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An Enquiry into the Sluggish Growth of Workers' Remittance Determinants in Bangladesh

Kundu, Nobinkhor

Department of Economics, Comilla University, Comilla-3503, Bangladesh

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Nobinkhor Kundu
Assistant Professor
Department of Economics
Comilla University
Comilla, Bangladesh
Email: nobinkundu@cou.ac.bd

ACRONYMS

ADB	Asian Development Bank
BB	Bangladesh Bank
BBS	Bangladesh Bureau of Statistics
BER	Bangladesh Economic Review
BMET	Bureau of Manpower Employment and Training
BOP	Balance of Payments
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GNP	Gross National Product
GoB	Government of Bangladesh
HIES	Household Income and Expenditure Survey
HRD	Human Resource Development
ICT	Information and Communication Technology
IDA	International Development Agency
ILO	International Labour Organization
IMF	International Monetary Fund
LFS	Labour Force Survey
NGO	Non Governmental Organisation
NSDC	National Skills Development Committee
ODA	Official Development Assistant
PPP	Public Private Partnership
SFYP	Sixth Five Year Plan
TTC	Technical Training Centers
TVET	Technical Education and Vocational Training
VTI	Vocational Trainings Institutions
WB	World Bank
WDI	World Development Indicators

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EXECUTIVE SUMMARY

Workers' remittance for economic growth is important variable, which is the second leading amount of capital inflows in Bangladesh. Revenues from workers' remittance in the country exceed various types of foreign exchange inflow, particularly Foreign Direct Investment (FDI), Official Development Assistant (ODA) and net earnings from exports, but workers' remittance is one of the major sources of foreign exchange earnings and it exceeded FDI and ODA inflows to the developing countries (World Bank, 2010).

Every year, about 250,000 Bangladeshis migrate abroad and about eight million people of Bangladeshi origin are living and working abroad presently. Remittance as percentage of GDP has stood well over ten percent recently. Around eight million Bangladeshi expatriates in more than 140 countries signify the strength of Bangladesh in international migration (Bangladesh Bank, 2012). According to world bank migration and remittances factbook (2011), Bangladesh is seventh position in top ten emigration countries and top ten remittance recipients in 2010 (billions).

According to World Bank statistics (2010), about eight million Bangladesh's are currently working aboard, with each migrant sending $1,672 per year on average, but in India, the average remittance per head is $4,843, where as for China it is $6,112. The reason for Bangladeshi's low remittance per head is that the majority of Bangladeshi wage earners are unskilled labors. The skill composition of workers overseas has become skewed towards semi-skilled and unskilled workers over time. This may be due to employers in foreign countries feeling that Bangladeshi workers lack appropriate skills.

We always considered total workers remittance inflows in Bangladesh, but we should be considered analyses of remittance returns per head and also considered marginal analyses that is each person how much increase of his or her remittance in each year. The purpose of research study is an enquiry into the sluggish growth of remittances determinants in Bangladesh for the purpose of transition from low income country to middle income country that is development direction is required to an average GDP growth of around nine percent. The study focused on the importance of per capita and marginal productivity of remittance inflows and its implication for economic growth in Bangladesh.

The primary data were collected from the respondents during the period of May to June, 2013 from a particular districts in Bangladesh have been taken as the study area Comilla district. Using cross section data to analyzed econometrics models such as multinomial logistic regression model are used and fit them to identify the significant inputs of skill development for remitters.

The logistic regression result is difficult to predict on the basis of only empirical data. This empirical result suggests that log of remittance, which *p-value* is statistically significant, have been estimated to obtain the effect of significant coefficient of education of remitters, years of emigrant, remittance country, skill of remitter dummy, skill training providers, sources of borrowing, collateral for loan, rate of interest annually, professional service of remitters and invested of remittance on business (small/ medium) dummy, which also might be found the most

significant in case of skill development training and access to credit for remitters. Consequently, it can be concluded that growth of remittance in Bangladesh will require access to skill development allied factors, other things remaining same.

The empirical result indicate that the most significant predictors of per-capita income and marginal productivity of remitters. So, attention should be given to expansion of allied factors which incremental productivity of remitters in Bangladesh. Appropriate policies and programs for the labor market are important drivers of economic growth and a more equitable income distribution. Now seems to be skill developed allied factors might have significant impact on per-capita and marginal growth of worker's remittance. Therefore, it can be concluded that there is strong significant statistical correlation seems to exist with number of emigrant workers and their skills earns maximize remittances and inflows in Bangladesh in the long run.

I. INTRODUCTION

I.1 Background of the study

Worker's remittances have become an important source of foreign currency earnings to promote economic development in our country, for the most part from developed countries to developing countries that depend on foreign earnings from export manpower. The importance of this flow of workers' remittance has increased considerably in recent decade's source of income for many developing countries. Real Gross Domestic Product (GDP) indicates that workers' remittance income in Bangladesh has gradually increased significantly in the last forty two years, with some minor fluctuations (Bangladesh Bank, 2012). These trends in workers' remittance, increases in workers' remittance flows have greatly significant and to minimize the problem arising from shortages of foreign exchange reserve which is badly needed to pay the importable goods and services bills. Workers' remittance are not only used as a mechanism for the survival of the poor in developing countries but also as a risk sharing mechanism, a stable source of investment and for future consumption smoothing (Adams, 2009). Every year a huge number of labor workers are going abroad and sending workers' remittance in Bangladesh which is one of the major sources of our national income like, foreign exchange reserves.

The availability of foreign exchange through workers' remittance has not only helped the recipient countries in achieving a reasonably high economic growth by reducing the current account deficit, it has also reduced their external borrowing as well as external debt burden. For capital deficient countries, like Bangladesh, workers' remittances are considered to be a vital source of foreign exchange. These workers' remittances have a positive impact on Bangladesh's economy through improved Balance of Payments (BOP) position and reduced dependence on external borrowing (Kundu et al., 2012). Considered workers' remittance from migrants in the various countries to Bangladesh will depend more on the macroeconomic conditions in world economy, as a migrant's ability to send transfers will depend on conditions where he or she is based. The inflows of workers' remittance to Bangladesh have consistently increased over the last forty two years. Significant flows of workers' remittance also helped Bangladesh recover from the adverse effects of oil price shocks, reduced the unemployment problem, and improved standard of living of recipient households.

Workers' remittance for economic growth is important variable, which is the second leading amount of capital inflows in Bangladesh. Revenues from workers' remittance in the country exceed various types of foreign exchange inflow, particularly Foreign Direct Investment (FDI), Official Development Assistant (ODA) and net earnings from exports, but workers' remittance is one of the major sources of foreign exchange earnings and it exceeded FDI and ODA inflows to the developing countries (World Bank, 2010). While workers' remittance cannot be considered as a substitute for FDI and other ODA, it may ease short-run foreign exchange constraints at times other financial flows decline due to external factors. However, since workers' remittance are used to supplement domestic investment and, or consumption, it must have contributed to economic growth directly or indirectly, but there have no record in Bangladesh.

We always considered total workers remittance inflows in Bangladesh, but we should be considered analyses of remittance returns per head and also considered marginal analyses that is each person how much increase of his or her remittance in each year. Experiences of East Asia

suggest that the availability of skills cannot catalyse growth by itself, but that of lack of skills can seriously constrain growth. The skill level and quality of the workforce will thus increasingly provide the cutting edge to successful competition in the global economy (ILO, 1998a). Every year, about 250,000 Bangladeshis migrate abroad and about eight million people of Bangladeshi origin are living and working abroad presently.

