

Role of Remittance for improving quality of life: Evidence from Bangladesh

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Abstract. Remittance is a considerable source to influence the national economy. As the growing volume of remittance earning has positive impact on income, growth and poverty reduction, the potential contribution for improving quality of life of the domestic people need to be investigated. The main objective of the study was to analyse the contribution of remittance earning on the quality of life in Bangladesh. For the quality of life, HDI index, extensively accepted index consisting income, education and life expectancy, is used. This study covers the data for HDI and remittance earning from 1981 to 2011. The study employed the VEC (Vector Error Correction) model to analysis the desired relation between the variables. The estimated result shows the long run causality running from remittance to HDI. This result implies that the remittance has an influence on the quality of living in long run. To improve the quality of life, the government have the better choice to emphasis on the bottom level people for emigration after suitable training so that they can earn more; consequently send more remittances to their home country.

Keywords. Workers, Remittance, Quality of life.

JEL. F24, J24, I25.

1. Introduction

Workers' remittance flow into Bangladesh tends to increasing over the last four decades. This earning is coming from more than 160 countries across the world. Bangladesh is the 5th largest recipient country in the world (Salahuddin & Gow, 2015) although it was 14th in 2005. Total remittance earning was \$24 million in 1976; it stood at \$ 6584 million in 2007. In Bangladesh the flow of remittance reached at new heights at \$14228.26 million at the end of fiscal year 2013-14. The country is expected to receive \$15 billion by 2015. The remittance-GDP ratio jumped to 11.14% in 2013 from 7.76% in 2005. Moreover, remittances contribute more than 12% of the GDP in Bangladesh in 2014. Remittance earning as the percent of export was 53.51% in 2013 while it was 45.62% in 2005. Nevertheless, remittance as percent of export earnings was highest in 2009-10 as 67.8 percent. Upward trend of remittance-tax revenue and foreign aid ration was also found. For example, the remittance-tax revenue and foreign aid ration were more than 90 and 400 percent in 2005, respectively (Barua, Majumder, & Akhtaruzzaman, 2007). In addition, the remittances of the Bangladeshi expatriates not only enrich GDP but also raise the standard of living as about 8.7 million families and their relatives are dependent on expatriate workers earnings.

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Generally remittance earning is sent to the earners' family for reducing of household wants. Workers' remittance is considered as valuable financial resources to the poorest particularly in the developing countries. As a result, the increasing growth in remittance inflow can be found highly associated with the increased income of rural people. Percentage share of rural households' income from remittance earnings indicates a positive association. For example, about 17.28 percent of total income of rural households came from remittance in 2010, whereas it was 12 percent in 2005. Explicitly, between 2005 and 2010, the income of rural households from remittance increased by a 5.28 percentage with increasing rate of remittance, whereas income from agriculture, business and commerce, professional wages and salary and housing services increased by 1.03, -2.25, 1.47 and 0.08 percentage, respectively during the same period (BBS, 2010).

Macroeconomic theory asserts that remittance is a significant factor to influence the national economy such as decreasing unemployment, increase income, saving, investment and so on. The remitters are now getting employed in the host country but they were once unemployed in the home country. Simultaneously, the inward remittance flow sending by the workers is causing employment generation internally by strengthening national savings, capital accumulation and investment. Basically, remittances are personal flows from migrants to their families and relatives. In addition, the remittances have a propensity to increase when the recipient economy or family suffers an economic depression subsequently a financial crisis, natural disaster, or political conflict. Migrants send more funds during harsh conditions for assisting their families and associates. As a result, remittances smooth consumption and contribute to the stability of recipient economies. For example, remittances as a share of personal consumption expenditure rose in Indonesia, Mexico and the Philippines following financial crisis and in Central America following natural disasters. In many conflict countries such as Haiti and Somalia, remittances provided sustenance to the poor. However, the remittances work effectively as an informal stabilization fund. In the Caribbean, a 1 percent decrease in real GDP is associated with a 3 percent increase in remittances after a two-year lag (Ratha & Mohapatra, 2007).

