

**CAPITAL UNIVERSITY OF SCIENCE AND  
TECHNOLOGY, ISLAMABAD**



**The Effect of Remittances on  
Domestic Capital Formation  
Evidence From Selected SAARC  
Countries**

by

**Amna Nasim**

A thesis submitted in partial fulfillment for the  
degree of Master of Science

in the

Faculty of Management & Social Sciences  
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*This thesis is dedicated to my parents.*



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All errors in this thesis are my sole responsibility.

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## *Abstract*

Remittances are expected to supplement domestic investment, if they increase the savings and reduce the financial hurdles. However, if the increase in remittances is mostly used for consumption by recipients, then their impact on the domestic capital formation may not be visible or may even be negative. The empirical evidence on the relationship between the two variables shows mix results. Also previous research has been carried out either for individual countries or for countries with different socio-cultural backgrounds. This study investigates the effects of remittances on domestic investment in selected SAARC countries having similar socio-cultural background. For this purpose, 38 years data of selected SAARC countries (Bangladesh, India, Pakistan, and Sri-Lanka) has been used. In addition to remittances, it includes six other control variables and employs fixed effect method to estimate the results. The findings of the study are that remittances in these selected SAARC countries (Bangladesh, India, Pakistan, and Sri-Lanka) have not added much too domestic capital formation. Out of other six control variables, all variables have expected and significant effect on domestic capital formation.

**Keywords:** Investment, Remittances, Financial Development, Foreign Direct Investment, Official Development Assistance, Growth, Inflation.

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# **Chapter 1**

## **Introduction**

### **1.1 Theoretical Background**

Domestic capital formation is much important for a country's economic development. It increases the level of productivity and improves the living standard. It enhances the development activities in the country. There are many sources of domestic capital formation. The main source is national savings and the other sources are; remittances, foreign direct investment, and official development assistance. In developing countries per capita GDP is very low. The incident of poverty is very high. Therefore private earnings are insufficient to maintain domestic capital formation at desirable level. Remittances play a crucial role in domestic capital formation of developing countries.

Settlements speak to the measure of salary earned by displaced people from abroad, and sent back to their nations of origin. In the course of the most recent decade the settlement streams has expanded by more than ten times sent to creating nations. The vagrant settlements are indispensable wellspring of outside trade for some, work sending out economies. Settlements are exchanged through different channels, for example, official bank channels, Money Transfer Operators MTO's (Western Union, MoneyGram and so forth.). Notwithstanding when the reason behind settlements is venture, settlements are more averse to endure the sharp withdrawal or euphoric floods that describe portfolio streams to developing

markets. Abroad occupants are bound to keep on putting resources into their nation of origin notwithstanding financial difficulty than are remote speculators, an impact that is like the home-inclination in venture (World Bank 2001). This relative security has energized some developing business sector economies to utilize settlements as guarantee against which to obtain on universal capital markets on considerably preferable terms over they generally could (Ratha, 2001). Settlements are frequently contributed by the beneficiaries, especially in nations with sound monetary strategies. Enhancements in approaches and unwinding of outside trade controls during the 1990s may have supported the utilization of settlements for speculation (Ratha, 2001). There is some proof that settlements have been progressively utilized for venture purposes in creating nations, particularly in low-salary nations. A few examinations gauge that settlements from the United States are in charge of right around one-fifth of the capital put resources into microenterprises in urban Mexico (Woodruff and Zenteno 2001).

In the past shockingly little consideration has been centered around the subject of the negligible impacts of settlements on family unit utilization and interest in the provincial Third World. This distractedness has been because of three impressive methodological issues. The first is fungibility; since settlements resemble some other type of money pay, it is hard to relate this pay source with a specific changes in family consumption conduct.

The second issue identifies with the different round impacts of settlements on the neighborhood economy. For instance, an inflow of settlements into a country region may prompt a flood in uses in lodging, which may, thusly, make new pay and work open doors for poor people and incompetent. Sadly, be that as it may, few investigations have assessed the second-and third-request impacts of settlement consumptions on wages and work. (Adams, Jr., 2005).

At long last, as R (American Finance Association Effects of Uncertain Inflation on the Investment and Financing Decisions of a Firm Author (s): A. H. Chen and A. J. Boness Annual Meeting of the American Finance Association , San Francisco , California , December Publis, 2016) eginald Apple yard notes, explore that has endeavored to decide how settlements are contributed "will in general be

ineffectively formulated (in the feeling of utilizing uncertain expository systems) and to need hypothetical underpinning.”<sup>4</sup> One specific trouble here is that much settlement investigate depends on information assembled at one point in time; such research is unfit to quantify the different manners by which settlements get put resources into various country resources after some time. In view of these three interrelated issues, numerous settlement ponders have would in general take a dreary perspective on the financial effect of settlements. These investigations have regularly discovered that the greater part of such salary exchanges is spent on utilization and not on interest in rustic resources.

In every period the family unit must pick between expending everything and putting some in resources. Resources vary in yields, hazard, and in the simplicity with which they can be exchanged. Putting resources into resources gives no less than two advantages: the likelihood of expanded dimensions of utilization later on, and protection against decreasing utilization radically when times are bad.(Adams, Jr., 2005)

Remittances can influence the well-being of the receivers in different ways. They can either influence domestic capital formation by encouraging savings and reducing financial hurdles or the influence mostly consumption needs if received by extremely poor families or by extremely rich families. It means that remittances do not have same impact in different situations. Individuals send remittances to a different classes in the social hierarchy. For example, Brackingin case of Zimbabwe, remittances mostly improved the living standard of already well-established class. As a result, income inequality increased in the society. The inequalities in the society. These inequalities enhance the negative effect of these remittances. It suggests that in remittances receiving state, social inequalities enhance. Elite class mostly receive remittances for household and this is only the reason these recipients are less motivated to do something for their betterment, even they are more excited to get benefits from other receiving currency.

In another study by Yiheyis and Woldemariam it is included that remittances affect domestic capital formation positively in three countries like Nigeria Kenya and

Senegal negatively affect in other two countries. It is therefore desirable to investigate the impact of remittances afresh in selected SAARC countries (Bangladesh, India, Pakistan, and Sri-Lanka), developing countries which have a similar socio-culture background.

