



## **Remittances, Foreign Debt and Economic Growth: A Cross Country Analysis**

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### **Abstract**

Remittances are the part of migrant workers and essentially cash exchange who earned by abroad and send their families. Worker remittances are an important part of international capital flows. The volume of remittances increments in developing countries day by day and season via season. Remittances are the backbone for the developing countries. Foreign debt is also an important for economic growth, especially for developing countries. Developing countries can increase their economic growth by using foreign debt in an efficient way. We have used annual data from the period of 2014 cross section of about 217 countries, including Afghanistan, Pakistan, Turkey, Bangladesh, Iraq and China. Results show that there is a positive and significant effect of foreign debt and remittances on economic growth.

**Keywords:** remittances, foreign debt, economic growth

**JEL Codes:** F24, F34, F43

## **I. Introduction**

A Remittance is the funds on expatriate sends to their country of origin via wire, mail or online transfer. The peer to peer transfer of funds across borders are economically significant money countries that receive them. Remittance flows make up 30-45 percent of total remittances received from developing countries, reflecting the fact that over half of migrants from developing countries migrate to other developing countries. Remittances funds are being transferred by workers who are living and working away from their homes as well as their friends and families. Examples include Middle Easterners living in Europe, Latin Americans in the United States, Koreans and Filipinos in Japan and Bangladeshis, Pakistanis and Indians in Middle East. Although the use of remittances differs from country to country, the recipients of remittances usually rely on them for living expenses, education and investments. The remittances have become an admired concern in the international financial literature over a decade because of their volume and their potentials to alleviate poverty. Remittance flows have continued to increase hand-in-hand with ascents in the number of migrants around the world and will likely continue to do so in the coming years.

Remittances may ameliorate some of the problems that plague developing countries, such as credit crunch, inequality in income and in employment opportunities, income volatility and poverty. At the household level, remittances help to solve such problems by supplying the resources necessary to obtain a house, start a business and maintain the education or health expenses, all of that is usually far beyond the reach of enormous segments of the population in the recipient countries. At a macro level, the productive financial and social externalities generated by remittances, which are likely to be large, and offer a constant source of foreign currency, can prevent the balance of payment crisis. Foreign remittance is an important source for the recipient countries. Such as Pakistan, Africa, Asia, Nigeria, China, Korea, Europe, India, Germany, Algeria, Latin America, Caribbean, Sub-Saharan Africa, Bangladesh etc. These countries are receiving a significant amount of remittances. However, fluctuations also arise in the inflow of remittances. Inflow of remittances affects economic growth positively by reducing the current account deficit, improving the balance of payment position and reducing dependence on external borrowing. Inflows of remittances increase the economic growth and reduce the poverty by stimulating the income of recipient countries. Inflows of remittances reducing credit constraints, accelerating investment, enhancing human development through financing better education and health.

In 1995, remittances to developing countries totaled about \$57.8 billion and this figure shot up to \$305 billion by 2008. The World Bank estimated that in 2009 it will fall to approximately \$290 billion due to economic recession. Thus, remittances have developed into a significant source of income for most of the developing countries, but the economic meltdown has caused turmoil in remittance earnings. The great sizes of remittances related to other external flows and to the GDP in many countries imply that the macroeconomic effects of remittances may be of critical importance in many countries. Worldwide top 19 remittance recipients receive more than 10 percent of their GDP in remittances Pakistan is among the top ten remittance receiving countries. Remittances sent by Pakistani migrants from around the world have grown sharply. These flows have not only provided critical support for the balance of payments, but have also helped to improve the external debt situation. Remittances have alleviated poverty and reduced inequality (Mughal and Anwar, 2012). The rise in remittances to Pakistan also helped to partially offset the negative effects of the oil crisis, reduce unemployment and improve the living standards of recipient households (Pakistan Economic Survey, 2012).

Worker remittances are considered more for repaying economic growth because of their stable nature. The worker remittances provide opportunity to resolve the problems of shortages of foreign exchange reserves. [Salahuddin 2015: Fayssia 2008: Jawaid 2012: Fagerheim 2015: Umaima 2012: Shera 2013: Khatlaan 2012: Mwangi 2015: Salomone 2013: Pardhan 2008: Naga 2015: Zahidi 2016: Belmimoun 2014: Ahmad 2012]. However, worker remittances have some negative impact on economic growth in these recipient countries. The negative impact of remittances on economic growth is the exchange rate appreciation. The exchange rate appreciation may decrease the competitiveness of the countries and thus decrease the exports and increase the imports (Lopez et al 2007). Remittances are only beneficial for short-run (Waheed and Aleem 2008). The remittances have a negative impact on economic growth of recipient countries because a significant flow of remittances reduces labor force participation and work efforts which lowers output. Worker remittances have increased rapidly, growing to more than three times the value of official development Assistant, being second only to foreign direct investment flows in developing countries.

Worker remittances in developing countries reached US\$280. 8 billion in 2009. They accounted for 42.1 percent of all external sources of financial flows, including official and foreign direct investment flows to developing countries. At 2010, remittances received by developing countries reached US\$325 billion and they are expected to grow to US\$ 346 billion by 2011 and US\$ 374 billion by 2012.

