

Overseas Remittances in Bangladesh: Short-run Dynamics and Long-run Implications

Syed Mahbub Hasan
Mohammad Amzad Hossain
AKM Enamul Haque
SM Zobayer Enamul Karim

November 2014

Bangladesh Public Administration Training Centre
Savar, Dhaka

Overseas Remittances in Bangladesh: Short-run Dynamics and Long-run Implications

Executive Summary

Bangladesh is resource scarce less developed country. In the backdrop of less diversification and narrow base of exportable, scrawny and inadequate facilities to attract foreign direct investment and declining trend of official development assistance, the remittances earned from manpower export is playing a vital role in the social and economic development of Bangladesh. The increasing trend of remittances creates new dynamism in the economy. It is giving new shape in the socio economic structure of the economy by easing the pressure of disguised, structural unemployment in the country. The resources generated from the remittances have given a new way of life to the domestic county especially the rural community of Bangladesh. It has created new employment and generating income by gearing up the rural non-farm activities shaping up the sub-sectors of agriculture, which is still considered as the main way of life for the people of Bangladesh. Therefore, new attempts are demanding even today to export more manpower to the international market so that Bangladesh can face the daunting challenges of feeding its 150 million of people, about half of whom are experiencing either transient or permanent food insecurity. The incoming remittances will thus keep the famine or food insecurity at bay and will work as a powerful catalyst for economic development that will help Bangladesh to reap the benefit of globalization.

The study covers both the households' and macroeconomic issues of overseas remittances in Bangladesh. Using survey data from different region of Bangladesh the study found that international remittances have positive impact on the living standards of the emigrant families. Remittances has increased their consumption pattern and increased asset holding and so other facilities of living standard and social status. From the macroeconomic frontier the study examined the dynamics and causality among overseas remittances and economic growth.

The study also examines the dynamic linkages between gross national product (GNP), overseas remittances and import in Bangladesh for the period 1976 to 2009. The time series properties of the considered variables have been examined by applying augmented Dicky Fuller test. The Granger Causality test and Error correction models were applied to investigate the short run dynamics of long run relationship among the variables. The test results indicate that all three variables are cointegrated implying that there is a stable long run relationship among them. The causality is from GNP to remittances to imports as indicated by the Granger and Error Correction models. Thus it can be concluded that changes in remittances will have an important insinuation for changes in imports in Bangladesh in the short as well as in the long run. The implication of the result is that all attempts should be made to increase the remittances of the country, which will eventually lead to increase the GNP in the country.

Contents

Section 1: Introduction	5
Section 2: A Brief Survey of the Literature on Remittances	9
Section 3: Trends and Pattern of Labor Force Migration from Bangladesh	14
Section 4: Methods, Results and Discussion of the Field Survey Data	22
Section 5: Flow of Remittances to Bangladesh	32
Section 6: Economic Development Potentials of Remittances in Bangladesh	35
Section 7: Overseas Remittances and Economic Growth: A Trivariate Causality Analysis	37
References	45
Annex	47

Overseas Remittances in Bangladesh: Short-run Dynamics and Long-run Implications

1. Introduction

Overseas remittances constitute the lifeline for the resource scarce countries like Bangladesh. Of the very few sources of foreign exchange the overseas remittances occupy the central place, as these countries suffered by transient and permanent food insecurity due to the scarcity of natural and other tangible resources. Currently it is the prime source of tangible resources to the economy of Bangladesh followed by commodity exports. The other sources of foreign exchange are foreign direct investment (FDI) and the official development assistance (ODA). Being less diversification of exportable, unfavorable official and physical infrastructural facilities for FDI and shrinking trends of ODA, the overseas remittances become the main issue of concern to the policymakers, politicians, economists and the households. With low technological base and low per capita productive capital Bangladesh has adopted manpower export as an important development strategy, which enhance country's strength of import payments, improve balance of payments situations and also to trim down the country's dependence on foreign aid / loans (Hossain et al 2007:39). In the economic frontier the stylized facts about overseas remittance is that it augment capital formation through additive savings, augment imports and increase the disposable income of the migrant household, which would stimulate long run economic growth.

Bangladesh is a labor surplus country. It has abundant amount of unemployed and underemployed labor both in the traditional agricultural sector and also in the modern manufacturing and service sector. Thus the country enjoys the natural advantage of exporting huge mass of this labor force to the international labor market without putting any or minimum negative impact on the domestic output. Being forced by transient food insecurity caused by natural calamities and the permanent food insecurity caused by widespread poverty the people of Bangladesh is migrating from one place to the other in search for the means of their livelihood. This out migration is helping the country in both ways of reducing pressure on unemployment situation and by sending remittances, which is new fabric of modern life to the migrant households living in the rural areas (Hossain et al 2007).

The dynamic linkage between overseas remittances and the other macro-variables become the new area of research over the last decade. This mainly emanates from the

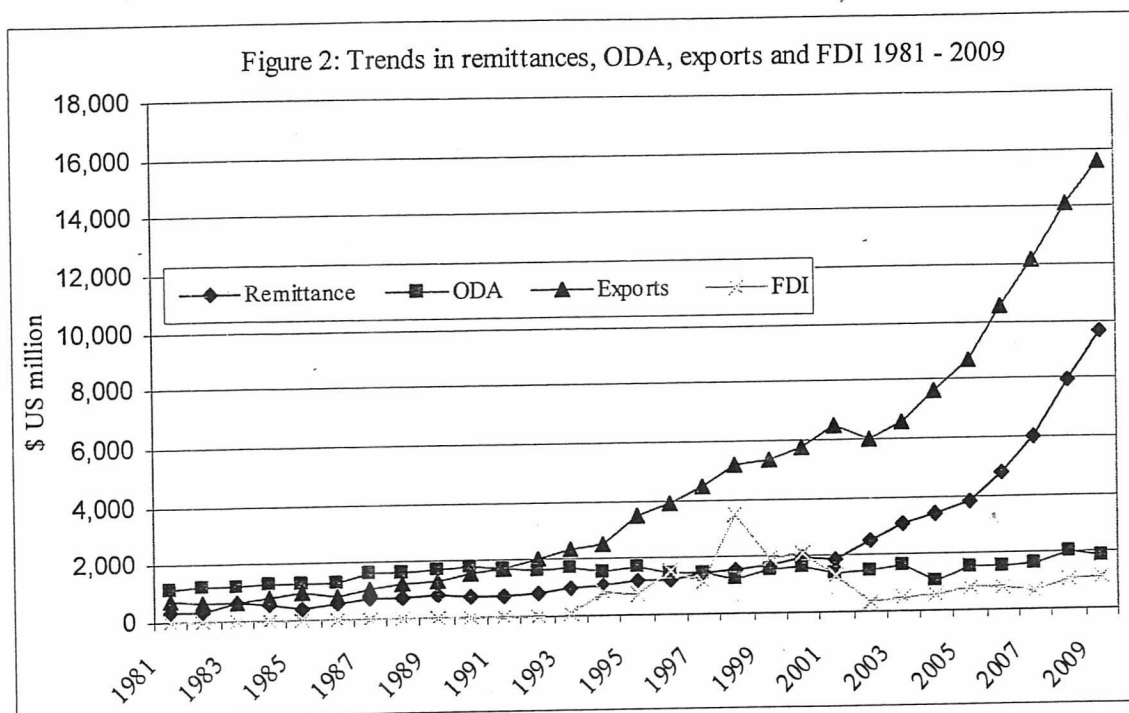
rapid growth of remittance flows and its development impact in many developing and less developed countries. The issues of migration appear as the top policy agenda in these countries. The development impact of remittances is evident from both micro and macro points of view. Overseas remittances now constitute the second largest incoming resource flows in Bangladesh, as is seen from table and figure.

Table 1: Remittances to Bangladesh compared with other incoming resource flows

(million US dollar)				
Year	Remittances	FDI	Export	ODA
1981	305	12	711	1146
1982	491	3	626	1240
1983	628	21	686	1177
1984	500	7	811	1268
1985	500	3	934	1269
1986	576	3	819	1306
1987	748	16	1074	1595
1988	764	14	1231	1640
1989	758	21	1286	1668
1990	782	15	1524	1810
1991	769	23	1718	1732
1992	902	25	1993	1611
1993	1009	74	2383	1675
1994	1154	829	2534	1559
1995	1202	750	3500	1739
1996	1355	1543	3884	1443
1997	1525	1105	4427	1481
1998	1599	3493	5172	1251
1999	1807	1974	5324	1536
2000	1955	2147	5752	1588
2001	2071	1311	6467	1369
2002	2848	350	5986	1442
2003	3178	463	6548	1585
2004	3610	556	7603	1033
2005	3848	845	8654	1507
2006	4802	792	10526	1567
2007	5979	666	12177	1630
2008	7915	1086	14110	2061
2009	9689	1132	15565	1847

Source: Bangladesh Bank, 2010.

It is evident from the table that remittances constitute the second largest incoming resource flow for Bangladesh next to commodity exports. Furthermore, remittances tend to be less volatile than other incoming resource flows and are more stable than foreign direct investment as is clear from figure-2.



Source: Bangladesh Bank, 2010.

The figure reveals that the overseas remittances show clear upward trend. In the 1990's all the sources of foreign exchange have shown comparable figures. However, afterwards the overseas remittances clearly overshoot the FDI and ODA.

There is a general consensus that the remittances have positive impact on development and economic growth. However the role of remittance on the economy is not well understood due to the methodological and analytical weakness of the existing studies. This is particularly true for the case of Bangladesh where the literature on the issue is quite nascent and the existing studies failed to separate the cause and effects of remittance on the other macro-variables of the country. Most of the studies (Ali, et. al.1981, Islam 1981, Mahmood 1984, 1987, 1991, 1992, Siddique 1986, Matin 1994, Murshid et. al. 2001) explained the trends and pattern of overseas remittances and have drawn the conclusion of positive impact of remittances on the domestic economy.

Hossain et. al (2007) is but an exception, which by analyzing time series properties of the data examined the cause and effects relationship between remittance and the gross national product (GNP) of the country. The paper however, suffers from omitted variable bias. Therefore, analyzing the dynamic linkages between overseas remittances and its impact on the Bangladesh economy still demanding both from micro and macroeconomic aspects by considering most of the drawback of the existing literature. The major objective of this paper is to examine the dynamic linkage between gross national product, overseas remittance and import over a long period of time. Besides, based on households survey the study also address the issues of

- i) The impacts of remittances on the living standard of emigrants' families;
- ii) How do the emigrants' families utilize these remittances?