The skill composition of workers overseas has become skewed towards semi-skilled and unskilled workers over time. This may be due to employers in foreign countries feeling that Bangladeshi workers lack appropriate skills. The unemployment rate is only about four percent – which is consistent with rates in other developing economies worldwide – with a slightly higher unemployment rate for youth. The underemployment rate is high and rising – from seventeen percent in 2000 to thirty eight percent in 2003 (World Bank, 2010). According to current World Bank statistics, about eight million Bangladesh's are currently working aboard, with each migrant sending $1,672 per year on average, but in India, the average remittance per head is $4,843, where as for China it is $6,112. The reason for Bangladeshis low remittance per head is that the majority of Bangladeshi wage earners are unskilled labors.

Economic development is expected to be associated with changes in the structure of employment. Acceleration of economic growth and productivity of the labour market situation depends on skilled labour force. Thus, skill allied factors is an important role in giving access to employment opportunities and its measure by employment elasticity of labour, that is, percentage change in employment divided by the percentage change in the labour. ADB (2004) finds that when chooses an elasticity of substitution between low skill and high skill workers to fit the cross-country pattern of skill premia, he is able to explain a moderate additional part of cross country income difference. The main challenge for the system is to overcome its inadequate orientation to the labor market. As new areas evolve, a strategy to promote and increase labour in Technical Education and Vocational Training (TVET) is essential.

I.2 Objectives of the study

The purpose of research study is an enquiry into the sluggish growth of remittances determinants in Bangladesh for the purpose of transition from low income country to middle income country that is development direction is required to an average GDP growth of around nine percent. This paper empirical analysis is macroeconomic determinants of workers' remittances for dynamics Bangladesh labour market and economic development. The study focused on the importance of not workers' remittance inflow, it also per capita and marginal productivity of remittance inflows and its implication for economic growth in Bangladesh. The research objective is as follows – an enquiry into the sluggish growth of remittance determinants in Bangladesh, for the purpose of a nation can transition from low income country to middle income country.

I.3 Methodology

This paper is concerned about the multiple logistic regression analysis, taken primary data from comilla district in Bangladesh, on international migrant workers to the determined influencing factors of remittances growth. After operating regression analysis in software *e-views-5.1* version, obtained result that the economic variables are significant.

I.4 Structure of the study

This paper is organized into five sections- following introduction, literature review including empirical studies section-II, analysis of the Bangladesh international migrant workers profile in section-III, section-IV includes data and methodology framework for the analytical analysis and it also identifies and defines the variable considered. Section-V examines and the analysis of empirical results of hours of employment. Finally, summary finding and concluding remarks of the paper for emerging new challenges of dynamic international labour market and for prosperous remittances growth and economic development. Appendix provides year wise growth of remittances profile, Bangladesh overseas employment and remittances profile and survey questionnaire

II. REVIEW OF THE LITERATURE

During the last decade of the twentieth century, Bangladesh achieved considerable success in acceleration of economic growth and rest of macroeconomic goals in stability of price level and employment generation. Progress of GDP growth in the economy is likely to result in a structural change of employment including emigrant workers'. The prospects of the skilled labour force in the labour market will be covered in this study.

A large number of studies have been carried out to show how workers' remittance affects economic growth. However, there are concerns whether workers' remittance could have significant and positive impact on economic growth. Many studies on workers' remittance have attempted to address that evaluated at both the international and national levels, provides some insight into the relationship between growth of national economy and workers' remittance. More than one year into the global financial crisis, remittances continue to rise in south Asia and the Philippines. Inflows of workers' remittance to these countries increased rapidly before the global financial crisis. Their continued strength has important implications for the Balance of Payments (BOPs) and macroeconomic policies in these countries. In Bangladesh, the strength of remittances in conjunction with weak imports caused a record current account surplus in FY 2009 according to Almekinders, G. et al. (2010).

Taylor (1992) found a positive association between remittances and economic growth. Aggarwal et al. (2006) conducted a study of 99 countries over the period 1975-2003 and find that remittances have a positive effect on bank deposits and credit to GDP. The authors then interpolate the positive effect on development by invoking existing studies showing the positive impact of these two variables on economic growth. Buch and Kuckulenz (2010) concluded that workers' remittances have positive economic and social effects on households receiving incomes from the Middle East. These studies have attempted to address the impact of workers' remittance on economic growth and poverty alleviation.

A few academic papers addressed the economic effects of workers' remittance but none of the studies used empirical exercise to investigate their impact on longer-term economic growth. Burney (1987) investigated the impact of workers' remittances from the Middle East on Bangladesh's GNP (Gross National Product) growth, BOPs, and domestic savings, using time-series data for 1969-70 to 1985-86. The study concluded that foreign exchange made available because of the workers' remittances from the Middle East, had not only helped in reducing the

current account deficit, but also reduced the external debt burden, improved debt servicing ability and decreased the need for additional foreign loans ultimately improving the BOP position. The study mentioned that nothing, however, is known about the exact magnitude of remittances' contribution to the GNP growth.

We also analyze the relation between workers' remittances and economic growth, but we are mainly interested in analyzing the macroeconomic determinants. This paper fills this gap and focuses on the macroeconomic effect of remittance flows on economic growth in Bangladesh. Remittances are almost as large as FDI, and more than twice as large as the official aid received by developing countries (Gammeltoft, 2002; Ratha, 2005). Foreign exchange reserves have significantly stabilized Bangladesh's financial sector and estimate whether there is a long-run relationship between economic growth and workers' remittance in Bangladesh. Iqbal and Sattar (2005) found that in the absence of worker remittances, it was likely that exchange rate, monetary and fiscal policies will come under pressure.

Our study here is that when using a multiple regression model methodology to estimate the real GDP and workers' remittance relationship, this is especially well-defined for the more recent years. The results from johanson co-integration tests provide some evidence that GDP is the most likely to have a long run relationship to workers' remittance (Kundu et al. 2012). Foreign remittance is an important source of foreign exchange earnings for Bangladesh since 1970. During the past four decade Bangladesh received significant amount of workers' remittance, however, fluctuation were also observed in the inflow of workers' remittance.

Moreover the study finds that remittances are used to finance education when households are facing aggregate shocks as these are associated with increased work activities. International remittances also perform an important role in reducing the extent of inequality and poverty. Several studies have helped to prove that remittances help households move out of poverty, lower mortality rate and increase educational and housing spending (Adams, 2003).

Furthermore the study also supports the idea that development impact of remittances enhances in the presence of sound macroeconomic policies and institution. Having access to credit can help increase investment opportunities in areas of developing countries that previously produced little, leading to growth and a positive trend relationship between workers' remittance and real GDP and shows that real GDP growth is positively correlated to workers' remittance during 1976 to 2010 and workers' remittance emerged to be the second important source of capital inflow for economic growth in Bangladesh (WDI, 2012).