The empirical findings of the economic literature according to which the role of remittances for economic development is still an open issue. Two important features need to be considered in order to provide a more reliable portrait: The gender and the educational level of migrants. In the last few decades, international migration has been characterized by a rapidly increasing feminization and brain drain. Secondly, at the macroeconomic level, international remittances seem to be marginal to the poorest countries: on the 372 billion received by developing countries in 2011, only 7 percent was sent to Least Developed Countries. Among the top ten recipient countries in volume in 2011, only one belonged to the Least Developed countries, namely Bangladesh, while all other fell into the middle-income country category. Considering remittance amounts as a share of Gross domestic product. Top ten recipients were Least Developed countries Liberia, Lesotho, Nepal and Samoa. However, according to a recent UNCTAD's report, Least Developed Countries remittance receipts have increased from 3.5 billion US dollars in 1990 to 27 billion US dollars in 2011 (of which two-thirds reached Bangladesh, Nepal and Sudan). Furthermore, the report shows that remittances represent a larger share of Gross domestic product in Least Developed Countries than in other developing countries (4.4 percent and 1.6 percent respectively). This fact is driven by small Least Developed countries, like Lesotho, and traditional recipient countries, like Nepal or Haiti, whose share of remittances in GDP exceeds ten percent.

India is the biggest country remittances receiving, in 2012, India topped the list with \$70bn (£47bn) of remittance inflows, followed by China (\$66bn), the Philippines and Mexico (\$24bn each), Nigeria (\$21bn), according to the latest World Bank figures on migration and remittances. India received an estimated \$14.36 billion in remittances from Pakistan in last three years. A majority of the remittances from the US have been directed to Asian countries like India (approx. 66 billion USD in 2011), China (approx. 57 billion USD), the Philippines (approx. 23 billion USD), Bangladesh (approx. <13.8 billion USD) and Pakistan (18.4 billion USD in 2015). According to a World Bank Study, [13] the Philippines is the second largest recipient of remittances in Asia. It was estimated in 1994 that migrants sent over US\$2. 6 billion back to the Philippines through formal banking systems. With the addition of money sent through private finance companies and return migrants, the 1994 total was closer to US\$6 billion annually.

In Latin America and the Caribbean, remittances play an important role in the economy of the region, totaling over 66.5 billion USD in 2007, with about 75% originating in the United States. This total represents more than the sum of foreign direct investment and official development aid combined. In seven Latin American and Caribbean countries, remittances even account for more than 10% of GDP and exceed the dollar flows of the largest export product in almost every country in the region. The percentages ranged from 2% in Mexico, to 18% in El Salvador, 21% in Honduras, and up to 30% in Haiti. Remittances to Africa play an important role in national economies. However, little data exist as many rely on informal channels to send money home. Immigrants from Africa today number approximately 20 to 30 million adults, who send around \$40 billion USD annually to their families and local communities back home.

Next to petrodollars, the second-biggest source of foreign exchange earnings for Nigeria are remittances sent home by Nigerians living abroad. In 2014, 17.5 million Nigerians lived in foreign countries, with the UK and the USA has more than 2 million Nigerians each. According to the International Organization for Migration, Nigeria witnessed a dramatic increase in remittances sent home from overseas Nigerians, going from USD 2.3 billion in 2004 to 17.9 billion in 2007, representing 6.7% of GDP. The United States accounts for the largest portion of official remittances, followed by the United Kingdom, Italy, Canada, Spain and France. On the African continent, Egypt, Equatorial Guinea, Chad, Libya and South Africa are important source countries of remittance flows to Nigeria, while China is the biggest remittance-sending country in Asia.

Remittances to developing countries sent through official channels were estimated at US\$ 406 billion in 2012 (World Bank, 2012). This represents a growth of 6.5 percent over 2011, and is projected to rise by 8 percent in 2013 and 10 percent in 2014. Current remittance flows are over three times the amount of

official development assistance (World Bank, 2012). In Pakistan, remittances through official channels have grown from just around US\$ 1.5 billion in 1997/98 to slightly over US\$ 13 billion in 2011/12. In the first six months (July–December 2012), they were slightly over US\$ 7 billion—an increase of 12 percent over the corresponding period in the previous year (July–December 2011). Remittances have a potential positive impact as a development tool for the recipient countries. The growth effects of remittances can be decomposed into its impact on savings, investments, growth, consumption, poverty and income distribution. The impact of remittances on economic growth in the receiving economies is expected to proceed through savings and investment as well as a short-run effect on aggregate demand and output during consumption. Workers' remittances are a component of foreign savings and they balance national savings by increasing the total pool of resources available for investments.

