CHAPTER NINE

SUMMARY, CONCLUSION, POLICY RECOMMENDATIONS AND SCOPE FOR FUTURE RESEARCH

9.1 Summary

Bangladesh has become independent in 1971 from Pakistan at the expense of 3 million lives in a bloody war of liberation. The war almost completely destroyed the physical infrastructure of the country. U.S. Secretary of State, Henry Kissinger had disparagingly called it a “bottomless basket”. Bangladesh is now an emerging economy in South Asia, with her annual exports of some $25 billion mainly from Knitwear and garment products, remittances equivalent to $14 billion in 2012 and a gross domestic product (GDP) growth of over 6.0 percent despite its confrontational politics and global economic slowdown over the last few years (Helal and Hossain, 2013).

Total population in 2014 in Bangladesh was 159078 thousands and rank of Bangladesh in the world population was 8^{th}. About 2.19 % of world population lives in Bangladesh. The population, ages 15-64, has increased gradually. From the period of 1977 to 2014 the population of ages 15-64 has increased by about 5.65 % of total. Higher proportion of this group of population is the backbone of the economy and higher potentiality of higher economic development of the country. In the year 1977, the density was 575 and in the year 2014 it became 1222.

Historically, migration has been a common livelihood strategy of Bangladeshi people and since the 18th century, emigration from Bengal has had a direct correlation with colonialism. After independence in 1971, new opportunities for international migration emerged. With rising oil prices, the Middle Eastern countries went through a phase of major infrastructure development for which they needed large numbers of expatriate workers. Various categories of Bangladeshi workers joined the Middle Eastern labour market. Gradually, such migration also expanded to the newly industrialized countries of Southeast Asia (Siddiqui, 2003).Due to shortage of labor in the developed countries there are huge demand of qualified labour .On the other hand in the developing countries, there are excess labour supply due to high or under employment in the countries. So they are ready to move to the counties of higher demand of labours.

According to report of World Bank Group in Migration and Remittances Factbook 2016, in the Third Edition (Advance) the number of migrants has risen rapidly in the past few years. More than 247 million people, or 3.4 percent of the world population, live outside their countries of birth for various reasons. Rank of Bangladesh in manpower export in the world in 2010 was sixth. When workers move from one country (home country) to other country (destination country) considerable social gains for migrant workers may observe in both countries from where the workers move and to where they work. In Bangladesh remittances are key source of external finance. In international labour market Bangladesh is a source of manpower.

Between 1976 and 2014 a total of 91.43 lakhs people emigrated temporarily from Bangladesh (BMET, 2015). The flows of remittance are more stable than other types of private capital inflows like official development aids (ODA) and foreign direct investment (FDI) and are counter cyclical (World Bank, 2006) as the flows increase during downturns as emigrant workers went to provide financial support to the family members in the country of their origin (Sayan, 2006).That is remittance act as a significant macroeconomic stabilizer in the developing countries

Impact of remittances on macro level in developing countries can be decomposed in to their effects on savings, investment, consumption and growth. We can consider remittances as a disposable income which is spent partially on consumption purpose and rest for saving purposes. This consumption may be on to buy durable household goods, finance education and health, purchase land or to provide capital for micro business start up etc. Hence we can say remittances have two part, investment part and saving part.

The inflows of large amount of foreign exchange by expatriates in the form of remittances increases the money supply of the recipient economy through the conversion of foreign exchange into domestic currency. If this increase in money supply is not channelized towards productive sectors and capital investment, it can fuel inflation by shifting to consumption expenditure.

Again according to Fuentes and Herrera (2008) large and sustained remittance inflows can cause an appreciation of the real exchange rate and make the production of tradable goods less profitable, a Dutch-Disease-like phenomenon. Appreciation of real exchange rate (RER) is usually associated with a loss in external competitiveness. Huge amount of international remittances flows to Bangladesh from all over the world. This large amount of remittances may have impact on the overall economy.

Due to excess overseas employment from a home country indicate poor economic conditions of the country. But these overseas workers send remittances from the host country to home country generally in hard currencies which are very essential for the developing countries. Now what are impacts of these workers; remittances on the economy of home countries specially on important macroeconomic variables of the country like Gross Domestic Products (GDP), Imports, Consumption, Investment, Real Exchange Rate, as well as Inflation. Remittances are used mainly either for consumption or savings or investment purposes. Hence remittances are related to the consumption as well as production system of the country. So our study approach should be demand side approach because remittances go directly to the households or consumers of the home country. Then, they would make more demand for products encouraging the suppliers to produce more products.