With regard to foreign direct investment, the evidence differs from country to country. It depends on financial structure, corruption and economic environment of the country. It has positive impact in country which have developed financial system and they are economically developed. The impact of FDI on domestic capital formation may be negative if financial system of the country is underdeveloped, corruption level is high and country is included in the list of developing country. Technological and knowledge spillover effects are extra mechanisms that create the connection between foreign direct investment and domestic investment. FDI increase its contribution in developing countries with the passage of time. In the sub-continent amount of average FDI was 2.4% of domestic product this ratio which is 0.4% greater than the volume of remittances in a year Al-Sadig (2013).

Official development is also an important source of finance other than remittances. As it is used as external finance. If this external finance is used for productive purpose, it has some positive impact on the domestic investment same as (Yiheyis and Woldemariam, in Burkina Faso 2016). But on the other hand it may become unfavorable if it is being used for nonproductive purpose. Mostly when people use foreign aid for extra consumption instead of savings.

Official development assistance can positively influence the economic activity in the receiving country (Burnside and Dollar, 2000). Like remittances, ODA can affect investment, in part, by augmenting savings and foreign exchange availability. However, whether ODA stimulates domestic investment depends, in part, on what activity it is allocated to finance and how it is actually utilized. ODA can spur domestic investment to the extent that it is allocated to productive public investment (as it is given primarily to the government) or serves as a complementary input (e.g. economic infrastructure, human capita development and other social infrastructure) to investment activity by the private sector. In addition, foreign

aid can potentially affect investment by relaxing the foreign exchange constraint and thereby increasing a countrys access to imported goods.

The presence of real GDP growth is partially inspired by the accelerator model of investment. An increase in economic growth enhance the collective demand, which is estimated create an extension in productive capability. The accelerator model is the theory in which a set of factors determined the investment. If the economy is functioning at full use of capital then investment is a quantity to the estimated variation in output for the period.

Trade openness is expected to effect the domestic investment through technology and knowledge. Trade openness increase the domestic investment. But there is an opposite impact in case of Nigeria and Burkina Faso, it fail to boost up the domestic investment. In case of domestic investment trade openness reflects more import as compare to exports or it may happen because increasing competition make it less appealing for domestic investment (e.g. Ndikumana, 2000; Serven, 2002).

Empirical studies have provided evidence that strongly supports the view that financial development has a positive effect on various aspects of real economic activity, including investment. But few studies suggest that financial development has no impact on domestic investment (Lonce Ndikumana, 2003) in the sense that it does not enhance the response of domestic investment. In contrast, the overall level of financial development makes domestic investment more responsive to output growth (accelerator-enhancing effect).

## 1.2 Problem Statement

The remittances could be a major source of capital formation for developing countries. In developing countries the inflow of workers remittances constitute the second major component of domestic capital formation. So it is desirable to investigate whether remittances significantly contribute to domestic capital formation of developing countries or not. This study intends to analyze the relationship

between remittances and domestic capital formation of developing countries. Remittances play an important role in the formation of domestic capital and by providing technological spillover is a matter of attention. The remittances can boost the level of domestic capital by enhancing the economic activities or by supporting these economic activities. The effect of remittances on domestic capital structure in the context of selected SAARC countries is not investigated by previous study. So this study has attempted to capture this relationship in the context of selected SAARC countries.

### **1.3 Research Gap**

Most of the previous studies on domestic capital formation do not include remittances and few studies which included remittances have mixed results. Some studies show positive effect on domestic capital formation while other have negative impact. Also previous studies have been conducted either for individual country or for countries which do not share similar socio cultural and economic background. This study investigates the impact of remittances on domestic capital formation along with six other variables in selected SAARC countries (Bangladesh Pakistan India Sri-Lanka) countries which have similar socio culture and economic conditions. In developing countries remittances are the major source of domestic capital formation. This study will find out whether these remittances have any impact on domestic capital formation in selected SAARC countries (Bangladesh, India, Pakistan, and Sri-Lanka) countries specifically.

### **1.4 Significance of Study**

It is a current topic nowadays. All the previous work which has been done is not for this region of selected SAARC countries (Bangladesh, India, Pakistan, and Sri-Lanka) countries. This topic is being covered in Burkina Faso, Kenya, Nigeria, Senegal and Africa but a single study does not exist on selected SAARC countries (Bangladesh, India, Pakistan, and Sri-Lanka) countries. This study will provide

the opportunity to investigate whether or not remittances have any significant impact on domestic capital formation in selected SAARC countries (Bangladesh, India, Pakistan, and Sri-Lanka) countries.

Inflow of workers remittances to developing countries is the major source of domestic capital formation. Short run and long run studies are conducted to explore the contribution of migrants remittances in the pace of domestic capital formation. This study identify the relationship between remittances and domestic capital formation in the context of selected SAARC countries (Bangladesh, India, Pakistan, and Sri-Lanka) countries. This study attempt to identify the relationship between domestic capital formation and some other variables.

The result of this study will help policy makers to get short run and long run associations between remittances and domestic capital formation in selected SAARC countries (Bangladesh, India, Pakistan, and Sri-Lanka). This study will also documented the relationship between the domestic capital formation and foreign direct investment, official development assistance, growth, trade openness, financial development and inflation. So, it will be helpful to formulate the policies by providing an insight to inflation. Unfolding the relationship between remittances and domestic capital formation which will help to make the strategic decision.

## **1.5 Research Objective**

- To investigate the impact of remittances on domestic capital formation in selected SAARC countries (Bangladesh, India, Pakistan, and Sri-Lanka) countries.
- To draw policy implication if any.

## **1.6 Research Question**

- Do remittances have any impact on domestic capital formation in selected SAARC countries (Bangladesh, India, Pakistan, and Sri-Lanka) countries?

## 1.7 Hypothesis

- Remittances have positive impact on domestic capital formation.
- Remittances have negative impact on domestic capital formation.
- Remittances have no impact on domestic capital formation.