The study is based on both primary and secondary data. The sources of secondary data are Bangladesh Bureau of Statistics (BBS), Bangladesh Bank (BB), Bureau of Manpower Employment and Training (BMET), Ministry of Finance, Government of Bangladesh, Internet and other published paper. The primary data is collected from field survey on 170 households in different regions of Bangladesh.

After collection and classification the data has been analyzed by modern econometric techniques of cointegration and error correction mechanism so as to see the short-term dynamics of long-term impact of overseas remittances in the Bangladesh economy. The Microsoft programme Spreadsheets and Econometric programme Eviews have been used to analyze the data.

The paper is arranged as follows. After introducing the issues in Section 1, Section 2 has thrown a birds eye view on the theoretical and empirical literature. Section 3 discusses the trends and patterns of manpower export from Bangladesh. Section 4 presents the results and discussion based on field survey. Section 5 empirically examines the dynamic linkage between overseas remittance and economic growth. Finally, utilization and policy

implication for better utilization of overseas remittance has been suggested to reap the maximum development impact.

2. A Brief Survey of the Literature on Remittances

In general remittances can be defined as the amount of money or goods sent home by the migrants. It represent a resource flow from the rich to the poor countries, which have large pool of unskilled / illiterate pool without any or a very few job opportunity in the domestic country. The global value of remittances has increased to over US\$ 100 billion a year that constitute the most important source of external source as the other external sources are showing a declining trend. Consequently the linkage between remittances and the other macro-variables i.e. the impact of remittances on the domestic economy has gained new attention in the development literature.

The literature on remittances is large and the researchers have analyzed the issues of trends, patterns, and the impact on the domestic economy. Russell (1986) have identified and described the various costs and benefits to remitting. Bloom (1985) analyzed the impact of remittance by considering the role of family of migrants as the entire family is sharing, and trading off the costs and benefits of remitting. Lucas and Stark (1985) is he proponent of Bloom (1985) and supported to consider the role of family in remittance analysis. They argued that migrants use their family members as their agent as the remittances sent by the migrants are used to care for the migrant's interests, though they also contain some compensation for the agents (Chami, et. al. 2003).

Few studies analyzed the remittances issue on the endogenous migration approach or the portfolio approach. For instance, Wahaba (1991) divided remittance into two parts. The fixed remittances, which go toward family support and the discretionary remittances, which are investment flows. A good number of studies directly address the economic effects of remittances and they concluded that most of the remitted funds are spent on consumption (Oberai and Singh 1980, Durand et al 1996). Based on household survey in Pakistan Gilani (1981) found that most of the remittances are spent on consumption,

followed by residential investment. Glytsos (1993) has found almost the similar spending pattern for remittances to Greece.

Some of the other studies found that part of the remittances goes to the savings and so on investment. Using survey data for Pakistan Alderman (1996) and Adams (1998) found that remittances tend to be invested in real estate of land and buildings. Brown (1997) has found that housing expenditures are the single largest expenditure out of remittance income based on the household data for Western Samoa and Tonga. In a sample survey of 74 Egyptian households Adams (1991) concluded that the receipt of remittances increases the marginal propensity to invest. The other studies concluded that the savings and the investment resulted from remittances may be seen from the individual households but are not necessarily productive in terms of the overall economy. Expenditures on housing, land or jewelry can be considered as investment from the individual points of view but a very little portion of the remittances are channeled to the business investment or directly productive activities. It is well recognized that an increase in investment in directly productive activities by the individual lead to the increase in investment in social overhead capital by the government. Thus there is reason believe that the remittances have negative impact on the domestic economy if it is used to increase family's consumption and stock of wealth, but not on the overall economy's stock of wealth (Chami et al 2003).

A number of studies analyzed the impact of remittances on the overall economy by using macroeconomic models. The main conclusion of these studies is that even if the lion's share of the remittances is used on consumption or residential expenditures they still have positive impact for the overall economy. The argument is based on simple multiplier issues, which emanates from the fact that consumption expenditures constitute a significant portion of the aggregate demand. Using input-output tables for Bangladesh Stahl and Habib (1989) have found a simple remittance multiplier for the years 1976-1988 is about 1.24, which is mainly a consumption effect. Using a simple Keynesian structural model Nishat and Bilgrami (1991) found the average value of multiplier 2.43. These simple Keynesian multiplier issues captures the short-run impact of remittances on

the receiving economy. However, there is very scanty literature on the impact of remittances on longer-term economic growth. This requires examining the dynamic linkage between remittances and the other macro-variables and can be done by using the modern techniques of time series econometrics. The present paper attempts to do that in the next sections.

Though there is a large theoretical and empirical literature analyzing the issues of remittances, for Bangladesh it is quite nascent. A World Bank study carried out by Ali, et al. (1981) has identified overseas remittances as a means of achieving a favorable balance of payments as well as creating a new resource base for the country. A number of studies focused on the trends in the process of migration, inflow and uses of remittances (Mahmood, 1985; Salim, 1992; Murshid et al. 2001). A major finding of these studies is that a significant portion of overseas earnings is spent for consumption purposes, acquisition of assets (particularly land), investments in petty trade and business and reinvestment to go to the other countries.

Some of the other studies (Salim, 1991, 1992; Mahmood 1991, Matin, 1994, Jesmin, 2005) focused on the macroeconomic impact of overseas remittances in Bangladesh. By calculating rates, ratios and percentages they have found that as compared to the major macro variables of the country such as export, import, ADP allocations, etc., overseas remittances rank highly. They argued that over the years remittances secured the top position as a source of foreign exchange earnings. Therefore it is equivalent to a significant amount of export earnings, covering the payments for the major imports of the country as well as having a dramatic effect on the balance of payment position. However, manpower exports have adverse effects as well. In the process of manpower exports, skilled and competed personnel also leave the country. Thus the country is deprived of their services and hence upsetting the normal functioning of the economy (Mahmood, 1985).

Many of the studies (Siddiqui 1991, Mahmood 1991, Rahman 2002) concentrated on the trend and pattern of migration and uses of remittances macro level and have made some

policy conclusion. Using the published macro data for the Bangladesh economy they have come up with the conclusion that remittances is beneficial in uplifting the socio-economic conditions of the migrant families. To them remittances enhance non-farm activities to the rural economy and thus works as an absorber of the slack seasons surplus labor.

Some of the recent studies has also focused on the impact of remittances on living standard of emigrants families. Using the survey data from Pakistan and Philippines Azam (2005) found that emigrants' families were highly successful to improve their household livelihoods and assets. Analyzing macroeconomic data Sattar and Iqbal (2005) concluded that remittances have a positive impact on Pakistan's economy through improved balance of payments position and reduced dependence on external borrowing. Significant flow of remittances also helped Pakistan recover from the adverse effects of oil shocks, reduced the unemployment problem and improved living standard of recipient households. Kofman (2008) observed that woman along with their children, experiences an increase in their living standard resulting from the remittances sent by their emigrant husband. Adams and John (2008) analyzed that the remittances affects the marginal spending behavior of households on a broad range of consumption and investment goods, including food, education and housing.

From the above literature three stylized facts are evident. The first fact is that a substantial portion of remittances income is used for consumption. The second fact is that, though small a part of remitted money make up savings and thus constitute investment. The third fact is that the saving and the investment resulted from the remitted income may not necessarily be productive for the economy as a whole. Empirically it is possible to establish the relationship between remittances and the gross national product, the gross domestic saving, export earnings, import payments, balance of payments, external dependence on grants and loans, tax revenue and the annual development programme as well. Here attempt has been made to examine the short run dynamics of long run relationship between gross national product, remittances and imports. These three variables came under consideration due to the fact that the remittances constitute a

major portion of net factor income from abroad in calculating GNP. Thus it is plausible to assume that there is a unidirectional causality from remittances to GNP. However there are reasons to believe that an increase in country's GNP make the people more mobile. Hence causality can run from GNP to remittances as well. Therefore a bi-directional causality is also likely. Again it has been discussed that a significant portion of remittances are used to make import payments. Thus remittances may cause the increment of imports in the country. Imports then enhance exports, which has ultimate positive impact on the GNP of the country. Consequently, it is not unwise to assume trivariate causality among GNP, remittances and imports of the country.

The main drawback of the studies undertaken in Bangladesh is that they reached conclusions without taking into account any rigorous econometric technique in analyzing the data. Matin (1994) estimated the trend growth rate of the migrant workers examining the time series properties of the variables in the model. The presence of non-stationary variables invalidates the t and F tests, as the standard regression results are 'spurious'. Thus, in handling time series data it is crucial to check for stationarity of all the variables. A long run or equilibrium relationship exists if the variables are stationary as well as cointegrated. Hossain et al 2007, has examined bi-variate relationship between gross national product and the remittances for Bangladesh by considering time series properties of the variable and by applying standard econometric techniques. However, such bivariate analysis suffers from omitted variable bias, as there are dynamic linkages between remittances and the other macro variables. The present study adopts the cointegration technique as well as the Granger and Error Correction Models with the purpose of ascertaining the short run dynamics of the remittances and its association with other relevant macro variables within a long run relationship in Bangladesh. Besides, the paper also investigates the causal relationship among the studied variables in the Granger causality framework, not attempted before.

The main attention of this paper is to focus on establishing the trivariate causality between the considered variables by applying the modern applied econometric techniques of cointegration and error correction mechanism. To do this empirical exercise we use the

aggregate time series data on GNP, remittances and imports over the period of 1976-2008. Data were taken from various issues of Economic Trends published by the Bangladesh Bank. GNP at current market price equals GDP at current market price plus net factor income from abroad. After compiling the data econometric software Eviews has been used to analyze the data. Besides based on microeconomic data field survey the study also addresses the issues of the impact of remittances on the standard of living of the emigrants' families and also analyzes the utilization of the remittances.

3. Trends and Patterns of Labor Force Migration from Bangladesh¹

3.1 Causes of Labor Force Migration

The process of migration has a long history. It dates back to the classical economists, who treated labor as the principal factors of production and suggested for labor force migration to keep production process smooth and to maintain social harmony (Salim 1991). The internal within the country and international migration from Bangladesh becomes a natural process of livelihood strategy for the people over the last centuries. The external migration from Bangladesh first traced to the Sri Lankan mythology. It is believed that the ancient inhabitants of Bangladesh have migrated from Bangladesh to Sri Lanka. Besides, immediately before partition of Indian Subcontinent a large number of Bangladeshi has migrated from Bangladesh to Assam and Myanmar. Migration from Bangladesh to the neighboring country becomes a regular phenomenon due to the loss of economic sovereignty resulting from the destruction of jute and cotton industries.