Our study covers the period of 38 years from 1977 to 2014. Our study is limited to only a specific country, Bangladesh. Our study is restricted to the macroeconomic impact of remittances on the economy of Bangladesh and we are not interested in this study of microeconomic impact of remittances on the Bangladesh. Our study mainly focuses on the wage earners' remittances mainly officially recorded data to Bangladesh from all the countries where Bangladeshi workers are employed.

From 1978 to 2014 the GDP of Bangladesh increases from 14930.33 Crore Taka to 1343674.4 Crore Taka (About 90 times).We find the annual average share of agriculture, industry and service sectors in GDP during 1977 to2014 are about 27.6%, 22.8 % and 49.6% respectively. Annually, in average the country's total final consumption expenditures are about 238750 Crore Taka during the period of 1977 to 2014.Annual average investment and Savings during the period of 1977 to 2014 were 79632 Crore Taka and 59708 Crore Taka respectively. The trade deficits increase to 87806 Crore Taka in the year 2014 about 110 times higher than trade deficits of the year 1977.The annual average of money and quasi money is about 9.7 times higher than the annual average of general government expenditures. The annual average growth rate of money and quasi money is also higher (about 4.3%) than the annual average growth rate of general government expenditures. We find that the annual average of foreign direct investment and net official development assistance were 2687.6 Crore Taka and 6592.5 Crore Taka respectively. The amounts of net official development assistance are larger than the amount of foreign direct investments.

The Globalization not only increases the international trade in goods and services but also causes rapid change in international financial and labour markets. The growth of international trade and investments has reduced the cross border barriers. As a result cross border movement of labour became so easy. There are discernable changes in the wages (both absolute and relative) in different sectors and different economies, labour contracts are becoming much more flexible.

The widely accepted definition that prevails in the literature is that remittances are unrequited, nonmarket personal transfers between households across countries. Migrant remittances are defined as the sum of workers' remittances, compensation of employees, and migrants' transfers. Workers' remittances, as defined by the International Monetary Fund (IMF) in the Balance of Payments Manual, 6th edition (IMF 2010), are current private transfers in cash or in kind from migrant workers who are considered residents of the host country to recipients in the workers' country of origin.

From the data source of Bangladesh Bureau of Employment and Training (BMET), a total number of 9.14 millions migrant workers migrated from Bangladesh and a total amount of US$ 133.78 billion has been remitted to Bangladesh from across the globe between 1976 and 2014.

However, if, although very tough, we add the amount of remittances transferred through informal channels then this number will be much higher. Econometric analysis and available household surveys suggest that unrecorded flows through informal channels may add 50 per cent or more to recorded flows (Global Economic Prospects 2006).

During the entire 38 years of period the share of professional migrants in numbers was lower than other categories. The share of semi-skilled category was about 6.2 times higher than professional category. The share of semi-skilled was above double than skilled category. The share of less-skilled category was the above of one and half times of skilled category. So here we can conclude that large numbers of migrants workers were migrated from Bangladesh from 1976 to 2014 are less-skilled workers.

We find that the Saudi Arabia is the most important country of source of remittances for Bangladesh. The other important remittance source countries are United Arab Emirates (U.A.E), United State of America (U.S.A.), Kuwait, United Kingdom (U.K.), Malaysia, Oman, Qatar, Bahrain, Singapore, Italy, Japan, South, Korea, Australia, Germany, etc.

The oil-rich Middle Eastern countries with more than 80 percent of the total stock of Bangladesh migrants accounts for a lion's share of remittances. So it is important to note here that Middle East countries are the very important destination countries for the Bangladeshi migrant's workers. So we can say that Bangladesh is quite dependent on the economy of Middle East countries

In an economy there may be expected three major positive effects of labour migration. First, migrants' workers who remain abroad send remittances to their family members. Second, when they return home bring back their skills and experiences from abroad which have great importance on the home country. Migrants may also invest capital in entrepreneurial ventures that facilitate transfer of knowledge or technology to the developing countries. When a large number of low and unskilled workers migrated from a labour surplus country to a labour deficit country then both the countries can be benefited mutually. Labour surplus country can reduces the pressure on local labour market by giving more opportunities to the remaining labour forces.

There are so many factors that can influence the flow of remittances from the host countries to home countries. These are altruism, exchange motive, loan repayment, insurance, inheritance, investment, political stability. Besides these there are some macro economic factors such as home and host country GDP, exchange rate, money supply, interest rate, inflation, crude oil price in international market, wage rate, number of migrants and the relative rates of return of different financial and real assets may affect the flow of remittances.