The general conclusion of these studies suggest that remittances have positive effects on economy of Bangladesh in terms of aggregate consumption, investment, reduction in current account deficit, external debt burden and improve education/skills of the households. Workers' remittance also plays an important role in human capital investment in the recipient country through relaxing resource constraints. Cattaneo (2005) found that remittances are typically spent on investment in physical assets as well as investment on human capital such as education and health, which promotes growth. Jongwanich (2007) examined the impact of workers' remittances on growth and poverty reduction in developing Asia-pacific. The results suggested that, while workers' remittances have a significant impact on poverty reduction through increasing income,

smoothing consumption and easing capital constraints of the poor, but they have marginal impact on growth working through domestic investment and human capital development. Calero (2008) explored that remittances increases school enrollment and decrease the extent of child work. They find that remittances have positively affected economic growth.

Strategies for workers' remittance growth should, therefore, be based on not an analysis of number of emigrant migration also depends his/her skilled. Before a country pursues a labor-intensive growth strategy, now a time we should be taking new strategies marginal productivity of employment. This study focus particularly on the emigrants workers' and ask how education and skill development, e.g., vocational training, can help in improving the ability of emigrants workers' to obtain better employment with a higher productivity and better per capita and marginal productivity.

III. Emigrant Labor Remittance in Bangladesh

III.1 Remittance Recipients Countries

Remittance as percentage of GDP has stood well over ten percent recently. Around eight million Bangladeshi expatriates in more than 140 countries signify the strength of Bangladesh in international migration (Bangladesh Bank, 2012). Bangladesh Bank is responsible along with other government agencies to internal and external balance in the economy. Labour surplus Bangladesh is one of the top ten labour-receiving countries in the world (World Bank, 2010). According to world bank migration and remittances factbook (2011), Bangladesh is seventh position in top ten emigration countries and top ten remittance recipients in 2010 (billions), shown in *table-1*.

Table-1: Top Remittance Recipients Countries in 2010 (Billions)

South Asia	Low-Income Countries	Developing Countries	World
India ($55.0 bn) **Bangladesh ($11.1 bn)** Pakistan ($9.4 bn) Sri Lanka ($3.6 bn) Nepal ($3.5 bn) Maldives ($0.0 bn)	**Bangladesh ($11.1 bn)** Nepal ($3.5 bn) Tajikistan ($2.1 bn) Kenya ($1.8 bn) Haiti ($1.5 bn) Kyrgyz Republic ($1.0 bn) Uganda ($0.8 bn) Ethiopia ($0.4 bn) Mali ($0.4 bn) Cambodia ($0.4 bn)	India ($55.0 bn) China ($51.0 bn) Mexico ($22.6 bn) Philippines ($21.3 bn) **Bangladesh ($11.1 bn)** Nigeria ($10.0 bn) Pakistan ($9.4 bn) Lebanon ($8.2 bn) Republic of Egypt ($7.7 bn) Vietnam ($7.2 bn)	India ($55.0 bn) China ($51.0 bn) Mexico ($22.6 bn) Philippines ($21.3 bn) France ($15.9 bn) Germany ($11.6 bn) **Bangladesh ($11.1 bn)** Belgium ($10.4 bn) Spain ($10.2 bn) Nigeria ($10.0 bn)

Sources: World Bank Migration and Remittances Factbook, 2011.

Stock of emigrants as percentage of population is 3.3%. Emigration rate of tertiary-educated population is 4.3%. Emigration of physicians is 6.5% of physicians trained in the country. Females as percentage of immigrants: 13.9% (World Bank, 2011b). Top destination countries are India, Saudi Arabia, the United Kingdom, Kuwait, Oman, the United States, Malaysia, the United Arab Emirates, Italy, Jordan.

III.2 Growth of Worker's Remittance in Bangladesh

Bangladesh is one of the leading workers' remittance recipient countries as the export earnings of labor services growing at a speedy rate from the early 1990s. Bangladesh, being one of the top workers' remittance -recipient countries in the world, has drawn attention to the workers' remittance –real GDP relationship in between 1976 and 2010, a total of 6.8 million people emigrated temporarily from Bangladesh (BMET, 2012). Workers' remittance inflows to Bangladesh are increasing at an average annual rate of nineteen percent in the last thirty years from 1979 to 2008 (Hussain and Naeem, 2009). The flow of workers' remittance increased steadily from US$24 million in 1976 to US$1949.2 million in 2000 and started to play a key role in the economic development of the country. However, from 2001, the trend shows a dramatic increase of four hundred percent to US$9689.3 million in 2009 and US$11.1 billion in 2010 (Bangladesh Bank, 2011).
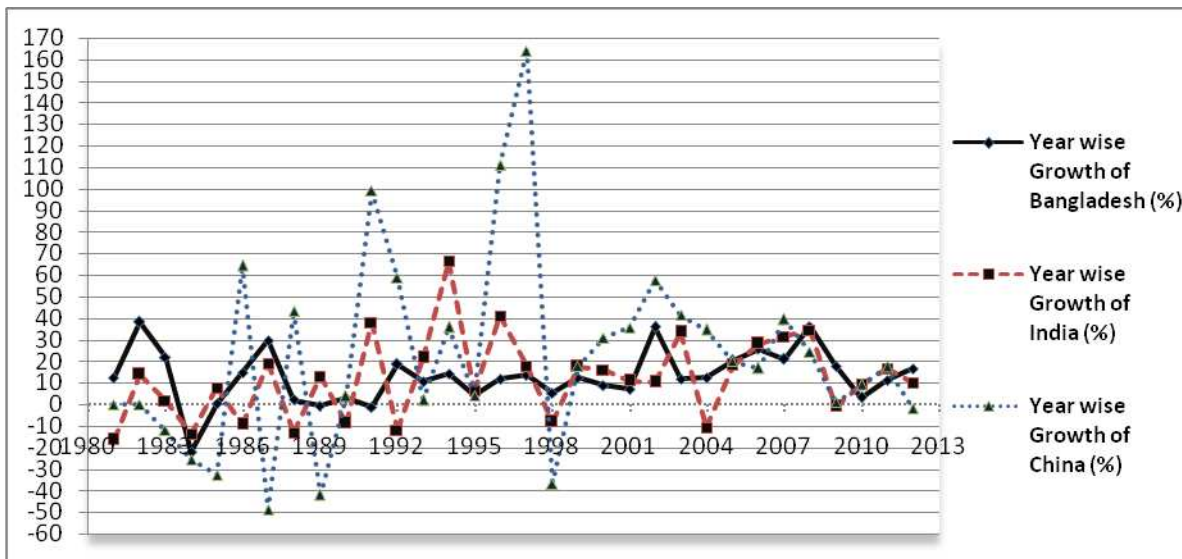
Figure: Year wise growth of remittance

The flow of remittances, while, slowed down quite rapidly in the region as a result of global financial crisis, the flow of remittances grew robustly by twenty four percent in Bangladesh during 2009. Bangladesh was the tenth largest recipient of workers' remittance among the developing countries in terms of average per migrant for the period 1990 to 2005, and it ranked fourteenth among all of the workers' remittance -recipient countries in terms of the total amount of workers' remittance received in 2005.

According to World Bank statistics (2012), about eight million Bangladesh's are currently working aboard, with each migrant sending $1,672 per year on average, but in India, the average remittance per head is $4,843, where as for China it is $6,112. The reason for Bangladeshis low remittance per head is that the majority of Bangladeshi wage earners are unskilled labors. The skill composition of workers overseas has become skewed towards semi-skilled and unskilled workers over time. This may be due to employers in foreign countries feeling that Bangladeshi workers lack appropriate skills.