Currently surplus labor in the economy is trying to manage their means of living by moving from rural to the urban areas or to the other countries. In addition people are migrating to achieve better educational opportunities, access to specialized jobs, better health care systems and wider opportunities for self-actualization as pull factors and political turmoil, violence, social insecurity and corruption as push factors (Siddiqui 2003). There is a huge flow of Bangladeshi workers all over the world, especially in Middle East countries, where there is demand for unskilled labor in the enormous

¹ This section heavily draws on Hossain, M.A. 2007.

construction and household activities. Again there is an acute shortage of manpower in Western countries, Far Eastern countries and the newly developed emerging Asian countries. The public policies of Bangladesh are encouraging people to migrate to these countries. For instance, over the last few years Malaysia becomes one of the major destinations of Bangladeshi workers. Very recently the government of Bangladesh has made an agreement with South Korea to send ten thousand workers to that country. Workers' remittances to Bangladesh contribute extensively to foreign exchange earnings. Labor migration is seen as a way to ease the pressure of unemployment, underemployment and the poverty situation in the country.

3.2 Trends of Labor Force Migration

A large number of Bangladeshi workers are migrating abroad in search for the means of their subsistence. However the labor market for Bangladeshi workers is not extensive. In the 1970s and 1980s it was narrowed down to some countries of the Middle East. Despite the efforts it has not spread widely. In the 1990s Bangladeshi workers has found their new destination in Malaysia and some other newly developed Asian counties. The extent of Bangladeshi labor market in abroad can be understood from the following table:

Table 4: Labor Market for Bangladeshi Workers

Region	Labor Importing Countries
North Africa	Algeria, Nigeria, Kenya
Eastern Africa	Liberia, Sierra Leon and Cote d' Ivore, Laos
Asia	Bahrain, Kuwait, Libya, Qatar, K.S.A. UAE, Singapore, Oman, Brunei Malaysia, Yemen, South Korea.
Latin America	Argentina, Bolivia, Brazil, Uruguay, Venezuela
Western Europe	Austria, Belgium, France, Germany, Netherlands, Sweden, Switzerland, UK
North America	Canada, USA
Australia	Australia

Source: Bangladesh Overseas Employment and Services Limited (BOESL).

According to the official statistics labor migration has increased steadily since independence. For the last 30 years the number of migrant workers has increased from around 6000 in 1976 to 2,77,000 in 2004. Over this period a total of record 6.8 million

workers have migrated from Bangladesh to the other countries of the world (BMET 2006). In the reference period most of the migrants have found their place in Saudi Arabia followed by U.A.E., Kuwait, Malaysia, Oman and Singapore. Besides new employment opportunities have also been created for Bangladeshi worker in Libya, South Korea, Brunei, Mauritius, Italy, Lebanon, Jordan and the other countries. From the early period of labor migration to April 2006 different countries of Middle East were the destination of 90 percent of total manpower export from Bangladesh. The rest of the workers migrated as many as 19 other countries. While at the same time Pakistan, India and Philippine's have exported their workers annually to as many as 40 countries throughout the world (Rahman 2002). Of the Middle Eastern countries Saudi Arabia dominates in absorbing larger number of labor force from Bangladesh. The number of Bangladeshi workers migrated since 1976 is shown in the following table:

Table 5: Country wise Migration of Bangladeshi Workers

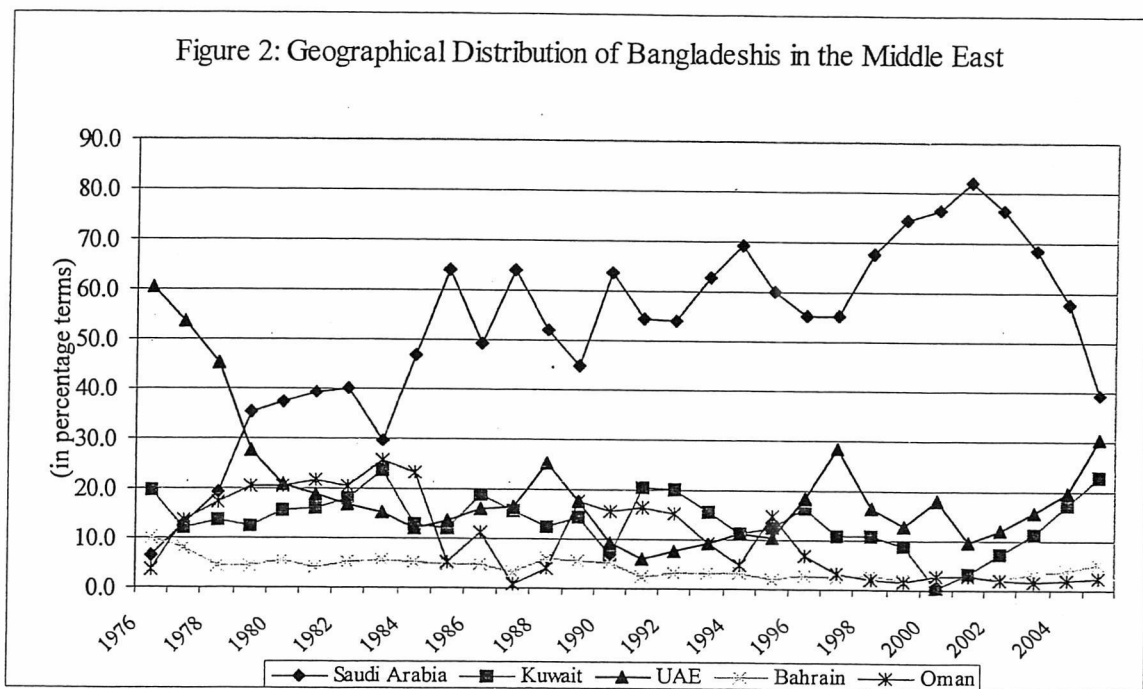
Year	Saudi Arabia	Kuwait	UAE	Bahrain	Oman	Malaysia	Singapore	Others	Total
1976	217	643	1,989	335	113	0	0	809	6,082
1977	1,379	1,315	5,819	870	1,492	0	0	632	13,484
1978	3,212	2,243	7,512	762	2,877	23	0	1,029	19,636
1979	6,496	2,298	5,069	827	3,777	0	110	223	20,779
1980	8,695	3,687	4,847	1,351	4,775	3	383	84	25,805
1981	13,384	5,464	6,418	1,392	7,351	0	1,083	1,029	38,102
1982	16,294	7,244	6,863	2,037	8,248	0	331	182	43,181
1983	12,928	10,283	6,615	2,473	11,110	23	178	2,279	47,872
1984	20,399	5,627	5,225	2,300	10,048	0	718	638	46,939
1985	39,133	7,384	8,336	2,965	3,218	0	792	428	64,241
1986	27,235	10,286	8,790	2,597	6,255	53	25	1,159	58,386
1987	39,292	9,559	9,953	2,055	440	0	0	1,280	64,566
1988	27,622	6,524	13,437	3,268	2,213	2	0	1,409	56,463
1989	39,049	12,402	15,184	4,870	15,429	401	229	1,286	90,839
1990	57,086	5,957	8,307	4,563	13,980	1,385	776	2,678	96,722
1991	75,656	28,574	8,583	3,480	23,087	1,628	642	3,032	146,673
1992	93,132	34,377	12,975	5,804	25,825	10,537	313	3,569	188,524
1993	106,387	26,407	15,810	5,396	15,866	67,938	1,739	4,930	246,466
1994	91,385	14,912	15,051	4,233	6,470	47,826	391	5,896	188,158
1995	84,009	17,492	14,686	3,004	20,949	35,154	3,762	6,589	187,640
1996	70,734	21,042	23,812	3,759	8,691	66,631	5,304	7,236	209,205
1997	106,534	21,126	54,719	5,010	5,985	152,844	27,401	7,458	383,074
1998	158,715	25,444	38,796	7,014	4,779	551	21,728	10,640	269,665
1999	185,739	22,400	32,344	4,639	4,045	0	9,596	9,419	270,181
2000	144,618	594	34,034	4,637	5,258	17,237	11,095	5,213	224,686
2001	137,248	5,341	16,252	4,371	4,561	4,921	9,615	6,656	190,966
2002	163,254	15,767	25,438	5,370	3,927	85	6,870	4,545	227,258
2003	162,131	26,722	37,346	7,482	4,029	28	5,304	11,148	256,193
2004	139,031	41,108	47,012	9,194	4,435	224	6,948	25,006	274,962
2005	80,425	47,029	61,978	10,716	4,827	2,911	9,651	35,165	254,707
Total	2,111,419	439,251	553,200	116,774	234,060	410,405	124,984	161,647	4,211,455

Source: BMET, 2006

The table reveals that since its operation from the mid 1970s, the labor force migration has been increasing almost continuously over the years. The number of migrated labor force has increased from six thousand in 1976 to over 4 million in 2005. In the initial years the migration rate was substantially high. However it has shown a declining trend in 1984-1988. It was reported people lose their interest to go abroad as many people were cheated by so called 'Adam Bepari' and due to the severe flood in the country. Again Iraqi invasion in Kuwait in 1991 has also lead to the low growth of Bangladeshi migration in Middle East. Similarly the growth rate has also shown a

shrinking trend in 2001 due to the US incursion in Iraq. This situation make the social turmoil in Middle East and Bangladeshi workers have tried to find new avenues in emerging Asian countries.

Of the 13 Middle Eastern countries only 5 of them captures almost the whole of migration to this region. These are Saudi Arabia, Kuwait, United Arab Emirates, Bahrain and Oman. Among these five countries Saudi Arabia is the most important importer of labor from Bangladesh, accounting for about 52 percent of the total migration in this region, followed by UAE 20 percent and Kuwait 14 percent. With some fluctuations these sources absorbs almost 90 of the Bangladeshi labor force. The geographical distribution of Bangladeshis in the Middle East is clear from the following figure 2.



Source: Table-2.