## 1.8 Scheme of the Study

This study includes five chapters. First chapter includes introduction and second chapter includes literature review. Third and fourth chapter contain methodology and results and discussions consecutively. Chapter five contains conclusions and policy implications.

# **Chapter 2**

## **Literature Review**

The remittances have become a subject of various empirical studies especially for microeconomic performance in case of four developing countries Bangladesh, India, Pakistan and India. This section shows a link between the Remittances and domestic capital formation through the analysis of empirical studies. It also represents the picture of underlying theory.

### **Impact of Remittances on and Domestic Capital Formation**

Domestic capital formation is influenced by remittances through a large numbers of interconnected sources, but highly prominent are mentioned below. If remittances are stable and good-sized, could deliver some extra benefits and means to receiving families. Remittances may also helpful to decrease the financial hurdles that are involved in investment activities (Barajas et al., 2009, p.5).

It was assumed that lower level of moral hazard is associated with the circulation of remittances (Chami, Fullenkamp, & Jahjah, 2003), remittances could also effect the small and medium sized business positively and helpful for construction purpose like housing finance (Ratha, 2003; Plaza, Navarrrete, & Ratha, 2011). Savings and investments are strongly linked and it could be enhanced through the use of available financial resources to the receivers. These resources are like, increase the

funds of credit for potential debtors and decrease the lending ratio. Additionally, individuals or households who receive remittances are normally considered more reliable as debtors.

Such type of trustworthy income resources could enhance household collateral' (Barajas et al., 2009, p.6), in that way it make them able to get more loans and credit easily to enhance their investment. As Agrawal et al. (2011) and others claimed that remittances can also support the financial growth by sending it through official bodies. It may also promote the intermediation by motivating savings and growing demand for and get access to finance, with a satisfactory and positive results on investment activity. Liquidity and credit restrictions could be minimized by using remittances as an alternate especially in poorly managed financial sector. It should be stated that the investment special effects of remittances are declared to be conditioned, if financial sector is developed properly it may provide more funds for further investment (e.g. Bjuggren, Dzansi, & Shukur, 2010). Additionally, remittances may have a number of effects on the demand for, invention and production of daily usage by encouraging the earnings and the expenditures (Ratha, 2003, p.164). Remittances may also increase the estimated profit by supporting and encouraging the economic and investment activities, albeit with alag. Moreover remittances may also provide an automatic stability by smoothing their consumption outcome that may reduce the domestic microeconomic volatility. Remittances could also support to avoid risk in case of any investment activities.

Ojapinwa and Odekunle (2013) look at that regardless of the expanding significance of settlements in all out global capital streams, the connection among settlements and supply of capital development has not been satisfactorily contemplated. This paper thinks about one of the connections among settlements and fixed capital arrangement, specifically how neighborhood money related segment improvement impacts a nation's ability to exploit settlements. Utilizing time arrangement information for the period 1977-2010, the examination utilized the ADF and Philip-Perron changed unit root tests and put together its investigation

with respect to a Dynamic Ordinary Least Squares-two stage Instrumental Variable [2SIV] way to deal with control for the endogeneity issue that emerges from use of slack autonomous factors. We find that settlements support load of physical interest in Nigeria nations with positive association with created money related frameworks by giving complementarities to fund interest in a created budgetary framework. Considerable government distribution on social administrations is similarly vital in quickening capital arrangement. The discoveries of this examination emphatically propose that for Nigeria to profit by universal exchanges, Nigeria money related division ought to be tweaked to supplement settlements potential capital arrangement.

By and large, the monetary writing proposes that settlement streams add to venture development, the easing of destitution, an improved way of life, and financial development and advancement. As far as the way of life and destitution, 70% of vagrant specialists in the US transmit assets all the time and three out of five transient laborers are in the working poor classification, while half of that vagrant specialist's populace is younger than thirty-five years (Biller, 2007). The majority of these transmitted assets are for family related issues, instructive costs or charitable reasons. They are spent on sustenance, attire, lodging and medicinal services. Settlements are held to cultivate a feeling of budgetary majority rule government and they are non-complementary in that they are single direction money related streams with no expectation of return or repayment. They speak to a progression of salary for families who may n Burnside and Dollar (2002) expressed that the effect of help streams on the rate of development of the beneficiary economy relies upon whether that specific cash exchange is contributed or devoured. In the event that it is contributed, it is probably going to decidedly influence development, though on the off chance that it is expended it might have a negative or no effect. Motivating forces to contribute settlements and any profits on venture and its ensuing efficiency, relies upon the approach condition that exists. A decent approach condition will expand the profits on speculation and raise the open door cost on utilization, while despite what might be expected, a terrible strategy condition will lessen the profits on venture and lower the open door cost of consumptionnot

generally get help.

As per the World Bank (2006) settlements are increasingly powerful in both raising venture and upgrading development in nations with more elevated amounts of human capital, solid organizations, and great approach conditions. Specifically, it is accounted for that settlement streams have developed altogether because of ideal government approaches that have improved access to banking, upgrades in innovation that upgrades the procedures identified with cash exchanges, better gathering of information, worries of tax evasion and fear based oppressor financing, lower and moderate expenses of settlement exchanges.

Lartey and Acosta (2008 and 2007) and Montiel (2006) proposed that the noteworthy inflows of settlements has additionally destabilizing result, in term of thankfulness in genuine conversion standard where (the centrality share spent on nontrade-capable products and ventures), which deteriorates the fare intensity of the beneficiary nation and the marvels alleged Dutch Disease. The capital streams gratefulness disheartens venture that can additionally destabilize macroeconomic condition of the beneficiary's economies (Cordons, 1994).

In these situations where international partners use local dealers the arrival of FDI can also generate new business chances for native investors and "pulls in" local investment through linkages of backward and forward (cave, 1982). Research of the investment influence on indorse FDI in china remain occasional. Yet, some aspects seem to recommend that the FDI inflow favors the development of local investment in china.