Recent studies have found positive relation between remittances and economic growth, specifically in developing countries. Salahuddin & Gow (2015) pointed out that remittances affect the national growth rate in three ways: by enhancing the rate of capital accumulation, changing in the labour force growth and enhancing the efficiency of investment by affecting factor productivity growth. They also emphasised that the most of the country-level studies rely on household data as insights into how remittances impact households at the micro level.

At the household level, the remittance is received by the family members and used to meet their basic needs, and open up opportunities for investing in education, health care. On the other hand, the remittances are used to loosen up constraints in the family budget to invest in business or to save; are a kind of emergency resource and a social security for the elderly and relatives. Moreover, it can boost the local economy. Thus remittance can create secondary weave of development. However, there is no decisive support of the impact of remittance on the quality of life and income distribution.

In many low-income countries, several studies analysing household survey data show that remittances have reduced poverty and resulted in better development outcomes. Ratha & Mohapatra (2007) predicted that remittances may have reduced the share of poor people in the population by 11 percentage points in Uganda, 6 percentage points in Bangladesh and 5 percentage points in Ghana. Besides, the studies in El Salvador and Sri Lanka found that the children of remittance recipient households had a lower school drop-out rate. In Mexico, Guatemala, Nicaragua and

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Sri Lanka, the children in remittance recipient households had higher birth weights and better health indicators than other households. Remittances are also often used for petite business investments, especially in countries with a good investment climate (Ratha & Mohapatra, 2007).

Adams & Cuecha (2013) examined the relationship between remittances and poverty reduction and investment on education, housing and health using time series data adopting cointegration technique for Ghana. Their findings highlighted the strong role of remittances in reducing poverty and enhancing investment in health, education and housing.

Mamun & Nath (2010) pointed out that at household level; remittances reduce poverty while they have significant effect on macro variables in Bangladesh economy. Using a System GMM-IV model for a cross sectional panel of 87 developing countries, Combes & Ebeke (2011) found that remittances significantly reduce consumption instability and its effect is even stronger for financially less developed countries. Moreover, remittances also increased the capacity to cope with natural disasters and macroeconomic shocks (Combes & Ebeke, 2011).

Migration permits the worker to earn a wage abroad which is several times higher than his previous income. The share of this higher wage remitted adds substantially to the current income of the migrant's family. In evaluating the social benefit from this increased flow of income, the factors to be considered are the uses to which remittances are put- consumption, expenditures on land purchase and housing, perhaps other investments and the distribution of remittances over the income scale. Besides, Mahmud & Osmani (1980) analysed the impact of remittances on the distribution of household income and on the level of consumption and savings of migrants' families. In addition to the employment aspect, many other key macroeconomic variables in Bangladesh such as growth, poverty reduction, social security, BOP situation have proven to be significantly positively related to remittances (Chowdhury, 2011; Das, 1981; De Bruyn & Kuddus, 2005; Deb, 1986; Mahmud & Osmani, 1980). The Global Economic Prospects pointed out that remittance have given rise to a decline in the poverty headcount ratio by 6 percentage points in Bangladesh during 1990-2006 (Barua, Majumder, & Akhtaruzzaman, 2007).

Growing volume of remittance earning to Bangladesh and its positive impact on income, growth and poverty, the potential contribution for improving quality of life, consequently the economic development need to be investigated. Little heed was given to analyse the impact of remittance on quality of life in Bangladesh. The main objective of the study was to analyse the contribution of remittance earning on the quality of life in Bangladesh. For the quality of life, HDI index, worldwide accepted index, is used consisting income, education and life expectancy. This study covers the data for both from 1981 to 2011.

2. Remittance in Bangladesh: Workers, Earning and Uses

Bruyn & Kuddus (2005) pointed out that international remittances are sent by three distinct types of migrant: by well-educated, high or middle income earners who are diasporas to America or Britain, by low income or unemployed segments of the population migrated to industrialized countries and by major group of migrant labourer who are residing for a particular period of time in Middle Eastern, South-East Asian and some industrialized countries. The first two groups' amount was more than a million emigrants, while in the last three decades about 3.8 million Bangladeshis have been officially recorded as migrant labourers in the different countries.