We find that all the explanatory variables except LINF are highly statistically significant in the long-run relationship among the variables. We find Inflation in

Bangladesh is not an important macroeconomic determinant of remittances. The coefficient of LINF is negative but insignificant. Value of coefficient of LINF is -0.354. That is, in Bangladesh remittances flow decreases during high inflation and increases during low inflation. This finding indicates that remitters are quite aware of the economic situation of their home countries. Remitters think not only about their family but also portfolio investment.

We find exchange rate as a positive determinant of remittances in Bangladesh. Coefficient of exchange rate is so high. It is about 2.18. This means 2.18 % amount of remittances increases due to 1% increase in exchange rate. Remitters are very sensitive about the exchange rate. We have taken exchange rate in our study as BT/US$. So 1% increase in exchange rate means 1% depreciation in the Bangladeshi Taka. That is, now 1 US$ can purchase more amount of Bangladeshi Taka. So now remitters may be so much motivated to send remittances to their family because their family members will be benefitted much. So we can say that when there is higher exchange rate in the home country the remitters will send so many remittances to their home country from the host country. So, lower inflation and higher exchange rates in the home country invite more remittances from the host countries to the home country.

We find another positive determinant of remittances, that is, crude oil prices (LCOP).Meaning that when the crude oil price increases, oil exporting countries get maximum benefits from the international markets. The economy of these countries will expand and create higher demand of labours. Again migrant workers from Bangladesh are going mainly to the oil exporting countries. So remittances to Bangladesh are quit dependent on the price of crude oil. So due to increase in crude oil price in the international market the remitters will send more remittances from their host country to home country. Hence Bangladesh will get more remittances from the oil exporting countries due to hike in the oil price.

We find the coefficient of LGDPPC as positively significant. The value of the coefficient of LGDPPC is 0.580. When per capita GDP of home country increases the remitters send more remittances to their family members at home. When per capita GDP (we can consider it as a proxy of per capita income) increases in the home country then the family members of migrant workers may become richer too. So, migrant workers now may send more remittances to their family members due to progress in their home countries. This result also indicates that in Bangladesh remittances have positive impact on per capita GDP because the flows of remittances are increasing day by day.

It is also found that the coefficient of error correction term ($ECT_{t-1)}$ is negative and highly significant in the model. The coefficient value is -1.905 at 1% level of significant. This coefficient is also called the adjustment coefficient or speed of convergence and it implies that when remittances deviate from long run equilibrium, error correction term has an opposite adjustment effect and the deviation degree are reduced with very rapidly.

We also note that remittances have short-run positive impact on itself. That is, the amount of current remittances flow in Bangladesh depends on previous amount of remittances flows positively.

Although inflation in Bangladesh has no any significant impact on the flow of remittances in the long-run but it has significant impact in the short-run. On the other hand exchange rate and crude oil price have negative short-run effect on the flow of remittances but they have positive impact on the flow of remittances in the long-run in the Bangladesh. The per capita GDP has no significant impact on the flow of remittances in Bangladesh in the short- run but it has positive impact in the long-run.

All the macroeconomic determinants of remittances identified in our model indicate that the altruism as well as portfolio motives decide jointly the flow of remittances from the host countries to home countries. Crude oil price, exchange rate and per capita GDP have positive relationship with remittance inflow in Bangladesh. On the other hand increasing inflation reduces the flow of remittances in the country. During depreciation or devaluation of home currency the migrants are become better-off as their income increases in the domestic currency. So for portfolio motive they will send more remittances to their home country during home currency depreciation. Crude oil prices have great impact on the economy of oil rich countries or on the host countries. Their income mainly depends on the oil price. Bangladeshis are going to mainly migrated to the oil rich countries where there are huge demand for unskilled and semi skilled labors. When oil price increases the demand for labor also increases and hence remittances increases in Bangladesh. All the macroeconomic determinants of remittances identified in our model indicate that the altruism as well as portfolio motives decide jointly the flow of remittances from the host countries to home countries.

The flows of remittance are more stable than other types of private capital inflows like official development aids (ODA) and foreign direct investment (FDI) and are counter cyclical (World Bank, 2006) as the flows increase during downturns as emigrant workers went to provide financial support to the family members in the country of their origin (Sayan, 2006).That is remittance act as a significant macroeconomic stabilizer in the developing countries.