The foreign debt to be used in productive sectors and in basic infrastructures which can enhance the productivity of other sectors. Under this condition external debt servicing doesn't affect economic growth. Krugman, 1985 argued that, if the available external loan improves the productive capacity of the borrowing country. It is unnecessary to take an extra external loan to service the original debt. According to (Cline, 1985): if the marginal productivity of each available external debt is greater than or equal to the principal and the interest payment, external debt will have a positive impact on the economy of the borrowing country. But, if the borrowing country failed to service its debt, it will lose its' credit worthiness; and this in turn might affect the economic performance of the borrowing country by reducing the availability of foreign debt (Mjema and Musonda, 1994). Those countries which have good institutions show positive growth rates whenever the stock of capital increases, but the countries with bad institutions, increase in capital investment may lead to negative growth rates due to rent seeking and other unproductive activities

Before 1980s, benefits of trade openness were skeptical; but the old controversies came to an end in the late 1980s, when countries started developing interest in a multilateral trade agreement for economic cohesion. Trade liberalization is a system which minimizes the hedges to make the mobility of goods and services across the globe easy and more comfortable. Trade liberalization transforms the world into a global village by reducing the obstructions, which gives birth to dynamic changes in the economic activities at a national and international level; ultimately the meaning of distance and living standard has been changed among the people of nations. IMF, World Bank, and WTO play significant role in trade liberalization. Traditional economist believed, trade liberalization improves productive efficiencies by making reallocating resources, keeping in view absolute and comparative advantage theory of economic growth, that ultimately uplift economic growth. Moreover, trade openness encourages competition at national as well as international level by diffusing knowledge and technological progress across the border. Although the trade liberalization is beneficial for the prosperity and development of nations, but its fruits are "country, time, and case specific. The contribution of trade liberalization in GDP growth is roughly 5%, that advocate liberal trade policy is necessary to lift economic activities.

Trade openness significantly changes economic, social and political life of the nations because appropriate trade policies produce economic fruits while inappropriate policies propagate severe disturbance at national level. The influence of open trade on a country's prosperity is a popular subject and frequently debated in the literature for more than a century but still indecisive. In growth literature, it is widely accepted that growth is positively and significantly linked with trade liberalization. Low debt levels are positively associated with growth, even if countries are not able to borrow freely due to the risk of debt repudiation; an underlying assumption in these cases is that borrowed funds are associated with productive investment. External debt has a different impact on different countries such as in 24 developing countries from 1976 to 2003. The debt servicing to GDP negatively affect the economic growth and may leave less funds available to finance private investment in these countries leading to a crowding out effect. In Nigeria, debt service payments have a negative impact on economic growth. External debt service showed a significant negative relationship with GDP, which indicated that debt overhang phenomenon, has occurred in Indonesia in the long run. In Pakistan total debt was not to be an important determinant of economic growth either in the short-run or the long run mainly due to inefficient use of external debt.

In Malaysia the total external debt positively affects the economic growth at aggregate and disaggregate level. In the short run, total external debt had positive effects on economic growth. It also revealed that Malaysia had not suffered from the debt overhang problem. In Indonesia External debt servicing showed a

significant negative relationship with GDP, which indicated that debt overhang phenomenon, has occurred in Indonesia in the long run. In Philippine, the economic growth was not very much affected by external debt servicing. External debt has a different impact on different countries such as in 24 developing countries from 1976 to 2003. The debt servicing to GDP negatively affect the economic growth and may leave less funds available to finance private investment in these countries leading to a crowding out effect. In Nigeria, debt service payments have a negative impact on economic growth. External debt service showed a significant negative relationship with GDP, which indicated that debt overhang phenomenon, has occurred in Indonesia in the long run. In Pakistan total debt was not to be an important determinant of economic growth either in the short-run or the long run mainly due to inefficient use of external debt.

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Sub Saharan Africa's total external debt stock, \* which was US\$84. 049 billion in 1980, had jumped to US\$164. 981 billion in 1988 and US\$190. 206 billion in 1990. By 1995, SSA's total external debt stock amounted to US\$223. 298 billion (World Bank data). Note that between 1980 and 1995, the debt stock increased by US\$139. 249 billion or at an average annual rate of 6.7%. Associated with the rising external debt stock has been a crushing debt service burden. From a level of US\$6. 374 billion in 1980, the total debt service on long term debt rose to US\$12. 264 billion in 1990 and then dipped to US\$8. 784 billion in 1995.

Pakistan faces a serious debt problem, which threaten the economic future of the country. Burden of external debt and debt servicing have continued to grow over time. According to the World Bank report 2000-2001, Pakistan is among the HICs; because Pakistan's present and future debt situation is quite dismal. In 1970 the value of external debt in absolute term was \$ 3.4 billion, which went to \$ 9.93 billion in 1980. The external debt approximately doubled over from 1981 to 1990 and reached to \$ 20.66 billion. External debt showed a rising trend during 1990-99 as it increased from \$ 20.66 billion to \$ 33.89 billion. It declined to \$ 32.78 billion in 2000 due to debt rescheduling. Then external debt was \$ 35.74 billion in 2003, in the last few years external debt increased at an unprecedented rate and reached to \$ 54.60 billion in 2010 (Government of Pakistan, 2010 and World Bank, 2007).

