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Financial Access, Remittance and Economic Growth: Evidence From Developing Countries

by

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This work is dedicated to my beloved parents who supported me, encourage me, and prayed for me and to my respected supervisor Dr. Nousheen Tariq Bhutta, who has been a constant source of inspiration.



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Abstract

The study examines the relation between financial access, remittance, and economic growth. The specific goal of the study is to investigate the possible effect of financial access on economic growth, whether remittances promote economic growth or not, the effect of remittances on economic growth considering access to financial services. In this study we use panel data estimation techniques to investigate the relationship between financial access, remittance and economic growth on 70 developing countries over the period of time 2004 to 2017. In addition we examine the impact of financial development on economic growth. The results show a significant and positive effect of financial access and remittance on economic growth.

Keywords: Financial access, remittance, and economic growth.

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Abbreviations

WDI	World Development Indicators
IMF	International Monetary Fund
FA	Financial Access
FD	Financial Development
OLS	Ordinary Least Square
DC	Developing Countries
GDP	Log of GDP Per Capita

Chapter 1

Introduction

The World Bank reported that the flow of remittance to the developing countries decreased from 2016 to 2017 but the officially recorded remittance increased from \$429 billion to \$466 billion. It is predictable that remittance would increase in 2018 by 4.1 percent with an estimated value of \$485 billion in 2018. The highest remittances receiving of developing countries are namely, India 69 billion Dollars, China 64 billion Dollars, the Philippines 33 billion Dollar, Mexico 31 billion Dollar, Nigeria 22 billion Dollar, Egypt 20 billion Dollar Source World Bank (2018).

The main source of funds for most of the developing countries is remittances. Remittance inflow provides greater source of finance compare to other basis of economic income in the developing countries (Chami, et al, 2012).

Remittance is also perceived as the main source of income for the remittance receiving countries in exchange for the labor force they are providing. Based on 2017 Migration Report of United Nations, the most number of migrants came from Asia and Africa. Migrant's remittances have a substantial role in remittance receiving country. It is evident that an increase in remittance follows a higher increase in GDP (Masduzzaman, 2014).

Remittances have been a substitute to foreign direct investment on developing countries. Most of the developing countries established remittance as supplementary for debt market. Remittances aids, credit restraint which adds to the

progress of the distribution of investments and to the enhancement of economic growth. Based on the recurring cycle of remittance, it is evident that remittance has a massive impact on the GDP in developing countries (Giuliano et al, 2009).

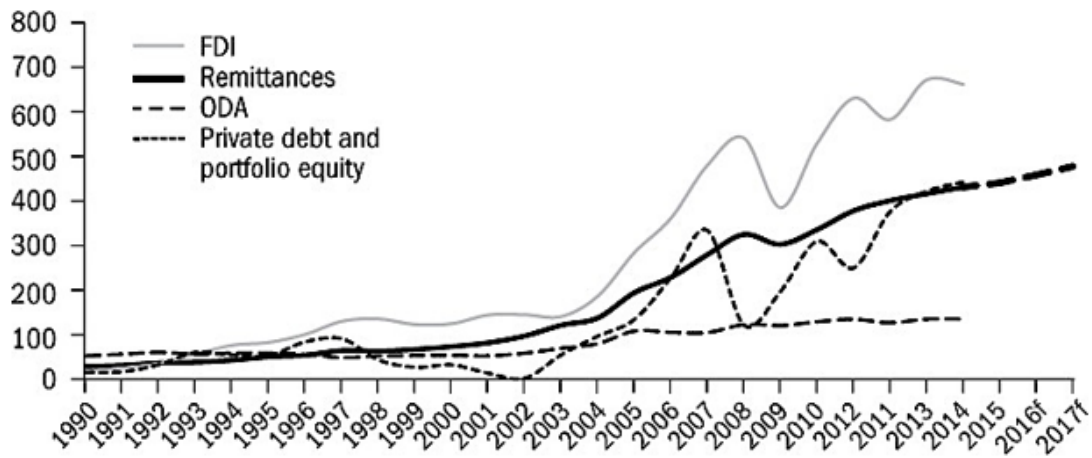


FIGURE 1.1: The flow of remittance to developing countries compared to other sources from 1990 to 2017. (Source World Bank 2017)

According to Dastidar (2017) remittance can also be a medium of investment utilization including the substitution of arrears through liquidity to the market. Remittance helped the economic growth of countries with less financial restriction. The range of profit on remittance is based on economic foundation in the receiving country. Countries with improved financial institutions to benefit from remittance income have better chances of increasing the economic growth.

Philip, et al (2001), bank-based financial systems accelerated GDP growth in long run more than capital-based systems. In addition, stock markets may help long-term growth of production, its influence best in small amounts as compared to banking systems. In particular, both banks and stock markets appear to have contributed to the growth of production in Germany, France and Japan. Finally, the connection in the United States and the United Kingdom appears to be weak and from growth to financial development. Bank-based financial systems can promote more in the GDP growth of capital in the market.

Despite of having a notable financial growth due to remittance, emigrant countries still face major challenges like the devaluation of the exchange rate which

impacted negatively on the financial development of the countries. Fund transfer is not based on economic structure of the receiving country which is the reason why the emigrant countries experience financial loss regardless on the increase of remittance (Awad and Sirag, 2015). Another challenge is when the receiving faction of the remittance doubt the financial sector and prefer other ways of investing the inflow or when migrants instantaneously consume their income on imported goods. Developing countries meant to enhance financial sectors to increase saving, overall investment and improve quality of the investment Chowdhury, (2016).

Financial development and remittances have a significant positive impact on economic growth. A well-developed financial structure of the country has an important effect to enhance the effect on GDP growth that is, countries experience a raise in growth rate which has developed financial sectors (Abida, and Mohamed, 2014).

Conditional convergence found in the economic growth and also in financial development for middle and high income countries (Michael, 2009). Remittances effected financial sector directly through better access among households and they are catalyst for financial access for poor households but they make difference to the wealthier from urban areas also they have an important effect on saving among receiving households in Mexico. Remittances promote economic and financial development in developing countries through many ways, remittances provide finance for needed expenditure; consumption and also accelerated the demand of goods in the economy so many industries get benefits from increase in demand. Remittances can affect GDP growth through investment in developing countries.

Masuduzzaman (2014) Migrants remittances have a substantial role in remittance receiving country. It is evident that an increase in remittance follows a higher increase in GDP. He used VEC model along with Johansen test to find the long-run and the short run between remittance-financed development and remittance-growth. Remittances effected financial sector directly through better access among households and they are catalyst for financial access for poor households but they

make difference to the wealthier from urban areas also they have an important effect on saving among receiving households in Bangladesh. How professionally it delivered information and monitoring function, liquidity, and risk sharing. Stock market played a vital role in developing countries. In addition, the stock-based and bank-based performs different functions. Stock market offers boosting liquidity and trading risk and banks focus on the relationships with companies to acquire information about ongoing projects.

To increase economic growth in the developing countries, it is essential to study the relationship among remittance, financial development, and economic growth. Remittances are channeled into investments, the accumulation of human capital and the small enterprises, how they improve the financial systems and access to financial resources. The main receivers of remittances are on consumption and expenditures, land and other kinds of financial assets that are associated with the economic growth (Bettin and Zazzaro, 2011).

The financial systems are instruments, institutions, and markets alongside with legal and regulatory that authorizations the flow of money to enabled economic activity. It provided important information about investment and capital allocation. Financial intermediaries observe investment and helped in increasing productivity. Better financial management helped trade and managing risk. The enhancement of financial services contains the formation and development of financial instruments, market, and institutions that support investment and the process of growth. The relation can also vary based on time period. In the longer duration, remittances can be an alternative resource of financing in replacement of consumption of the domestic financial sector. In shorter duration, the role of remittances is a reservation stock for profit variation (Uddin, 2013).

By using panel smooth transition regression (PSTR) approach Eggoh, (2010) this model is more flexible and instinctual than the other models are used in the literature. This model indicated that the impact of remittances to move from one country to another depending the variables are used in the study, in this study the

main variable is financial development. The effect of remittances depends on financial development. This model provides parametric approach capturing both time variability and cross-section heterogeneity of the effect of remittance depending on financial development.

Financial development has a huge impact on economic growth of developing countries. It elevated GDP growth through industrial innovation, improvements on assets distribution among others. A more advanced financial system expands faster over long periods of time. Moreover, it promotes extension of financial access and that would result to an increase in income degeneration. A well consolidated and improved financial development which is more driven in nature and response to the migrants are the keys to a more effective economic growth (Akonji and Wakili, 2013).

A well implemented financial sector development requires having strong rules and regulation as well as an administration of all vital units essential for economic growth. Development in finance can generate or obliterate the economic growth of a country. Thus, acquiring a dependable development is essential and has been a series of deliberation among conservative theorist in financial sector policies (World Bank, 2016).

Caldero and Lin, (2003) suggested financial development enhanced GDP growth by technological changes and capital improvement. Furthermore, the effect of financial intermediaries was larger in developing countries than developing countries and the sampling interval longer the sampling interval larger the effect. In addition, it increased GDP growth across countries, financial developing is an integral factor of economic growth. The study also suggested that there is bidirectional causality in industrial and developing countries, which means financial depth raises growth and growth impels financial development.

Panicos et al (1996) financial reforms contributed financial deepening and it also contributed to the process of economic growth. Financial development varies from

country to country because it depended on their institutional characteristics, countries policies and implementation of the policies.

Sibindi (2014) tested the integration between the variables Apply Johansen's method. Emigrant countries still face major challenges like the devaluation of the exchange rate which impacted negatively on the financial development of the countries. Fund transfer is not based on economic structure of the receiving country which is the reason why the emigrant countries experience financial loss regardless on the increase of remittance. The level of profit on remittance is based on economic conditions in the receiving country. Countries with improved financial institution to benefit from remittances income have better chances of increasing the economic growth. Moreover the results suggested that financial is cause to promote the inflow of the remittance. They also mentioned that remittance is not a substitute of financial development; it is just a compliment to financial development.

According to Alhamada (2011) suggested how personal remittances and financial influenced development GDP volatility? His study showed the effect of remittance on economic growth volatility is no straight and it changes time to time in function of financial development across countries. A stabilizing role of remittances depend on how high the level of financial development is and also better way of use of remittances.

Najeeb et al (2012) identified the level of stock market persuades on economic growth and how efficiently it delivers information and monitoring function, liquidity, pooling and risk sharing. Stock market played an important role in developing markets. In addition, the stock-based and bank-based performs different functions. Stock market offers boosting liquidity and trading risk and banks focus on the relationships with companies to acquire information about ongoing projects. Banking sector development and stock market have complimentary and significant roles in economic growth.