To analyze year wise growth of remittance trends of Bangladesh, India and China from *appendix table - A.1*, show that the figure. Remittance growth of China is much rapid than Bangladesh and India, but India is rapid growth than Bangladesh during 1980 to 2012. As shown in figure, for Bangladesh a significant sluggish growth rate (year to- year) of these transfers started about 1980. At a specific year growth of remittance of Bangladesh is maximum 38%, on the contrary, India is 66% and China is 163%. The growth rate of remittance of Bangladesh is falling at year 1984, 1989 and 1991, and rest of the year rising sharply over all but per capita remittance growth is sluggish comparable with India and china.

The study examined the determinants of growth of workers' remittance from emigrant workers' in the various countries. An understanding of the performance of the emigrant's workers' of Bangladesh analysis of the most issues and highlights should on per capita and marginal productivity of remitter in the international labour market. This requires focus on quality of labour force and direction for specific policies to accelerate remittance growth, particularly for the semi/unskilled of the labour force. The magnitude of workers' remittance must be adequate to ensure that the workers' earnings are not only above the growth rate threshold but also prospects of continuous improvement per capita and marginal productivity of remitter.

III.3 Bangladesh Overseas Employment and Remittances Profile

A large migrant population of semi/unskilled workers largely concentrated in the Persian Gulf countries, particularly Saudi Arabia and the United Arab Emirates, contributing to rising remittance flows. Bangladesh overseas employment size and total remittance in million US $ can be seen from the *appendix table - A.2*. Total remittance of Bangladesh grew from 381.18 million US dollar in 1980-81 to 12843.43 million US dollar in 2011-12. In terms of calculated numbers, eight million Bangladesh's are currently working aboard, this suggests an added more than two lacs emigrants to the total remittance workforce annually, and needed annually to maintain a stable growth of emigrant labour market. The review of the issues rose above 32 years from 1980-81 to 2011-12 shows year wise growth percentage, remittance as a percentage of GDP and remittance as a percentage of merchandise export. The blank in the column indicate non-availability of data.

A very dynamic aspect of Bangladesh overseas employment, semi/unskilled employment is emerging to take up a very important role in the remittance scenario. In respect of sluggish growth of remittance, it grew from about 9.78% in 1981-82 to about 10.24% in 2011-12. Similarly, remittance as a 1.99% of GDP in 1980-81 gradually rose up to 11.14% of GDP in 2011-12. While remittance as a 56.33% of merchandise export in 1980-81 gradually rose up to 1988-89, but gradually falling up to 2000-01, again gradually rose up to 52.03% of merchandise export in 2011-12. For better understanding of the nation of Status in remittance, as regards year wise growth percentage, remittance as a percentage of GDP and remittance as a percentage of merchandise export.

IV. DATA AND METHODOLOGY

IV.1 Sources of Data

This research study is based on a number of sources of data – Primary and Secondary. To analysis primary data collected for used cross sectional study to be considered about allied

factors for international migrant workers. Quantitative technique is used in the existence of the causes and effects of influencing factors on returns to workers' remittances of suburban and rural areas of Comilla District, Bangladesh. The sampling design that is used in the study is appropriately performed based on the geographical location and also determined the size of sample by using the appropriate formula. Given the sample size and distribution, it is clear that the survey is not intended to provide results representative of the whole emigrant in Bangladesh but to provide a quick diagnostic of the sluggish growth of remittances determinants in Bangladesh.

The primary data were collected from the respondents during the period of May to June, 2013. The survey was conducted over two hundred respondents from a particular districts in Bangladesh have been taken as the study area Comilla district. A structured questionnaire was prepared in the light of the objectives of the study that was filled up by direct interview. All filled-up questionnaires were fully scrutinized and the valid data thus collected were processed and analyzed to reach with research objective.

To analysis the secondary data are used for an understanding the growth of and per capita remittances for socioeconomic growth and development and its marginal productivity analysis require closer attention. Secondary data obtained from various published sources like as, Labour Force Survey (LFS) of Bangladesh Bureau of Statistics (BBS), Bangladesh Economic Review (BER) of Ministry of Finance, Ministry of Planning, Government of Bangladesh (GoB) reports (various), Bangladesh Bank (BB), Asian Development Bank (ADB) and World Bank (WB). The questionnaire has been designed in light on skill allied factors for strong growth of remittances in Bangladesh and it may be included social and economic factors that indicate international migrant of Bangladeshi labor dynamism and development.

IV.2 Analytical Framework
IV.2.1 Logistic Regression Model

The advanced econometrics models such as multinomial logistic regression model are used and fit them to identify the significant factors of skill for remitters. The study is used multivariate techniques to explore how to increase per-capita and marginal productivity of remitters by allied factors, viz., multiple logistic regression model, was used to identify the determinants of remittance growth that is high growth of remittance of a nation, can be used not only to identify risk factors but also to predict the probability of success. The model expresses a qualitative endogenous variable as a function of several exogenous variables- both qualitative and quantitative (Kramer, 1991 and Gujarati, 2004).

The reason behind the use of logistic regression model is that outcome variable – log of received workers' remittance, such model is helpful to predict the likelihood of factors options for selected variables to achieve high growth of remittances in Bangladesh.

Let Y_i denote the endogenous variable for the ith observation.

Where Y_i = log of received workers' remittance

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The linear probability model (LPM) was

$$P_i = E(Y = 1 \mid Xi) = \beta_1 + \beta_2 X_i \qquad (1)$$

Where, X_i is an exogenous variables and β_i's the regression coefficients. Give a notation $P_i = E(Y = 1/Xi)$ to represent the conditional mean of Y given X when logistic distribution is used. The method is to model the response using the logistic function given by

$$P_i = E(Y = 1/Xi) = \frac{1}{1 + e^{-(\beta_1 + \beta_2 X_i)}} \qquad (2)$$

For ease of exposition, we write (2) as

$$P_i = \frac{1}{1 + e^{-z_i}} = \frac{e^{z_i}}{1 + e^{z_i}} \qquad (3)$$

Where $Z_i = \beta_1 + \beta_2 X_i$ and Equation (3) represents what is known as the, cumulative, logistic distribution function (Kramer, 1991). It is easy to verify that as Z_i ranges from $-\alpha$ *to* $+\alpha$, P_i ranges between 0 and 1 and that P_i is nonlinearly related to Z_i (i.e.,X_i), thus satisfying the two requirements[1]. We have created an estimation problem because P_i is nonlinear not only in X but also in the β_i's as can be seen clearly from (2). This means that we cannot use the familiar OLS procedure to estimate the parameters, which can be linearized shown as follows:

If P_i, the probability of skilled workers' remittance, is given by (3) then $(1-P_i)$, the probability of semi-skilled or unskilled workers' remittance is

$$1 - P_i = \frac{1}{1 + e^{z_i}} \qquad (4)$$

Therefore, we can write

$$\frac{P_i}{1 - P_i} = \frac{1 + e^z}{1 + e^{-z_i}} = e^z \qquad (5)$$

Now $P_i \big/ 1 - P_i$ is simply the odd ratio in favor of high growth of remittance – the ratio of the probability of high growth of remittance to the probability of low growth of remittance. If we take the natural log of (5), we obtain a very interesting result, namely,

$$L_i = In\left(\frac{P_i}{1 - P_i}\right) = Z_i$$
$$= \beta_1 + \beta_2 X_i \qquad (6)$$

That is, *L*, the log of the odds ratio, is not only linear in *X*, but also linear in parameters. *L* is called the logit, and hence the name logit model. For the purposes of estimation of the logit model, we write (6) as follows:

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[1] Note that as $Z_i \to +\infty, e^{-Zi}$ tends to zero and as $Z_i \to +\infty, e^{-Zi}$ increases indefinitely. Recall that e= 2.71828.

$$L_i = In\left(\frac{P_i}{1-P_i}\right) = \beta_1 + \beta_2 X_i + u_i \tag{6.1}$$

To estimate (6.1), the values of the regressand, or logit, L_i. This depends on the type data we have analysis for data at the individual, or micro, level. If we have data on individual families, OLS estimation of (6.1) is infeasible. $P_i = 1$, if growth of workers' remittance is high and $P_i = 0$, if growth of workers' remittance is low. These values directly into logit, L_i, we obtain:

$$L_i = In\left(\frac{1}{0}\right) \quad \text{if growth of workers' remittance is high}$$

$$L_i = In\left(\frac{0}{1}\right) \quad \text{if growth of workers' remittance is low}$$

Obviously, these expressions are meaningless. Therefore, if we have data at the individual, or micro, level, we cannot estimate (6.1) by the standard OLS routine. In this situation we may have to resort to the maximum likelihood (ML) method to estimate the parameters. Software packages *Eviews - 5.1* have built-in routines to estimate the logit model at the individual level.

IV.2.2 Empirical Methodology

To estimate the model, a widely used multiple logistic regression frameworks are taken to separate out the effects of key socio-economic factors of explanatory variables impact on growth of workers' remittance. A consistent time series data on remittance skill allied factors are not available for this cases we take cross section data. Regression equations on log of workers' remittance have been estimated to obtain the effects explanatory variables. The logistic multiple regression analysis has been used. The explanatory variables in the equations consist of the characteristics of the emigrant workers and dummy variables for the sector and status of employment. Using the survey data a logistic regression model has been estimated to examine how to growth of remittance based on various explanatory variables. In the following analysis, we shall estimate equations in the logit form.

Logistic regressions have been presented with the dependent variable as an indicator of the probability of being in remittance. Dependent variables dummy for three status of remitter (= 1, if a Skilled workers' remittance receives is '> TK. 50,000', otherwise a Semi-Skilled Remittance is 'TK. 20,001 to 50,000' or Unskilled Remittance is '< TK. 20,001') have been included.

Using the survey data a logistic regression model has been estimated to examine how to determinants of growth of workers' remittance based on Age of remitter, Sex of remitter dummy, Education of remitters, Years of emigrant, Remittance country [Middle East (Saudi Arabia, UAE, Jordon, Qatar, Oman, Bahrain, Lebanon, Libya, Kuwait, Yemen), South East Asia (Malaysia, Singapore, South Korea, Brunei), Europe (UK, Italy, Germany), Africa (Sudan, Mauritius, Egypt) and others], Skill of remitter dummy, Skill training providers, No. of dependent members, Amount of loan, Sources of borrowing, Collateral for loan, Rate of interest annually, Insurance of remitters/ members dummy, Cooperative bank dummy, Professional service of remitters (Welding, Agricultural workers, Construction worker, General labor, Cleaners, Shop keepers, Hotel employee and others), Invested on household items dummy, Invested on home improvements dummy, Invested

on business (small/ medium) dummy and Invested on landownership dummy, letting dichotomous exogenous variables for growth of remittance as predictors of one hundred and eighty emigrant worker's, shown below.

Dependent Variable:

log of received workers' remittance	= 1, if a Skilled workers' remittance receives is '> TK. 50,000' = 0, otherwise a Semi-Skilled Remittance is 'TK. 20,001 to 50,000' or Unskilled Remittance is '< TK. 20,001'

Explanatory Variables:

Age of remitter	'15-25 years', '26-35 years', '36-45 years' & '45+ years'
Sex of remitter dummy	Sex (1= Male, 0 = Female)
Education of remitters	'VoT', '< class 5', 'class 6 to 10', 'class 11 to 12' & '> class 12'
Years of emigrant	'1-5 years', '6-10 years', '11-15 years', '16 years' and 'Above'
Remittance Country	'Middle East', 'South East Asia', 'Europe', 'Africa' and 'Others'
Skill of remitter dummy	= 1, if Skill of Remitter is used = 0, otherwise
Skill training providers	'Government', 'NGO', 'Association' & 'IDA'
No. of dependent members	'<4 members', '4-6 members', '7-9 members', '10 members' and 'Above'
Professional service of remitters	'Welding/Electrician', 'Agricultural workers', 'Construction worker', 'Drivers', 'Cleaners', 'Company job', 'Hotel employee' & 'Others'
Amount of loan	'< TK. 100,000', 'TK. 100,001 to 300,000', 'TK. 300,001 to 500,000' & '> TK. 500,000'
Sources of borrowing	'Relative/ Neighbour/ Friends', 'Mahajan', 'NGO' & 'Banks'
Collateral for loan	'Nothing', 'Land and building', 'Machinery and equipment', and 'Personal assets of owner'
Rate of interest annually	'Nothing', '< 15%', '15% to 20%' & '> 20%'
Insurance of remitters/ members dummy	= 1, if have any insurance of remitters/ family members = 0, otherwise
Cooperative bank dummy	= 1, if have idea of cooperative bank for remitters = 0, otherwise
Invested on household items dummy	= 1, Whether invested on Household items = 0, otherwise

Invested on home improvements dummy	= 1, Whether invested on home improvements = 0, otherwise
Invested on business (small/ medium) dummy	= 1, Whether invested on Business (small/ medium) = 0, otherwise
Invested on landownership dummy	= 1, Whether invested on landownership = 0, otherwise

The expected sign of explanatory variables coefficients are positive and or negative respectively. The error term is assumed to be random and serially independent having zero mean with finite variance. In order to determine the appropriate technique of estimation, the empirical model is estimated by logistic regression method. The direction and the strength of between the explanatory variables and log of remittance variability are determined from the sign of the coefficient and significance of *z-statistic*. To verify the validity of the model, two major evaluation criteria were used: (i) the a–priori expectation criteria which is based on the signs and magnitudes of the coefficients of the variables under investigation, (ii) Statistical criteria which is based on statistical theory, which in other words is referred to as the Least Square (LS) consisting of Akaike info criterion (AIC), Schwarz criterion (SC), R-square (R^2), McFadden R-squared (R^2_{MCF}), LR statistic (df) and Probability (LR stat).

V. ANALYSIS OF THE EMPIRICAL RESULTS

The empirical analysis is to explore the causes and effects of influencing factors on returns to workers' remittances of suburban and rural areas of Comilla District, Bangladesh. This analysis begins with an attempt to understand the relationship of allied factors of remittance growth and status of remitter with skilled, semi/unskilled remitter. Now let us interpret the regression results using the data. Since most modern statistical packages have routines to estimate logit models on the basis of ungrouped data. From emigrant workers' family perspective, used remittances for this purpose is importance, such as family maintenance, land purchase, insurance or bank deposit, education, and loan repayment. The regression results calculated by *Eviews 5.1* are given in table 2.

Each slope coefficient in this equation is a *partial slope* coefficient and measures the change in the estimated logit for a unit change in the value of the given regressor, holding other regressors constant. The constant coefficient of -23.02 suggesting a relationship between the two variables show statistically highly significant with other variables constant but negative sign means if an individual has no education, skills, training, money and others. Among the individual's characteristics, age of remitter and number of dependent members have expected influences. To capture the effect of gender, sex of remitter (male=1) does not have a significant impact because female remitter participant rate is very tiny and many female headed households receive remittance from male remitter.