The figure reveals that despite some fluctuations and downturn Saudi Arabia still stands in the important position to absorb Bangladeshi labor force. Bangladeshi migration to Saudi Arabia reached its pinnacle by the year 2002, when Bangladeshi workers faces difficulties in entering Kuwait, a close allies of USA who had taken its possession there to attack Iraq. After 2002, Saudi Arabia has shown a down turn to absorb Bangladeshi

workers while the other countries of the region particularly Kuwait, UAE and Bahrain were eager to absorb Bangladeshi workers.

Due to the shrinking scope in the Middle Eastern countries Bangladeshi workers are trying to access the emerging Asian countries. So far they have shown some success to enter in Malaysia and Singapore and government of Bangladesh has recently signed an MOU to send ten thousand workers in South Korea. In the period of 1992-1997 a large amount (3,80,930) of Bangladeshi workers have migrated to Malaysia. After that manpower export to Malaysia has shown a sharp downturn. Again from 1997 to 2001 a total of 79, 435 workers has migrated to Singapore. A small number of workers are migrating each year to this country.

3.3 Skill Composition of Migrants

The migrant workers from Bangladesh can be classified into four categories based on their professional competence. These are

- i) Professional and Semi-professionals: These group include doctors, engineers, university teachers, cost and chartered accountants, computer experts, administrators etc.
- ii) Skilled: Persons having special qualities to perform machine operator, carpenter, cook, drivers, painters, electricians etc. belongs to this group.
- iii) Semi-skilled: This group includes those who through on job training can perform the work as gardener, housekeeper, room-boy, medical attendant etc.
- iv) Unskilled: Persons without any technical and professional skill belongs to this category. They can work as construction helper, cleaners, helpers to masons, municipals workers etc.

Bangladesh has a large pool of workforce with least knowledge base. Due to the widespread poverty and illiteracy only a very small percentage of the workforce become successful to make them professionals or skilled. Consequently Bangladeshi workers are failed to capture the international labor market. They are trying to migrate only in those countries where there is demand for unskilled or semiskilled workers. The entry of the Bangladeshi workers is limited to the countries where there is skill biasness. Though

there is high demand for professionals and skilled personnel in the international labor market with substantially higher wages, Bangladesh is failing to reap that advantage due to untrained manpower who is trying to migrate. The skill categories of Bangladeshi migrants are shown in the following table-3.

Table 6: Distribution of Migrants by Different Skill Groups

Year	(in percentage)			
	Professionals	Skilled	Semi-skilled	Unskilled
1976	9.3	29.2	8.9	52.6
1977	11.2	41.0	3.1	44.7
1978	15.1	35.9	4.6	44.3
1979	14.3	28.6	6.9	50.3
1980	6.6	40.6	7.8	45.0
1981	7.0	40.2	4.4	48.4
1982	6.2	32.8	5.2	55.7
1983	6.2	64.8	17.4	11.5
1984	4.7	30.3	9.7	55.4
1985	4.5	35.9	9.9	49.7
1986	3.2	38.3	13.5	45.0
1987	3.0	32.2	13.0	51.8
1988	3.9	37.1	15.9	43.1
1989	5.2	38.2	17.4	39.2
1990	5.8	34.3	20.0	39.9
1991	6.1	31.9	22.2	39.8
1992	6.0	26.9	16.5	50.5
1993	4.5	29.3	27.1	39.1
1994	4.5	32.8	25.0	37.8
1995	3.4	31.9	17.1	47.6
1996	1.5	30.4	16.4	51.7
1997	1.0	17.1	50.8	31.1
1998	3.6	27.1	19.5	49.8
1999	3.0	36.7	16.8	43.5
2000	4.8	44.7	11.9	38.6
2001	3.7	22.5	16.2	57.7
2002	6.4	25.0	16.0	52.6
2003	6.2	29.1	11.4	53.3
2004	7.0	30.0	9.0	54.0
2005	0.8	45.0	9.7	44.5

Source: BMET 2006.

From table-3, it is clear that unskilled group constitute almost fifty percent of Bangladeshi migrants, followed by skilled personnel 35 percent, unskilled group 10 percent. The professional group is very small in the migrant categories.

3.4 Bangladeshi Armed Forces in Abroad

Since 1991 a good number of the members of the Bangladeshi security forces are working in the UN peacekeeping missions and are out posted to the various countries of the world. In the backdrop of their growing success in abroad these numbers are increasing day by day. These security forces are bringing the fame for the country and contributing to the national economy by earning a significant amount of remittances. From the beginning the Bangladeshi security forces have been out posted to the 16 countries in the heading of 15 UN peacekeeping missions. They worked in Cambodia, Mozambique, Somalia, Rwanda, Kuwait, Bosnia, Haiti, Angola, East Timor, and Sierra Leon. The armed forces are now engaged in Eritrea, Ethiopia, Congo, Liberia, Sudan and Ivory Coast.

Table 7: Earnings from the UN Peace Keeping Missions

UN Mission	Country	Total amount	Expected
		Earned in US \$	Future Earnings US \$
Antak	Cambodia	457,828.00	326867.34
Anumoz	Mozambique	2,567,582.36	-
Unosom	Somalia	255,855.77	-
Unamir	Rwanda	2,415,059.78	-
Unicom	Kuwait	59,642.31	-
Unprofor	Bosnia	919,117.50	5132.5
Unmih/Unsomih	Haiti	460,495.06	-
Unavem	Angola	2,091,358.54	-
Untaet	East Timor	10,949,642.30	3440205
Unamosil	Sierra Leon	92,304,895.83	88955842.43
Unmi	Eritrea/Ethiopia	5,787,911.72	3177988.64
Monuk	Congo	19,434,253.27	13514288.68
Unmil	Liberia	77,417,918.71	4140613.37
Unosi	Ivory Coast	55,520,237.15	18156957.97
Unmis	Sudan	14,892,805.74	2570604.5
Total		285,534,604.04	134,288,500.40

Source: Inter services Public Relations Office (Various documents), July 2007.

From the above table it is evident that the Bangladeshi armed has earned a significant amount of valuable foreign exchange for the economy. Since 1991, they have already earned 285,534,604.04 US dollar equivalent to the Tk. 18,501,447,132.96. And from the existing missions they are expecting a future income of 134,288,500.40 US dollar in the

coming years. For a resource scarce country like Bangladesh these earnings have important implications from both the micro and macro point of view. In the individual level such earnings may enable to ensure life cycle smooth flow of consumption of the respective household and can make sure the household's food security. From the macro point of view such earnings can strengthen country's defense structure by receiving military equipments from UN or from the other developed country. The training and experience gathered by the out-posted members of the security forces can be of vital importance for the armed force base of the country. Therefore, it is necessary to look for such missions so that Bangladesh can earn a large sum of foreign exchange.

4. Methods, Results and Discussion of the Field Survey Data

Over the last decades a huge mass Bangladeshi worker has immigrated to the foreign countries. However, there is no proper registration system of the emigrants. Thus we have randomly selected 170 emigrants families from different districts of Bangladesh. These families had at least one member in the other country for earning purposes. A well structured questionnaire (Appendix ..) was used for data collection. The questionnaire consists mainly the following information:

First part of the questionnaire contained demographic information of the family and basic household characteristics of the emigrant;

Second part consists of the information about households' income and expenditure pattern;

Third section provides information about the utilization of the remittances;

Final section includes the information about social issues related to the emigrant households'.

Table 4.1: Destination of Migrant workers

Migrated Countries	Number of Migrant
Saudi Arabia	127
UAE(Dubai)	9
Qatar	2
Malaysia	5
London	1
Kuwait	18
Pakistan	1
Iraq	1
Canada	1
Singapore	4
South Africa	1
Total	170

Source: Field Survey

Table 4.1 reveals that the labor market for Bangladeshi workers are very narrow based and are concentrated to the Middle East countries. Of the 170 emigrants more than 90 percent of the workers migrated to the Middle East countries. However, of the Middle East countries most of the migrated labors have been absorbed by Saudi Arabia.

Table 4.2: How long the Migrants are in abroad

Years	Number of Migrant
0 to 5	67
5 to 10	86
10 to 15	11
15 to 20	4
20 and above	2
Total	170

Source: Field Survey

Table 4.2 shows that migrants are staying in the abroad for a substantial period of time. More than 90 percent of our sampled workers are staying until 10 years. This may be due to recover the cost of migration. A small portion of the emigrants also staying abroad for more years. These are the emigrants to the countries other than Middle East countries, who tries to be the permanent resident of those countries.

Table 4.3: Employment Status of Migrants before Migration

Profession before Migration	Number of Migrant
Agriculture	96
Industrial Work	5
Small Business	25
Student	27
Unemployed	10
Employed	6
Carpenter	1
Total	170

Source: Field Survey

Table 4.3 shows the employment status of the migrants before migration. It is clear from the table that about half of the emigrants are unskilled workers. A small section are skilled industrial and semi-skilled workers. A significant portion of emigrants are students and unemployed.

Table 4.4: Educational Qualifications of the Migrant

Education	Number of Migrant
Nil	6
Less than Primary Pass	10
Primary Pass	36
Junior Pass	71
Secondary Pass	37
Higher Secondary Pass	10
Total	170

Source: Field Survey

Table 4.4 reveals that educational status of the emigrant workers. It shows that a significant portion of the workers have very low levels of education. This is true as they are unskilled agricultural workers. Though more than 50 percent of the workers have some educational background they can be trained up to make them as skilled worker. However, in our sample merely 10 percent of the workers got training before migration while the rest 90 percent emigrated without taking any formal training as shown in the following table 4.5.

Table 4.5: Training before Migration

Training Status	Number of Migrant
Trained	17
Non Trained	153
Total	170

Source: Field Survey

Table4.6: Current Profession of Migrants in abroad

Profession of Migrants	Number of Migrant
Cleaner	2
House Servants	3
Tailoring	2
Small Business	6
General Worker	77
Gardener	3
Painter	1
Hotel Worker	1
Welding Worker	8
Plumber	1
Mason	1
Driving	7
Electrician	2
Not Found	56
Total	170

Source: Field Survey

As the unskilled workers migrate to abroad our sample shows that the emigrant workers are engaged in odds and low paid jobs. Their monthly income is also very low. Average monthly income of the 96 percent of the emigrant workers are less than Tk. 50, 000 as shown in the following table 4.7.