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As Bangladesh is one of the major manpower exporting countries of the world, it generates a large amount of remittance. This process has been started since mid 1970s because of oil exploration of Middle East countries because of their requirement with lower wages than other countries. Then the trend of overseas worker's demand stated to increases across the world shown in Figure 1. The number of overseas worker was 14000 in 1976 (MOF, 2012). This number increased to 66787 people in 1981. After one decayed the number of overseas workers became double (110000) in 1990. The level of overseas workers reached at new height at 875055 in 2008. On an average the country exports 245,221 people annually.

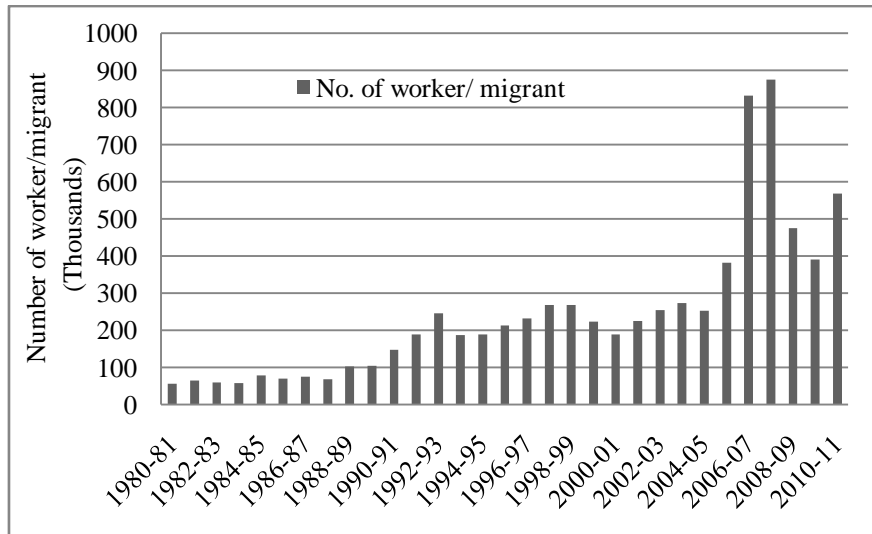


FIGURE 1: Trend of Overseas Workers from Bangladesh

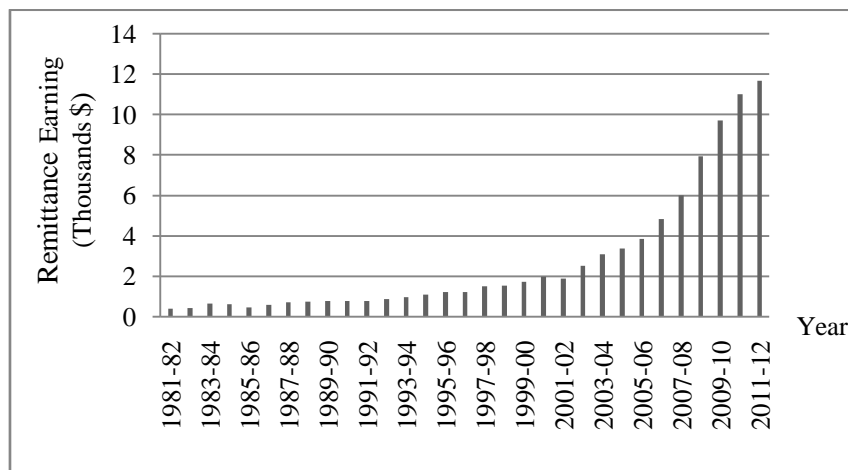


FIGURE 2: Inflow of Remittance earning

As a result of increasing demand in overseas due to lower wages for Bangladeshi workers, Bangladesh has been increasing remittance earning using this opportunities. Between 1976 and 2002, Bangladesh received US\$ 30,400 million in official remittances. Most international remittances come from the Middle East from temporary migrant workers. Saudi Arabia accounts for more than 40 per cent. The Diaspora also takes a large share, with the USA accounting for 14 per cent of the remittance flow. Besides official channels, money is remitted by *hundi* or hand carried by the migrant or friends or family of the migrant. These informal channels

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probably equal the amount sent by formal channels. The former are often quicker, cheaper (also in terms of exchange rate), easier, more accessible and more confidential than the latter. However, they can also be less reliable.