In any developing countries the common problem is shortages of foreign exchange reserve which is very essential to pay the import bills. Bangladesh is not an exceptional country but Bangladesh depends more on remittances to meet the problem of payment of the import bills. Remittances promote growth through smoothing the investment constraint as it act as a substitute for in-efficient or non-existent credit markets (Giuliano & Ruiz-Arranz, 2006).

From the Johansen Cointegration technique we find long-run relationship among the variables. Remittances and foreign direct investment both are positively correlated with GDP in Bangladesh. On the other hand we find the coefficient of LODA as negative (although insignificant).The value of coefficient of remittances estimated to be 0.42. That is 0.42 % variation in GDP occurred due to 1% variation in remittances in the economy. In other words we can say that when remittances increase 1 %, the GDP increases 0.42% in Bangladesh. We can say that remittances have positive impacts on GDP in Bangladesh in the long-run. So remittances are most welcome in Bangladesh. The value of coefficient of LFDI is 0.11. The result explains that when 1% increases to FDI in the economy of Bangladesh then the GDP increases about 0.11%. In other words, when economy is open up for foreign investors for investment in the country, the economy gets benefits from the FDI in respect of increase in GDP in the long run. The coefficient of LODA is estimated to be -0.0045. So in Bangladesh there is no any significant impact of Official Development Assistance (ODA) in the long-run. The economy of Bangladesh is quite dependent not only on remittances but also on foreign direct investment.

From the VECM we find the coefficient of speed of adjustment shows that how much time would be taken by the economy to restore long run equilibrium. Negative sign of speed of adjustment shows that over estimate of GDP in short run or other words we say overshooting of GDP in case of Bangladesh. The result of error correction shows that overshooting of GDP which is adjust 8.4 percent annually or required almost 11.9 years to adjust. Here we have speed of adjustment is very slow.

Impact of remittances on macro level in developing countries can be decomposed into their effects on savings, investment, consumption and growth. We can consider remittances as a disposable income which is spent partially on consumption purpose and rest for saving purposes. This consumption may be on to buy durable household goods, finance education and health, purchase land or to provide capital for micro business start up etc. Hence we can say remittances have two part, investment part and saving part.

Following Glytsos (2002) we employ a Keynesian-type econometric model with dynamic perspective as the theoretical basis of the effects of remittances on macroeconomic activities. The structural simultaneous equation model is estimated by using two alternative methods the two-stage least square (2SLS) technique.

By using TSLS we find the short-run marginal propensity to consume (MPC) in Bangladesh is 0.415. That is, when income (including remittances) increases one Taka, the household consumption increases of 0.42 Taka. The MPC of Bangladesh is not so high. Lower MPC indicates higher saving rates. The marginal propensity to invest (MPI) in Bangladesh is very low. The MPI is just 0.179.The marginal propensity to import (MPM) of Bangladesh we estimate to be 0.126.

When remittance increases one Taka and sustained over the seven years, we find from the estimated impact multipliers that consumption increases about 0.78 Taka in the first year. Similarly in the next six years through the interim multipliers the consumption increases namely 0.59 Taka, 0.44 Taka, 0.33 Taka, 0.25 Taka, 0.19 Taka and 0.14 Taka respectively. Hence one Taka remittance contributed in total in the economy of Bangladesh about 2.7 Taka as consumption through the consumption multipliers during the seven years of time period.

Again that one Taka remittance contributes in the economy about 0.34 Taka as investment in the first year through the investment multipliers. In the second year it becomes only 0.02 Taka. From the third year there is no any multiplier impact of remittances on investment.

On the other hand, impact multiplier or short-run effects of one Taka increase in remittances on import in the first year is about 0.24 Taka. The contributions of that one taka from the second year are 0.19 Taka, 0.15 Taka, 0.12 Taka, 0.09 Taka, 0.07 Taka and 0.06 Taka respectively. Hence one Taka remittance can increases the import in total in the economy about of 0.92 Taka through the import multipliers during the seven years of time period.

Finally, we measure the total impact of one Taka on the income by using impact multiplier formula. We find that one Taka of remittances contributes 1.88 Taka in income in the first year. Its impact on the income from the second year become declining gradually. In the second year we find the multiplier as of 0.29 Taka. In the 7^{th} year it become just of 0.08 Taka. Hence, one Taka of remittances contributes 1.27 Taka in income through the dynamic multipliers or interim multipliers from the second year to seventh year. So we can conclude that, one Taka increase in remittances contributes 3.15 Taka in income in Bangladesh through the impact multiplier as well as dynamic multipliers from the first year to seventh year.