According to Catrinescu et al (2009) the function of the financial institution is important in how remittance affects the economy Growth. A healthy financial institutional environment was created have affected the volume and effectiveness of the investment; that's why through good institutions transfers could be more efficiently possible. They supported the argument the effect depends on the country institutions that are suitable for productivity use of remittances. Good governance, Low ethnic tensions, good socio-economic conditions are law and order situation are important for successful use of remittances inflow. The effective government is experimenting to encourage that transfers be made are unlikely to be of significant economic benefit. However because institutions seem to be important in what ways Remittances are used, it is important to have improved quality institution to contribute economic growth. In addition, the variables are also important and everything displays the expected sign government stability, socio-economic conditions and law and order situation of the country.

Arshad, et al, (2005) there is a positive and significant impact of financial development on economic growth in long run and the effect of interest rate policy is lesser than the effect of financial development on economic growth in Pakistan, to promote economic growth, accessibility of funds is more vital than the cost of the fund. Furthermore, the effect of financial development is positive and significant on economic growth in short run.

According to Kabir et al (2011) study gave mixed results and a reciprocated causal relationship or one directional from growth to financing in different regions. Furthermore, sector variables such as government spending and trade have a vital role in explaining economic growth. Therefore why a financial system works well is an essential but not enough condition for accomplishing sustainable growth. In addition, according to income level of the countries by the World Bank, low, middle and high income countries effective financial structures cause to increase in economic growth. The derivation decisions of annual GDP growth rates to verify the approximate measures of financial performance are the most vital to consider

economic growth over time and its contribution explain the economic growth of different geographical regions and income groups.

Dilek, et al (2016) argued stock market and credit market development have positive long run impact on GDP but the credit market based financial systems accelerated economic growth in long run more than stock market- based. Furthermore, financial development has a positive effect on the economic growth in two economies named as stock-market based and bank-based. The study also indicated that security of markets, increasing the openness and competitiveness create active financial intermediaries.

Philip, el al (2001) suggested bank-based financial systems accelerated economic growth in the long run more than the capital-based systems. In addition, stock markets may help Long-term growth of production; it influenced best in small amount as compare to banking system. In particular, both banks and stock markets appear to have contributing to the growth of production in Germany, France and Japan. Finally the impact the United States and the United Kingdom appeared to be less from growth to financial development. Bank-based financial systems can promote more in the long term growth of capital in the market.

Jeremy, (1990), suggested growth provided resources to financial structure and also investment could be effective for higher growth. Remittances promote economic and financial development in developing countries through many ways, remittances provide finance for needed expenditure; consumption and also accelerated the demand of goods in the economy so many industries get benefits from increase in demand. Growth is low in beginning stage when income increases, economic growth increases, financial structure immense and income inequality will be increase.

Woo, (1986) less development countries have supply-leading causality pattern is more than demand causality pattern and also it observed higher growth rate of GDP is highly associated with the supply-leading approach in less developed countries. Thus, in less development countries are distinguished by causal direction and in developed countries the directions is reverse causal.

1.1 Theoretical Background

There are many theories which support economic growth but two theories support in our study namely, 1 Neo classical growth theory and 2 Endogenous growth theory.

1.1.1 Neo Classical Growth Theory

Neo classical theory of growth has presented by Solow, (1956). According to Solow there are some factors that determine the economic growth following are as under; the inclusion of capital in an economy and how effectively people use the capital. Moreover, it indicates the relationship between labor and capital determines the economic growth. Finally the inclusion of technology in the economy improves the productivity of labor and also the economic output.

The production function of this theory $Y=A (K, L)$, in this function Y represent economic growth, A indicates the level of technology of the country, K denotes capital share and L represents the amount of labor. If there inputs increase it shows the positive effect on economic growth.

Neo classical theory also has some characteristics. 1 stock per capita and output per capita are measured as fixed. 2 saving rates are not affected by the growth rate but has a constant effect on the on the rate of production per capita. 3 two regions with equal rates of population growth and saving congregate to an equilibrium rate of output per capita.

1.1.2 Endogenous Growth Theory

Endogenous theory of growth has presented by Romer (1986) that determines investment in the human capital, knowledge and innovation are significant providers to economic growth. The endogenous theory of growth principally poses that the long run growth rate and economy of any country depends on policy measures.

Following are some principles of endogenous theory of growth.

1. If countries improve capital investment in infrastructure and also investment in health and education leads to increase in economic development.
2. The key factor of technological process depends on investment in research and development.
3. Human capital investment plays an important role in economic growth.

1.2 Research Gap

Review of literature suggests that a number of studies have been conducted to study economic growth preferences for financial development and remittances, Masuduzzaman (2014), Giuliano and Arranz (2008), Abida and Sghaier (2014), Chowdhury (2014), Uddin (2013), Sibindi (2014) in different regions. Moreover, most of studies have not been focused on individual access to financial services, it is important to focus on financial services with respect to adults and area wise in remittances receiving countries because the impact of remittances is mainly depend on how much people have access to financial services, Takeshi and Hamori (2016). In addition, mostly studies have been conducted in countries wise or smaller regions, it needs to be focused and conducted in developing countries because remittance is the main sources of income in these countries, Chami, et al, (2012).

1.3 Research Questions

Various studies have conducted on financial development and economic growth but there is less evidence available on financial access, remittance and economic growth by using the commercial bank branches per 1000 km² and commercial

bank branches per 100,000 adults proxy of financial access. The research paper aim to answer the following questions:

- What is the impact of financial access on economic growth?
- What is the effect of remittance on economic growth?
- What is the combined impact of financial access, remittance on economic growth?

1.4 Research Objectives

The aim of our study is to find out the relation of remittance and financial access to economic growth. The goal is to find evidence that both remittance and financial access has vital role on GDP growth.

1. The study aims to investigate the potential effect of financial access on economic growth in developing countries.
2. To examine whether remittances help to increase economic growth in the developing countries.
3. Finally, it focuses on the effect of financial access and remittances on economic growth.

1.5 Significance of the Study

This study hopes to establish and understanding on financial access, remittance and economic growth. Our study will suggest strategists in remittances receiving developing countries will frame policies for financial development so these countries can gain the maximum benefits from the remittances to the country's economic growth, it will also helpful to understand how remittances enlarged bank deposits

if they instantly use on consumption of goods or other ways of saving their flows and investments. Moreover, the findings of this study will rebound to be benefit of the developing countries considering the remittances and financial access play a vital role in economic growth. These countries that apply the recommended approach derived from the results of the study will be able to focus on financial services to individuals.

Chapter 2

Literature Review

2.1 Financial Development and Economic Growth

Yousif, (2002) investigated the link between financial development and growth by using panel data over the years 1977 to 1999 in 30 developing countries. The results are as follows. First, he found a bilateral relationship, and he also mentioned the results vary across countries with the indicators used to find financial development and it also depends on counties policies and institutions.

Jeremey, (1990), argued two themes; distribution of income and economic growth, and financial structure and economic development. Growth provided resources to financial structure and also investment could be effective for higher growth. Growth is low in beginning stage when income increases, economic growth increases, financial structure immense and income inequality will be increase. In addition the study focused on the economic growth, the distribution of financial gain, and also institutional development. The economic growth raises investment by organizational capital, in this way promotes economic growth. Institutions promote trade in economy.

Panicoso, et al, (2011), examined a few countries financial development caused bifacial relationship. Financial reforms contributed financial development and it

may also contribute to the development of economic growth. Financial development of countries varies because it depends on their institutional characteristics, countries policies and implementation of the policies.

Kabir et al (2011) investigated according to income level of the countries as categorized by World Bank, low, middle and high income countries. They also argued in these categorized countries effective financial structures cause to increase in economic growth. The study also aimed to provide the information of the relationship between remittances and economic growth in middle and low income countries based on the geographic location, they value both the panel regressions and the deviation Decisions of GDP growth rates to verify the approximate measures of financial performance are the most important to consider economic growth and its contribution explained the economic growth of different geographical regions and income groups.

Najeeb and Glenn, (2012) identified the level of stock market persuades on economic growth and how efficiently it provided monitoring function and information and liquidity, pooling and risk sharing. The results showed that the stock market played an important role in developing markets. In addition, this paper also suggested that the stock-based and bank-based performs different functions. Stock market offers boosting liquidity and trading risk and banks focus long-term relationships with companies to get information about ongoing projects. Overall the results showed that banking sector development and stock market have complementary and significant roles in economic growth.

Gemma et al (2010) argued that financial development positively influences economic development, financial development, stock market, it is same for both develop and developing countries. The effect of stock market and banking development on developing Asias growth is not large enough to be noticeable from the other regions of the world. Development of particular elements of financial system does not matter for counties growth but development of financial system as a whole.

Dilek, et al, (2016) examined how financial development effect economic growth. Their study developed convenient model for empirical application. The study used panel data the period 1989 to 2011 of 40 countries. The study also recommended that financial development plays essential role in economic development, although it varies across regions. The study also discussed the impact of stock market and credit market developments on GDP growth, which has a positive long-term impact on economic growth. In terms of FSI, impact of financial development is insignificant and positive on the growth of all financially developed economies based on banks and stock markets. It can therefore be argued that it is crucial for economic growth to oppose certain policies in its financial structure.

Gregorio, et al, (1995) the literature review and results indicated that financial caused to enhanced economic growth performance. This effect is, however, different from country to country and time to time. In addition, Latin American 1970s and 1980s, there might be a case where expectations of government bailouts and financial liberalization can cause to negative relationship economic growth and financial intermediation.

Arshad, (2008) studied the relationship of financial development on Pakistans economy over the time period 1961 to 2005. Study argued positive and significant impact of financial development on economic growth in long run and the effect of interest rate policy is less then it in growth of Pakistan, to promote economic growth, accessibility of funds is more vital than its cost.

Mohsin, et al, (2000) suggested strong positive is significant and financial depth is the main determinant across regions difference in growth. Furthermore, the study used five years non-over lapping average panel data and estimate the growth equation to explain the growth variation across time, when a time dimension introduced in the model the result became weaker.

Abdul et al, (2011) investigated the effect of financial sector development on economic growth in Pakistan over period 1978 to 2003. The study combined three measures of financial development by using PCA through composite financial dept.

indicator. The result indicated positive and significant relationship, for channeling funds from savers to borrower financial intermediation plays an important role.

Michiel, et al (2017) performed a meta-analysis 68 empirical studies out of 551 in total empirical studies that included private credit to Gross Domestic Products as an indicator of development. It estimated the impact is significant and positive in logarithmic estimation but it couldnt find significant effect in linear estimation. Overall results indicated that there is a positive but decreasing impact.

Arshad, et al (2005) analyzed how development effects Growth over the period 1971 to 2004 in Pakistan by using ADL (Autoregressive Distributed lag) approach. They found long term positive impact on economic growth, while investment is insignificant but positively correlated to income. Furthermore, changes in investment effect economic growth significantly and positively in short run. Moreover, it is stable in long run.