Bangladesh has started getting remittance earnings since mid 1970s. In 1975, Bangladesh earned about \$10 million. Only after three years, the earning increased about ten times more at \$101million. Then ten times remittance yearning increases after 16 and 15 years in 1994 and 2009, respectively as shown in Figure 2.

From the point of view of utilization, four types of transfers can be discerned. Firstly, individual transfers to families or friends used for consumption purposes. In addition, investment in business or traditional productive uses and in savings is rather limited, but remittances are seen as important financial means to investment in human capital (like education), housing and land purchase. Secondly, individual transfers are sent to save or invest in the home country, and thirdly to sponsor charity or community development initiatives. Lastly, collective transfers are identified to fund charity or community development initiatives.

Generally, macroeconomic theory asserts that remittance is a considerable factor to influence the national economy in various ways. At the household level, the remittance is received by the family members and used to meet their basic needs, and open up opportunities for investing in education, health care. On the other hand, the remittance is used to loosen up constraints in the family budget to invest in business or to save, as an emergency resource, to provide a social security for the elderly. Besides, remittance is used to boost up the local economy. Thus remittance can create second wave of development (Bruyn & Kuddus, 2005).

3. Methodology

This study used bivariate data to analyse the role of remittance on the quality of life in Bangladesh. The human development index (HDI) is used as dependent variable and remittance earning (REM) is used as independent variable based on macroeconomic theory. Remittance earning refers to the amount of money sent by workers to their native homeland through proper way. This means that the earning of foreign currency by Bangladeshi workers working in overseas is sent to their home country. This data set was collected from Bangladesh Bank (BB). Another variable indicates the HDI that is a composite index estimated by UNDP which consists of three indicators such as per-capital income, life expectancy and mean years of schooling. The HDI data was taken from the World Bank data source. This study used the bivariate data series from 1981 to 2011 due to lacking of other year's data.

To identify the pattern, the data series were normal plot and found rising trend gradually. This trend indicates that the data series might have unit root problem. Then for the convenience, data set were transformed by taking log as follows:

$$\log\text{HDI}_t = \beta_1 + \beta_2 \log\text{RMT}_t + u_t \quad (1)$$

Where HDI indicates Human Development Index, RMT is used for remittance earning and u is a random error term.

As this study evolved to analyse the short run and long run association between HDI and RMT, the unit root problem was needed to identify first. There are various tests for checking unit root problem. Though Augmented Dickey-Fuller (ADF) test is used widely, the Phillips-Perron test was used which is a modified version of the ADF test corrected for the autocorrelation and heteroskedasticity of the variables (Enders, 2008). As the variables contain unit root problem, First differences of the variables were used for proper model estimation. Then the study used cointegration

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test using different options: one option includes intercept but not trend and another option includes both intercept and trend.

Depending on the integrated level, the cointegration test was conducted. The Johansen cointegration test was used as it is widely used by the researchers. The results of Johansen cointegration test depend on two statistics such as Trace statistics and Maxeigen statistics (Cheung & Lai, 1993; Johansen & Juselius, 1990). If both statistics demonstrate the similar result, the estimated result can be accepted easily. In case of contradictory between the results, the researchers generally accept the trace statistics (Cheung & Lai, 1993). Then the model mentioned above (Eq.i) for the cointegration test can be used. On the basis of the result of cointegration test, the VEC (Vector Error Correction) model was used to analysis the desired relation between variables.

The equation of the VEC correction model can be expressed as-

$$\Delta \log HDI_t = \alpha_0 + \alpha_1 \Delta \log RMT_t + \alpha_2 u_{t-1} + \epsilon_t \quad (2)$$

Δ is the first difference operator, ϵ_t is a random error term, $u_{t-1} = \log HDI_{t-1} - \beta_1 - \beta_2 \log RMT_{t-1}$ is one period lagged value of the error from the cointegrating regression. The coefficient α_2 must be negative for having the long run causality running from the RMT to HDI. Negative sign of the coefficient of cointegrated equation explain the existence of the long run impact of remittance on the human quality of life. In the same way positive sign of the coefficient can be interpreted as the absence of the long run effect of remittance on human quality of life as suggested by Pesaran & Pesaran (2010).