As a result, the impact of external debt on economic growth is statistically significant in terms of debt crowding out effect over the selected eight countries in particular and over all the heavily indebted poor African countries in general in a restricted sense. This is the case when indebted poor countries transfer resources, including foreign aid and foreign exchange resources to service their accumulated debt. In the other hand, the effect of external debt on economic growth is found to be statistically insignificant in terms of debt overhang effect. This result is against the debt overhang hypothesis and the presumption we made on the Solow theory of economic growth, which states that an accumulated debt act as a tax on future output, discouraging productive investment plan of the private sector and adjustment efforts on the part of government.

Lower the total external debt levels are associated with higher growth rates, and that this negative relationship is driven by the incidence of public external debt levels, and not by private external debt levels. The external debt expansion has a negative impact on economic growth of the developing countries. If properly utilized, external debt can help the developing countries to meet their development goals.

## II. Literature Review

Shah et al September (2012) analyzed external public debt and economic growth: Empirical evidence from Bangladesh 1974-2010. The time series data used from 1974-2010. Involving dependent variable (economic growth rate) and independent variable (labor, capital, external debt). By using a technique Unit root test. The estimation results show that in the long run, significant negative effect of external public debt service and positive effect of external debt stock on economic growth. In the short run, the only external debt service has negative effect, but the debt stock has no effect. Haider et al. (2012) analyzed the impact of foreign aid, external debt and economic growth Nexus in low income Countries: The role of institutional quality. By using annually time series data from 1984-2008. Hausman test has been applied. Involving economic growth as dependent variable while foreign aid and external debt as independent variable. The empirical results indicate that the good governance and foreign aid effect on economic growth positively while external debt has a negative effect. Hamidu et al (2013) checked out external debt and domestic debt impact on the growth of the Nigerian economy. Time series data have been used from 1970-2010. By using Ordinary Least Square method. Considered economic growth as dependent variable while external debt and domestic debt as independent variable. The estimation results suggest that external debt has negative impact on economic growth. Policy implication is that policy makers should manage the debt effectively by productive activities, so as to increase the level of output in Nigeria. Akram (2011) analyzed the impact of public debt on the economic growth of Pakistan. Time series data have been used from 1972-2009. ARDL technique has been applied. By using economic growth as independent and public debt as dependent variable. The results indicate that positive effect of public debt leads to higher growth rate while the negative effect leads to lower growth rate.

Zafar et al (2015) analyzed the impact of trade openness and external debt on economic growth: new evidence from South East Asia, Asia, and Middle East. Panel data used in this article. Involving Gross domestic product as dependent variable and trade openness and external debt is used as independent variables. The unit root test has been applied. The estimation results show that a positive relationship between trade openness and growth, but external debt has a negative effect on growth. Policy suggest that open new horizon for lesser trade barriers or trade openness. Korkmaz (2015) checked out the relationship between external debt and economic growth in Turkey. Time series quarter data used from 2013:1-2014:03. The VAR method has been applied in this article. Economic growth considered as dependent variable and external debt as independent variable. The results of this study showed that Positive effect of external debt leads to increase economic growth. Salahuddin et al (2015) examined the relationship between economic growth and remittances in the presence of cross-sectional dependence. Panel data used from (1977-2012) for some larger countries of foreign remittances like Bangladesh, India, Pakistan and Philippines. A cross-sectional dependence test has been applied. Asian economic growth as dependent variable while remittances as independent variables in the article. The estimation result shows that a highly significant relationship between remittance and economic growth in the long run, However an insignificant positive association between them in short-run. Fayissa et al (2010) analyzed the impact of remittances on economic growth and development in Africa. The panel data used from (1980-2004). Consider economic growth as dependent variable and remittances as independent variable. The results show that remittances do positively impact on economic growth and development.

Bayar (2015) examined the impact of remittances on the economic growth in the transitional economies of the European union. Panel data used from (1996-2013). By using Dumitrescu and Hurlin (2012) causality test. The estimation results indicate that remittances and FDI net inflows had significant impact in the explanation of the economic growth in collecting samples of countries. Remittances affect the economic growth by contributing to the national savings and meeting foreign exchange requirements while foreign direct net inflows affect the economic growth by providing resources to the countries. Policy implications suggest that government should establish the environment to attract both remittances and Foreign direct inflows in the developing and underdeveloped countries. Jawaid et al (2012) examined the relationship between worker's remittances and economic growth in China and Korea: an empirical analysis. By using time series data from (1980-2009). Consider economic growth as dependent variable while workers' remittance as independent variables in the article. Co-integration, error correction and causality tests has been applied. All methods showing different results like co-integration results showed that significant positive long-run relationship between remittances and economic growth, while, significant negative relationship exists between remittances and economic growth in China. Error correction results showed that

the significant positive short-run relationship between remittances and economic growth in Korea, while significant in the short run in China. Causality results showed that unidirectional causality runs from worker remittances and economic growth in both China and Korea. Policy suggested that Korea should to ensure the continuous inflows of worker remittances and their efficient utilization to ensure economic growth, and China should keep an eye to reduce voluntary unemployment leads to decrease in productivity and growth in the country. Ejigayehu et al (2013) examined the effect of external debt on economic growth. A panel data used from 1991-2010. External debt used as independent variable and economic growth as the dependent variable. The estimation results showed that the impact of external debt on economic growth statistically significance in terms of debt crowding effect rather than debt overhang.