Theoretically, remittances may have an inflationary effect via increasing domestic demand or through increase in money supply. If this increase in money supply is not channelized towards productive sectors and capital investment, it can fuel inflation by shifting to consumption expenditure. Again, remittance may have deflationary impact through increase in goods or services provided that remittances are invested in productive sectors.

We find that in the long-run, remittances, money supply and trade openness are positively correlated with inflation in Bangladesh. We find the coefficient of money supply in our model as positive and significant. The value of coefficient is 0.209 .That is 0.21% variation in inflation occurred due to 1% variation in money supply in the economy. In other words we can say that when money supply increases 1 %, the inflation increases 0.21% in Bangladesh. This result supports the general theory of money supply. That is, when money supply increases, the price level also increases in the economy.

We also find the positive relationship between trade openness and inflation. The value of coefficient of trade openness is 0.5370. The result explains that when 1% increases in trade openness of the economy then the inflation increases about 0.54 %. In other words, when economy expands or become more open, then inflation also increases certain extent.

The coefficient of remittances in our inflation model is 0.0385.The result suggest us that in the economy of Bangladesh there are no significant impact of remittances on inflation .When in Bangladesh 1% increase in the flow of remittances increases 1 %, the inflation increases just 0.04%. We can say that when we control all other variables there are no any direct significant impact on overall inflation in the economy. There may be indirect impact of remittances on inflation as we find that there are positive impacts of trade openness on inflation in the economy. Trade openness is measured as (Exports+ Imports)/GDP. The component imports in the trade openness are directly positively related to inflation. Again we find in chapter seven that remittance increases the amount of imports in Bangladesh. So we can say that flow of remittances may have indirect positive impact on overall inflation in Bangladesh.

Johansen Cointegration technique confirms the present of long-run relationship among the variables. Excess money supply and trade openness of the country invites inflation in certain extent as usual. But remittances have no direct significant impact on inflation. There may be indirect impact of remittances on inflation through the import multiplier. The result of error correction shows that overshooting of inflation which is adjust 16.4 percent annually or required almost 6 years to adjust.

The Dutch Disease theory suggests that the effects of capital inflows on resource allocation are traced through their effects on the real exchange rate. More precisely, it tells us that large inflows of capital can give rise to an appreciation of the real exchange rate and eventually a deterioration of the competitiveness of the sectors exposed to international competition, thus preventing the development of a dynamic export sector (Bourdet and Falck, 2006).

Using econometric techniques such as Johansson cointegretion techniques and VECM we find that remittances and others explanatory variables have significant impact on the real exchange rate. It is also found that the coefficient of error correction term ($ECT_{t-1)}$ is negative and significant in the model. The coefficient value is -0.4024 at 10% level of significant. This coefficient is also called the adjustment coefficient or speed of convergence and it implies that when real exchange rate deviate from long run equilibrium, error correction term has an opposite adjustment effect and the deviation degree are reduced with very rapidly. This indicates that there present cointregretion relationship among the variables.

The coefficient of remittances is 0.3236.That is when remittances increase 1%, the real exchange rate increases 0.32%. In other words, due to increase in the flow of remittances the real exchange is depreciated by 0.32%. The relative price of tradable to non-tradable has been increased due to increases in the flow of remittances. Our results indicate that self interest motives are larger than ‘altruism’; there are positive contribution in savings and investment of the country. So in the long-run tradable sectors also may expand their wings resulting in depreciation in real exchange rate of the recipient of remittances country.

We expect the impact of trade openness (TO) on real exchange rate is positive that is depreciation in real exchange rate but we find opposite result. When trade openness increases, the tradable sectors cannot get the benefit of trade openness. We find that the impact of KOPEN on RER is negative. When LKOPEN increases 1%, the RER decreases 0.20 %. Due to openness in Bangladesh (free flow of FDI as well as ODA) the real exchange rate (RER) appreciated resulting in adverse effect on trade competiveness in Bangladesh.

We find the coefficient of LGDPPC as negatively significant. The value of the coefficient of LGDPPC is -0.5205. When per capita GDP of home country increases the real exchange rate decreases. We find in our study that the demand effects of technological progress (increase in LGDPPC) are greater than the supply effects. That is the *Ricardo-Balassa* effect is applicable in our case. The *Rybczynski* principle is not working in Bangladesh.We also find that in the short-run there are no impact of LREM and LTO on the LRER except GDPPC but in the long run all the explanatory variables are highly significant. In a nutshell, huge flow of workers' remittances to Bangladesh is not a curse; it is like a flow of blessing.