Yan, et al (2015) examined that in general financial development is negatively correlated with economic growth but in both primary and secondary industry there is no influenced of financial development into economic growth. Five independent variables used to investigate the relationship as follow labor force, financial development, export growth, inflation and capital growth. Moreover to examined the impact of financial development, four different models has been used after 1978 and divided industries into 3 different part as following primary, secondary and tertiary.

Petra, el al (2014) explored if any impact present between financial development on economic growth by performing meta-regression analysis. Approximately positive and significant has noticed to happen between these two variables, and study also investigated that there is not strong evidence of biasness in the publication. The results varied across the countries; it depended on set of control variables. Furthermore, financial development played vital role to accelerate GDP growth.

Meshach, (2011) investigated the correlation between financial integration and economic growth, the effect of financial integration on economic growth in both

direct and indirect. The direct effect suggested that financial integration promoted economic growth through accelerating domestic investment and the indirect effect result reveals that financial integration caused economic growth by domestic financial and institutional development. The study also suggested that the negative possible impact arises from volatility of capital flow, lack of economic stability and misallocation of capital flow.

Peter, (2002) examined the role of financial factors in four economies following are as under, Dutch Republic, England, the United States and Japan. Data presented for England 1700 to 1850, Japan 1880 to 1913, the Dutch Republic 1600 to 1794 and the United states 1790 to 1850 showed that inclusion of institutions, financial instruments and markers played vital role in accelerating commerce, industrial ion and commerce. Through regression with a sample countries data for post-1850 period provides additional information for finance in the economic growth. The finding are same as the more descriptive and traditional analysis.

Caldero and Lun (2003) financial development increased economic growth across countries, financial developing is an integral factor of economic growth. The study also suggested that there is bidirectional causality in industrial and developing countries, which means financial depth raises growth and growth impels financial development. Furthermore, the effect of financial intermediaries in larger in developing countries than developing countries and the effect depended on the sample. In addition, financial development increases economic growth through technological changes and capital accumulation.

Philip, el al (2001) bank-based financial systems accelerated economic growth in the long run more than the capital-based systems. In addition, stock markets may help Long-term growth of production, its influence best in small amount as compare to banking system. In particular, both banks and stock markets appear to have contributing to the growth of production in Germany, France and Japan. Finally, effect in the United States and the United Kingdom seemed weak from growth to financial development. Bank-based financial systems can promote

more in the long term growth of capital in the market. Moreover, it showed that stock market fluctuations have had negative effects. Japan and France appear to share British stockholders both have negative effects on development and financial disbursement. Finally, the insignificant impact of German stock markets was negligible.

Woo, (1986) studied the relationship by using the panel data model of 56 countries over the period of time 1951 to 1980. The study found that less development countries have supply pattern is more than demand causality pattern and also it observed higher growth rate of GDP is highly associated with the supply-leading approach in less developed countries. Thus, in less development countries are distinguished by causal direction and in developed countries the directions is reverse causal.

Dilek, et al (2016) examined the effect using panel data of 40 countries with stock and credit markets over the period 1989-2011. The study examined that both stock market and credit market development have positive long run impact on GDP per capita but the credit market based financial systems accelerate economic growth in long run more than stock market- based. Furthermore, results reveal positive effect with the economic growth in two economies named as stock based and bank based markets. The study also indicated that security of markets, increasing the openness and competitiveness create active financial intermediaries.

Jordan, et al (2001) investigated how financial development effects growth by using VAR model and Granger causality procedure for nine countries (Australia, Denmark, Canada, France, Japan, Italy, UK and New Zealand) of organization for economic and development in china. Despite in conflicting theoretical arguments in respect of direction of causality, the study examined that there is slight support to financial development promotes economic growth.

Guglielino, et al (2004) examined stock market development and economic growth effect by using panel date of 7 selected countries (Argentina, Chile, Korea, Greece, Philippines, Malaysia and Portugal) over the period 1977 to 1998. A sign of

causality between domestic credit and economic growth; it found evidence for three countries when the causality was between bank deposits and economic growth. A causal link between financial growth and economic growth has noticed, but these results may be due to the elimination of main variable, they have also analyzed a triple relationship to create a model of dynamic interaction between financial development. The image changed radically, the causal link was five in seven, for the development of the stock market.

Rati, et al, (1999) investigated the connection between financial improvement and economic development by using cross section data of 95 countries. The study suggested that there is bidirectional causality in industrial and developing countries, which means financial improvement raises growth and growth impels financial development. It also suggested weakly negative or negligible results.

Liang, et al, (2006) investigated financial expansion and economic relationship using vector autoregressive as a specification in china over the period of time 1952 to 2001. The study suggested unidirectional between them. In addition, growth is affected by financial development through different ways like, enhancing efficient capital allocation and raising investment level. Furthermore, physical capital stock, financial development, real interest rate and international trade are all significantly and economically connected to growth.

Suleiman, et al (2008) used Granger causality test in a synchronization frame and an error correction model. The model includes GDP, measuring development and the amount of investment in Growth. The study suggested bidirectional relationship by using all the financial measures. Moreover, the study found an unplanned causality between development and growth by increasing finance for investment.

Habib, (2000) showed financial development indicators corresponded with productivity and investment and some of the results were affected by the addition of countrys fixed effect. The direct effect suggested that financial integration promoted economic growth through accelerating domestic investment and the indirect effect result reveals that financial integration caused economic growth by domestic

financial and institutional development. The study also suggested that the negative possible impact arises from volatility of capital flow, lack of economic stability and misallocation of capital flow. In addition the study focused on the economic growth, the distribution of financial gain, and also institutional development. The economic growth raises investment by organizational capital, in this way promotes economic growth. Institutions promote trade in economy.

Takeshi, et al (2013) studied financial permeation and growth by using the panel data for years 2004 to 2010 on 37 countries in Africa. The study revealed that financial permeation with financial access promoted growth in these countries. Moreover, the study found that loans from banks, number of commercial banks, and also the deposits in banks, have significant and positive effect on GDP per capita. In addition, the level of education matters the most in African countries.

Christopoulos et al (2004) investigated financial depth and GDP growth relationship using cross-sectional and time data over the period 1970 to 2000 in ten developing countries named as, (Paraguay, Colombia, Peru, Ecuador, Mexico, Honduras, Thailand, Kenya, Dominican Republic and Jamaica).

H_{A1} = There is significant positive relationship between financial access and economic growth.

2.2 Remittances and Economic Growth

Oshota et al (2014) examined if there is possible effect over the period 1981 to 2011 in Nigeria. The impact of remittance on growth is positive in long run. The study also suggested that if remittances increase by 1 % would cause to increase economic growth by 1.95% in long run. Moreover, the study showed that physical investment accelerates economic growth and also productivity. In addition, foreign aid had significant impact on in long run and as well as in short run. In addition it showed trade plays significant and positive role in encouraging economic growth.

Dastidar (2017) analyzed the link between remittance and economic growth over the years 1990-2014 for 62 countries. The study revealed no significant impact of remittance on growth. It only showed that remittances caused to promote economic growth. In more open economies remittance accelerates economic growth and found no significant impact, which is due to remittances are not enough for economic growth itself. It depended on the countries institutions, financial markets and macro-economic environment to take benefit of remittances on economic growth.

Samer, et al (2017) used Augmented Dickey-Fuller Test to test the variables, applied the (ECM) Error Correction Model and the Johansen co-integration method by using annual data 1970 to 2016. The study showed that the relationship between remittances and is positive and stable in long run. In addition, it revealed that in long run remittances cause to promote economic growth, but it found no change is remittances in African countries, people prefer consumption rather than investment so that's why there is no role of remittance on economic growth, there is also a reason why remittance doesn't affect economic growth is sub-Saharan African is: the financial structure of African countries is not well developed, because it doesn't increase capital investment, there is no change is remittances in African countries, people prefer consumption rather than investment so that's why there is no role of remittance on economic growth.

Pradhan, (2016) studied the effect of remittances on growth in (Russian Federation, China, India, South Africa and Brazil) by estimating panel data for the years 1994 to 2013. The results showed long-run effect but the PVECM showed a long run negative effect.

Beatrice, et al (2015) found a bi-directional relationship between international remittances and economic growth and it showed significant and positive effect of investment, economic growth and government expenditure. Moreover, the effect of inflation and secondary enrollment is negative on economic growth.

Kunofiwa, (2015) analyzed the relationship among banking sector development and personal remittances by using time series data over the time period 1975 to 2011 in Israel. The study used vector and error correction model and Johansen test to investigate direction of causality and existence of relationship in both long run and short run. The results showed that: (1) they found insignificant relationship between personal remittance and economic growth, (2) and also the study revealed a significant long run relationship (3) finally it showed no long run relationship among banking sector development, personal remittances and economic growth and no existence of short run causality relationship among banking sector development, personal remittances and growth.

Danmola et al (2013) inquired migrant remittance on growth impact in Nigeria. The study showed that remittance causes to raise the income level of individual, increase consumption and reduce poverty so it directly effects and promote economic growth in Nigeria. There was enough part of empirical proof which showed that people with low level income spend extra of additions to profits on primary requirements than do better profits families. International countries in which low earnings families must stay in poorly assembled confined housing with few fundamental conveniences. The count of a combine of rooms, the introduction of a nicely or piped water, or electricity use can make an exquisite improvement within the value of life for a bad own family. In addition, all households do not receive remittance but remittances are very important to meet the need of households.

Arben, et al (2017) studied remittances effect on Albanian economic growth using time series data and by using ARDL over the time 1992 to 2015. The results showed a positive but not bi-directional impact. The result indicated that remittance improves the standard of living of the households which is the integral source of income for the people and also it is the link between development countries and migrants. Remittance boost development, Migrants respond to the economic, political, and social condition in their country by their remittances and also migrants

can contribute in numerous ways. Remittances accelerate economic growth but it depends on how they are utilized and the activities of the financial institutions of the country.

Rashid, et al, (2014) examined workers' remittances and economic growth by using (GMM) over the period 1973 to 2011 in Pakistan. The study revealed that workers' remittance played a significant and an essential part in Pakistan; the impact of workers' remittance on economic growth is positive and significant. Furthermore, workers' remittances importance increases day by day in remittance-receiving countries, after FDI (foreign direct investment) workers' remittance is the 2nd largest channel of financial inflow.

Ahortor, et al (2009) explored the influence of remittances on economic growth using annual panel data over the period 1996 to 2006 in 31 small-open developing countries. The study showed a positive impact of remittances on economic growth. Moreover, secondary school enrolments proxy, and investment have significant positive impact. In addition, government expenditure and economic openness used as control variables seemed to have a negative impact on growth across the regions. In addition, why the inflow of remittance has not increased economic growth is that remittances are generally not planned to assist as investments but family members finance to purchase their daily necessities. Remittances enable people to reduce poverty but they do not naturally turn their receivers into business. The interesting possibility remains that the remittances can be directed in some way into accomplishing both, but this needs more attention to understand the role of remittances played in households' lives and also financial systems that can help receivers of remittances make the most of the remittances they got.