Table 4.7: Monthly income of Migrants in abroad

Income (Taka)	Number of Migrants
0000 to 25000	26
25000 to 50000	121
50000 to 75000	8
75000 to 100000	5
More than 100000	1
Total	170

Source: Field Survey

The low income of the emigrant workers is caused by the fact that they are unskilled or semiskilled and less trained. However, they spend a large amount of money to go abroad as shown in the following table 4.8

Table 4.8: Money Spent while going abroad

Spent (Taka)	Number of Migrants
00000 to 50000	0
50000 to 100000	11
100000 to 150000	16
150000 to 200000	36
200000 to 250000	14
250000 to 300000	48
300000 to 350000	3
350000 to 400000	13
400000 to 450000	16
450000 to 500000	12
550000 to 600000	1
Total	170

Source: Field Survey

Table 4.8 reveals that the average amount of money spent in going abroad is Tk. 300000 and even a large portion of our sample emigrant spent more than Tk. 300000 in going abroad. This sum of money is arranged by previous savings, selling land or other assets and borrowing from friends and relatives as shown in the following table 4.9.

Table 4.9: Sources of money arranged by Migrant for going abroad

	Sources of Money	Number of Migrants
a	Own	9
b	Land Sell	4
c	House Sell	0
d	Cattle sell	0
e	Loan	1
f	Relatives	11
g	Others	15
	Own and Loan (a+e)	10
	Own and Relatives (a+f)	29
	Land Sell and Loan (b+e)	24
	Cattle sell and Others d+g	9
	Loan and Relatives (e+f)	5
	Own ,Loan and Relatives (a+b+f)	15
	Land Sell Relatives and Others (b+f+g)	4
	Land Sell, Cattle sell and Loan (b+d+e)	16
	Land Sell, Cattle sell and Relatives (b+d+f)	7
	Cattle sell, Loan and Others (d+e+g)	11
	Total	170

Source: Field Survey

It has found from our sample that most of the emigrant workers send more than 80 percent of their income to their families at home. And most of the cases this money is sent to the wife directly or to the family head (father most of the cases). In case nuclear family wife makes the decision on spending the money and on the other cases family head makes the decision and some cases there is a general consensus in spending money and or money is spend by the direction of the emigrants. The scenario is show in the following tables.

Table 4.10: Who receives money

Money sent to	Number of Migrants
Own account	1
Wife	58
Father	79
Mother	15
Brother	16
Son	1
Total	170

Source: Field Survey

Table 4.11: Decision Making

Decision Making	No of cases
Wife	26
Father	37
Mother	8
Jointly	99
Total	170

Source: Field Survey

From our sample it has found that a significant portion of remittance is spent on consumption purpose. On average 25 to 30 percent of the remittance are used consumption goods. While a significant portion is also spent on consumption durables, to meet the households' current expenditure, on health care provision, on children's education as well as loan repayments, as shown in the following tables.

Table 4.12: Cost on Consumption Goods

Cost as Percentage of remittances	Number of family
0 to 5	3
5 to 10	6
10 to 15	10
15 to 20	28
20 to 25	15
25 to 30	66
30 to 35	5
35 to 40	2
40 to 45	28
45 to 50	6
50 and above	1
Total	170

Source: Field Survey

Table 4.13: Expenditure on Durable Goods

Cost as Percentage of remittances	Number of family
0 to 5	16
5 to 10	55
10 to 15	23
15 to 20	13
20 to 25	6
25 to 30	31
30 to 35	5
35 to 40	8
40 to 45	1
45 to 50	1
50 to 55	2
55 to 60	7
60 and above	2
Total	170

Source: Field Survey

Table 4.14: Households current expenditure purpose costs

Cost as Percentage of remittances	Number of family
0 to 5	34
5 to 10	55
10 to 15	14
15 to 20	44
20 to 25	6
25 to 30	3
30 to 35	1
35 to 40	8
40 to 45	2
Total	167

Source: Field Survey

Table 4.15: Educational Purpose costs

Cost as Percentage of remittances	Number of family
0 to 5	16
5 to 10	73
10 to 15	29
15 to 20	21
20 to 25	2
Total	141

Source: Field Survey

Table 4.16: Health service Purpose costs

Cost as Percentage of remittances	Number of family
0 to 5	29
5 to 10	56
10 to 15	23
15 to 20	33
20 to 25	4
25 to 30	2
Total	147

Source: Field Survey**Table 4.17: Cost on Loan Repayment**

Cost as Percentage of remittances	Number of family
0 to 5	16
5 to 10	28
10 to 15	8
15 to 20	4
20 to 25	0
25 to 30	0
Total	56

Source: Field Survey**Table 4.18: Cost on Maintaining Family responsibility**

Cost as Percentage of remittances	Number of family
0 to 5	50
5 to 10	55
10 to 15	9
15 to 20	26
Total	140

Source: Field Survey

A small portion of remittances are also used to maintaining social status quo. As our sample shows that about 30 percent of the emigrant families spent around 5 or more percentages of remittances on social purposes such as donating to the religious institutions and social clubs as shown in the following table 4.19.

Table 4.19: Cost on Social Contributions

Cost as Percentage of remittances	Number of family
0 to 5	53
5 to 10	30
10 to 15	1
15 to 20	1
Total	83

Source: Field Survey

Despite the incremental use of remittances on consumption expenditure, on consumers' durables, on the provision of health care, on the educational attainment of the siblings, on loan repayments and on social contributions, most of the respondents agreed that remittances are using on income generating activities. It is mostly used in land purchase and on fixed deposit in the Bank as well as doing small business. However, due to the risk aversion nature of the emigrant families residing at home are not will to utilize remittances on investment as shown in the following tables.

Table 4.20: Is remittance spent on long term income generating activity

Money spent on income generating activities	Number of family
Yes	117
No	53
Total	170

Source: Field Survey

Table 4.21: Remittance spent on long term income generating activity as

	Income generating activity	Number of family
a	Land Purchase	11
b	Small Business/Industry Established	4
c	Deposit in bank	8
	Land Purchase and Deposit in bank(a+c)	94
	Total	117

Source: Field Survey

Table 4.22: Reasons for not Investing Remittances

	Reasons for not Investment	Number of family
a	Environment isn't in favor	3
b	Lack of willingness to take risk	116
c	Lack of Capital	8
	Environment isn't in favor and Lack of willingness to take risk (a+b)	38
	Lack of willingness to take risk and Lack of Capital(b+c)	3
	Environment isn't in favor, Lack of willingness to take risk and Lack of Capital(a+b+c)	2
	Total	170

Source: Field Survey

5. Flow of Remittances to Bangladesh

Overseas remittances become a buzzword over the last decades due to its importance in shaping up the underdeveloped and developed economy. Migrants send either money or goods to their families and friend at home. These goods or money sent to the domestic country by migrants is generally treated as remittances. However, this broad definition excludes many unofficial transactions, which in some cases even equivalent or more than that of the official transactions. Therefore the remittances information collected from official sources is an underestimation of the actual level. In this analysis we are considering information available only from the official sources. Transfers through informal channel such as 'hundi'(cash transfers through intermediary), in kind transfers, such as consumers goods are not captured in the considered data, though they constitute substantial amount. Besides, the Bangladeshi soldiers and army officers working in the UN peace keeping mission are sending a significant amount to the home, which is not included in our official statistics (Hossain, 2007).

Though there are some fluctuations the flow of remittances has been increasing over the years. The remittances to Bangladesh have increased from 23.2 million US dollar in 1976 to 9689.00 million US dollars in 2009. This is of course a remarkable achievement for a resource scarce underdeveloped country Bangladesh, which is striving towards increase its foreign exchange by diversifying its exportable and by creating physical infrastructural facilities to attract foreign direct investment. The country also becomes

successful in finding new markets for the growing surplus of unskilled and semiskilled labor. The flow of remittances to Bangladesh is shown in table-1.

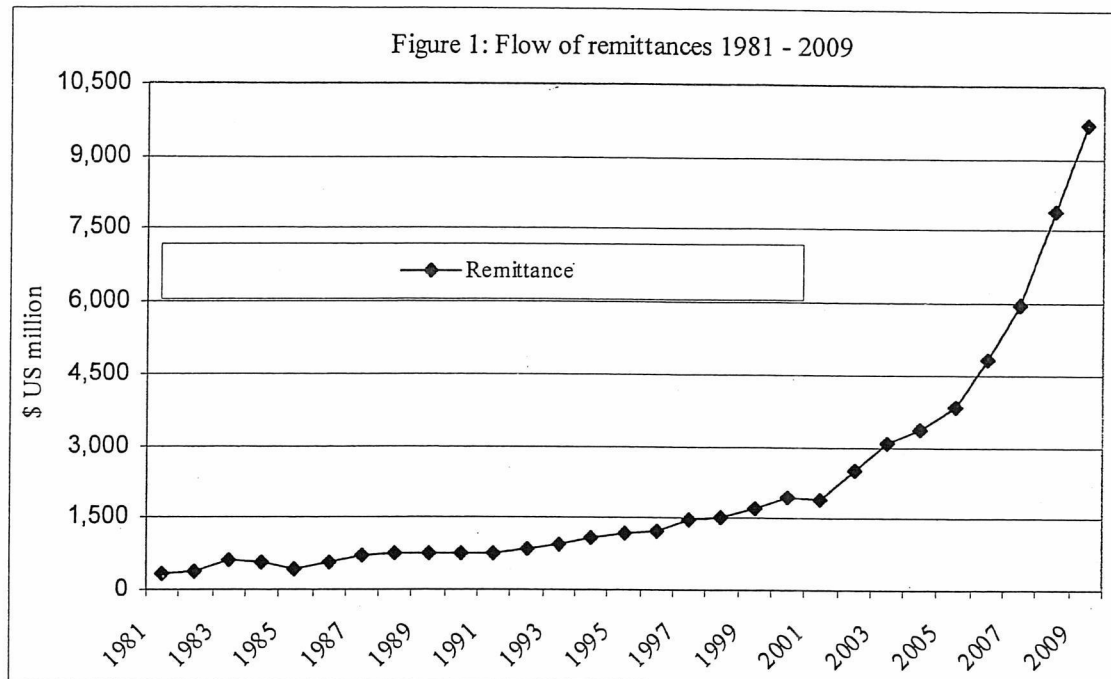
Table 1: Flow of remittance to Bangladesh

Year	US \$ in million	Annual Change (%)
1976	23.2	-
1977	82.79	256.85
1978	106.90	29.12
1979	172.06	60.95
1980	301.33	75.13
1981	304.88	1.18
1982	490.77	60.97
1983	627.51	27.86
1984	500.00	-20.32
1985	500.00	0.00
1986	576.20	15.24
1987	747.60	29.75
1988	763.90	2.18
1989	757.84	-0.79
1990	781.54	3.13
1991	769.30	-1.57
1992	901.97	17.25
1993	1009.10	11.88
1994	1153.50	14.31
1995	1201.50	4.16
1996	1355.30	12.80
1997	1525.00	12.52
1998	1599.00	4.85
1999	1806.60	12.98
2000	1955.00	8.21
2001	2071.00	5.93
2002	2847.80	37.51
2003	3177.60	11.58
2004	3610.15	13.61
2005	3848.09	19.80
2006	4802.00	24.79
2007	5979.00	24.51
2008	7915.09	32.37
2009	9689.09	22.41

Source: Bangladesh Bank, 2010 and authors' calculation. .