To determine the impact of remittances on the any macroeconomic variables it is very necessary to know the motives of remitters to send remittances to their family or relatives or friend. The motives may be 'altruism' or self interest. If self interest motives are larger than 'altruism', there are strong possibilities of contribution in savings and investment of the country. So in the long-run tradable sectors also may expand their wings resulting in depreciation in real exchange rate of the recipient of remittances country. In case of Bangladesh we can say that huge flow of workers' remittances is not a curse it is like a flow of blessing.

9.2 Conclusions

Prime question regarding the huge flow of workers' remittances to Bangladesh economy is a blessing or a curse?

Total population in 2014 in Bangladesh was 159078 thousands and rank of Bangladesh in the world population was 8^{th}. About 2.19 % of world population lives in Bangladesh. The population, ages 15-64, representing backbone of the economy, has increased gradually. Between 1976 and 2014 a total of 91.43 lakhs people emigrated temporarily from Bangladesh and a total amount of US$ 133.78 billion has been remitted to Bangladesh from across the globe. The flows of remittance are more stable than other types of private capital inflows like official development aids (ODA) and foreign direct investment (FDI).

Now what are impacts of these workers; remittances on the economy of home countries specially on important macroeconomic variables of the country like Gross Domestic Products (GDP), Imports, Consumption, Investment, Real Exchange Rate, as well as Inflation.

During the entire 38 years of period the share of professional migrants in numbers was lower than other categories and large numbers of migrants workers were migrated from Bangladesh from 1976 to 2014 are less-skilled workers. When a large number of low and unskilled workers migrated from a labour surplus country to a labour deficit country then both the countries can be benefited mutually. Labour surplus country can reduces the pressure on local labour market by giving more opportunities to the remaining labour forces.

There are so many factors that can influence the flow of remittances from the host countries to home countries. The amount of current remittances flow in Bangladesh depends on previous amount of remittances flows positively. Inflation in Bangladesh has no any significant impact on the flow of remittances in the long-run but it has significant impact in the short-run. On the other hand exchange rate and crude oil price have negative short-run effect on the flow of remittances but they have positive impact on the flow of remittances in the long-run in the Bangladesh. So, lower inflation and higher exchange rates in the home country invite more remittances from the host countries to the home country. This finding indicates that remitters are quite aware of the economic situation of their home countries. Remitters think not only about their family but also portfolio investment. Relationship between remittances and crude oil price indicates the amount of remittances to the home country is depending on the income of the host countries also. Per capita GDP of home country is also a positive determinates of remittances in Bangladesh. This result also indicates that in Bangladesh remittances have positive impact on per capita GDP because the flows of remittances are increasing day by day. So we can conclude that all the macroeconomic determinants of remittances identified in our model indicate that the altruism as well as portfolio motives decide jointly the flow of remittances from the host countries to home countries.

From the Johansen Cointegration technique we find long-run relationship among GDP, remittances, FDI and ODA. Remittances and FDI both are positively and ODA is negatively correlated with GDP in Bangladesh. Remittances have positive impacts on GDP in Bangladesh in the long-run. So remittances are mostly welcome in Bangladesh. When economy is open up for foreign investors for investment in the country, the economy gets benefits from the FDI in respect of increase in GDP in the long run. So FDI is mostly welcome in Bangladesh. But the ODA has no any significant impact in Bangladesh in the long-run. The economy of Bangladesh is quite dependent not only on remittances but also on foreign direct investment.

By using TSLS we find the short-run and long-run MPCs in Bangladesh are 0.415 and 0.718 respectively. The long run MPC of Bangladesh is so high. Higher MPC indicates lower saving rates or lower investment in the country. The marginal propensity to invest (MPI) in Bangladesh is very low. The MPI is just 0.179.The short-run and long-run MPMs of Bangladesh we estimate to be 0.126 and 0.281 respectively. One Taka of remittance contributed in total in the economy of Bangladesh through the consumption, investment and import multipliers 2.7 Taka, 0.36 Taka and 0.92 Taka respectively during the seven years of time period. So we can conclude that, one Taka increase in remittances contributes 3.15 Taka in income in Bangladesh through the impact multiplier as well as dynamic multipliers from the first year to seventh year.

We find that in the long-run, remittances, money supply and trade openness are positively correlated with inflation in Bangladesh. We find the coefficient of money supply in our model as positive and significant. This result supports the general theory of money supply in the economy of Bangladesh. That is, when money supply increases, the price level also increases in the economy. We also find the positive relationship between trade openness and inflation. When economy expands or become more open, then inflation also increases certain extent. But there is no significant impact of remittances on inflation in the economy of Bangladesh. In the economy of Bangladesh, the impact of remittances on inflation is positive but very less in the long-run.