Atif, et al, (2017) reviewed remittances on economic growth in Sudan by using annual data over the years 1977 to 2015 using ARDL (Auto regressive distributed lag), the results showed a negative effect. More specifically, through several mechanisms remittances seemed to have a negative impact, the depreciation of the exchange rate is one of them.

Arusha, (2012) showed that migrant remittance has a significant and positive impact on economic growth. The evidences showed openness encouraged migrants to increased transfer to their homelands. In addition, capital per capita and secondary school enrolment are sources of financial sector development. The results showed that remittance is main source of financing for them. Therefore, this article was an attempt to provided information to understand the implications and to test the hypothesis that Remittances are the main source of growth and economic development.

Dahal, (2014) showed remittances on financial development and human capital have a positive impact, but the impact of remittance on international trade and manufacturing growth is negative. In addition, remittances effect financial development positively through savings, investment and also with bank credit and deposits. Regarding human capital, remittances have positive link with secondary enrolment rates and reduction in mortality rates. In relation to productive remittance have negative link with growth.

Kratou, (2016) argued worker's remittances on economic growth by using data for the period 1984 to 2011. The effect is positive in long run and it is negative in short run, but the short-run effect is conditional with the economic growth. Moreover, remittances caused to increase economic growth but it depended on the financial system of the country. In addition the results showed that remittances were more productive in promoting countries economic growth with developed institutions. Can remittance respond to revolution? Remittance is the most important factor for financial inflow to the developing countries. The sample of the study is Tunisian migrants over time period 2000 to 2016. The result indicated that remittance improves the standard of living of the households which is the integral source of income for the people of Tunisia and also it is the link between development countries and migrants. Remittance boost development, Migrants respond to the economic, political, and social condition in their country by their remittances and also migrants can contributed in numerous ways to the current revolution.

Meyer (2016) analyzed six countries (Bulgaria, Albania, Macedonia, Romania, Bosnia and Moldova) effect of remittances on growth. The results showed that workers remittance effected economic growth positively and significantly. In addition workers remittance promoted economic growth but it depended on how the country uses in a productive way by investment. In addition, why the inflow of remittance has not prompted economic growth is remittances are generally not planned to assist as investments but family members finance to the purchase their daily necessities. Remittances enraged people to reduce poverty but they do not naturally turn their receivers into business. The interesting possibility remained that the remittances can be directed in some way into accomplishing both, but this need more attention to understand the role of remittances play in households lives and also financial systems that can help receivers of remittances make the most of the remittances they receive.

Malik, et al, (2009) Remittances are the main sources of inflows to the developing nations. Remittances have created a have major importance to balance the need and wants of households. In their study, on economic growth in Pakistan, the findings showed effect of workers remittances on economic growth is positive. Moreover, the results showed that, 1 percent increase in remittances lead to increase 1.84 percent in income. In addition, the remittances have been use n house hold consumption but it included to economy of Pakistan.

Uddin, et al, (2015) analyzed some of the largest remittances receiving countries in the world namely; Philippines, India, Bangladesh and Pakistan showed the impact is highly significant and positive in long run and the relationship between variables. Moreover, remittances played a dominant role to promote the economic growth of the selected countries. In addition, why the inflow of remittance has not prompted economic growth is remittances are generally not planned to assist as investments but family members finance to the purchase their daily necessities. Remittances enrage people to reduce poverty but they do not naturally turn their receivers into business. The interesting possibility remains that the remittances

can be directed in some way into accomplishing both, but this need more attention to understand the role of remittances play in households lives and also financial systems that can help receivers of remittances make the most of the remittances they received.

Mobeen, et al, (2014) examined the growth by using time series data over the years 1991 to 2010. After conducting multiple regression tests to examine the relationship, the results showed that workers remittances contributed in the economic growth. Thus, the role of workers remittances is the most important and significant in economic growth of Pakistan. In addition, why the inflow of remittance has not prompted economic growth is remittances are generally not planned to assist as investments but family members finance to the purchase their daily necessities. Remittances enrage people to reduce poverty but they do not naturally turn their receivers into business. The interesting possibility remains that the remittances can be directed in some way into accomplishing both, but this need more attention to understand the role of remittances play in households lives and also financial systems that can help receivers of remittances make the most of the remittances they received from the migrants.

Ahamada (2012) analyzed the causes, using panel data over the time 1980 to 2007 for 20 sub-Saharan African countries, the study found no relationship between remittances and economic growth, because it doesnt increase capital investment, there is no change is remittances in African countries, people prefer consumption rather than investment so thats why there is no role of remittance on economic growth, there is also a reason why remittance doesnt affect economic growth is sub-Saharan African is: the financial structure of African countries is not well developed. because it doesnt increase capital investment, there is no change is remittances in African countries, people prefer consumption rather than investment so thats why there is no role of remittance on economic growth, there was also a reason why remittance doesnt affect economic growth is sub-Saharan African: the financial structure of African countries is not well developed.

Junaid, et al (2012) investigated the effect of remittance on poverty reduction of time 1973 to 2010, the province wise research showed that the remittance affected the poverty and economic growth in Sindh, Baluchistan, Punjab but it is not clear KPK. The results of this study also suggest that international labor migration has significant potential benefits people in Pakistan. In the long run it is improving the growth and well-being of poor households with the increasing impact of remittances and welfare Enlarge with time. The result indicated that remittance improves the standard of living of the households which is the integral source of income for the people of Pakistan and also it is the link between development countries and migrants remittance boost development.

Abdel, et al, (2013) examined the impact of remittance, educational expenditure and growth in Philippine in 1984 to 2009. The results showed that remittance is main source of financing for the Philippines. Therefore, this article is an attempt to provide information to understand the implications and to test the hypothesis that Remittances are the main source of growth and economic development in the Philippines. The ARDL model used allowed researchers to study long-term and short-term strategies. The results showed a positive correlation. However, the results showed no evidence of impact between Philippine investment and economic growth rate, why there was a positive relation because due to some reasons: 1 the indirect impact of remittances in the Philippines. A huge percentage of Remittances used for private consumption, which has a positive impact on economic growth rate. 2 the indirect impact of educational expenditure is positive and has a higher flexibility (2.28%) as remittances (0.35%) due to the multiplier effect. the higher Education spending leads to a huge flow of remittances and thus to an increase at GDP growth rates.

Sami, (2012) analyzed the channels through which the remittances MENA countries as Algeria, Egypt, Iran, Algeria, Lebanon, Jordan, morocco, Mauritania, Oman, Syria, Sudan, Tunisia, West Bank Gaza, Yemen, Turkey and Djibouti. Economic factors associated with remittances put investment and consumption

channels under pressure to explain how remittances can affect growth. This effect was relatively low as most transfers were for consumption. A country wise investigation recommended that not all countries use the same use of remittances. In addition remittances showed no significant impact in countries where remittance is used for consumption purposes.

Freund, et al, (2008) investigated the relationship of remittance, informality and transaction cost in developing countries over the period 1995 to 2003. The study revealed the impact of remittance, educational expenditure and growth in Philippine in 1984 to 2009. The results showed that remittance is main source of financing for the Philippines. Therefore, this article was an attempt to provide information to understand the implications and to test the hypothesis that Remittances are the main source of growth and economic development in the Philippines. The ARDL model used allows researchers to study long-term and short-term strategies. The results showed a positive correlation. However, the results showed no evidence of a long-term impact between Philippine investment and economic growth rate, why there is a positive relation because due to some reasons: 1 the indirect impact of remittances in the Philippines. A huge percentage of Remittances are used for private consumption, which has a positive impact on economic growth rate. 2 the indirect impact of educational expenditure is positive and has a higher flexibility (2.28%) as remittances (0.35%) due to the multiplier effect. the higher Education spending leads to a huge flow of remittances and thus to an increase at GDP growth rates.

Amuedo, et al, (2010) investigated remittances from migrants to Latin America in United States for time period 1985 to 1993. To investigate this issue, after legalization, they were looking at changes in willingness to pay remittances and sums to each reviewed countries there is a large proportion of inflow remittance has used to improve the significant level of household basic needs. First the loss of workers normally in their high will, in maximum instances, lessen the relatives income get from home resources. So a part of income remittance will use to

compensate the loss and to hold the household's degree of consumption. Second, there was a enough part of empirical proof which showed that people with low level income spend extra of additions to profits on primary requirements than do better profits families. This is typically the case in Third World international countries in which low earnings families must stay in poorly assembled confined housing with few fundamental conveniences. The count of a combine of rooms, the introduction of a nicely or piped water, or electricity use can make an exquisite improvement within the value of life for a bad own family; lessen the relatives income get from home resources. So a part of income remittance will use to compensate the loss and to hold the household's degree of consumption. Second, there is a enough part of empirical proof which tells that people with low level income spend extra of additions to profits on primary requirements than do better profits families.

Pradhan, et al, (2008) investigated the effect of remittance on investment, consumption, exports and imports for Mediterranean countries by using panel data analysis over the time 1980 to 2002. The results showed different country importance of spending remittance on investment consumptions and imports. The huge variations in the remittances gave huge variations of economic growth. The changes in flow of remittances increased economic growth but inflows of remittances can also restraint economic growth with the favorable cases apparently being more dominant than unfavorable ones. The output effect can be determined by the amount of remittances in the country economy and the business and also the behavior of the households of the countries. In addition, why the inflow of remittance has not prompted economic growth is remittances are generally not planned to assist as investments but family members finance to the purchase their daily necessities. Remittances encouraged people to reduce poverty but they do not naturally turn their receivers into business. The interesting possibility remains that the remittances can be directed in some way into accomplishing both, but this need more attention to understand the role of remittances played in households lives and also financial systems that can help receivers of remittances make the

most of the remittances they receive.

Stahl, et al, (1986) examined how international workers remittance affected Asian development over the time 1980 to 1985 for seven developing countries namely: (Pakistan, India, Philippine, Thailand, Sri Lanka, Bangladesh, and South Korea). In each reviewed countries there is a large proportion of inflow remittance has used to improve the significant level of household basic needs. First the loss of workers normally in their high will, in maximum instances, lessen the relatives income get from home resources. So a part of income remittance used to compensate the loss and to hold the household's degree of consumption. Second, there was enough part of empirical proof which showed that people with low level income spend extra of additions to profits on primary requirements than do better profits families. International countries in which low earnings families must stay in poorly assembled confined housing with few fundamental conveniences. The count of a combine of rooms, the introduction of a nicely or piped water, or electricity use can make an exquisite improvement within the value of life for a bad own family. The equal can be stated with regard to the acquisition of customer durables and the money "wasted away" on these stuffs can substantially enhance the quality of lifestyles.