Table-2: Determinants of Workers' Remittance Status: Results of Logistic Regression

Dependent Variable: Received Workers Remitt
Method: ML - Binary Logit
Included total observations: 180

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constant	-23.01	6.12	-3.75	0.000
Age_of_remitter	1.38	0.50	2.74	0.006
Amount_of_loan	0.03	0.38	0.08	0.932
Collateral_for_loan	-0.87	0.48	-1.96	0.057
Cooperative_bank_dummy	3.77	1.12	3.36	0.000
Country_of_remittance	4.20	0.73	5.73	0.000
Education_of_remitters	-3.88	1.00	-3.85	0.000
Insurance_of_remitters_dummy	4.00	0.93	4.27	0.000
Invested_on_business_dummy	3.37	0.87	3.87	0.000
Invested_on_home_improve_dummy	-4.13	1.08	-3.81	0.000
Invested_on_household_dummy	-1.79	0.84	-2.11	0.034
Invested_on_landownership_dummy	2.13	1.34	1.77	0.091
No_of_dependent_members	0.91	0.47	1.98	0.055
Professional_service_of_remitters	0.68	0.22	3.09	0.002
Rate_of_interest_annually	-2.84	1.29	-2.19	0.028
Sex_of_remitter_dummy	3.20	2.54	1.25	0.208
Skill_of_remitter_dummy	2.62	0.49	5.30	0.000
Skill_training_providers	1.55	0.32	4.73	0.000
Sources_of_borrowing	0.73	0.46	1.72	0.092
Years_of_emigrant	1.11	0.40	2.74	0.006

McFadden R-squared	0.77			
LR statistic (19 df)	109.25			
Probability(LR stat)	0.0000			

The coefficient of education of remitter is negative and highly significant. The negative coefficient reflects the relatively lower educated workers are most of the emigrant workers, and when a person gets more education they are not working as workers in home and abroad and ultimately higher unemployment rate among the more educated. Skill training providers ('Government', 'NGO', 'Association' and 'IDA') and the coefficient of dummy form (yes=1) "skill of remitter" is positive and significant in the equation.

As a consequence, vocational training drives up the returns to physical investment, it will imply that ceteris paribus for a given remittances flow, the higher the skill level of the country, the higher the share of remittances devoted to investment and therefore the higher the growth rate associated with those remittances. Moreover, vocational training also appears as an important complement of the growth process.

Professional service of remitter and remittance country makes significant difference in growth of remittance. Specifically remitters' professional services ('Welding/Electrician', 'Agricultural workers', 'Construction worker', 'Drivers', 'Cleaners', 'Company job', 'Hotel employee') and emigrant country ('Middle East', 'South East Asia', 'Europe' & 'Africa') both have significant positive coefficients and thus are making a larger contribution to growth of remittance.

Thus, the country of remittance coefficient of 4.20 means, with other variables held constant, that if country of remittance increases by a unit, on average the estimated logit increases by about 4.20 units, suggesting a positive relationship between the two and statistically highly significant. Similarly, Years of emigrant has a positive impact on growth of remittance in our equation, if a year of emigrant increases by a unit, on average the estimated logit increases by about 1.12 units.

The coefficient of amount of loan is not statistically significant in the equations. Similarly the remitter may not have sufficient scope for borrowing from 'Relative/ Neighbour/ Friends', mahajan, NGO (Non Governmental Organisation) and banks. Collateral for loan ('Land and building', 'Machinery and equipment', 'Personal assets of owner') is not only obstacles most of the remitter and also highly significant rate of interest per annum is burden of borrower. The coefficient of sources of borrowing and collateral for loan is statistically moderate significant impact on growth of remittance.

Remittance which may influence productivity and thereby the remittance productivity have been improvement of living standard of remitter family. Remittance investment on household items (TV, freeze and motor cycle), home improvements, business (small/ medium) and landownership (in dummy form; yes =1) are four such variables. The value of other assets was not asked in the questionnaire. Therefore, dummy variables have been included for possession of these assets. In the absence of the value of an asset, it is difficult to attach analytical meaning to these variables except that "TV, freeze and motor cycle" are remitters' assets.

The coefficient of landownership is low statistically significant in the equations. Landownership is likely to have a positive effect through its positive impact on labour productivity. This effect has been counterbalanced by a negative income effect. The coefficient of dummy form (yes=1) both 'Investment on business', 'insurance of remitters/ members' and 'cooperative bank' have positive impact and significant on remittance growth.

As we can see regression, respect to all others regressors, results show that semi/unskilled remitters have a higher probability of being low growth of remittance than the skilled remitters. Amount of loan has an insignificant coefficient and thus has no advantage over the skilled remitter. Skilled remitters is better than semi/unskilled remitters, later has a significant positive impact on the logit, although statistically the effect of rate of interest is significant, but rate of interest is sensitivity to generate log of remittance in one hand and other hand coefficient of education is negative and significant but coefficient of skill and training is positive and highly significant. This positive coefficient reflects the relatively higher log of remittance in Bangladesh. Thus, other things remaining same, if semi/unskilled remitters trained up to become a skilled remitters, his/her per capita and marginal productivity of remitter will chances of rising out of sluggish growth of remittance.

The empirical evidence so far, however, shows that impact of the semi/unskilled emigrant on sluggish growth of remittance is the important determinant. The results of our simple analysis suggest that remittances are related to economic growth of Bangladesh. Empirical approach used is to examine an outcome of remittance, such as vocational skill, education, business ownership, insurances or financial support of remitters' family. From the findings on remittance use from the emigrant and household perspectives, it is evident that migrants had dual motivations: investment in physical and human capital. When families invested mainly in physical capital, remittances were used for home building, land purchase, and businesses, whereas, when families invested mainly in human capital, they spent remittances mostly on education, medical treatment, and family maintenance. Migrant remittances were used for family maintenance because migrants were, regardless of gender, the principal economic providers for the families left behind.

However, together all the regressors have a significant impact on the log of remittance, as the LR statistic is 109.2566, whose *p-value* is about 0.000000, which is statistically significant. A more meaningful interpretation is *in terms of odds*, which are obtained by taking the antilog of the various slope coefficients. Thus we take the antilog of the 'skill of remitter' coefficients of 2.623005 we get $13.78 \left(\approx e^{2.623005} \right)$. This suggests that skill remitters who are used knowledge to his/her working area is more than 13.78 times likely to get a skill remittance than semi/unskilled remitters who are not exposed to it, other things remaining the same. Whereas the McFadden R^2 (R^2_{MCF}) value is 0.772881, although, this value is overplaying the importance of goodness of fit in models, where the regressand is dichotomous. Skill development needs for earnings will increase substantially if workers could be internally and/or externally fulltime employed with appropriate skills and training.

VI. CONCLUSIONS AND POLICY RECOMMENDATIONS

Worker's remittance inflows from migrant workers abroad have been playing a major role in accelerating socio-economic development, promoting employment and underpinning external sector viability of Bangladesh over the last few decades. Workers remittance, besides, inflows are an element in the pillar of success of Bangladesh in fighting the global economic crisis. Worker's remittance have resulted in improved living standards of worker's families and helped in improving the income distribution in favor of poorer households and stabilized Bangladesh's Balance of Payments (BOPs). Worker's remittances are remarkable tool for poverty alleviation.