Uzun et al (2012) checked out the impact of external debt on economic growth in Transition economies. Panel data used from 1991-2009. Using ARDL technique, the results found that positive relationship between debt and economic growth rate of the countries in long-run. The economic policy suggests that the transition countries should perform disciplined fiscal and monetary policies also they should balance current account. Fagerheim (2015) analyzed the impact of remittances on economic growth in Asia, A empirical analysis, 1980-2012. A panel data used from 1980-2012 for seven Asian countries. By using the OLS method indicated insignificant results due to the lack of observations. But concluded that remittances rapidly growing in Asian countries. Nwannebuike et al (2016) checked out the impact of external debt and economic growth, The Nigeria experience. The time series data used from 1980-2013. The dependent variable gross domestic product while the external debt stock, external debt service payment and exchange rate considered as independent variables. Ordinary least square method has been applied. The results indicated that exchange rate fluctuation had a positive impact on the Nigerian economy while external debt stock and debt service payment had a negative impact on the same economy. The policy recommended that the debt Management Office should set the mechanism in motion to ensure that loans were utilized for the purpose for which they were acquired as well as set a ceiling for borrowing for states and federal governments based on well-defined criteria.

Mahmoud (2014) analyzed the impact of foreign debt and economic growth in Palestine: An econometric study of the period 1994-2013. Time series data used from 1994-2013. The Ordinary least square method has been used. The empirical results indicated that a positive relationship between foreign debt and economic growth. The study suggested that several recommendations that can boost the level of economic growth in Palestine. Bhutta (2013) analyzed the external debt and economic growth relationship using the time series data used from 1990-1996. 3SLS technique has been used. The results showed the relationship between debt service and economic growth. The rise in the debt servicing ratio adversely affects economic growth, whereas the decrease in the ability of an economy to service its debt. Checherita et al (2010) examined the impact of high and growing government debt on economic growth: An empirical investigation of the Euro area. A panel data used from 1970-2010. The results indicated that a non-linear impact of debt on economic growth with a turning point-beyond which the government debt-to-gross domestic product ratio has a deleterious impact on long-run growth, at about 90-100% of gross domestic product. The annual change of the public debt ratio and the budget deficit-to-gross domestic product ratio are negative and linearly associated with per capita gross domestic product growth.

Sosin et al (2001) examined the foreign debt and economic growth. Cross sectional data have been used. The results showed that foreign debt and the growth rate of per capita gross domestic product were negatively related at a high level of significance. Using foreign debt as an independent variable, whereas economic growth as the dependent variable. Umaima et al (2012) checked out the impact of remittances on economic growth and poverty. The time series data have been used from 1973-2010. By using ARDL approach analyzed the impact of remittance inflows on economic growth and poverty. The empirical evidence showed that remittances affect economic growth positively and significantly. The policy suggested that substantial potential benefits associated with international migration for poor people in developing countries like Pakistan. Shera et al (2013) examined the remittances and their impact on economic growth. Using panel data during from 1992-2012. The results showed that remittances do have positively impacted on the growth of the gross domestic product per capita in Albanian country. The policy implications suggested that remittances should flow in Albanian countries because migrants can easily constraints, budget crucial spending needs of food, health care and schooling expenses for their children. Khathlaan (2012) checked out the link between remittances and economic growth in Pakistan: A boon to

economic stability. The time series data have been used during the period from 1976-2010. ARDL and the error correction technique had been applied to establish the long-run and the short-run relationship between worker remittances and economic growth. The results demonstrated that a positive and significant relationship between worker remittances and economic growth in the long-run and short-run.

Mwangi et al (2015) analyzed the effect of international remittances on economic growth in Kenya. Time series data have been used from 1993-2013. The Ordinary least squares used to determine the effect of international remittances on economic growth. The results concluded that the international remittances indicators are significant factors influencing the economic growth in Kenya is largely derived from international remittances. Salomone et al (2013) analyzed the remittances: a lifeline for developing countries? Panel data used from 1985-2005. The results showed that the positive role played by females on remittances is mainly driven by skilled women relative to unskilled ones. Policy suggested that if the increase qualification of migrants on annual remittance inflows can be increase in developing countries. Pardhan et al (2008) analyzed the remittances and economic growth in developing countries. Using panel data from 1980-2004. Using random effect and fixed effects approaches. The results showed that remittances have a positive impact on economic growth. Considered remittances as an independent variable while gross domestic product as the dependent variable. Muranganwa (2012) examined an assessment of the impact of external debt on economic growth in Zimbabwe (1985-2009). Time series data used from 1985-2009. Ordinary least square method has been used. The results indicated that external debt has a deleterious impact on economic growth. Policy suggested that continue borrowing from foreign sources would negatively affect Zimbabwe's economic growth. Arshed et al (2014) analyzed the relative effectiveness of foreign aid and foreign debt on economic growth in Pakistan. Using annual time series data from 1970-2010. The Dickey-Fuller test has been used. The results showed negative long-run relationship between gross domestic product and foreign direct whereas positive long-run relationship between foreign aid. Policy suggested that each new Government complete the development project of last Government, firstly, then start their own projects, and ensure the political stability.