Glytsos (2005) investigated the effect of remittance on investment, consumption, exports and imports for Mediterranean countries by using panel data analysis over the time 1980 to 2002. The results showed different country importance of spending remittance on investment consumptions and imports. The huge variations in the remittances gave huge variations of economic growth. The changes in flow of remittances can increase economic growth but inflows of remittances can also restraint economic growth with the favorable cases apparently being more dominant than unfavorable ones. The output effect can be determined by the amount of remittances in the country economy and the business and also the behavior of the households of the countries. The study disclosed a constant country performance of instability and uncertainty, with great progressive and inter country variations

of remittance effects, the study also pointed to different inter country priorities of remittance spending and to an asymmetric impact of remittance changes, in the context that good done to growth by rising remittances is not as great as the harm done by falling remittances.

Chami et al (2003) examined can remittance respond to revolution? Remittance is the most important factor for financial inflow to the developing countries. The sample of the study is Tunisian migrants over time period 2000 to 2016. The result indicated that remittance improves the standard of living of the households which is the integral source of income for the people of Tunisia and also it is the link between development countries and migrants. Remittance boost development, Migrants respond to the economic, political, and social condition in their country by their remittances. In addition, why the inflow of remittance has not prompted economic growth is remittances are generally not planned to assist as investments but family members finance to the purchase their daily necessities. Remittances motivated people to reduce poverty but they do not naturally turn their receivers into business. The interesting possibility remained that the remittances can be directed in some way into accomplishing both, but this need more attention to understand the role of remittances play in households lives and also financial systems that can help receivers of remittances make the most of the remittances they received.

Barajas, et al, (2009) The contribution of remittances to economic growth was so little in remittance receiving countries and the results found that if remittances are accurately measured, and if growth equations are well instrumented, then the results could not find effect of remittances inflow on growth in long term. Furthermore, the study showed that generally the impact is negative. In addition, why the inflow of remittance has not increased economic growth is remittances are generally not planned to assist as investments but family members finance to the purchase their daily necessities. Remittances enrage people to reduce poverty but they do not naturally turn their receivers into business. The interesting possibility

remains that the remittances can be directed in some way into accomplishing both, but this need more attention to understand the role of remittances played in households lives and also financial systems that can help receivers of remittances make the most of the remittances they got.

Hein, (2005) the output effect can be determined by the amount of remittances in the country economy and the business and also the behavior of the households of the countries. In addition, why the inflow of remittance has not prompted economic growth is remittances are generally not planned to assist as investments but family members finance to the purchase their daily necessities. Remittances encouraged people to reduce poverty but they do not naturally turn their receivers into business. The interesting possibility remains that the remittances can be directed in some way into accomplishing both, but this need more attention to understand the role of remittances played in households lives and also financial systems that can help receivers of remittances make the most of the remittances they received for international emigrants. The huge variations in the remittances gave huge variations of economic growth.

The changes in flow of remittances increased economic growth but inflows of remittances can also restraint economic growth with the favorable cases apparently being more dominant than unfavorable ones.

Edelbloude, et al, (2017) argued remittance was the most important factor for financial inflow to the developing countries. The sample of the study is Tunisian migrants over time period 2000 to 2016. The result indicated that remittance improves the standard of living of the households which is the integral source of income for the people of Tunisia and also it is the link between development countries and migrants. Remittance boosted development, Migrants respond to the economic, political, and social condition in their country by their remittances and also migrants can contribute in numerous ways to the current revolution of Tunisian economy and society. In addition, they found strong and reasonable evidence that remittances related with the Arab revolution. Remittance plays

an important and positive role to absorb economic blows resulting from political tension in those countries

H_{A2} = There is significant positive relationship between remittance and economic growth.

2.3 Financial Development, Remittance and Economic Growth

Giuliano et al (2009) evaluated the remittance, financial development and economic growth in 100 remittance receiving developing countries for time 1975 to 2002. Study found that remittances provided financial acceleration in economic growth in developing countries by offering substitute options for investment, remittances helps countries to improve capital allocation, helped to reduce credit constraints and boosted economic growth. However, these results could not capture every passages through remittances can affect growth. They have not examined other possible country characteristic measures, including the institutional aspects that might explain effect.

Ndebbio (2004) examined the effect of financial deepening, and growth for the time 1980 to 1989 using panel data in 34 sub-Saharan African countries. His study identified some factors (removal fiscal deficits, reduction in inflation and elimination of some restrictions in financial systems) that cause to promoted economic growth. "Solicit savings by offering realistic interest rates". Financial intermediation or financial development can affect growth positively if the amount of investment has increase. And also financial development can also effect economic growth by improving the structure and amount of savings.

Juthathip (2007) studied the effect of remittance, poverty reduction and economic growth over the time 1993 to 2003 by using panel data in Asian developing countries. The study showed there is a significant and positive effect of remittance of

economic growth by increasing the investment and improvement of human capital. Furthermore, the remittance affects poverty positively and significantly by smoothing consumption and increasing income. This result indicates that remittances can increase even the Families who do not receive remittances, mainly due to the multiplier effects of increased expenses. As a migrant family the consumption of services increases or Goods that are produced in divisions with excess capacity can create extra demand jobs for other families who spend and create extra demand. The result could lead to a reduction of poverty; even some poor families do not get direct access inflow.

Deodat (2011) The results recommend that though financial development is directly related to economic growth, it's vital for mobilizing remittances from international migrants. The results conjointly revealed a bi-directional relation existing between international migrant remittal inflows and money deepening, whereas a one directional line of relation is traceable from remittances to economic growth. This suggested that, financial development as such is prejudices to growth during a low-income in Ghana, unless it succeeds in attracting non-debt foreign capital within the type of migrant remittances.

According to Sibindi (2014) tested the integration between the variables Apply Johansen's method. Emigrant countries still face major challenges like the devaluation of the exchange rate which impacted negatively on the financial development of the countries. Fund transfer is not based on economic structure of the receiving country which is the reason why the emigrant countries experience financial loss regardless on the increase of remittance. The level of profit on remittance is based on economic conditions in the receiving country. Countries with improved financial institution to benefit from remittances income have better chances of increasing the economic growth. Moreover the results suggested financial development has caused to promote the inflow of the remittance. They also mentioned that remittance is not a substitute of financial development; it is just a compliment to financial development.

Catrinescu et al (2009) According to panel data analysis showed significant impact and the analysis also suggested that the role of the financial institution is important in describing remittances impact on economy Growth. A healthy financial institutional atmosphere was created have affected the volume and effectiveness of the investment; that's why the presence of decent institutions, transfers could be possible channels more proficiently, eventually leading to higher performance. The results indicated that effective government is experimenting to encourage that transfers be made are not likely to be of significant economic benefit. However because institutions seem to be important in what ways remittances are used, it is important to have improved quality institution to contribute is economic growth and to achieve a positive impact on economic growth. In addition, the variables are also important and everything displays the expected sign. Government stability, socio-economic conditions and law and order have a positive effect of remittance on economic growth. This study maintained the argument that the effect of remittances on growth depends on the country institutions that are suitable for productivity use of remittances. Good governance, Low ethnic tensions, good socio-economic conditions are law and order situation are important for successful use of remittances inflow.

Fayissa (2010) investigated remittances on GDP growth by obtaining panel data over the time 1984 to 2014 for sub-Saharan African countries. The key goal of this study was to observe the outcome of remittances with respect to the opposite exterior sources of capital like foreign direct investment and foreign aids on the GDP growth and development of African countries. The study showed that remittances do completely influence the economic growth on African economies. They have originated that 10 percent increase in remittances caused a 0.4 percent increase within the gross domestic product per capita. Moreover, remittances are not supernumerary for a sustained and domestically designed development endeavor for natural process the issues of developing countries moreover, comprehensive migration will have a hurtful effect on domestic labor markets in definite sectors like

government services, education, the producing and services, science and technology particularly wherever those migrating to different countries are mostly skilled staff World Health Organization are tough and dearly-won to replace Migrant transfers within the style of remittances wants on health care, schooling expenditures and food. However it may also be expected have the simplest ways of proper institutional sectors which are crucial for the growth of the economy.

Masduzzaman (2014) Migrants remittances have a substantial role in remittance receiving country. It is evident that an increase in remittance follows a higher increase in GDP. He used VEC model along with Johansen test to find the long-run and the short run between remittance-financed development and remittance-growth. Remittances effected financial sector directly through better access among households and they are catalyst for financial access for poor households but they make difference to the wealthier from urban areas also they have an important effect on saving among receiving households in Bangladesh. How professionally it delivered information and monitoring function, liquidity, and risk sharing. Stock market played a vital role in developing countries. In addition, the stock-based and bank-based performs different functions. Stock market offers boosting liquidity and trading risk and banks focus on the relationships with companies to acquire information about ongoing projects.

Mundaca (2009) investigated the effect of workers remittances and financial intermediation on growth. The results showed that the inflows of remittances have significant and positive on growth in long run. They used data for the countries in the Caribbean and Latin America over the period of time 1970 to 2002. The study also analyzed the effects of inflow of remittances and financial development on economic growth, the results showed that the inflow of remittances have positive effect on economic growth; second, if the inflow of remittance invested in a profitable way in long run then the inflow of remittances have a vast influence on economic growth. Moreover, remittances have positively impact growth. When the proxies of financial market development with remittances together becomes

more significant and the inflow of remittances have a much stronger effect on economic growth. the inflow of remittances thus promote further economic growth if financial systems are well developed, and the inflow of remittance and financial development can accelerate economic growth and remove financing restriction on both individuals and company development. If there are good financial systems and sound investment opportunities, it meets the financial investment needs of the families and when remittances are included in the growth equation the effect of investment on growth increases positively and significantly.

Nyamongo et al (2012) examined the role of remittance is main part of growth of the economy, according to the available record shows that remittances were almost three times higher than the foreign aid and huge amount of foreign investment remittances inflow to the developing countries and after that the flow of remittances in all over the world reached to nearly \$ 440 billion US from which 325 billion Dollar were transferred to the developing countries. The key findings are as under: (1) the financial development importance seemed to weakened in promoting the economic growth, almost all countries in the population sample of developing countries; (2) the remittance is an essential channel to boost the economic condition for the countries; (3) the impact of remittances volatility on economic growth of African countries under the study is negative; (4) inflow of financial remittances seemed to be accompaniment.

Salah, (2013) examined how remittance inflows and development causes economic growth for the time 1976 to 2011 in Bangladesh. In this study Annual GDP per capita is proxy of economic growth, the proxy of is the nominal domestic credit and the proxy of inflow of remittances is annual remittances in US\$ percentage to GDP %US. Bangladesh is among high remittance countries in south Asia, the flow of remittance and economic growth in past two decades has increased in remarkable account. The study used Johansen co-integration approach to relationship between remittance inflow, and GDP growth. The study showed that the role of remittance inflow can be change in and in short run. The remittance is a main

source to flow the money which can be used as financial domestic sector and in short run remittances play a role to balance price fluctuation. Remittance is the most important source for households to meet their needs in developing countries like Bangladesh, which cannot be considered as a lesser source of financing.