The table reveals that in 1976 the amount of remittance was only 23.2 million US dollar, which jumped to 82.79 million US dollar in the next year. Until 1983 the flow remittances have increased steadily. However, it shown a sudden downward trend in the

next couple of years, which is attributable mainly the so called oil crisis in the Middle East countries that causes a low flow of oil revenue to these countries and thus causes low employment of labor from developing countries. Afterwards though it recovered, has shown some fluctuations. In the 1980's the flow of remittance remains almost stable, however, shown a gradual increasing trend in the 1990s and a jump afterwards. The official flow of remittances in Bangladesh can be understood from the following figure 1.



Source-Based on table1.

Geographically the market for Bangladeshi migrant labor and are concentrated to the Middle East countries and the Western Europe. However, in the late 1990s East Asian countries especially, Malaysia emerged as a big market for the Bangladeshi labors. The relative share of remittances in these regions has changed significantly over the years. In the initial years of independence and in the early 1980s the Western Europe and some socialist countries of Eastern Europe had absorbed a substantial amount of Bangladeshi migrants. And in particular, Western Europe would account for more than three fourths of the remittances flowing into Bangladesh. Their relative share fell less than one tenth in recent years because countries of Western Europe has no demand for the unskilled

worker. These countries and also the Eastern Europe who has opened their economies and North American countries has high demand for technically skilled worker and high level professionals that Bangladesh failed to supply. The opposite is true for the Middle Eastern countries (Mahmood 1991). Currently, the Middle Eastern country Saudi Arabia, UAE, Qatar, Oman, Bahrain and Kuwait contributes almost 85 percent of the remittances in Bangladesh. Obviously this corresponds to the total outflow of migrants to these countries. Especially, the contribution of Saudi Arabia is twice than the combined contribution to the other Middle Eastern Countries.

For the last few year the USA and the UK is also contributing a significant share to the remittances of Bangladesh. In the FY 2004/05 the contribution of the USA and the UK were 467.81 and 297.54 million US dollar respectively. The US figure is next to the Saudi Arabia, while that of the UK is just behind Kuwait and UAE. Though Malaysia and Singapore are playing the vital role in absorbing Bangladeshi worker for the last ten years or so, their share to the remittance is not that significant. In the late 1980s and early 1990s a significant portion of Bangladeshi worker has found work in the north African countries particularly in Libya.

6. Economic Development Potentials of Remittances in Bangladesh²

The utilization of overseas remittances in Bangladesh is not homogeneous. A heterogeneous picture on the uses of remittances is evident from different studies. Remittances are the main component of migrants' income and consumption and also a significant source of foreign exchange to the country. In the broader framework the uses of remittances can be considered from both micro and macro point of view. Existing studies (Islam 1981, Mahmood 1986, Deb 1986) show that most of the households spend their increased income in consumption, construction and development of houses, buying arable or homestead land, spends of education of their children and on basic health care situation, released out mortgaged land, weeding, establishment of charitable institutions such as mosque, school etc. Deb 1986, found that the average consumption expenditure of the receiver of the migrants is 10 percent higher than the non receiver. One of the

² This section draws heavily on Hossain, 2007.

interesting findings of his study is that remittances increased the demand for all commodities but the demand for food items is less than that of the non-food / conspicuous items. This may be due to the fact that migrant's family are more solvent than that of the nonmigrant, which in some sense might be true because migration requires a substantial amount of money that can only be bearable by the solvent households. Islam (1981), found that the receiver of the remittances has a tendency to purchase arable or homestead land. A recent phenomenon is that remittances earner from one country is reused to meet the expenses of going other countries. Remittances are also used in rural non-farm activities. Particularly, the group of relatively low educated (graduate or below) are less interested to engage themselves in the agricultural activities directly. They try to use the remittances in the sub sectors of agriculture i.e. in livestock, fisheries or in forestry. Another important trend is that if the remittances receivers become financially solvent and have some regular income flow they keep the remittances as fixed deposit in the bank and thus make the money idle. Some receivers also use the remittances as a capital to initiate petty trade.

From the macro point of view remittances are used to make import payments and for the productive investment of the government. However exact direction of the macro level use is not well known due to the lack of literature. However, through Wage Earners Scheme government import certain capital goods and some raw materials, which promote country's industrialization. Bangladesh also suffers from balance of payments deficit. The remittances are used to ease that deficit.

The need and scope of the uses of remittances to the various productivities determines the development potentials of remittances. The issue is whether the remittances are creating additional income or it is generating employment.

From the individual point of view his endeavor can be considered successful if he can arrange a smooth flow of life cycle income and can leave some assets for the next generation. From the macro point of view the development potential of overseas remittances can be understood from its contribution to the resource base of the country

and the development of different sectors. Government policies should be designed to use remittances in such a way it can work as a sustaining income generating catalyst. Remittances should be used to reap its maximum potentials. Since most of the migrant labor forces are from the rural economy, the following sectors should come under greater attention:

- i) Improvement in agriculture and promoting agricultural extension services and noncrop subsectors such forestry, fishery and livestock. Focus will also be given to increase the production of non foodgrain cash crops ;
- ii) Small-scale rural industries such as rice and flourmills, grinding spices, bread and biscuit factories, ice plants i.e. agrobased small scale industries to be established or be initiated by the remittance recipients families so that the trickle down effect positively affect the rural communities;
- iii) Rural service industries;
- iv) Transport and communication business;
- v) Petty trading;
- vi) Export oriented industries small scale micro industries establishment etc.

7. Overseas Remittances and Economic Growth: A Trivariate Causality Analysis

7.1. Methodology

To test for causality and cointegration between overseas remittances and economic growth, the time series properties of each variable are examined by the unit root tests. At first it is examined whether the considered variables are stationary or not by applying the augmented Dickey-Fuller (ADF) test, which is based on the following regression equation with a constant and a trend of the form:

$$\Delta Y_t = \partial_1 + \partial_2 t + \ell Y_{t-1} + \sum_{i=1}^m \phi_i \Delta Y_{t-i} + v_t \quad (i)$$

where, $\Delta Y_t = Y_t - Y_{t-1}$ and Y are the considered variables, m is the number of lags in the dependent variable chosen by Schwartz Information criterion and v_t is the stochastic

error term. The null hypothesis of a unit root implies that the coefficient of Y_{t-1} is zero. If the null hypothesis is rejected, then the series is stationary and no differencing in the series is necessary to induce stationary (Hossain et al 2007:42).

Johansen-Juselius cointegration technique has been applied to check the cointegration among GNP, remittances and imports. In this technique trace statistic and the maximum eigen value test statistic are used to identify the number of cointegrating vectors. The Trace test statistic for the null hypothesis that there are at most r distinct cointegrating vectors is

$$\lambda_{trace} = T \sum_{i=r+1}^N \ln(1 - \lambda_i) \quad (ii)$$

where, λ_i 's are the estimated characteristic roots of a diagonal matrix of generalized eigen values (ordered according to their size). The r in the Trace statistic is the number of roots above which the remaining roots are significant.

The maximum eigenvalue statistic for testing the null hypothesis of at most r cointegrating vectors against the alternative hypothesis of $r + 1$ cointegrating vectors is given by

$$\lambda_{max} = -T \ln(1 - \lambda_{r+1}) \quad (iii)$$

The r and $r+1$ in the max statistic refer to two alternative numbers of roots being tested for. Thus, we test whether $r+1$ can be rejected in favor of r roots. Johansen (1988) shows that equations (ii) and (iii) have non-standard distributions under the null hypothesis and provide approximate critical values for the statistic generated by Monte Carlo methods (Hossain et al 2007:42).

The presence of cointegration between variables is an indication of long run equilibrium relationship. However, there is a possibility of disequilibrium in the short run. Therefore, we can treat the error term in the cointegrating relation, which is used to tie the short run behavior of the variables. The error-correction mechanism corrects for disequilibrium. Therefore, the error-correction models (ECM) are applied to investigate the direction of causality. If Y_t and X_t are cointegrated, then Granger representation theorem (Engle and

Granger, 1987) says that the relationship between the two variables can be expressed as the error correction mechanism as follows:

$$\Delta Y_t = \alpha_1 + \lambda_1 Z_{t-1} + \sum_{i=1}^k \delta_i \Delta X_{t-i} + \sum_{j=1}^k \pi_j \Delta Y_{t-j} + u_{1t} \quad (\text{iv})$$

$$\Delta X_t = \alpha_2 + \lambda_2 Z_{t-1} + \sum_{i=1}^k \tau_i \Delta X_{t-i} + \sum_{j=1}^k \zeta_j \Delta Y_{t-j} + u_{2t} \quad (\text{v})$$

where, $Z_t = Y_t - \gamma X_t$, and u_{1t} and u_{2t} are white noise error terms. If at least any one of the two coefficients λ_1 or λ_2 is not zero the series Y_t and X_t are cointegrated in these two equations. This error correction model permits to test the short run dynamics of the long run relationship between Y_t and X_t . If $\lambda_1 \neq 0$ and $\lambda_2 = 0$, then X_t will lead Y_t in the short run. The opposite will occur if $\lambda_2 \neq 0$ and $\lambda_1 = 0$. If both $\lambda_1 \neq 0$ and $\lambda_2 \neq 0$, then feedback relationship exists between Y_t and X_t , which will adjust in the long run. In addition short run dynamics between Y_t and X_t are characterized by the coefficients δ_i 's and ζ_j 's. If δ_i 's are not all zero, movements in the X_t will lead to Y_t in the short run. If ζ_j 's are not all zero, movement in the Y_t will cause X_t in the short run. This analysis can easily be extended to n number of variables.