Foreign exchanges are increased by the officially channeled remittances and it makes the balance of payment so easy at the same time gap of payments could be eliminate (UNCTAD, 2012, p.137). It is stated that inflow of remittances is stable as compared to foreign direct investment or official development assistance. Remittances support the revenues of export by reducing the instability level and at the same time it allows more import of some different goods which are highly required. Whenever official channels are used to transferred remittances it may improve the creditworthiness of any country for borrowing and its capacity to pay back the debts. So, remittances plays a key role in case of debt payment and it

also evaluate the country's creditworthiness for bilateral and multilateral lenders (IMF, World Bank, 2012), thus it enhances the capability of foreign exchange, foreign credit and lower the risk level to lenders. Government's capability to finance a number of private projects could be enhanced by the remittances. Government may enhance the funds through different ways like by increasing the tax on remittances as income or by imposing tax on those expenditure which are caused by the remittances. Ebeke (2014) claimed that remittances are able to effect the monetary policy it may also increase the tax base by using some instruments as VAT Value-added tax. Remittances play an important role in the development of all organization's infrastructure projects such as health center, school. Remittances have complementary effects when transferred through migrant associations and some other channels (Anyanwu & Erhijakpor, 2010). Entrepreneurship and other investment activities also effected by the remittances (Anyanwu & Erhijakpor, 2010).

It is so obvious that all channels that are involved in transferring remittances might be not fully functioned or all significant theoretical logics may not be relevant. It might be not possible that inflow of remittances convert in investment (Anyanwu & Erhijakpor, 2010). For instance according to Barajas et al. (2009, p.6) and others, all households who receive remittances consume more and prosper their lives but having a little bit effect on reserves and investment. It may have some other a number of effects.

Remittances may have a lot of other effects. If it is considered as permanent source then there may be more chances of consumption as compare to investment although having a number of credit restrictions. When financial system considered more developed domestically then credit limitations link becomes weaker, financial system perceived as more established or developed and highly associated with its worldwide counterpart (Barajas et al., 2009; Bjuggren et al., 2010).

Remittances could apply some further macroeconomic impact that might be closed up by impeding investment action. An increase in nominal exchange rate, money supply and foreign reserve are encouraged by increasing inflation and exchange rate (Ball, Lopez, Reyes, & Cruz-Zuniga, 2010; Cceres & Saca, 2006; Khan & Islam,

2013). Remittances may also cause an increase in inflation and its basic reason is that it increases the consumption for goods and services, especially where economy of a country is unstable and don't have capacity to meet consumer's demand (Bracking, 2003). Increase in inflation is not a suitable condition for economy as well as for a country especially in case of investment. Increase in financial inflow results in real appreciation of inflation. All goods that are made domestically are not capable of slowing down the financial requirements in this sector. Foreign exchange accessibility and availability of imported inputs partially balance the effect of its results. Remittances also have a negative picture in society as it promote the culture of dependency and discouraged the effect of productive activity. Reservation wage may also increases, as a number of beneficiaries depends on remittances that's why they would be less interested to contribute in the labor market and not highly involved in the entrepreneurial actions. Which may probably leads toward poor financial performance (Bridi, 2005; Chami et al., 2003).

So this argument must be understood through different combination like with expenditure and a lot of other effect mentioned above, to wisdom whether a number of effect on demand is higher than the discouragement outcomes on the supply side. it is so obvious in above studies that relation between domestic capital formation and remittances that latter effect the former through different ways, but some chances still exists that it does not function properly in specific condition. In addition, effect of remittances on investment may be conditional with some factors such as the degree of credit limitations confronted by the receiver and an increase in consumption power without an increase in disposable income, frequency and distribution of remittances received. As the degree to which recipient countries' financial institutions are settled and the extent to which these sectors are associated domestically to the world economy are demanded to condition the effect of remittances on investment. So these thoughts proposes that it is an empirical matter that whether remittances effect the domestic capital formation.

Dass and Chowdhury (2011) explored remittances and changing aspects of GDP in different countries especially in emerging countries. This study pay its specific attention to specifically 11 countries. As study conclude that long term connection

exist between GDP and remittances but this connection is not strong in fact it is slightly significant. It means remittances are being used for consumption in a number of countries. Remittances have the capability to influence the economic growth even when it is being used for consumption. But its overall effect is very lower. Ahortor Adenutsi (2009) suggest that remittances have little bit positive effect in log run specifically in developing countries along with all control variables. The results shows that contribution of remittances for underdeveloped countries is highly efficient to economic growth. So remittances don't have the capability to provide funds to investment projects.

Glystsos (2002) showed from empirical evidence remittances are less effective in developed countries like Europe, but more effective in the developing countries. As it has important impact of paying the bills of imports in bulk and on economic growth. Migrants sometimes make investments but mostly they go for savings. So banks use these savings in some productive ideas just like banks may use this money in loan extension criteria. Fayisa and Niah (2010) examined the effect of promotion of migrants' remittance on the growth of economy of different countries and particularly in Latin American countries. The results showed that economic conditions of these countries as per GDP has significant impact of remittances. Gross domestic product per capita has been effected by the investment in humane and physical capital. GDP has negative relation with two factors like financial inflows from foreign and foreign aid. GDP is effected by the trade openness positively but not significant. Foreign direct investment and gross domestic product has positive connection.

Bracking (2003) studies the significance of remittances to those who are living in the home country from worldwide emigrants. This study specifically focus on Zimbabwe. It claims that when money was sent by any foreign country it put some positive effects on families. Buying power could be weaken by remittances, especially for those households who don't have any member outside the country for earning. But in consequences it may increase the prices of the assets and inflation occurs. Similarly it may also effects the money market due to rise in price of inflation.

This study suggests that just to get to know all about cost and benefits of remittances sent by the immigrants to their households, in relation to evaluate the social class and community of diverse group who sends or receive the money. This study argues that one of the most important but non-economic impact of remittances is that it put some. The paper argues that further research is required to understand the costs, as well as the benefits, of money sent home by migrants, in terms of assessing the class and social agency of different groups of remittance senders and receivers. The paper suggests that one non-economic, but significant effect, of remittance-underwritten parallel markets might be an undermining of inclusive governance and democratic state accountability in the long-run.