Zouheir, et al, (2004) analyzed the link between financial developments, remittance on for North African countries namely; (Morocco, Tunisia, Algeria and Egypt). The study used GMM for data analysis. They found significant and positive when remittances are interrelated with the financial development. The impact of inflow of remittance on GDP growth is depending on the financial institutions and financial condition of the country. The benefits of financial development remittance inflow are beneficial for developing countries like; Egypt, Algeria Tunisia and Morocco. The study showed that the results are mostly significant and positive when remittances are interrelated with the financial development. The impact of inflow of remittance on GDP growth is depending on the financial institutions and financial condition of the country. When a country's financial systems are well developed than the remittances play an imperative role to boost the economy of the country.

Adams (2016) examined study by regime durability and regime by, both have different and opposite result from each other 1st one has significant and negative effect and 2nd has significant impact. Furthermore, remittances are supplementary for a sustained and domestically designed development endeavor for natural process the issues of developing countries moreover, comprehensive migration will have a hurtful effect on domestic labor markets in definite sectors like government services, education, the producing and services, science and technology particularly wherever those migrating to different countries are mostly skilled staff World Health Organization are tough and dearly-won to replace Migrant transfers within the style of remittances wants on health care, schooling expenditures and food.

H_{A3} = There is significant positive relationship among financial access, remittance and economic growth.

Chapter 3

Methodology

3.1 Data Description

Different studies have been conducted on the variables that explain the financial access, remittance and economic growth. According to our study dependent variable is economic growth, we used log of per capita real GDP growth has a proxy of economic growth and independent variables are financial access “Commercial bank branches per 1000 km²” and ‘commercial bank branches per 100,000 adults as proxy of financial access’ and remittance (personal remittances received as percentage to GDP as proxy of remittances) and our control variables are namely: openness, school, inflation, population and investment.

TABLE 3.1: List of selected developing countries in our sample

Afghanistan	Colombia	Jordan	Mozambique	South Africa
Albania	Congo, Dem. Rep.	Kazakhstan	Namibia	Sudan
Algeria	Congo, Rep.	Kenya	Nepal	Thailand
Armenia	Costa Rica	Kyrgyz Republic	Nicaragua	Timor-Leste
Bangladesh	Dominican Republic	Lesotho	Niger	Togo
Belarus	Ecuador	Macedonia, FYR	Nigeria	Tunisia
Belize	Egypt, Arab Rep.	Madagascar	Pakistan	Turkey
Benin	Ghana	Malawi	Paraguay	Uganda
Bhutan	Guatemala	Malaysia	Peru	Ukraine
Bolivia	Guinea-Bissau	Mali	Philippines	West Bank and Gaza
Bulgaria	Honduras	Mauritius	Romania	
Burkina Faso	India	Mexico	Russian Federation	
Burundi	Indonesia	Moldova	Rwanda	
Cape Verde	Iran, Islamic Rep.	Montenegro	Senegal	
Cameroon	Jamaica	Morocco	Serbia	

3.2 Population and Sample Selection

The sample of the study included developing countries in the world and data collection is strongly based on the accessibility of the data, I have excluded the countries that their data was not available due to some reasons. In this study I used panel data estimation techniques to find the relationship between financial access, remittance and economic growth. The study used convenience sampling technique. Study used the data of 70 developing countries over the period of time 2004 to 2017. Moreover to investigate the impact of financial development on economic growth and I collected the data from World Bank (2017) and IMF (International monetary fund) data base.

3.3 Variable

In this study we used economic growth as our dependent variable, and independent variables are financial access and remittance and control variables are namely: openness, inflation, investment, population and school. The definitions of the variables are as under.

3.3.1 Dependent Variable

3.3.1.1 Economic Growth

I used economic growth as dependent variable is the study; the proxy of economic growth is log of GDP per capita, as used in different studies Giuliano (2009), Fayissa (2010), masduzzaman (2014), Sibindi (2014) and Takeshi et al (2016) which is gross domestic products divide by countrys population. GDP which added value to the countrys economy and also product taxes minus all subsidies which do not add value to the products. I took data in current US Dollar.

3.3.2 Independent Variables

1: Financial Access

Financial access is the ability of household to get financial services from financial institutions which are namely: deposit, credit, insurance, risk management and insurance. In our study we use commercial bank branches per 1000 km square and commercial bank branches per 100,000 adults as proxy of financial access. Takeshi, et al, (2016).

2: Remittance

Remittances include personal transfer of international immigrants and compensation of workers. Personal transfers include all transfer in cash or cash equivalent or cash received by households, so it means all transfers from nonresident to resident individuals, all current compensation of workers. We take personal remittances received percentage of GDP in our study. Chowdhary (2016), Zouheir (2014), and Uddin (2013).

3: Financial Development

Financial development means all the development strategies to promote economic growth and decrease poverty, reduce the incurred cost in the financial structure. It also means to improve the information about allocation of capital, risk management, exercising corporate governance and monitoring firms, diversification, investment, and savings etc.

It thus involves the formation and expansion of institutions, instruments and markets that help investment and growth process. It also refers to the fulfillment of the functions of the financial system in the best manner by reducing the market distortions and the degree of improvement in the financial markets both concerning the size and quality of financial markets.

I used outstanding deposits with commercial bank % of GDP and Outstanding loans from commercial banks % of GDP as proxy of financial development. Takeshi, et al, (2016), Chowdhary (2016), Zouheir (2014), and Uddin (2013).

3.3.3 Control Variables

1. Investments

I used gross capital formation percentage of GDP as proxy of investment, Gross capital formation means additions of fixed assets of the economy and plus the total changes in level of inventories.

The Fixed assets include plant, land, equipment purchases and machinery, and the construction of railways, roads, hospitals, offices, schools, and industrials and commercial buildings. And Inventories includes stocks of goods, work in progress and finish good. Adenutsi (2011), Fayissa(2010), Catrinescu (2008).

2. Population

I used population as the control variable in the study as annual population growth percentage, the annual population rate include growth rate of population from previous year to current year in percentage.

The actual definition of population includes all the citizenship of any country. Nyamongo (2012), Mundaca (2009) Sibindi (2014).

3. School

I used secondary school enrollment rate percentage; the gross enrollment ratio means the total enrollments irrespective age and gender to the population of the country. Fayissa (2010), Nyamongo (2012), Ndebbir (2004).

4. Openness

The proxy of openness in the study is trade percentage to GDP, the sum of imports and exports of goods and services percentage to GDP. Ndebbir (2004), Takeshi (2016).

5. Inflation

Inflation means annual change in percentage in price of the goods and services of the consumer. Ndebbir (2004).

3.4 Variables and Sources of Variables

TABLE 3.2: Variables and Sources of Variables

Variables	symbols	Sources
Dependent variable		
Log of GDP per capital (current US Dollar)	LNGDP	World development indicators (WDI)
Independent Variables		
Commercial bank branches per 1000	Fa1	IMF
Commercial bank branches per 100,000 adults	Fa2	IMF
Outstanding deposits with commercial bank % of GDP	Fd1	IMF
Outstanding loans from commercial banks % of GDP	Fd2	IMF
Personal remittance received percentage to GDP	REM	WDI
Control Variables		
Annual population growth percentage	P	WDI
Secondary school enrollment rate percentage	School	WDI
Trade percentage to GDP	open	WDI
Inflation, consumer prices (annual percentage)	Inflation	WDI
Gross capital formation	Invest	WDI

Note:**WDI:** World development indicator.**IMF:** International monetary fund.

3.5 Panel Data Analysis

Panel data analysis is use to investigate both cross section and time series data is called panel data, three types of models can be used in the panel data analysis namely; common coefficient model, random effect model and fixed effect model.

The intercept of common coefficient model is constant for all-time series and cross section period. Fixed effect model has different intercept for all the time series and cross section period and finally random effect model has different intercept for all the time series and cross section period. There are two different types of tests will be used to find which model will be used for panel data analysis namely; fixed effect redundancy test and Hausman test.

3.5.1 Fixed Effect Redundancy Test

The study used fixed effect redundancy test to determine between two models which are common coefficient model and fixed effect model, the test showed significant result and suggested fixed effect model.

3.5.2 Hausman Test

The study used Hausman test to determine between random effect and fixed effect model, after the test, the result showed a significant results and suggested random effect model.

3.6 Model Specification

For empirical analysis I used static model, because I test which model will be used in our study. To determine between two models which are common coefficient model and fixed effect model I applied fixed effect redundancy test, the results suggest fixed model and To determine between fixed effect and random effect model for this purpose the study applied Hausman test, the Hausman test results suggested random effect model, the study used fixed effect model as used by Catrinescu (2008).

In first equation we include financial access variable interacting economic growth.

$$LNPGDP_{i,t} = \beta_0 + \beta_1 FA_{i,t} + Z_{i,t} + u_{i,t} \quad \text{eq. 1}$$

$LNP_{GDP_{it}}$: Log of per capita GDP

FA_{it} : Financial access

Z_{it} : Is the group of control variables, including

$open_{it}$: Trade (import and export)/GDP

$school_{it}$: Secondary school enrollment rate (percentage)

$inflation_{it}$: Measured as annual change in percentage in price of the goods and services of the consumer

p_{it} : Annual population growth percentage

$invest_{it}$: Gross capital formation percentage

Where u_{it} is the error term t and i indicates year and country respectively.

In second equation we include remittance variable interacting economic growth.

$$LNP_{GDP_{i,t}} = \beta_0 + \beta_1 REM_{i,t} + Z_{i,t} + u_{i,t} \text{ eq. 2}$$

$REM_{i,t}$: personal remittances received percentage of GDP

And finally in third equation we include interaction term of financial access and remittance with economic growth.

$$LNP_{GDP_{i,t}} = \beta_0 + \beta_1 (FA.REM)_{i,t} + Z_{i,t} + u_{i,t} \text{ eq. 3}$$

Chapter 4

Data Analysis and Discussion

4.1 Descriptive Analysis

The descriptive statistics has used to examine the pattern of dependent and all independent variables. Descriptive statistics includes (mean, median, maximum, minimum and standard deviation). In table no 4.1 shows the pattern of dependent variables which is GDP per capita and independent variables are financial access, remittance and financial development. The mean value of LNPGDP is 7.649 and median value of LNPGDP is 7.842. The minimum value of LNPGDP is 4.847 and the maximum value of LNPGDP is 9.680 while standard deviation of LNPGDP is 1.047. FA1 is commercial bank branches per 1000 km^2 the mean value of FA1 is 10.370 while median value is 3.738 and the maximum value of FA1 is 111.822 and the minimum value of FA1 is 0.021 while standard deviation of FA1 is 16.338. FA2 is commercial bank branches per 100,000 adults; the mean value of FA2 is 12.145 while median value of FA2 is 8.005. The maximum value of FA2 is 92.173 and the minimum value of is 0.132. The standard deviation of FA2 is 12.696. FD1 is outstanding deposits with commercial banks percentage of GDP, the mean value of FD1 is 41.005 while the median value of FD1 is 34.753. The maximum value of FD1 is 169.302 and the minimum value of FD1 is 2.452. The standard deviation of FD2 is 27.430. FD2 is outstanding loans from commercial banks (percentage of GDP) as proxy of financial development, the mean value of FD2 is 31.804 while

median value of FD2 is 26.686. The maximum value of FD2 is 116.122 and the minimum value of FD2 is 1.0101. The standard deviation of FD2 is 20.9001. REM is personal remittances received percentage of GDP, the mean value of REM is 5.919 while the median value of REM is 3.227. The maximum value of REM is 41.49946 and the minimum value of REM is 0.0009 while standard deviation of REM is 6.893589. INVEST is gross capital formation percentage to GDP as proxy of investment, the mean value of INVEST is 7.3928 while the median value of INVEST is 6.294. The maximum value of INVEST is 113.403 and minimum value of INVEST is -57.4. The value of standard deviation of INVEST is 16.768.