As indicated above that worker's remittance plays a significant role in the promotion of targeted economic growth in Bangladesh. Despite the consequences, worker's remittance spending on investment being low, even a small portion can help to alleviate liquidity constraints and directly contribute to growth. This is especially compelling for Bangladesh given that employment overseas helps somewhat in alleviating unemployment pressures at home. We anxious, however, low growth of worker's remittance is the causes of weakness of the performance of the labor market. Deficiencies of skill and inadequacies of educational attainment are factors behind the low growth of remittance.

It can be assumed that skill remittance factors might be significant in becoming skilled employed on particular sectors like as welding/electrician, agricultural workers, construction worker, drivers, cleaners, company job and hotel employee, and particular top destination country like as

India, Saudi Arabia, the United Kingdom, Kuwait, Oman, the United States, Malaysia, the United Arab Emirates, Italy, Jordan. We observed that skill employment is the predominant type of employment of farm and nonfarm sector, both in home and abroad.

The logistic regression result is difficult to predict on the basis of only empirical data. This result suggests that log of remittance have been estimated to obtain the effect of significant coefficient of education of remitters, years of emigrant, remittance country, skill of remitter dummy, skill training providers, sources of borrowing, collateral for loan, rate of interest annually, professional service of remitters and invested of remittance on business (small/ medium) dummy, which also might be found the most significant in case of skill development training and access to credit for remitters. Consequently, it can be concluded that growth of remittance in Bangladesh will require access to skill development allied factors, other things remaining same.

Labour market in Bangladesh, although labour supply is unlimited but there have not much skill labour. Bencivenga, et al. (1995) argued that the interaction between technology and skills is critical in determining growth, productivity, and the distribution of earnings across individuals, and also suggesting that low levels of skills can be a constraint to technology through trade and foreign direct investment (FDI). In addition, most of these educational deficits are also apparent even after low level of per-capita income. There is a very close association between per-capita income levels and levels of skills, which are complementarities between education and vocational training and remittances for the growth process.

The Bangladesh Bureau of Manpower Employment and Training (BMET) have, although, no significant role, but there have seven specific functions. However, these bureaus have a mixed record in terms of their effectiveness and efficiency. The lack of resources limits their outreach and the types of services that they offer. As government institutions, perceptions of bureaucracies persist even where corrective actions have been undertaken.

It is appropriate that the NSDC (National Skills Development Committee) shall have given priority to TVET (Technical Education and Vocational Training) as a major focus of educational reforms in the medium term. To further this NSDC agenda it will imperative to align skill development with the dynamics of the labor market. TVET are indispensable instruments for improving labour mobility, adaptability and productivity, thus contributing to enhancing firms' competitiveness and redressing labour market imbalances (Cailods, 1994). Thus specific linking training with job for emigrant workers' is a must for generating future demand. Skill training can play a critical role for the development of socio-economic condition.

Remarkable policy environments will increase the return of remittance on investment vocational training, financial scheme and its related facilities. A priori condition of growth and development is important of its allied factors, one of them is labour force which is required quality maintained and they have ability in shaping nation for this necessity to access skill development allied factors that gather pace for remittance employment generation. The major findings on the sluggish growth of remittance determinants and its implications are summarised below:
Firstly, Bangladesh should aim at expansion and modernization of allied factors for labour market to meet domestic and global market demands. The pressure on Government of

Bangladesh (GoB), to raise competency levels of labor for the domestic and global markets is clear from the fact, that a NSDC has been formed.

Secondly, TVET Policy Framework, under the Sixth Five Year Plan (SFYP), 2011-2015, will continue its efforts to promote these sectors' roles in the delivery of non-farm and non-formal education. Instead of TVET, they are hopeful to get a job very soon and entered in labour market and to become a member of unemployed pool.

Thirdly, Skill training must be diversified to cater to all types of users and various groups of labour force who would receive training. Public sector training facilities should give more emphasis on new skills. IT skill generation should receive priority in the context of revolutionary changes Information and Communication Technology (ICT).

Fourthly, Financial and nonfinancial institutions should be encouraged to extend a suitable package of financial services for remitters. Operational and financial autonomy should be provided to institutions. Enhancement in Public-Private Partnership (PPP) should be ensured.

Fifth, NGOs can provide training, loan and inputs and also act as social entrepreneurs. Microcredit facilities should be provided to facilities to pass out trainees and trainers for establishment of training centers. Such training can be improved remittance earning and step forward for this emigrant workers'. In this case, high priority should be given to female training, because of eighty percent female workers are contribute to readymade garments sectors.

Sixth, Well-designed policies to improve the quality of labour force and create matching employment opportunities can provide effective stimulus for a skill-based growth. This policy for raising the employability of the labour force through skill training can be effective means for employment expansion. Appropriate policies and programs for the labor market are important drivers of economic growth and a more equitable income distribution.

The key features of the strategy include need oriented, multi skill and flexible training to meet changing needs of potential industrialization, overseas employment and self employment. We should set minimum standards of training and certification. Improvement should be carried out in quality of training of instructional and management staff. It is expected that, together with GoB, national/zonal NGO's and IDA (International Development Agency) will form part of the skills development revolution in Bangladesh. Now seems to conclude that skill developed allied factors might have significant impact on per-capita and marginal growth of worker's remittance.

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APPENDIX

A.1-Table: Year wise Growth of Remittances Profile

Year	Remittance of Bangladesh (in Million US $)	Remittance of India (in Million US $)	Remittance of China (in Million US $)	Year wise Growth of Bangladesh (%)	Year wise Growth of India (%)	Year wise Growth of China (%)
1981	339	2757	..	12.51537565	-16.5239022	-
1982	381	2301	..	38.16052557	13.74179575	-
1983	526	2618	617	22.0233305	1.620142163	-12.20112745
1984	642	2660	542	-22.05155758	-13.73382809	-25.64575646
1985	501	2295	403	0.344277043	7.602514403	-32.75434243
1986	502	2469	271	14.68961576	-9.286623659	64.3099631
1987	576	2240	445	29.76429211	18.9968635	-48.78727991
1988	748	2665	228	2.114610724	-13.13560328	43.10647255
1989	764	2315	326	-0.738924805	12.89461426	-42.12784213
1990	758	2614	189	2.755486855	-8.803298098	3.748808641
1991	779	2384	196	-1.219705671	37.98104469	98.94865775
1992	769	3289	390	18.50800771	-11.90850638	58.88871787
1993	912	2897	619	10.48686875	21.58337995	1.937421292
1994	1007	3523	631	14.24555802	66.2516854	35.73442301
1995	1151	5857	857	4.412534154	6.254412387	3.990665111
1996	1202	6223	891	11.899908	40.8596954	111.0884201
1997	1345	8766	1881	13.52298512	17.85678929	163.9701896
1998	1526	10331	4966	5.213057009	-8.24380578	-36.83954038
1999	1606	9479	3136	12.49736949	17.35339564	17.54589569
2000	1807	11124	3687	8.896124836	15.81392216	30.78731576
2001	1968	12883	4822	6.964198267	10.78555123	35.60174511
2002	2105	14273	6539	35.80365281	10.24812992	57.41503276
2003	2858	15736	10293	11.67250589	33.44879834	41.29077729
2004	3192	20999	14542	12.28676971	-10.70887998	34.62981391
2005	3584	18750	19578	20.38847329	17.99810401	19.91704668
2006	4315	22125	23478	25.79700658	28.0611421	16.70964592
2007	5428	28334	27401	20.90829419	31.35182165	39.36045509
2008	6562	37217	38186	36.24170442	34.28703429	24.3703084
2009	8941	49977	47492	17.67263213	-1.018283462	0.921126214
2010	10521	49468	47930	3.13249198	9.230836958	9.054222671
2011	10850	54035	52269	11.22204978	16.61220913	17.40183401
2012	12068	63011	61365	16.50891112	10.05986478	-1.824723767

Source: World Bank 2011b. *Migration and Remittances Factbook 2011*. Washington, DC: World Bank. For latest data and analysis on migration and remittances, please visit http://www.worldbank.org/migration.