Cceres and Saca (2006) examines that how central American countries are effected by the spillover and at the same time it also check that how El Salvador's economy is effected by the remittances. Model that is used by the study is Vector auto regression model that contains fiscal and real variables. The outcomes of the study is in El Salvador, remittances effect the economic activity and international reserves negatively and at the same time a decline also occur in supply of money. But interest rate, imports and consumers price are being effected oppositely by the remittances. It emphasize the need of changing the policy for El Salvador's economy just to encourage the contribution of remittances for capital formation as it may also enhance value of remittances.

Adolfo Barajas et al., (2009) debated it previously that in developing countries remittances sent by the workers to their households is known as the main cause of financial inflows while most of the studies consider it as insignificant part of the domestic as well as official assistance for inflows. Remittances put positive effects in poverty reduction and increase the consumption power of the households who receive remittances, but it is still questionable that whether they are spending for long run or just focusing on short term consumption. This study focus on this question and try to overcome the previous weaknesses in empirical work, concentrate on suitable measures and technique that is linked with remittances and It would be just estimated the progress through its impact on remittances. Outcomes of the study indicate that economic growth is not effected by the remittances.

Bjuggren et al., (2010) investigate that how investment is being effected by the remittances. Worker's remittances considered to be a very important part of financial inflows in developing countries and its amount is round about \$300 billion per year. Worker's remittances are used by the recipients in the home country for both purpose like for consumption and investment. As every country has its own financial and institutional framework so this study shows it's significant that how remittances interact with these frameworks in the home country. In this study data used on flow of remittances is from 1995 to 2005. This study include data of 79 developing countries from 1995 to 2005 on flow of remittances. Data approach that is used to analyze, is dynamic panel data approach. The outcomes show that investment could be enhanced by different factors like high quality institutional framework and well developed credit market. But at the same time availability of more worthy institutional framework and well established credit market enhance the quantity of investment. Though it is also observed that remittances don't have central importance as a major source of investment. Well established credit markets and institutional framework also undermine the importance of remittances.

Gibson and Karunaratne (2014) observe that most of the decision maker even don't have the capacity for financial decision making because there's a lack of financial literacy. One important topic in financial literacy which is hardly discussed that one is immigrants, who required specific financial needs linked with remittances. This paper observes the deviation between two countries (Australia and Sri Lanka) which are playing important role in case of remittances, whether these countries have the ability to understand that money will work or not. There are a large number of differences in these two groups especially in case of having financial knowledge. Different source of remittances have different transaction cost. But these variations in transaction cost can be reduced and number of dollars can be save by improving financial literacy as it may also facilitated to generate some highly efficient and effective choices for remittances.

Al-Sadig (2013) investigate that the degree of external foreign direct investment

has improved meaningfully from emerging and evolving economy. It is much significant to know that physical capital formation is playing an important role to evaluate that how local investment react to all these outflows. Theoretically study focus on developing countries and observe the impact of external investment on developing countries. The data from 1990 to 2010 is being used. This data is collected from developing countries only. The findings of this study shows that domestic investment is effected by the outflows of foreign direct investment negatively.

Benmamoun and Lehnert (2013) investigate the importance of emerging remittances with the combination of all challenges faced by the foreign aid and growth of foreign direct investment in the view of theoretical partition. One important question relevant to remittances is whether that foreign remittances paying an important role as a determinant of economic growth which is contributing to FDI and foreign aid. Panel data is being used from 1990 to 2006. This study used GMM technique. Researcher found that in developing countries, three factors like foreign remittances, foreign direct investment and official development assistance are positively and significantly related with the growth of economy. Especially we found that there is a huge effect with foreign remittances. Comparatively foreign remittances contribute much for economic growth of developing countries as compare to FDI and ODA. In another situation when countries depends heavily on FDI, only foreign remittances add more to the growth of economy as compare to FDI and ODA. We concluded that a proper policy is required for a suitable circulation of foreign remittances which may add more potential to the development of economy.

Shapiro and Mandelman (2016) integrate remittances and those who startup a small enterprise or usually referred any business who start with few employees and with small amount of capital in a small business cycle, where financial and humane capital seems like market hurdles. Remittances perform well at the time of downturn to modest the usage of household as a countercyclical remittances. Most of the time remittances also provide financial support to the small business which may strengthen the income of the households especially at the time of

recession. Countercyclical remittances put some positive effects on the revenue and ultimately it leads to a decline in the availability of labor but at the same time it may increase the level of wages at the time of downturn. It also put some unfavorable effects to regain the economy. If we focus on other evidence, we find that contribution of workers and procedure of employment is effected by the remittances between paid and non-paid employees in business series. This model only conveys collective dynamics and workers market that are reliable in case of Mexican data it also involve the rate of variability and joblessness.

La and Xu (2017) examine the remittances perform an important role to benefit the public specifically people living in developing and deprived countries through remittances migrate from other countries. Crowding out effects might be overlapped by the internal or international remittances which are same like public transfer. This study examine the crowding out effect of remittances in the context of Vietnam. This study use three different survey as sample which were conducted in 2000s. It was observed in 2000s that there was a great inflow of remittances in a developing country Vietnam. But significant effect of crowding out are for both remittances like international and domestic remittances are particularly on the people who are spending their lives below the poverty line. But on the other hand derivatives are positives and significant in this area. In case of some other relations it's not an easy task to take the challenges to provide a system which is more efficient and effective in the country.

Individuals living in foreign countries mostly built international remittances with the intentions to help out their families and friends for a better living style or to invest in their own country. Remittances are defined by the United Nations technical group in two different ways. They created a difference between overall remittances and institutional. If capital is being transferred household residents to household residents it is known as personal remittances, institutional remittances are being transferred by residential sector to the households that are non-residents. So, total remittances include sum of both personal and institutional (World Bank, 2006, p 87). Government can perform a vital role in the transfer of remittances. But the main purpose of Government interference is to avoid all participants from pressure,

exploitation and robbery just to encourage the stream of remittances and utilized all these flow of remittances for productive actions. To attain all these purposes, most of the governments started a variety of legal procedures, programs and policies (Orozco, 2002; World Bank, 2006). But all governments' interference is not slightly disturbing. Sometimes governments strived to adjust the remittances just to into the stream of funds, but some governments became successful others face failure (Shivani and Rizema, 1999; Orozco, 2002). Remittances transfer market has emerged as the most competitive and money making market (Lowell and De la Garza, 2002). It has increase a lot of challenges. These challenges are; safety of the transaction, even though specific channels, hidden commercial actions, migrants routine, Lowell (1998) describes that Mexican government post office were being lost by one third portion of the transferred remittances.