When two series are cointegrated the absence of causal relationship between them is ruled out in the error correction framework, while such a possibility exists in the Granger test. Thus we need to apply Granger causality to examine the direction of causality.

Granger Causality postulates that X causes Y if Y can be explained better by the present and lagged values of X than by the past values of Y alone assuming that both X and Y are stationary variables. This test assumes that the information relevant to the prediction of the respective variables is contained solely in the time series data on these variables (Gujrati, 2003). For instance, using a two variable system, the test is based on the following regression:

$$Y_t = \alpha + \sum_{i=1}^m \beta_i Y_{t-i} + \sum_{i=1}^n \phi_i X_{t-i} + \varepsilon_t \quad (\text{vi})$$

$$X_t = \chi + \sum_{i=1}^m \phi_i X_{t-i} + \sum_{i=1}^n \mu_i Y_{t-i} + \nu_t \quad (\text{vii})$$

where, ε_t and v_t are white noise error term and assumed to be stationary, and m and n are the number of lags to be specified. Equation (vi) postulates that current Y is related to past values of itself as well as that of X and equation (vii) proposes a similar behaviour for X . X is said to Granger cause Y if the computed F statistics is significant at the conventional level. The same procedure can be applied to test causality from Y to X . Granger model is very sensitive to lag lengths. The lags have been chosen on the basis of information provided by the minimum Schwartz information criterion. Econometric estimations were done using EViews version 7.0.

7.2. Empirical Results

In light of the methodology presented above at first GNP remittances and imports variables are tested for the unit roots suggested by ADF test. Unit root test examines the stationarity of the variables. The test is applied to both the original series (in logarithmic form) and to the first differences. Further, both the models with and without trend are tried. The lag parameters are determined by Schwartz information criterion. The results are reported in table -6.

Table- 6: Unit Root Tests (ADF) for the period 1976-2004

Without Trend		
Variables	Series in Levels	First Differences
LNGNP	-2.875	-3.873***
LNREM	-2.372	-4.129***
LNIMP	-1.827	-2.955***
With Trend		
Variables	Series in Levels	First Differences
LNGNP	-3.553	-4.154**
LNREM	-3.783	-4.117**
LNIMP	-3.423	-2.834***

Note: i)*** and ** indicates significance at 1% and 5% respectively.

ii) The optimal lag length has been considered to be 1 according to the Schwartz information criterion.

The test result indicates that all the considered variables are non-stationary at their levels. However, first difference makes them stationary. That is the variables LNGNP, LNREM and LNIMP are integrated of order one i.e. $I(1)$. Since the variables are $I(1)$, then it is necessary to set out cointegration tests to determine whether there exist a stable long run

relationship among them in Bangladesh. We relied on the Johansen's approach to establish the cointegrating vectors. The result is presented in table-7.

Table – 7: Johansen and Juselius Test of Cointegration

Data Vector	Lag	Hypothesis	λ Trace	λ Max
LNGNP, LNREM, LNIMP	1	$r \leq 0$	11.90	15.41
		$r \leq 1$	0.51**	3.76**

Notes: i) we have experimented with a number of lags and found 1 to be the optimal lag length. The null hypothesis states that there doesn't exist at most r cointegrating relationship among the variables. ii) ** indicates significance at 5% level.

Table-7, reports the maximum eigen-value and trace tests of Johansen and Juselius (1990). These are complementary versions of the same test to determine the cointegration rank, r . Both the test suggests that GNP, remittances and imports are cointegrated. The implication of the result is that there is the existence of a stable long run relationship between GNP and remittances in Bangladesh.

Table – 8: Estimation of Error Correction Model

Error Correction:	D(LNGNP)	D(LNREM)	D(LNIMP)
CointEq1	-0.067013 (-1.43808)	-0.195418 (-1.45937)	0.342684* (-4.83538)
D(LNGNP(-1))	-0.019247 (-0.08634)	0.039492 (-0.06165)	0.448289*** (-1.32228)
D(LNGNP(-2))	-0.152781 (-0.83391)	0.82112 (-1.55969)	0.467302*** (-1.67712)
D(LNREM(-1))	0.047618 (-0.73101)	0.051576 (-0.27553)	0.270738*** (-2.73281)
D(LNREM(-2))	-0.039024 (-0.66038)	-0.070611 (-0.41584)	0.248953*** (-2.77013)
D(LNIMP(-1))	-0.115769 (-0.98916)	0.003494 (-0.01039)	0.576456 (-3.23858)
D(LNIMP(-2))	-0.026176 (-0.25000)	0.128784 (-0.42804)	0.580961 (-3.64846)
C	0.067633 (-2.98711)	0.032527 (-0.49994)	-0.109047 (-3.16678)

Note: i) Figures in the Parenthesis represents t statistic.

ii) : i)*** and * indicates significance at 1% and 10% respectively.

Table-8 implies that the coefficient of the error correction term is statistically insignificant in the first two equations. The implication is that changes in remittances or import do not causally affect GNP in the short run. Similarly, the changes in the GNP or import do not causally affect remittances in the short run. In the third equation the error correction term is statistically significant, implies change in GNP as well as remittances have impact on imports of the country in the short run. That is there is unidirectional causality is running from remittances and GNP to imports. This is a very plausible result. More over, in the first equation though the lag remittance coefficient is statistically not different but positive, meaning that remittances have impact on GNP. Similarly from the second equation we can say that GNP have positive impact on remittance. From the third equation we can see that the lagged remittance coefficients are statistically different from zero, implies that remittances have impact on the import of the country.

Table – 9: Direction of Causality (Granger Causality Test)

Null Hypothesis:	Obs	F-Statistic	Probability
LNREM does not Granger Cause LNGNP	27	2.36657	0.11725
LNGNP does not Granger Cause LNREM		6.36538**	0.00659
LNIMP does not Granger Cause LNGNP	27	1.54766	0.23503
LNGNP does not Granger Cause LNIMP		1.42734	0.26131
LNIMP does not Granger Cause LNREM	27	9.46635	0.00108
LNREM does not Granger Cause LNIMP		5.24632**	0.0042

Note: *** and ** indicate significance at 1% and 5% respectively.

The results of Granger causality test are explored in table- 9. The table shows that GNP causes remittances in the long run, though we have found that in the short run they do not have any statistically significant relationship. The table also shows that remittances causes import in the long, however the other way relationship has not been established, meaning that there is an unidirectional causality is running from remittances to import. It can be seen that both the Granger causality and Error Correction Models (ECM) provide similar results regarding the direction of causality. These results show a unidirectional causality running from remittances to imports. However, the Granger causality test also shows a unidirectional causality from GNP to remittances.

5. Conclusions and Policy Implications

Bangladesh is resource scarce less developed country. In the backdrop of less diversification and narrow base of exportable, scrawny and inadequate facilities to attract foreign direct investment and declining trend of official development assistance, the remittances earned from manpower export is playing a vital role in the social and economic development of Bangladesh. The increasing trend of remittances creates new dynamism in the economy. It is giving new shape in the socio economic structure of the economy by easing the pressure of disguised, structural unemployment in the country. The resources generated from the remittances have given a new way of life to the domestic county especially the rural community of Bangladesh. It has created new employment and generating income by gearing up the rural non-farm activities shaping up the sub-sectors of agriculture, which is still considered as the main way of life for the people of Bangladesh. Therefore, new attempts are demanding even today to export more manpower to the international market so that Bangladesh can face the daunting challenges of feeding its 150 million of people, about half of whom are experiencing either transient or permanent food insecurity. The incoming remittances will thus keep the famine or food insecurity at bay and will work as a powerful catalyst for economic development that will help Bangladesh to reap the benefit of globalization.

The study covers both the households' and macroeconomic issues of overseas remittances in Bangladesh. Using survey data from different region of Bangladesh the study found that international remittances have positive impact on the living standards of the emigrant families. Remittances has increased their consumption pattern and increased asset holding and so other facilities of living standard and social status. From the macroeconomic frontier the study examined the dynamics and causality among overseas remittances and economic growth.

The paper applies Cointegration, Error Correction and Granger Causality models to explore the causal relationship between GNP, remittances and imports in Bangladesh. In

the macroeconomic issues main contribution of this study is to address the issue of the short run dynamics of long run relationship between remittances and the two important macro variables, namely GNP and imports. The study found that all three variables are cointegrated indicating that there is a stable long-term relationship among them. The causality is from remittances to imports as indicated by the Granger and Error Correction models. Thus it can be concluded that changes in remittances will have an important insinuation for changes in imports in Bangladesh in the short as well as in the long run. The implication of the result is there should make all attempts to increase the remittances of the country. Once the remittances increase it will help to stimulate imports that on the other way will lead to increase GNP. This means the causality from remittances to GNP is also likely via imports. Our study also founds a unidirectional causality from GNP to remittances, which is also plausible. However, the other way causality can also be possible.

References

- Adams, Richard H. Jr., 1991. "The Economic Use and Impact of International Remittances in Rural Egypt", *Economic Development and Cultural Change*, Vol. 39, P. 695-722.
- Ali, M.Q., 1980. "Manpower Export from Bangladesh: Its Socio-economic Implication". *The Dhaka University Studies*, Part- C, Vol. 1, No. 2, P.47-56.
- Ali, S.A., 1981. "An Analysis of the Institute of Home Remittance by Bangladeshi Workers Abroad on the National Economy in Labour Migration from Bangladesh to the Middle East". The World Bank Staff Working Paper 454, Washington, D.C.
- Amjad, R., 1986. "Impact of Worker's Remittances from the Middle East on Pakistan's Economy: Some Selected Issues", *Pakistan Development Review*, Vol. 25, P. 757-782.
- Brown, Richard P.C., 1997. "Estimating Remittance Functions for Pacific Island Migrants", *World Development*, Vol. 81, P. 613-626.
- CIA (Central Intelligence Agency, 2007. *The World Fact Book, 2006*. Last updated 23 January, 2007 (date accessed 22 March , 2007). <http://www.cia.gov/cia/publications/factbook/geos/bg.html>
- Chami, R., C. Fullenkamp, and S. Jahjah, 2003. "Are Immigrant Remittance Flows a Source of Capital for Development?" The IMF Working Paper, WP/03/189, Washington, D. C.
- Engle, R.F. and C.W. Granger, 1987. "Co-integration and Error Correction: Representation, Estimation and Testing". *Econometrica*, Vol.55, P. 251-276.
- Gilani, I., 1981. "Labor Migration from Pakistan to the Middle East and its Impact on the Domestic Economy, Part I," *Pakistan Institute of Development Economics Research Report Series 126*.
- Gujarati, D.N., 2003. *Basic Econometrics*. Mcgraw Hill, New York.
- Glytsos, N.P., 1993. "Measuring the Income Effects of Migrant Remittance: A Methodological Approach Applied to Greece", *Economic Development and Cultural Change*, Vol. 42, P. 131-161.
- Hossain, M.A., N.A. Shams and W. Habib, 2007. "Gross National Product, Overseas Remittances and Causality in Bangladesh: A Bivariate Analysis", *The Jahangirnagar Economic Review*, Vol. 17, June 2007.
- Jennings, A. and M. Clarke, 2005. "The development impact of remittances to Nigeria", *Development in Practice*, Vol. 15, No. 5, P.685-691.
- Jesmin, R. 2005. "Is Migrants' Remittances A Potential Tool For The Development OF Bangladesh Economy", *Journal of Business Administration*, Vol. 31, No. 3 & 4, P. 15-41.