Note: All numbers are in current (nominal) US $. Date: April 2013

A.2-Table: Bangladesh Overseas Employment and Remittances Profile

Year	No. of Emmigrants	Total Remittance (in Million US $)	Year wise Growth (%)	Remittance as a % of GDP	Remittance as a % of Merchandise Export
1980-81	38000	381.18	-	1.99	56.33
1981-82	66000	418.47	9.782779789	1.26	72.32
1982-83	64000	619.48	48.03450666	1.92	120.4
1983-84	52000	590.60	-4.66197456	2.25	81.95
1984-85	69000	441.60	-25.2285811	1.27	57.02
1985-86	78000	648.61	46.87726449	1.65	76.67
1986-87	61000	697.45	7.529948659	2.27	78.41
1987-88	74000	737.43	5.73231056	1.98	68.31
1988-89	87000	770.82	4.527887393	1.76	60.43
1989-90	110000	758.20	-1.637217510	1.37	57.32
1990-91	97000	764.04	0.770245318	1.57	53.18
1991-92	185000	847.97	10.98502696	0.91	54.28
1992-93	238000	944.00	11.32469309	0.79	50.69
1993-94	192000	1088.79	15.33792373	1.13	46.87
1994-95	200000	1197.63	9.996418042	1.19	47.74
1995-96	181000	1217.06	1.622370849	1.34	35.61
1996-97	228000	1475.40	21.22656237	1.29	39.44
1997-98	243000	1525.42	3.390267046	1.25	36.85
1998-99	270000	1705.74	11.82100667	1.26	35.33
1999-00	248000	1949.32	14.28001923	1.57	39.00
2000-01	213000	1882.10	-3.44838200	1.77	35.27
2001-02	195000	2501.13	32.8903884	2.57	43.98
2002-03	251000	3061.97	22.42346459	2.44	57.31
2003-04	277000	3371.97	10.12420109	2.44	59.63
2004-05	250000	3848.29	14.12586707	3.08	57.60
2005-06	291000	4801.88	24.77957742	8.00	45.61
2006-07	564000	5978.47	24.50269478	9.80	49.09
2007-08	981000	7914.78	32.38805246	11.63	56.09
2008-09	576000	7890.91	-0.301587660	9.98	50.41
2009-10	427180	10987.40	39.24122820	10.95	67.66
2010-11	439375	11650.32	6.033456505	10.42	50.65
2011-12	691402	12843.43	10.24100626	11.14	52.03

Source: BMET and Statistics Department, Bangladesh Bank.

A.3: SURVEY QUESTIONNAIRE

An Enquiry into the Sluggish Growth of Workers' Remittance Determinants in Bangladesh

To be filled in an interview with stakeholders like: Households/ Bankers/ Associations (if applicable)

Name of Interviewer: Interview date:

Name of Interviewee:	
Age :	Sex : Male / Female
Village:	Union:
Thana:	District:
Mobile No. :	E-mail:

1. Age Group of remitters: *(please tick)*
a. 15- 25,   b. 26- 35,   c .36- 45,   d. 45+

2. Gender of remitters: *(please tick)*
a. Male,   b. Female

3. What is the education level of remitters? *(please tick)*
a. Vocational Training
b. primary education school
c. secondary education school
d. higher secondary education school/ Polytechnic Institutes
e. Graduate degree (B.A, B. Sc, Diploma)

4. From which country is your relative remitting the funds? (Please tick)
a. Middle East (Saudi Arabia, UAE, Jordon, Qatar, Oman, Bahrain, Lebanon, Libya, Kuwait, Yemen)
b. South East Asia (Malaysia, Singapore, South Korea, Brunei)
c. Europe (UK, Italy, Germany)
d. Africa (Sudan, Mauritius, Egypt)
e. Others (Specify: _____)

5. Are you a member of association (e.g. IOM) _____ Yes=1 or No=2. If yes, how much do you pay annually in subscription fees to your association? Taka _____

6. Did you offer training to your skill develop from association? _____ Yes=1 or No=2

7. Did you offer Technical Education and Vocational Training (TVET) to your skill develop? _____ Yes=1 or No=2. If yes, who offer to training?
a. Government, b. Non Government Organisation, c. Association, d. International Development Agency

8. In which profession is the remitter working? (Please tick)
a. Welding, b. Agricultural workers, c. Construction worker, d. General labor, e. Cleaners, f. Shop keepers, g. Hotel employee, h. Others (please specify: _____)

9. For how many years is your relative working abroad? (Please tick)
a. 1-5 years, b. 6-10 years, c. 11-15 years, d. 16 years and above

10. Under what process remittances received in every month? (e.g., Hondy, Bank, Bkash, etc.)
At Earlier: _____
At Present: _____

11. How much remittances received in every month (on an average)?
At Earlier: Taka _____, At Present: Taka _____

12. For what purposes are you using the funds send by your relation? (Please tick)
a. Family expenses, b Home improvements, c. Household items (TV/ freeze, motor cycle), d. Business (small/medium), e. Landownership

13. If remittances is invested in business in what kind? (Please tick)
a. Small shop, b. Stock business, c. Handicrafts, d. Money lending, e. Others (Specify please :_____)

14. What percent of remittances is invested? (Please tick)
a. 1 to 10%   b. 11 to 20%   c. 21 to 30%   d. 31 to 40%   e. Above 40%

15. When remitter had gone to abroad, is any financial help getting? _____ Yes=1 or No=2. If yes, from where remitter is getting financial help?
a. Relative/ Neighbour/ Friends, b. Mahajan c. NGO, d. Banks

16. How much amount of money gets from these sources? TK. _____ and how much interest rate to pay _____ % annually?

17. (*if Q.15 is yes*) Did the loan require collateral? _____ Yes=1 or No=2. If yes, which of the following were used as collateral? (*Please tick)*
a. Land and building
b. Machinery and equipment (including vehicles)
c. Tangible assets (e.g inventory)
d. Personal assets of owner (e.g house)
e. Other (specify:_____)

18. What was the value of the collateral required as a percentage of the loan value?_____ % of loan value

19. What is the total duration of the loan (from the moment you received the money until the moment it must be fully repaid)? _____ years

20. Do you feel, cooperative bank is necessary (like as social business) belongs the group members of remitters? _____ Yes=1 or No=2. If yes, how is it possible? Please your comment:
_____
_____

21. Have you any insurance of remitters/ family members? _____ Yes=1 or No=2. If yes, which types of insurances?
a. Life insurances, b. Asset insurances, c. Others (Specify:_____)

Thank you very much for your cooperation in answering this questionnaire