TABLE 4.1: Descriptive Analyses

Variables	Mean	Median	Maximum	Minimum	Std. Dev.
LNPGDP	7.649	7.842	9.68	4.847	1.047
FA1	10.37	3.738	111.822	0.021	16.338
FA2	12.145	8.005	92.173	0.132	12.696
FD1	41.005	34.753	169.302	2.452	27.43
FD2	31.804	26.686	116.122	1.0101	20.9001
REM	5.919	3.227	41.499	0.0009	6.893
INVEST	7.392	6.294	113.403	-57.4	16.768
OPEN	77.253	69.789	210.373	16.946	32.387
P	1.631	1.573	5.366	-1.666	1.171
SCHOOL	68.75	75.179	126.647	8.774	25.484
INFLATION	6.374	5.0461	59.219	-8.283	6.138

The mean value of OPEN is 77.253 while median value of OPEN is 69.789. The maximum value of open is 210.373 and the minimum value of OPEN is 16.946 and finally the standard deviation value of OPEN is 32.387. P shows annual population growth percentage, the mean value of P is 1.631 while the median value of P is 1.573. The maximum value of P is 5.3666 and the minimum value of P is -1.666 while the standard deviation value of P is 1.171. In this table SCHOOL shows secondary school enrollment rate percentage, the mean value of SCHOOL is 68.750 while the medial value of SCHOOL is 75.179. The maximum value of SCHOOL is 126.647 and the minimum value of SCHOOL is 8.774 and finally the standard deviation value of School is 25.484. INFLATION shows annual change in percentage in price of the goods and services of the consumer, the mean value of INFLATION is 6.374 while the median value of INFLATION 5.046.

The maximum value of INFLATION is 59.219 and the minimum value of INFLATION is -8.283 and finally the standard deviation value of INFLATION is 6.138.

4.2 Correlation Matrix

To find out the collinearity in the analysis, the study conducted the pairwise correlation of independent variables. The analysis shows the direction of the relationship in the form of positive and negative between two variables, starting from the highest correlation 1 and the lowest correlation 1 between independent variables.

The value of correlation zero means that there is no correlation between variables and the value of correlation one means that there is perfect correlation exist between variables.

GDP per capita is positively correlated with financial access and financial development. Remittance and investment are negatively correlated with GDP per capita. Openness and secondary school enrollment are positively correlated with GDP and GDP is negatively correlated with population and inflation.

Financial access is positively correlated with financial development and remittance is positively correlated with financial access and also financial development. Openness is positively correlated with GDP per capita growth also positively correlated with financial access and financial development.

Secondary school enrollment is positively correlated with GDP per capita growth and also positively correlated with financial access and financial development. Inflation is negatively correlated with GDP per capita growth and also negatively correlated with financial access, financial development, remittance and investment.

Note: GDP shows log of per capita GDP, Fa1 shows commercial bank branches per 1000 km square, Fa2 shows commercial bank branches per 100,000 adults, Fd1 shows outstanding deposits with commercial banks GDP percentage.

TABLE 4.2: Correlation Matrix

Variables	GDP	Fa1	Fa2	Fd1	Fd2	Rem	Invest	Open	P	School	Inflation
GDP	1										
Fa1	0.25	1									
Fa2	0.525	0.482	1								
Fd1	0.411	0.513	0.3008	1							
Fd2	0.495	0.146	0.429	0.662	1						
Rem	-0.132	0.125	0.136	0.059	0.04	1					
Invest	-0.148	-0.06	-0.122	-0.065	-0.12	-0.0102	1				
Open	0.242	0.1008	0.252	0.459	0.446	0.2916	0.0306	1			
P	-0.61	-0.368	-0.548	-0.218	-0.288	-0.166	0.0865	-0.243	1		
School	0.837	0.267	0.478	0.427	0.487	0.0818	-0.141	0.318	-0.702	1	
Inflation	-0.088	-0.097	-0.119	-0.153	-0.168	-0.055	-0.002	-0.071	-0.0312	-0.059	1

Fd2 shows outstanding loans from commercial banks GDP percentage, Rem shows personal remittances received as percentage to GDP, Invest shows gross capital formation to GDP percentage, Open shows trade to GDP percentage, P shows annual population growth percentage, School shows secondary school enrollment rate percentage, and inflation.

4.3 Diagnostic Test

For panel data analysis it is compulsory to check which model will be used in our study. There are two different test, Redundant Fixed effect test and Hausman test. To determine between two models which are common coefficient model and fixed effect model we applied fixed effect redundancy test, the results suggest fixed model and To determine between fixed effect and random effect model for this purpose we applied Hausman test, the Hausman test results also suggest fixed effect model.

TABLE 4.3: Likelihood Test

Likelihood test	Prob.
Cross section F	0.0000
Cross section Chi square	0.0000

TABLE 4.4: Hausman Tests

Test summary	Prob.
Cross-section random	0.0000

4.4 Financial Access and Economic Growth

The R-square coefficient is 0.957, which indicates that our model of the study is good and we can determine by the number of significant and insignificant values in our model, the numbers of significant values are more than insignificant value our

model is good and 95.77 % variation in dependent variable which has explained by independent variable in this model. Furthermore, some variables are not included in our study which might affect economic growth so that's why the intercept is 0.0000.

The coefficient of FA1 is 0.0213 it means fa1 has positive relationship with economic growth and probability is 0.0000. The coefficient value of invest is .0005 and p-value is 0.267. Open has significant and negative impact of economic growth, the value of coefficient is 0.004 and p-value of open is 0.0000.

TABLE 4.5: Case 1

Variables	OLS		Fixed effect	
	Coefficient	Prob.	Coefficient	Prob.
C	5.561	0.0000	6.251	0.0000
FA1	0.001	0.4034	0.021	0.0000
INVEST	-0.001	0.0920	0.0005	0.2672
OPEN	-0.0009	0.1128	-0.004	0.0000
P	-0.0412	0.0747	0.094	0.0025
SCHOOL	0.033	0.0000	0.019	0.0000
INFLATION	-0.007	0.0144	0.001	0.2293
R-square			0.9577	
Redundant test				0.0000
Hausemen test				0.0000

Note: FA1 is commercial bank branches per 1000 km square.

The coefficient of school is 0.019 and its p-value is 0.0000. Which means when a country invests on education the economic growth of that specific country will increase. The value of redundant fixed effect test is significant which means the study has to use fixed effect model and the results of the study are accurate or it met the expectation of our desire results so that's why the study used fixed effect model.

The coefficient of P is 0.094 and p-value is 0.0025 which means there is significant and positive impact of population on economic growth. It indicates that the population of the country helps to boost the economic growth in the form of availability of workers. The coefficient of inflation is 0.0019 and p-value is insignificant. The results are same as Takeshi and Hamori (2016).

TABLE 4.6: Case 2

Variables	OLS		Fixed effect	
	Coefficient	Prob.	Coefficient	Prob.
C	5.379	0.0000	6.2203	0.0000
FA2	0.013	0.0000	0.0170	0.0000
INVEST	-0.001	0.2701	0.0005	0.2160
OPEN	-0.001	0.0099	-0.004	0.0000
P	0.0199	0.3874	0.0861	0.0067
SCHOOL	0.032	0.0000	0.0204	0.0000
INFLATION	-0.004	0.1401	0.0012	0.4320
R-square			0.9558	
Redundant test				0.0000
Hauseman test				0.0000

Note: FA2 is commercial bank branches per 100,000 adults.

The determination coefficient R-square is 0.955, which shows that model we use in our study is excellent. The value of intercept in this model is 0.0000 it means some omitted variable that might affect economic growth. The coefficient of FA2 is 0.0170 and p-value is 0.0000 which indicates that FA2 has positive and significant relationship with economic growth.

It means that if commercial bank branches per 100,000 adults increase the economic growth will also increase. The coefficient value of invest is 0.0005 and p-value is 0.216. The proxy of invest do not contribute in our model.

The coefficient of P is 0.0861 and p-value is 0.0067. It indicates that the population of the country helps to promote the economic growth. The coefficient of inflation is 0.0012 and p-value is 0.432. The value of coefficient is 0.004 and p-value of open is 0.0000. It depends of the financial institutions of the country, if financial system of a country is weak than impact cannot present in trade openness on economic growth.

The coefficient of school is 0.019 and its p-value is 0.0000. Which means when a country invests on education the economic growth of that specific country will increase. 1 percent increase in education will increase 2.04 percent of growth

4.5 Remittance and Economic Growth

The value of intercept in this model is 0.0000 it means some omitted variable that might affect economic growth. The value of R-square of our model is 0.954 it indicates that the model we use in our study explains 95.42 percent of variance.

TABLE 4.7: Remittance and Economic Growth

Variables	OLS		Fixed effect	
	Coefficient	Prob.	Coefficient	Prob.
C	5.826	0.0000	6.2700	0.0000
REM	-0.0341	0.0000	0.007	0.0552
INVEST	-0.002	0.0297	0.0002	0.5831
OPEN	0.0012	0.0294	-0.0050	0.0000
P	-0.095	0.0000	0.1330	0.0001
SCHOOL	0.0314	0.0000	0.0210	0.0000
INFLATION	-0.0101	0.0003	0.0005	0.7397
R-square			0.954	
Redundant test				0.0000
Hausemen test				0.0000

The coefficient of REM is 0.0072 and p-value is 0.0552 which indicates that REM has positive and significant impact on economic growth. It means that if personal remittances increase by 1 percent the economic growth increases by .07 percent. The coefficient value of invest is 0.0002 and p-value is 0.583, which means there is no relationship between invest and economic growth in this model. Open has significant and negative impact of economic growth, the value of coefficient is 0.005 and p-value of open is 0.0000. It depends of the financial institutions of the country, if financial system of a country is weak than there will not be any impact of trade openness on economic growth. The coefficient of school is 0.021 and its p-value is 0.0000 which means the impact of school on economic growth is significant and positive. If 1 percent increases in education, it increases 2 percent of economic growth. The coefficient of P is 0.133 and p-value is 0.0001 it means there is significant and positive affect of population on economic growth. It indicates that the population of the country helps to promote the economic growth. The coefficient of inflation is 0.00055 and p-value is 0.739 it indicates that there is no impact of inflation of economic growth in this model.