Absence of information related to monetary services and costs, Government and the banking system is not considered as much trustworthy (Lowell and De la Garza, 2002, p. 10). All these challenges could be tackle through sound rules and regulations from both private as well as well as government sector. In past research it was not sure that remittances have large impact on economy of the country, mostly remittances were just considered as a source of domestic consumption and particularly in case of imported goods (Lipton, 1980; Russel, 1986). This study has become important with the passage of time. A number of studies have shown that remittances are not only supporting domestic consumption but at the same time a specific portion also contribute to the investments and savings (Dustmann and Kirchamp, 2001, Woodruff and Zenteno, 2001; Adams, 2002). International remittances can change the consumption power, as it has a deep effect on poverty by increasing the households' income. These remittances play an important role in improving health, education, entrepreneurship, improving life style, security in case of economic ups and downs (United Nations, 2006; World Bank, 2006; Clarke and Wallsten, 2004). Serino and Kim (2011) and Portes (2009) in low income countries remittances help to lessening the poverty and increase the well-being of deprived is much important. Balance of payment, foreign exchange rate and interest rate are being effected by International remittances (CBO), 2005; United

Nations, 2006; World Bank, 2006).

Serino and Kim (2011) and Portes (2009) international remittances always helpful to eliminate the poverty and especially in low income countries, international remittances improve the wellbeing of all these. Interest rate, foreign exchange rate and balance of payment have been effected by the international remittances (CBO) 2005, United Nations, 2006, World Bank, 2006). Remittances also improve the creditworthiness of all the countries and it may helpful for getting more loans and some other financial aids easily in the time of uncertainty (United Nations, 2006). Domestic output could be enhanced by the international remittances because it has a lot effects and it also reduce output damages which may be faced by the migration of skilled labor (Ratha, 2003, p.164). International remittances provide an opportunity to growing countries to get a lot of advantages. But before getting all these benefits a number of rules and regulations and particularly market security issues must be tackled.

Foreign direct investment has multiplier effects on financial growth. A number of theoreticians considered that FDI has some negative effects on social benefits Blostrom and Kokko, 2003; Globerman and Shapiro, 2003; Mencinger, 2003; Hymer, 1970) as FDI has a number of benefits over market limitations and technological spillover. (Eden, 2009). Some studies undermine the concepts that spillover is effected by the FDI (Haddad and Harrison, 1993). But on the contrary, Hsiao and Shen (2003) argued that FDI put some positive effects on spillover. Irrespective that FDI keep trying to increase inflows even beaten the official aid (UNCTAD, 2007; OECD, 2007; Colen, Maertens, and Swinnen, 2013, p. 76-77). So FDI has great impact on the domestic countries' growth and development.

A strong relationship exist between remittances and financial development. A number of studies have done on the financial development and remittances. But commonly Banerjee and Newmann, (1993), and Greenwood and Jovanovic (1990) research put their focus on domestic as well as private firm for loan and different type of credit which they get through intermarries mostly from financial and non-financial institutions. Generally growth and financial institutions has a vigorous relationship so literature pay more attention to this connection. It is observed by

the Schumpeter (1911) that growth and technological innovations are promoted by the financial sector through the allocation of resources to entrepreneur.

Beck et al., (2000) shows it empirically that total factor of productivity built a positive relationship between growth and financial development. Wurgler (2000) financial development do not only directly enhance the investment at the same time current investment also boost up the economic growth. Highly developed market play a vital role to enhance the economic growth as well deep financial market also important for economic growth (Beck & Levine 2004) and (Rousseau and Wachtel 2000).

Demirguc-kunt et al., (2011) demonstrate that growth is independently linked with banks and market development. Billmeier and Massa (2007) financial sector is measured by the stock market development and it is linked with output growth. Mundaca (2009) investigated all about growth and remittances in for two different areas like Latin America and Caribbean regions. Panel data technique was being used from 1970 to 2003. Countries having a strong financial sector put a sound effect on remittances and growth and this concept is developed by the well-known countries.

Ruiz-Arranz, M., and Giuliano, P. (2005) studied the growing economies and examine the relationship of remittances and financial development. This study examine the data from 1975 to 2002. This study resolve the endogeneity issue by using GMM approach. Moreover growth can be improve in underdeveloped countries through financial development. Remittances marked a deep effect on the allocation of resources, improve the worth for getting more credit or relax the credit hurdles. Remittances also provide the opportunity of substitute of financial development and at the same time also increase the economic growth. A number of researcher explain the impact of impact of remittances on different sectors like health, education and income disparity.

(Ratha 2013a) analyzed that growth rate can easily be increase in different countries through remittances. In case of migration of people provide a sound base to the economy of the country. Poor people, who migrate to other countries, remittances make their life and the recipient so easy. (Frank et al., (2009) examine

the relationship of health and remittances in the region of America and conclude that people are using remittances for the betterment of health or not. (Frank et al., (2009) examined the relationship of remittances and health care insurance in America and they investigate that remittances are being used for healthcare insurance or not which are received by the household. People who are much conscious for their health and they are receiving remittances, most probably they are insured. So remittances play important role for this insurance and it can also create a gap between receiving and Non-receiving remittances. but in other case if some people are receiving remittances but they don't have any insurance, in that case there is no major change between both, receiving and Non-receiving countries.