4. Findings and Discussion

For the unit root test, model A includes only intercept and model B includes both intercept and trend. The estimated results show that both HDI and remittance have unit root problem in level as shown in Table 1. As the null hypothesis stating there is a unit root problem in the variable might not be rejected, the HDI and remittance in both models are non-stationary at level. However, both HDI and remittance are stationary in first difference in both models. Accordingly, the null hypothesis of having unit root problem might be rejected. As a result, both series are integrated in the same order as shown in Table 1.

Table 1 .Estimated Results of Unit Root Test of Bangladesh's HDI and Remittance

Variables	In levels		In first differences		Level of Integration
	Model A	Model B	Model A	Model B	
HDI	3.71(1.00)	-0.880(0.945)	-4.12 (0.003)	-5.66 (0.004)	I(1)
RMT	0.87(0.99)	-1.84 (0.65)	-5.25(0.002)	-14.70 (0.00)	I(1)

Note: The null hypothesis indicates the existence of unit root problem to the variable. In model A intercept is included but no trend is assumed where model B includes both intercepts and trends. Value in the parenthesis indicates P value.

Source: Data for HDI and remittance are from UNDP, Bangladesh Bank, and BMET.

Table 2. Estimated Results of Johansen Cointegration test for HDI and Remittance

Test	Hypothesized number of CE(s)	Option 1		Option 2	
		Statistical value	CV	Statistical value	CV
Trace Test	H ₀ (1)	23.056(0.003)	15.49	28.80 (0.02)	25.87
	H ₀ (2)	0862 (0.353)	3.84	4.47 (0.672)	12.52
Maxeigen	H ₀ (1)	22.19(0.0023)	14.26	24.32(0.008)	19.38

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Test	H ₀ (2)	0862 (0.15)	3.841	4.47 (0.88)	12.52
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Note: H₀(1) indicates the null hypothesis of no cointegrating equation and H₀(2) indicates the null hypothesis of cointegrating (I) equation at most. CV stands for critical value and CE stands for cointegrating equation. Option 1 includes only intercept in the CE where option 2 includes the intercept and trend. Parenthesis indicates standard error.

Base on the findings given in Table 1, the cointegration test was carried out. The result of the cointegration test is summarized in Table2. Option 1 includes only intercept and option 2 includes both intercept and trend. Before running the cointegration test the lag length was selected. For selecting the length of lag, the Akaike Information Criterion (AIC), and the Schwarz Criterion (SC) are normally considered. Both SC and AIC criterion suggested accepting lag 2. Using the suggested lag length the Johansen cointegration test provides cointegrating between HDI and remittance of Bangladesh in both options. For the both options, critical values are greater than trace statistics for the null hypothesis of having a cointegration (I) at most. Consequently the null hypothesis might not be rejected. Same result has been found for the maxeigen statistics. Thus both trace statistics and maxeigen statistics suggest having cointegrating (I) between variables.

Since the existence of cointegration between HDI and remittance, the study preceded the vector error correction (VEC) technique. The estimated result is presented in Table 3. In Table 3, C(1) reports the speed of adjustment towards long run equilibrium. Other coefficients from C(2) to C(5) use to indicate the short run coefficients. The estimated result for C(1), the coefficients of cointegrated equation is negative. This result implies having the long run causality running from remittance to HDI.