4.6 Financial Development and Economic Growth

Value of determination coefficient R-square of this model is 0.954 it shows the relationship strength between the dependent variable and this model. The intercept of this model is 0.0000 it means some have effect on economic growth but we have not included. The coefficient of FD1 is .00886 and p-value is 0.0000 which indicates that outstanding deposits with commercial banks showed positive and significant. The results are same as Takeshi and Hamori (2016). It means that if outstanding deposits with commercial banks increase by 1 percent it increases .08 of economic growth. The coefficient value of invest is 0.0005 and p-value is 0.204, which means no relationship of invest and economic growth in our model.

TABLE 4.8: Case 1

Variables	OLS		Fixed effect	
	Coefficient	Prob.	Coefficient	Prob.
C	5.664	0.0000	6.267	0.0000
FD1	0.003	0.0000	0.008	0.0000
INVEST	-0.001	0.1066	0.0005	0.2049
OPEN	-0.0019	0.0019	-0.0056	0.0000
P	-0.068	0.0017	0.101	0.0014
SCHOOL	0.031	0.0000	0.018	0.0000
INFLATION	-0.007	0.0172	0.002	0.0707
R-square			0.95	
Redundant test				0.0000
Hausemen test				0.0000

Note: FD1 is outstanding deposits with commercial banks.

Coefficient of P is 0.101 and the p-value is 0.0014 it means the impact of population on economic growth is positive and significant. It indicates that the population of the country helps to promote the economic growth. The coefficient of inflation is 0.002 and p-value is 0.077 it indicates no relationship.

Open has negative impact of economic growth. The value of coefficient is 0.0056 and p-value of open is 0.0000. The coefficient of school is 0.0183 and its p-value is 0.0000 which means the relationship of school on economic growth is significant and positive. If 1 percent increases in education, it increases 1.8 percent in economic growth, it means some have effect on economic growth but we have not

included. The coefficient of FD1 is .00886 and p-value is 0.0000 which indicates that outstanding deposits with commercial banks showed positive and significant, if outstanding deposits with commercial banks increase by 1 percent it increases .08 of economic growth.

The value of coefficient determination R-square of this model is 0.957. It means this model fits in our study, and we can examine by the number of significant and insignificant values in our model, so the number of significant values are more than insignificant values, which means our model is perfect. The coefficient of FD2 is .0111 and p-value is 0.0000 which indicates that the relationship between outstanding loans from commercial banks and economic growth is significant and positive. It means that if outstanding loans from commercial banks increase by 1 percent it increases 1.1 percent of economic growth. The coefficient value of invest is 0.0008 and p-value is 0.056.

The p-value of invest is 0.372 and the coefficient value of invest is 0.0004, it indicates that there is no relationship. The coefficient value of OPEN is 0.0049 and p-value of OPEN is 0.0000. It means there relationship between OPEN and economic growth is negative in this model. The p-value of P is 0.0000. The results indicate that 1 percent increase in investment leads to 0.086 percent in economic growth.

TABLE 4.9: Case 2

Variables	OLS		Fixed effect	
	Coefficient	Prob.	Coefficient	Prob.
C	5.669	0.0000	6.39007	0.0000
FD2	0.007	0.0000	0.01116	0.0000
INVEST	-0.001	0.243	0.00087	0.0564
OPEN	-0.002	0.0001	-0.0054	0.0000
P	-0.066	0.0018	0.07241	0.0184
SCHOOL	0.0303	0.0000	0.01728	0.0000
INFLATION	-0.0050	0.0488	0.00139	0.3753
R-square			0.957	
Redundant test				0.0000
Hausemen test				0.0000

The coefficient of school is 0.0172 and its p-value is 0.0000. If 1 percent increases in education, it leads 0.17 percent increase in economic growth. The coefficient of P is 0.017 and p-value is 0.0184.

It indicates that the population of the country helps to promote the economic growth. 1 percent increase in population leads to 1.7 percent increase in economic growth. The coefficient of inflation is 0.0013 and p-value is 0.375. Open has negative impact of economic growth. The value of coefficient is 0.0054 and p-value of open is 0.0000.

4.7 The Combined Impact of Financial Access, Remittance on Economic Growth

The value R-square of this model is 0.954. It means this model perfectly fits in our study, and we can examine by the number of significant and insignificant values in our model, so the number of significant values are more than insignificant values, which means our model is perfect. P-value is FD1 and REM is 0.0097 and the coefficient is .00016 and which indicates that the relationship between commercial bank branches per 1000km²proxy of financial access and remittance on economic growth is significant and positive.

TABLE 4.10: Case 1

Variables	OLS		Fixed effect	
	Coefficient	Prob.	Coefficient	Prob.
C	5.72	0.0000	6.303	0.0000
FA1*REM	-0.0009	0.0000	0.0001	0.0097
INVEST	-0.002	0.0469	0.0002	0.6454
OPEN	-0.0005	0.3165	-0.005	0.0000
P	-0.0802	0.0003	0.1357	0.0001
SCHOOL	0.0327	0.0000	0.0212	0.0000
INFLATION	-0.009	0.0022	0.0006	0.6743
R-square			0.9566	
Redundant test				0.0000
Hausemen test				0.0000

The coefficient value of invest is 0.0002 and p-value is 0.645, we found no relationship between investment and growth in our model. Open has negative impact of economic growth in this model and the value of coefficient is 0.005 and p-value of open is 0.0000. The coefficient of P is 0.1357 and p-value is 0. It indicates that the population of the country helps to promote the economic growth. 1 percent increase in population leads to 13.57 percent increase in economic growth. The p-value of school is .0212 and its p-value is 0.0000 which means the relationship of school on economic growth is significant and positive. If 1 percent increases in education, it leads to 2.1 percent increase in economic growth. The coefficient of inflation is 0.0006 and p-value is 0.674.

TABLE 4.11: Case 2

Variables	OLS		Fixed effects	
	Coefficient	Prob.	Coefficient	Prob.
C	5.665	0.0000	6.272	0.0000
FA2*REM	-0.0008	0.0000	0.0003	0.0326
INVEST	-0.0022	0.0443	0.0004	0.3723
OPEN	7.37E-05	0.905	-0.0049	0.0000
P	-0.0781	0.0006	0.1403	0.0000
SCHOOL	0.0326	0.0000	0.0216	0.0000
INFLATION	-0.0091	0.0024	0.0013	0.4335
R-square			0.9553	
Redundant test				0.0000
Hausemen test				0

R-square is the response variable percentage which is explained by the model. The value of determination of coefficient R-square of this model is 0.955. It means this model fits in our study, and we can examine by the number of significant and insignificant values in our model, so the number of significant values are more than insignificant values, which means our model is perfect. The coefficient of FA2 and REM is .0003 and P-value is 0.032 which indicates that the relationship between Commercial bank branches per 100,000 adults as proxy of financial access and remittance on economic growth is significant and positive. The p-value of invest is 0.372 and the coefficient value of invest is 0.0004, it indicates that there is no relationship. The coefficient value of OPEN is 0.0049 and p-value of OPEN is 0.0000. It means there relationship between OPEN and economic growth is

negative in this model. The p-value of P is 0.0000 and the coefficient of P is 0.14. It means 1 percent increase in population leads to 14.34 percent increase in economic growth. The coefficient of school is 0.021 and the p-value of school is 0.0000 it indicates significant and positive relationship, 1 percent increase in education causes to increase 2.168 % of economic growth. Finally the p-value of inflation is 0.433 and the coefficient value is 0.0013.

Our study results indicate a positive and significant relation between financial access and economic growth, it means if financial access increases economic growth will also increase. Moreover, the results with remittance on economic are positive and significant, it indicates remittance accelerate economic growth in developing countries. In addition, we also examined the effect among financial access, remittance and economic growth, we found and positive and significant results, so we can say that financial access and remittance promote economic growth.

Chapter 5

Conclusion and Recommendation

5.1 Conclusion

The aim of the study is to determine the possible relation between financial access and remittance to economic growth and also to find out that both remittance and financial access has an important role to promote GDP growth in developing countries. The study aims to investigate the potential effect of financial access on economic growth in developing countries and the purpose of the study is to examine whether or not remittances promote economic growth. Finally it also focuses on the impact of remittances on economic growth considering access to financial services in less developed countries. In this study we used panel data estimation techniques to analyze the relationship between financial access, remittance and growth. The sample of our study consists of 70 developing countries for the period of time 2004 to 2017.

The dependent variable of the study is log of GDP per capita and independent variables are commercial bank branches per 1000 km^2 and commercial bank branches per adults as proxy of financial access and remittance. We also analyzed the possible impact of financial development on economic growth. We take outstanding deposits with commercial banks percentage of GDP and also outstanding loans from commercial banks percentage of GDP as proxy of financial development and

control variables we used in this study are namely: openness, inflation, investment, population and school.

In this study we examine effect of financial access on economic growth, in case 1; we used commercial bank branches km per square as proxy of financial access, the results showed positive and significant relationship. It showed if 1 percent increase in commercial bank branches, the economic growth will increase 2.133 percent. In case 2 we used commercial bank branches per 100,000 adults as proxy of financial access, the results revealed that the relationship between financial access and economic growth is also positive and significant. Moreover, if 1 percent increases in commercial bank branches per 100,000 adults, it caused to increase 1.7 percent of economic growth.

We also analyzed the relationship between remittance and economic growth. The results indicated a positive and significant effect. Which means remittance promotes growth in developing countries. In addition, the combined effect of financial access, remittance on economic growth is also significant and positive.

Moreover, we investigated the possible effect of financial development on economic growth. In case 1 we used outstanding deposits with commercial bank branches as proxy of financial development. The results revealed a positive and significant effect on economic growth, which means financial development helps to increase economic growth in developing countries, we also found same results in case 2 with outstanding loan from commercial banks as proxy of financial development.

5.2 Recommendations

In this study import and export of goods and services and investment have negative effect of economic growth so it might be because of weak and poor financial institutions, low investment opportunities, bad allocation of resources in developing countries and also international laws, taxes on import and export. The study recommends that countries should improve the financial institutions, a wise

allocation of resources and also find opportunities of investment. Moreover, it suggests that countries should improve their exports to other countries. The study used openness, school, inflation, population and investment as control variable, many other control variables can be used in future studies. The results can be evaluated in terms of income level in order to compare different income level. In addition, the idea presented in this study may be used as references in conducting new researchers or in testing other related findings. The study will also give them a background or an overview on financial access, remittance and economic growth.

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