Ratha (2013b) investigate the relation of remittances and economic growth in the context of Africa by using unbalanced panel data techniques from the period 1980 to 2004 for 37 African countries and found that in the less developed financial system the remittances increases the growth rate by providing another source of finance investment. This study shows that remittances have positive effect on economic growth rate and exactly important influence on economic growth rate and the current level of gross domestic product (GDP) as financing of human and physical capital. On the other hand Chami et al., (2003) studied 113 countries concluded thirty year period and find that remittances and economic growth have negative relationship, while IMF (2005) found no relationship between remittances and economic growth. Similarly, Chami et al., (2003) also observed that remittances have a negative effect on economic growth. Giuliano and Ruiz-arranz (2006) suggested the links between economic growth and remittances that how financial development influences the size of the economies. The study covered 100 developing countries data and found that remittance rise growth in economy with deep financially developed. It also suggests that remittances promote financial system where there is no need of credit to the population. The study also analyzed the repeated properties of remittance shows that they are mainly profit driven and usually procyclical.

Aggarwal et al., (2006) studied, economic growth and remittances that they have positive and significant effect in the long run on the income growth while in the

short run ODA has cause positive with respect to income growth, remittances and financial development have negative effect on the income level in the short run. This study observed that a remittance to financial development gives the vast information of that remittances reducing poverty and enhancing growth rate in economy. This study also observed that impact of remittances to the private sector on bank deposit and on bank credit. In this study they show that a remittance plays a significant role on bank deposit and credit to GDP. The study gives highly supported idea that remittances promote financial development in developing countries.

Shahbaz (2007) studied on the relationship between remittances and financial development by using time series data from the period 1971 to 2001 and finds the long run relationship by employing Johansen co-integration technique and autoregressive distributed lag (ARDL) approach. The result suggests that financial development can be promoted from remittances. Furthermore, the study also suggests gross national product (GNP) per capita and increase in exports promote the performance of financial sector development while increases in inflation cushion the effects.

Service, E. (2014) analyzed the impact of remittances on financial development substitute in economic growth by using panel data model of 66 developing countries for the period 1970 to 2005. They study found that financial development determines the effectiveness of national banking system and displayed that the impact of remittances on economic growth is negative in countries where bank efficiency is low and high in countries where bank efficiency is high.

Aggarwal et al., (2011) studied on the relationship between worker remittances and financial sector development by share of deposit and credit to GDP, by using panel data of 109 developing countries data from the period 1975 to 2007. The study uses the fixed effect and generalized method of moment (GMM) estimation in order to examine the relationship between remittances and financial development. The study found that the impact of remittances on financial development plays an important role in the economy because it enhances the growth rate effects of financial development. The study also finds that there is a positive and significant

relationship between worker remittances and financial development in the receiver developing countries after controlling opposite connection and dimension error effect.

Chowdhury, M. B. (2011) analyzed on the relationship between worker remittances and financial development for Bangladesh. The study used a time series data over the period 1971 to 2008. The study found that the impact of workers remittances on financial development plays an important role in the economy and it is the 2nd largest source of foreign exchange earnings. Furthermore, the study reveals direct and significant relationship between remittances and financial development. Own and Me (2011) examined the interplay between remittances and financial development. The data are collected in this study from Pakistani by using time series data from the period 1980 to 2010, including Auto Regressive Distribution Lagged (ARDL), Ordinary Least Square regression model and Error Correction Model approach to analyze the role of trade openness and foreign aid in raising financial development to analyze the linkage between trade openness and foreign aid in promoting financial development and also the linkage among financial development and worker remittances. The study shows that there is no relationship in the long run among worker remittances and financial development while in the short run there is a significant and positive relationship among worker remittances and financial development. The study also examined the ODA, trade openness and remittances that they have positive and significant effect in the long run on the income growth while in the short run ODA has cause positive with respect to income growth effect but trade openness, remittances and financial development have negative effect on the income level in the short run.

Oke, et al., (2011) studied the impact of workers remittances on financial development in Nigeria from 1977 to 2009 by using ordinary least square estimation (OLS) and generalized method of moment (GMM) estimation techniques and used two indicators to measure the financial development. One is the ratio of money supply to GDP and the other is ratio of private credit to GDP. The study found that remittances and financial development having positive and significant effect on financial development in Nigeria with the exclusion of the ratio of private credit

to GDP. Remittances used for consumption purpose in the economy rather than production function in the economy. It increases the liquidity as compared to loanable fund. Fayissa and Nsiah (2012) studied the financial development and remittances with control variable of exchange rate, size of migrant stock in both Africa and American regions. The study uses panel data from 1985 to 2007 period including of 44 countries in which 25 countries were from Africa and 19 countries from America. They find that financial development, exchange rate and size of migrant stock have positive effect on remittances in both regions.

Cooray, A. (2012) studied the migrant remittances and financial development. The study posits that remittances cause to increase in both size and efficiency of the financial sector development.

Akkoyunlu, . (2012) studied the direct relationship between remittances and financial by taking evidence from turkey. The study is discovered by using time series data to find the relationship between remittances and financial development. The study is conducted in the small level as well as in high level. At the end of the study observed that there is no association between financial development and remittances. Brown et al., (2013) studied on the impact of remittances and financial development in the micro as well as macro level by using panel data. In the macro level the data of 138 countries used over the period 1970 to 2005. The study shows a negative relationship between remittances and financial development in developing countries. In the micro level study the data are taken between 1990 and 2007 and examine the relationship between remittances and household financial literacy for two countries, Azerbaijan and Kyrgyzstan. In this level the study shows that remittances and financial literacy having a negative relationship among remittance- receiving households.

Sharif et al., (2013) studied that impact of remittances and financial development in the case of Latin America and Caribbean region by using panel data method through using fixed and random effect model. In order to investigates this effect the study taken the data from 1991 to 2010 from 29 Latin American and Caribbean region. The study found in research that there is positive and significant relationship between remittances and financial development.

Kakhkharov, J. (2014) studied on the impact of remittances and financial development in Central and Eastern Europe by using panel data through taking sample of 27 countries from the period 1996 to 2003. The study shows that remittances have a significant and positive effect on financial development and also analyzed that the effect of remittances on financial development is particularly more in those countries where there are high share of remittances to GDP ratio.