Table 3. *Estimated Results of VEC Model*

	Coefficient	Standard error	t-statistics	Probability
C(1)	-0.000607	0.000221	-2.750716	0.0117
C(2)	-0.173740	0.210323	-0.826063	0.4176
C(3)	0.195000	0.352471	0.553237	0.5857
C(4)	-0.009057	0.006171	-1.467681	0.1563
C(5)	-0.000406	0.005036	-0.080693	0.9364
C(6)	0.017038	0.006717	2.536703	0.0188
R-squared	0.385416	Mean dependent var		0.016180
Adjusted				
R-squared	0.245738	S.D. dependent var		0.003661
S.E. of regression	0.003179	Akaike info criterion		-8.476937
Sum squared				
residual	0.000222	Schwarz criterion		-8.191465
Log likelihood	124.6771	Hannan-Quinn criter.		-8.389665
F-statistic	2.759313	Durbin-Watson stat		2.029471
Prob (F-statistic)	0.044132			

This finding is justified by aggregate level data splitting HDI component. For example, per capita earning increases by about ten times more during the last four decades as remittance increases. Literacy rate also increases to 78 percent that was below 30 percent during 1980s. It can be mentioned that the youth literacy rate (the percentage of people ages 15-24) is increasing rapidly. According to UNESCO, the youth literacy rate was 44.68, 63.62 and 76.96 percent in 1991, 2001 and 2010, respectively. Macroeconomic theory and empirical findings suggest that economic growth is highly correlated with remittance (Ahmed & Uddin, 2009; Rahman, 2014; Salahuddin & Gow, 2015). Remittance has contribution for productive investment and asset creation in the third world, specifically rural areas (Adams Jr,

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1998; Coon, 2014). In addition, remittance also helps develop SME that contribute to income capacity (Afsar, 2014). In 1972, the life expectancy was below 50 years. In 2012, it increases to 70 years old. Haq, Howlader & Kabir (2014) found that the life expectancy at birth in Bangladesh is strongly correlated with the economic growth. Zhunio, Vishwasrao & Chiang (2012) conducted a study to investigate the effect of international remittances on aggregate educational and health outcomes using a sample of 69 low and middle income countries including Bangladesh. Their findings proved that remittances play an important role in improving school attainment, increasing life expectancy and reducing infant mortality.

5. Conclusion and Recommendations

The objective of the study was to analyse the contribution of remittance earning on the quality of life in Bangladesh. This study covers the data for HDI and remittance earning from 1981 to 2011. The study employed the VEC model to analysis the desired relation between the variables. The estimated results reveal that the remittance has an influence on the quality of living in long run. Based on the findings, it can be mentioned that the growing stock of migrants' in abroad may contribute to stable foreign earning. In addition, the remittance might be influential for safety for the received families and relatives in the home country. Therefore, a decrease in the inflow of remittance will reduce the income of rural households by a significant amount causing them to be trapped in poverty. To improve the quality of life, the government should emphasis on the bottom level people for emigration after proper training so that they can earn more; consequently send more remittances to their home country for the betterment of their family and relative. Migrants might be motivated to shield their families by increasing the flow of remittances during the adverse shocks. Besides, the government can provide loan with law interest rate for poor people who can go abroad for remittance. Moreover, scope exists for future research to identify and estimate various channels through which remittances impact the recipients' family and relatives form household survey.

References

- Adams Jr, R.H. (1998). Remittances, investment, and rural asset accumulation in Pakistan. *Economic Development and Cultural Change*, 47(1), 155-173. doi: [10.1086/452390](https://doi.org/10.1086/452390)
- Adams, R.H., & Cuecuecha, A. (2013). The impact of remittances on investment and poverty in Ghana. *World Development*, 50, 24-40. doi:[10.1016/j.worlddev.2013.04.009](https://doi.org/10.1016/j.worlddev.2013.04.009)
- Afsar, R. (2014). Remittances and SME Development: Reflections from South Asia. *Migrant Remittances in South Asia: Social, Economic and Political Implications*, 135. Palgrave Macmillan.
- Ahmed, H.A., & Uddin, M.G.S. (2009). Export, imports, remittance and growth in Bangladesh: An empirical analysis. *Trade and Development review*, 2(2), 79-92.
- Barua, S., Majumder, A., & Akhtaruzzaman, M. (2007a). Determinants of workers' remittances in Bangladesh: An empirical study. *Policy Analysis Unit (PAU), Bangladesh Bank Working Paper No. WP, 713*.
- Barua, S., Majumder, M., & Akhtaruzzaman, D. (2007b). Determinants of workers' remittances in Bangladesh: An empirical study. *Working Paper series No. 0713. Policy Analysis Unit, Bangladesh Bank*.
- BBS. (2010). Household Income and Expenditure Survey 2010. Dhaka: Bangladesh Bureau of Statistics (BBS).
- Cheung, Y.W., & Lai, K.S. (1993). Finite-sample sizes of Johansen's likelihood ratio tests for cointegration. *Oxford Bulletin of Economics and statistics*, 55(3), 313-328. doi: [10.1111/j.1468-0084.1993.mp55003003.x](https://doi.org/10.1111/j.1468-0084.1993.mp55003003.x)
- Chowdhury, M.B. (2011). Remittances flow and financial development in Bangladesh. *Economic Modelling*, 28(6), 2600-2608. doi:[10.1016/j.econmod.2011.07.013](https://doi.org/10.1016/j.econmod.2011.07.013)
- Combes, J.-L., & Ebeke, C. (2011). Remittances and household consumption instability in developing countries. *World Development*, 39(7), 1076-1089. doi:[10.1016/j.worlddev.2010.10.006](https://doi.org/10.1016/j.worlddev.2010.10.006)
- Coon, M. (2014). Financial development and the end-use of migrants' remittances. *IZA Journal of Labor & Development*, 3(1), 1-25. doi:[10.1186/2193-9020-3-7](https://doi.org/10.1186/2193-9020-3-7)