Jilenga et al (2016) checked out the impact of external debt and foreign direct investment on economic growth: Empirical evidence from Tanzania. Using time series data from 1971-2011. ARDL approach has been used. The results indicated that in the long-run debt promote economic growth in Tanzania, while foreign direct investment has negative impact on economic growth. Abuzaid et al (2011) analyzed external debt, economic growth and investment in Egypt Morocco Tunisia. Time series data used from 1980-2005. The results indicated that external debt affects investment positively and statistically significantly, indicating external debt in selected countries encourages investment rather than depreciate it. Naga et al (2015) examined the effect of remittances on Egypt's economic growth. Using time series data from 1977-2013. Multiple linear regression model has been used. The extracted results showed that a strong positive and significant relationship between investment and gross domestic product per capita, while insignificant positive relationships between remittances and gross domestic product per capita. Ould (2015) checked out the role of external debt on economic growth: Evidence from Mauritania. Using time series data from 1989-2012. Ordinary least square method has been used. Domestic product used as dependent variable and external debt and debt servicing as independent variables. The results indicated that the positive relationship between the gross domestic product and external debt while negative relationship between gross domestic product and debt servicing. The policy implications suggested that the Mauritanian government should reduce its dependence on external debt by stepping up to boost internal revenue sources. Zahidi et al (2016) checked out remittances, institutions and economic growth in North Africa countries. Using panel data from 1980-2012. Using the systematic Generalized method of moments. The results showed that positive relationship between remittances and economic growth. Policy suggested that greater freedom of economic activities benefits more from the presence of remittances. Belmimoun et al (2014) examined the impact of migrant remittances on the economic growth empirical study: case of Algeria (1970-2010). Using time series data from 1970-2010. The vector error correction model has been used. The dependent variable represented by gross domestic product per capita and independent variable represented by remittances gross fixed capital formulation and household final consumption expenditure. The results showed that remittances have a negative impact on the Algerian economy in both short and long-run.

Hussain et al (2015) analyzed the relationship between economic growth and debt, an empirical analysis for Sub-Saharan Africa. Granger causality test has been applied. The results showed that negative relationship between debt and economic growth. Saad (2012) examined the causality between economic growth and external debt servicing: The case of Lebanon. Time series data have been used from 1970-2010. VECM method has been used. The estimation results showed that both short-run and long-run relationship existing among variables. Georgive (2012) checked out the implications of public debt on economic growth and development. Panel data used from 1980-2012. The estimation results showed that economic growth slows down leads to an increase in the budget deficit through reduce public revenue, leading to new debt issuance, and also showed that debt not directly influenced economic growth but crowds out investments through higher interest rates, increase uncertainty and higher debt servicing costs. Spilioti (2015) analyzed the relationship between the government debt and gross domestic product growth: evidence of the Euro area countries. Using panel data from 1981-2014. The results indicated that the positive impact of debt on economic growth and statistically highly significant. Afonoso et al (2015) checked out the role of government debt in economic growth. Panel data used from 1970-2012. The results indicated that the negative impact of -0.01% for each 1% increment of public debt, although debt service has a 10 times worse off effect on growth. Fatai (2016) examined the causal Nexus between external debt and economic growth: The Nigerian case. Time series data used from 1970-2014. VECM method has been used. The estimation results extracted that bidirectional causality going from external debt stock and economic growth, external debt service payment and economic growth and unidirectional granger causality going from external debt stock and external debt service payments. Ahmad (2010) analyzed the migrant worker remittances and economic growth: Evidence from Bangladesh. Time series data used from 1995-2006. The estimation results showed that remittances have been statistically significant, but have a negative impact on growth.

### III. Theoretical Framework

We begin our analysis with Smith, who in the fifth book (chapter III) of the *Wealth of Nations* [1776] discusses the economic effects of public debt. In the forty-one pages of this chapter, Smith argues that governments should not run budget deficits, because the accumulation of debt is considered “pernicious” for the nation even if all of it is owed to domestic investors. In fact, Smith attacks the mercantilist notion according to which the payment of interest on the public debt is like “the right hand which pays the left”. For Smith this is an “apology founded altogether on the sophistry of the mercantile system”. In this theory Smith argues that the Government should take external debt, but use of that debt should be efficient. Government should take steps which can be productive for the economy. The external debt should be beneficial for the economy and for development. In the fifth book (chapter III) of the *Wealth of Nation* [1776] discusses the economic effects of public debt. In the analysis of public debt Ricardo share views on the unproductive character of state expenditures and on the notion that their financing via public borrowing decreases the invertible product and, therefore, it becomes detrimental to society’s capacity to accumulate wealth. Ricardo argues that public borrowing or public debt can reduce the investment because mostly in developing countries government work an inefficient way they do not use the external debt efficiently and so the debt burden increase day by day in many developing countries. The data are used from 1975-2015. Mostly data are taken from an economic survey of Pakistan and the World Bank. Data on remittances taken from an economic survey of Pakistan.