Johansen, S. and K. Juselius, 1990. "Maximum Likelihood Estimation and Inference on Cointegration- With Applications to the Demand for Money", *Oxford Bulletin of Economics and Statistics*, Vol. 52, P.169-210.

Johansen, S., 1988. "Statistical Analysis of Cointegrating Vectors". *Journal of Economic Dynamics and Control*, Vol. 12, P. 231-254.

Mahmood, R.A., 1985. "*Bangladesh: Selected Issues in Employment and Development*". The Asian Employment Programme (ILO-ARTEP), Bangkok.

Matin, K.A., 1994. "The Overseas Migrant Workers, Remittances and The Economy of Bangladesh: 1976/77 to 1992/93". *Dhaka University Journal of Business Studies*, Vol. 15, No. 2, P.87-109.

Murshid, K.A.S., K. Iqbal and M. Ahmed, 2001. "*Migrant Workers from Bangladesh: Remittance Inflows and Utilization*". Research Report No. 170. The Bangladesh Institute of Development Studies, Dhaka.

Salim, R.A., 1991. "Labor Migration, Remittances and Economic Development: A Study on Bangladesh". The Jahangirnagar University (mimeo).

Salim, R.A., 1992. "Overseas Remittances in Bangladesh: Importance, Potentialities and Policy Options". *The Jahangirnagar Economic Review*, Part II, Social Science: Vols. XIII & XIV, The Jahangirnagar University.

Stahl, C.W. and A. Habib, 1989. "The Impact of Overseas Workers' Remittances on Indigenous Industries: Evidence from Bangladesh", *The Developing Economies*, Vol. 27, P. 269-285.

Wahba, S., 1991. "What Determines Workers' Remittances?" *Finance and Development*, December, P. 41-44.

বাংলাদেশ লোক-প্রশাসন প্রশিক্ষণ কেন্দ্র
সাভার, ঢাকা।

“Overseas Remittances in Bangladesh: Utilization and Impact”
শীর্ষক গবেষণা প্রকল্প

প্রশ্নমালা

[বিদ্রুদ: শুধু গবেষণা কাজে ব্যবহারের জন্য এ প্রশ্নমালা প্রণয়ন করা হয়েছে, প্রদত্ত তথ্যসমূহ সম্পূর্ণরূপে গোপন রাখা হবে; এবং কোন পর্যায়েই উত্তরদাতার ব্যক্তিগত পরিচয় প্রকাশ করা হবে না।]

অনুগ্রহ করে প্রযোজ্য স্থানে টিক (✓) দিন।

১.০ সাধারণ তথ্যাবলী:

১.১ অভিবাসনকারীর নাম/উত্তরদাতার নাম:

ঠিকানা: গ্রাম:

থানা:

জেলা:

১.২ উত্তরদাতার সাথে সম্পর্ক:

পিতা ☐

মাতা ☐

স্ত্রী ☐

পুত্র ☐

☐

কন্যা ☐

বোন ☐

কাকা ☐

অন্যান্য ☐

১.৩ কোন্ দেশে অবস্থান করছেন:

১.৪ কতদিন থেকে বিদেশে অবস্থান করছেন:

১.৫ বিদেশ গমনের পূর্বে দেশে কি কাজ করতেন:

১.৬ শিক্ষাগত যোগ্যতা কি: শ্রেণী

১.৭ বিদেশ গমনের আগে কোন প্রশিক্ষণ গ্রহণ করেছিলেন কি?

হ্যাঁ ☐

না ☐

☐

- ১.৮ হ্যাঁ হলে প্রশিক্ষণের নাম লিখুনঃ
- ১.৯ বিদেশে কোন কাজে (পেশায়) নিয়োজিত আছেন (জানা সম্ভব হলে)ঃ
- ১.১০ বিদেশ গমনের সিদ্ধান্ত গ্রহণের কারণ কি?
- ১.১১ পরিবারে নির্ভরশীল সদস্যের সংখ্যাঃ জন
- ১.১২ বিবাহিত হলে স্ত্রী কি দেশে কোন চাকরী করছেন? হ্যাঁ ☐ না ☐
- ১.১৩ অভিবাসনকারীর জমি/অন্যান্য সম্পত্তির পরিমাণঃ শতাংশ
- ১.১৪ উপরে বর্ণিত জমির মূল্যঃ টাকা
- ২.০ আয়-ব্যয় সংক্রান্ত তথ্যঃ
- ২.১ বিদেশ গমনে কত টাকা (প্রায়) খরচ হয়েছিলঃ টাকা
- ২.২ এ টাকা কিভাবে যোগাড় হয়েছে?
- নিজ ☐ জমি বিক্রয় ☐ বাড়ী বিক্রয় ☐ গবাদি পশু বিক্রয় ☐
- ঋণ গ্রহণ ☐ শুল্ক ☐ পিতা/মাতা ☐ ভাইবোন ☐
- অন্যান্য
- ২.৩ পরিবারের ধরণ উল্লেখ করুনঃ একান্নবতি ☐ একক ☐
- ২.৪.১ বিদেশ থেকে কি নিয়মিত টাকা পাঠান? হ্যাঁ ☐ না ☐
- ২.৪.২ কত সময় পর পর টাকা প্রেরণ করেনঃ মাসিক/৩ মাস পরপর/৬ মাস পর পর
- ২.৫.১ বিদেশী মুদ্রায় মাসিক কত বেতন পাচ্ছেনঃ টাকা
- ২.৫.২ বেতন বহির্ভূত অন্য কোন আয় থাকলে পরিমাণঃ টাকা

২.৫.৩ বেতনের কত অংশ দেশে পাঠাচ্ছেন? শতাংশ

২.৬.১ বিদেশ থেকে কিভাবে টাকা পাঠাচ্ছেন: নিজ ব্যাংক একাউন্টে প্রেরণ ☐
পরিবার প্রধানের একাউন্টে প্রেরণ ☐ চেক বা ব্যাংক ড্রাফট ☐
বন্ধু বা আত্মীয়-স্বজন ☐ হাণ্ডির মাধ্যমে ☐ মানি ট্রান্সফার কোম্পানী ☐

২.৬.২ টাকা পেতে অসুবিধা হয় কি? হ্যাঁ ☐ না ☐

২.৬.৩ হ্যাঁ হলে অসুবিধার ধরণ উল্লেখ করুন:

২.৭ কার নামে টাকা পাঠাচ্ছেন:

স্ত্রী/অন্যান্য (উল্লেখ করুন):

২.৮.১ প্রেরিত অর্থ খরচের ব্যাপারে কোন নির্দেশনা থাকে কি?

২.৮.২ নির্দেশনা না থাকলে টাকা খরচের ব্যাপারে কে প্রধানত সিদ্ধান্ত নেন:

স্ত্রী/অন্যান্য (উল্লেখ করুন):

৩.১ প্রেরিত অর্থ প্রধানতঃ কোন খাতে ব্যবহৃত হয়?

ব্যয়ের ধরণ	মোট ব্যয়ের শতকরা%
ভোগ্য দ্রব্য	
টেকসই দ্রব্য ক্রয়	
সাংসারিক চলতি ব্যয় মেটানো	
সন্তান/ভাইবোনদের পড়াশোনা	
স্বাস্থ্য সেবা	
পারিবারিক দায়িত্ব পালন	
সামাজিক ভূমিকা অর্জনে	
ঋণ পরিশোধ	
মোট	১০০%

৩.২ প্রেরিত অর্থ দীর্ঘস্থায়ী আয় বৃদ্ধি মূলক কাজে ব্যয়িত হয়েছে কি? হ্যাঁ ☐ না ☐

৩.৩ উত্তর হ্যাঁ হলে যথার্থ ঘরে টিক (✓) চিহ্ন দিনঃ

জমি ক্রয় ☐ ক্ষুদ্র শিল্প প্রতিষ্ঠা ☐ শেয়ার বাজারে বিনিয়োগ ☐ ব্যাংকে জমা
☐

৩.৪ রেমিট্যান্স বিনিয়োগ না করার জন্য দায়ী কারণ চিহ্নিত করুনঃ

- ☐ পরিবেশ অনুকূল নয়
- ☐ ঝুঁকি নিতে অনিচ্ছুক
- ☐ চাদাবাজী/সত্ৰাসী
- ☐ অন্যান্য (উল্লেখ করুন)ঃ

৪.০ অন্যান্য বিষয়াবলীঃ

৪.১ অভিবাসনকারীর অনুপস্থিতিতে আয় বৃদ্ধি মূলক কর্মকাণ্ডের সিদ্ধান্ত গ্রহণ ও কাজে কোন ক্ষতি হয় কিনা?

হ্যাঁ ☐ না ☐

৪.২ অভিবাসনকারীর অনুপস্থিতিতে কোন ধরনের সামাজিক সমস্যায় পতিত হয় কিনা?

হ্যাঁ ☐ না ☐

৪.৩ উত্তর হ্যাঁ হলে, সমস্যার ধরণ বর্ণনা করুনঃ

ক.

খ.

স্বাক্ষাৎকার গ্রহণকারীর স্বাক্ষর :

নামঃ

তারিখঃ