Turkish Economic Review

- Das, H. (1981). Impact of migration and money remittances on the economy of developing nations: A case study of Bangladesh. *Journal of the Institute of Bankers Bangladesh*, 13, 57-69.
- De Bruyn, T., & Kuddus, U. (2005). *Dynamics of remittance utilization in Bangladesh* (Vol. 18): International Organization for Migration.
- Deb, N.C. (1986). Consumption pattern in rural Bangladesh. *The Bangladesh Development Studies*, 14(1), 1-28.
- Enders, W. (2008). *Applied econometric time series*, John Wiley & Sons.
- Huq, M.N., Howlader, S.R., & Kabir, M. (2014). The Impact of Health on Productivity in Bangladesh. *Global Journal of Quantitative Science*, 1(2), 24-31.
- Johansen, S., & Juselius, K. (1990). Maximum likelihood estimation and inference on cointegration— with applications to the demand for money. *Oxford Bulletin of Economics and Statistics*, 52(2), 169-210. doi: [10.1111/j.1468-0084.1990.mp52002003.x](https://doi.org/10.1111/j.1468-0084.1990.mp52002003.x)
- Mahmud, W., & Osmani, S. (1980). Impact of emigrant workers' remittances on the Bangladesh economy. *The Bangladesh Development Studies*, 8(3), 1-28.
- Mamun, K., & Nath, H.K. (2010). Workers' migration and remittances in Bangladesh. *WCOB Faculty Publications*. Paper 84.
- MOF. (2012). Bangladesh Economic Review. Dhaka, Bangladesh: Finance Division, Ministry of Finance (MOF), Government of Bangladesh.
- Pesaran, B., & Pesaran, M.H. (2010). Conditional volatility and correlations of weekly returns and the VAR analysis of 2008 stock market crash. *Economic Modelling*, 27(6), 1398-1416. doi:[10.1016/j.econmod.2010.07.012](https://doi.org/10.1016/j.econmod.2010.07.012)
- Rahman, Z. (2014). The Link between remittances and economic growth: Empirical evidence from Bangladesh. *International Journal of Social and Economic Research*, 4(2), 140-159. doi: [10.5958/2249-6270.2014.00491.7](https://doi.org/10.5958/2249-6270.2014.00491.7)
- Ratha, D., & Mohapatra, S. (2007). Increasing the macroeconomic impact of remittances on development. *World Bank*.
- Salahuddin, M., & Gow, J. (2015). The Relationship between economic growth and remittances in the presence of cross-sectional dependence. *The Journal of Developing Areas*, 49(1), 207-221.
- Zhunio, M.C., Vishwasrao, S., & Chiang, E.P. (2012). The influence of remittances on education and health outcomes: a cross country study. *Applied Economics*, 44(35), 4605-4616. doi: [10.1080/00036846.2011.593499](https://doi.org/10.1080/00036846.2011.593499)



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