The Dutch Disease theory suggests that the effects of capital inflows on resource allocation are traced through their effects on the real exchange rate. Using Johansson cointegretion technique and VECM we find that remittances and others explanatory variables have significant impact on the real exchange rate. Due to increase in the flow of remittances the real exchange is depreciated by 0.32%. The relative price of tradable to non-tradable has been increased due to increases in the flow of remittances. Our results indicate that self interest motives are larger than ‘altruism’; there are positive contribution in savings and investment of the country. So in the long-run tradable sectors also may expand their wings resulting in depreciation in real exchange rate of the recipient of remittances country.

We expect the impact of trade openness on real exchange rate is positive that is depreciation in real exchange rate but we find opposite result. That is, due to increase in trade openness in the economy of Bangladesh, the real exchange rate has decreases, that is, appreciation in real exchange rate. In other words, we can say that the tradable sectors cannot get the benefit of trade openness.

We find that the impact of openness of capital market (that is, free flow of FDI as well as ODA) on real exchange rate is negative. Due to high flow of FDI as well as ODA in Bangladesh, the real exchange rate has been decreases. That is there is a situation of real appreciation in the real exchange rate resulting in adverse effect on trade competiveness in Bangladesh. Therefore, we can conclude that the impacts of remittances, FDI and ODA on the real exchange rate are different. The impact of FDI cum ODA on real exchange rate is positive where as the impact of remittances on real exchange rate is positive. So there may be possibility of “Dutch Disease” in the economy of Bangladesh due to high inflow of FDI and ODA but there is no such possibility of “Dutch Disease” due to huge inflow of remittances.

We find the coefficient of LGDPPC as negatively significant. When per capita GDP of home country increases the real exchange rate decreases. We find in our study that the demand effects of technological progress (increase in LGDPPC) are greater than the supply effects. That is the *Ricardo-Balassa* effect is applicable in our case. The *Rybczynski* principle is not working in Bangladesh. We also find that in the short-run there are no impact of LREM and LTO on the LRER except GDPPC but in the long run all the explanatory variables are highly significant.

To determine the impact of remittances on the any macroeconomic variables it is very necessary to know the motives of remitters to send remittances to their family or relatives or friend. The motives may be ‘altruism’ or self interest. If self interest motives are larger than ‘altruism’, there are strong possibilities of contribution in savings and investment of the country. So in the long-run tradable sectors also may expand their wings resulting in depreciation in real exchange rate of the recipient of remittances country.

There may be impact of September 11, 2001 or global economic slowdown due to financial crisis of 2007-2009 or any other shock in the economy, the Bangladesh grows its own way along with remittances. In Bangladesh there are still no alternatives of remittances for development. It is very essential in Bangladesh. In case of Bangladesh we can say that huge flow of workers’ remittances is not a curse it is like a flow of blessing.

9.3 Policy Recommendations

On the recipient side of remittances Solimano(2003) suggests that the issuance of remittance bonds, opening of foreign currency accounts for migrant workers in the home country, the creation of facilities for voluntary donations for projects in the home country are all measures to leverage remittances for development. In turn, the creation of education and housing accounts at home for migrants could help to enhance the productive and social use of remittances proceeds.

Economical shocks in remittances source country impacts on the flow of remittances in Bangladesh. Again we find positive impact of remittances on consumption, investment and imports of the country. Therefore the policy makers should remember the impact of remittances on the consumption, investment and imports while they make projection or predictions of consumption and investment.

Government in consultation with financial institutions should review the current structure of fees and other charges levied on inward remittances at both ends with a view to removing the hurdles that come in the way of remitting the funds through formal, financial channels for promoting greater flows of resources to developing countries.

Since remittances are private transfer from host country home country, the government policy on the flow of remittances should be taken as the form of incentives only. Government should not impose mandatory pressure on the flow of remittance.

- We find large numbers of migrants workers were migrated from Bangladesh from 1976 to 2014 are less-skilled workers. When a large number of low and unskilled workers migrated from a labour surplus country to a labour deficit country then both the countries can be benefited mutually. Labour surplus country can reduces the pressure on local labour market by giving more opportunities to the remaining labour forces. Government policy of Bangladesh should be appreciating migration of the less skilled workers from Bangladesh to Overseas.

