 2006, BBS, 2007a, BBS, 2007b