#### III.I. Model Specification

Following the methodologies of Ali (2015), Ali and Rehman (2015), Haider and Ali (2015), Ali and Bibi (2016) and Ali (2018). Our model can be specified as:

$$GDP = \beta_1 \text{popd} + \beta_2 \text{trade} + \beta_3 \text{gcf} + \beta_4 \text{remitt} + \beta_5 \text{debt} + \mu$$

This equation shows that GDP is the function of population density, trade, gross capital formation, personal remittances and debt.

Here:

GDP: The gross domestic product (dependent variable).

Popd: Population density.

GCF: Gross capital formation.

Remit: Personal Remittances.  
 Trade: Trade % of GDP.  
 Debt: Foreign Debt

Our model is:

$$Y_t = \beta_1 + \beta_2 X_{2t} + \beta_3 X_{3t} + \beta_4 X_{4t} + \beta_5 X_{5t} + \mu_t$$

#### IV. Results and Interpretation

This data covering the sample period, which uses for analysis, is taken from World Development Indicators (World Bank, 2014). Therefore, we start our analysis by observing the descriptive statistic of each variable.

**Table 1**

Variables	GDP	EXD	GCF	POPD	PR	TRADE
Mean	4.06E+11	5.75E+10	1.17E+11	428.5880	2.98E+09	93.46542
Maximum	1.74E+13	1.77E+12	4.93E+12	19073.07	7.04E+10	438.7612
Minimum	37259690	1.45E+08	78072111	0.137154	0.000000	19.45883
Std. Dev.	1.58E+12	1.86E+11	4.82E+11	1952.312	7.12E+09	55.48652
Jarque-Bera	49537.83	18090.05	37517.59	52210.06	16344.18	1660.619
Probability	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Observations	190	123	167	215	185	178

In table 1, results show that all selected countries the average of GDP is 4.06 (current us\$), average of external debt is 7.75 (current us\$), average of Gross capital formation is 1.17 (current us\$), average of Population density is 428.5880 (people per sq.km of land area), average of personal remittances received in (current us\$) is 2.98 and average of trade as a percentage of GDP is 93.46542. In the year 2014 find the maximum range of GDP is 1.74E+13 in the United States and the minimum GDP is 37259690 in Tuvalu. The maximum external debt is 1.77E+12 in China and minimum is 1.45E+08 in Comoros. The maximum value of Gross Capital Formation is 4.93E+12 in China and minimum is 78072111 in Dominica. The maximum range of Population density is 19073.07 in Macao SAR, China and minimum is 0.137154 in Greenland. The maximum range of personal remittances is 7.04E+10 in India and minimum is 0.000000. The maximum range of trade is 438.7612 in Hong Kong SAR, China and minimum is 19.45883 in Sudan. Jarque-Bera test use to check the normality in variables and normality criteria is if the p-value greater than  $\alpha$ , ( $\alpha = 0.05$ ) which shows that the data is normally distributed. The probability of JB for GDP is (0.000000) which shows that data is not normally distributed. The probability of external debt is (0.000000) which shows that data is not normally distributed. The probability of JB for Gross Capital Formation is (0.000000) and probability for population density is (0.000000) which shows that data is not normally distributed. The probability of JB test for personal remittances is (0.000000) and probability for trade is (0.000000) which also shows that data is not normally distributed.

**Table 2**

Dependent Variable: GDP				
Variables	Coefficient	Std. Error	t-Statistic	Prob.
EXD	2.126052	0.117371	18.11392	0.0000
GCF	1.353050	0.045311	29.86119	0.0000
POPD	-53730791	55172205	-0.973874	0.3326
PR	2.066149	1.204443	1.715440	0.0895
TRADE	-1.13E+09	2.88E+08	-3.933358	0.0002
C	9.24E+10	2.70E+10	3.421955	0.0009

In this table 2, GDP is dependent variable. By using cross sectional Ordinary Least Square method, we find some results which indicate that 1 unit (current us\$) increase in external debt, GDP increases 2.126052 (current us\$), external debt is statistically significant and positive impact on GDP. If Gross Capital

Formation increases by 1 unit (current us\$), GDP increase 1.353050 (current us\$). It has a positive impact on GDP and statistically significant, While 1 unit (people per sq.km of land area) increase in Population density, GDP decreases 53730791 (people per sq.km of land area), statistically insignificant and its negative impact on GDP. If Personal Remittances increases 1 unit (current us\$), GDP increases by 2.066149 (current us\$), Personal remittances positively impact to GDP and statistically significant. When Trade increases by 1 percent, GDP decrease 1.13%, trade is statistically significant, but it has some negative impacts on GDP. And R2 is 0.993928 which states that 99% variation in GDP is due to these variables and remaining 1% is unexplained or explained by other factors which are not incorporated in this model.