- We find flow of remittances to Bangladesh is inversely related to inflation rate. To increase the amount of remittances to Government of Bangladesh should try to control the inflation rate.

- Increase in nominal exchange rate or depreciation of nominal exchange rate invites more amount of remittances to Bangladesh. So government may depreciate their nominal exchange rate but it may have some other adverse effects on the economy.

- As remittances of Bangladesh change along with the price of crude oil fluctuation in the international market ,the government should find other countries for overseas employment for Bangladeshi workers which countries do not depend not only on the exports of crude oil.

- We find per capita GDP is positively related to remittances flow to Bangladesh. Government should channelized remittances to the production system of the country such a way that per capita income of the country increase which will invite again more remittances to the country.

- Remittances and FDI have positive impact on GDP of Bangladesh. The Government of Bangladesh should welcome the foreign investors and migrant workers. National policy regarding foreign investment and inflow of remittances should be in favour of them.

- The country must establish efficient and effective formal channels for receiving and sending remittances. Payment systems in Bangladesh need to be improved and links with migration countries need to be strengthened in order to reduce transactions costs. To attract remitters to remit in formal channels, the formal banking system should attempt to expand the branch network so as to effectively link remitters with the remittance receiving families.

- Encourage Bangladeshi migrants to hold savings in financial assets in Bangladesh rather than host countries. Govt. may provide beneficial terms like higher interest rates, or/tax exemptions or flexible currency conversion to financial instrument like bonds acquired by their expatriates. Facilitate investment opportunities to migrants for self-employment and enterprise creation in Bangladesh.

- Use remittances in such a way that generates a maximum developmental impact of remittances in Bangladesh.

- It is important to keep improving the skill of Bangladeshi migrant workers for them to be able to compete with migrant workers from other countries.

- Bangladesh government may offer special training schemes for return Bangladeshi migrants to open small businesses.

- Expansion and diversification of the countries of employment

9.4 Limitations of the Study

In our study we have some important following limitations:

Firstly, our study depends on only secondary annual aggregate data. We have no primary data. We have only 38 observations (1977-2014). To build a macroeconomic model a large number of observations are needed. In our study we have such models like, "macroeconomic determinants of remittances", or, "impact of remittances on inflation" need to many explanatory variables. But due to lack of degrees of freedom we cannot take sufficient variables in our model. We just take important determinants variables in our estimated model. We were bound to drop few important variables when we estimate our model due to small number of observations.

Secondly, the category *workers' remittances* in the balance of payments best represent what economists have in mind when modeling remittances. The properties of this series differ significantly from those of *employee compensation* and *migrants' transfers*, so combining these three items into a single measure of remittances, as is common practice in the literature, can lead to invalid conclusions about the properties of remittances and, in turn, suboptimal policy decisions (Chami et al.,2008) . Our data on remittances are also of aggregate of the above three components of remittances. We are unable to decompose the three components from the remittance data.

The third limitation of the research is the use of GDP Deflator as a proxy for inflation instead of CPI due to unavailability of CPI data from the year of 1977. Also, due to lack of data on Capital Stock in Bangladesh we take proxy variable by the cumulative Gross Capital Formation (Investment).

Fourthly, we find the impact of remittances on real exchange rate instead of real effective exchange rate of Bangladesh to capture the Dutch Disease of Bangladesh, even we measure real exchange rate of Bangladesh by using GDP Deflators Bangladesh and USA instead of CPI of both the countries.

9.5 Scope for Future Researches

Future research may extend to the sub-sectors levels of the economy. We may find out the impact of remittances on the agricultural or manufacturers or services sectors of the country. That is, to find out the impact of remittances on the sub-sectors of the Bangladesh economy. That is, a research on the developmental impact of remittances such as health, investment in human capital, housing, etc. to Bangladesh may be suggested for future research.

Even future research may extend to the household level on the poverty reducing role or potential of workers' remittances to Bangladesh. Knowledge on the role of remittances on household poverty will be useful in guiding the policy formulation process on how to target remittance for poverty alleviation.

A study on the expenditure pattern of remittances in Bangladesh may be important and interesting based on a field survey at both individual and household level. This type of study may find out the importance and impact of remittances in the household or societies of the country.

It is very essential to identify the important determinants of workers 'remittances flow to Bangladesh from abroad at the micro level.

We have find out the impact of remittances on real exchange rate. But it very necessary to investigate further the impact of remittances on the real effective exchange rate in the economy of Bangladesh, as real effective exchange rate represents appropriate measure of competitiveness of the country.