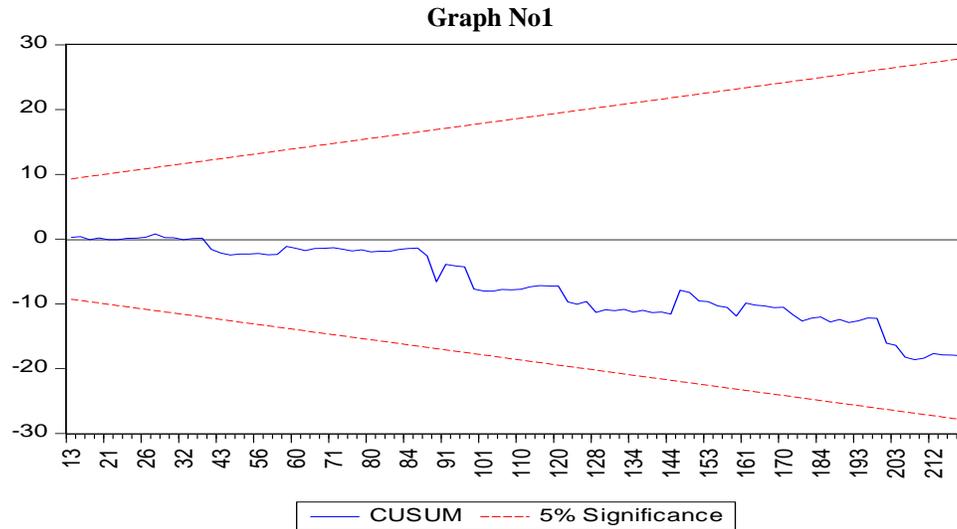


Table 1 results interpret by using stability test. Stability test uses to check the stability of the model. We use the cumulative sum of recursive residual (CUSUM) to check the stability of the model. In this figure use straight lines which represent the critical boundaries at 5% level of significance and horizontal line show the observations. Zigzag line lies between critical boundaries which show that our model is stable.

**Table 3**

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	1.508912	Prob. F(1,95)	0.2223
Obs*R-squared	1.594765	Prob. Chi-Square(1)	0.2066

To test the Serial Correlation, we use Breusch-Godfrey LM test. From the regression results we find that serial correlation does not exist in this regression result because the value of F-Statistics is very small and p-value is greater than 0.05 which is 0.2223 so, we do not reject the null hypothesis.

**Table 4**

Heteroskedasticity Test: ARCH

F-statistic	0.000167	Prob. F(1,49)	0.9897
Obs*R-squared	0.000174	Prob. Chi-Square(1)	0.9895

Table 4 interprets the result of an ARCH test of Heteroskedasticity. According to this test, the p-value of f-statistic is 0.9897, which is greater than 0.05 that is level of significance. The result shows that there is no Heteroskedasticity. So, we do not reject the null hypothesis.

## V. Conclusion and Policy Recommendation

The role of foreign debt, Remittances on economic growth has been the subject of broad research over the previous decade. This chapter summarizes the empirical results of the earlier chapters provide the overall conclusions of the study. Some recommendations and policy recommendations are also suggested in the light of our empirical results. The study was planned to investigate the role of foreign debt, remittances on economic growth in cross countries by using cross sectional data. Data were taken from about 217 countries, including Afghanistan, Pakistan, India, Nigeria, Iran, Oman, Turkey, Bangladesh, Iraq and China from the annually period 2014. To find the role of foreign debt, remittances on economic growth used cross sectional regression. We had revised the earlier studies the role of foreign debt, remittances on economic growth and found mixed results. The researcher has a different point of view. Therefore, this motive is behind this research. This study is aimed at studying remittances across the human development in developing countries. Results show that external debt and gross capital formation have significant and positive impacts on economic growth. Population density has an insignificant negative impact on GDP. Personal remittances have significant and positive impacts on GDP, while trade has significant negative impacts on GDP. We justify that foreign debt, remittances are two factors, but there are many other factors which can increase the economic growth. For example, foreign direct investment, official development assistance and Foreign aids etc. These factors make a reason for the change in human development in developing countries and accept foreign debt, remittances, another factor also affects the economic growth. Finally, the results investigate that there is no serial correlation between foreign debt, remittances and economic growth and there is no Heteroskedasticity between foreign debt, remittances and economic growth. The results of this study have an extensive importance for policy makers. We can suggest to policy makers that how foreign debt, remittances can extend the economic growth, especially in developing countries.

- Particularly in Pakistan, we can suggest the policy makers if government decreases the tax on money transfer, then people will send their money through formal method and through this method, all transfer payments will record in the government.
- We suggest the policy makers for the purpose of economic growth, the government should need to lower the cost on money transfer foreigner to their home country.
- Trade as a GDP percentage has a negative impact on economic growth in developing countries. We can suggest policy makers if developing countries promote the exports and make the substitute of imported goods, then we can increase the economic growth.
- We suggest the policy maker for the purpose of economic growth to use the foreign debt in productive projects so that economic growth of particularly developing countries can increase.

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