Aziz et al., (2015) studied on the migrants remittances and economic growth rate in the role of financial development by using unbalanced panel data over the period 1980 to 2010 for 72 countries. After including the entire variable the data for 54 to 56 countries are shows valid while other are invalid in dissimilar empirical mode. The study shows that financial development make easy the change of worker remittances which may facilitate in productive investment and there wise increases in economic growth. The study also shows that workers remittances through financial development increases economic growth and also found that in the appearance of financial liberalization and trade openness the worker remittances plays a greater role in economic growth as well as its significantly and positively increases economic growth.

Coulibaly, D. (2015) suggested on the links between remittances and financial development in the context of Sub-Saharan African by using panel data from the period 1980 to 2010. The study shows that remittances have positive linkage with financial development in 4 countries; these are Sierra Leone, Senegal, Sudan, and Niger. While in Gambia the financial development have positive linkage on remittances. The study also shows through credit to measure that only in Sudan remittances have positive and significant linkages with financial sector development.

Ahmed and Martnez-Zarzoso (2016) studied that remittances and transaction cost using gravity model approach. The study used bilateral data on remittances of 23 countries flows to Pakistan. They find that transaction cost is negative associated with remittances, as higher cost refrains each migrants from sending money back home. Moreover, they established that remittances are significantly and positively

related to financial sector development. Their finding claims that well developed financial market positively impact remittances in the host and home.

Another source of external finance is remittances as it has also great effect on the return of the households and well-being of the recipient (Gatha, 2003), remittances has the power to attract the officials like who makes the policies and community. The crisis in 2008 in financial sector in Europe, though recent studies do not expect much more as it does not consider it trustworthy and its stability is also not reliable (UNCTAD, 2012,p.24; Arief, Weiss & Jones, 2010; Barajas, Chami, Fullenkamp & Garg, 2010; Nagarajan, 2009).

Average flow of remittances is near about one third of the income which is earned from export in the current ten years period. This amount of remittances is higher than the amount of private capital flows twice, 12 times higher than official transfer. This study also mention that amount of remittances is relatively is 100 times more than the official flow of capital. Macroeconomic effect of remittances are not much glowing as it lessen the poverty level in developing countries. Remittances has great impact on consumption level, expected variations in flows of remittances influence the short term output.

Cceres (2005a) investigate the impact of remittances on interest rate, inflation and supply of money. Remittances increase the interest level in the country as Caceres find these results from annual data by applying co-integration technique for the period of 1980-2001. The impact of remittances on interest rate put some adverse effects on the development of economy. Cceres also analyzed the monthly data to check out the effects of monetarist variables. Cceres explained that main element for the supply of money is the ambiguity allied with the remittances that is attained by using GARCH method. Currently most of the countries which are heavily depending on the remittances mostly fall in trouble if any decline occurs in the remittances. Its main example is the countries like, Georgia, Kyrgyzstan, Tajikistan, Azerbaijan and America, all these central Asian countries that are highlighted by the Middle East. This fall in remittances intensifying the impact of universal downturn. Government policies consumption rate are being effected by a decline in remittances. Government policies like, capacity to conduct financial

strategy which may disappear due to loss in tax returns which comes from two main sources, consumption and all those activities which are using remittances as a financial source. Same is the case with the Central American countries. As when remittances decrease it may increase the need of loan from IMF as a financial assistance. It can assist to their citizens in the condition of economic recession.

Usually, daily expenses are being covered by the remittances for example education and health. Informal social insurance is also provided by the remittances. Social insurance in away like by decreasing the poverty level and disparity of income. Adams 1991; Adams and Page 2005; Ahlburg 1996; Quartey 2005; Yang and Choi 2007). Moreover a number of studies indicate that remittances are laying a significant role for insurance by freeing all those shocks which may face by the households. These shocks and problems can also be minimized if the households send someone from their home to some other areas where all these problems or shocks don't exist at the same time. Burgess and Haksar 2005; Clarke and Wallsten 2004; Gubert 2002; Lucas and Stark 1985; Quartey 2005; Yang and Choi 2007).

Some writers make us able to get that how remittances can boost up the investment in domestic country by understanding the superiority of the institutions and financial structure. Most important concern of the immigrants is to increase the quantity of inflows in their home country. As remittances are significant in case of development stability of the country. These inflows also influence the portion of the GDP of any country. Overall remittances in 2000 were just 131 billion US\$ but in 2005 it increased up to 263 billion US\$. It was almost 0.62% of the overall GDP. These figures are much important. Developing countries compared this considerable amount to the official development assistance. In case of FDI remittances are shown as 2nd contributor as per World Bank estimations. In poor nations remittances are significant as it playing a significant role to exceed the FDI. Remittances can perform a better role to eliminate the poverty. Although remittances are important for developing countries but still a great attention is required to understand that how remittances should be used for economic development.

Monetary institutions are very crucial for growth (see e.g. Levine, 1997). Most of the research include remittances in case of growth not for investment and get some different results. Mundaca (2009) took Central America countries as sample and concluded that growth is enhanced by the financial development through remittances. But on the other hand Giuliano and Ruiz-Arranz (2009) and Fayissa and Nsiah (2008) said that in underdeveloped countries raise the level of growth by using remittances in financial sector. Remittances play a significant role in financial sector especially for the countries which are not able to get loan from private sector.

It is a fact that where political instability, corruption and incompetent bureaucracies exist, it is hard to argue that migrants can enhance the investment up to a specific limit. In an article Catrinescu et al. (2009) observed the foundation that a specific setup of any non-financial institution effect the progress of remittances. Different authors provide a detail information on that non-financial institutions like government solidity, self-governing and accountability can affect the growth and development of the remittances.

Some of the articles support the idea that financial and non-financial institution encourage the investment. In some countries reputable financial institutions exists, where democracy is practical but at the same time an efficient and energetic market is needed to attract domestic and international investment and use thus investment in most productive projects. Political solidity, a lesser amount of corruption and well-organized bureaucracy and a compensation leads to an increase in confidence level of investors. This study varies from previous studies as it concentrate on investment. This study also explore that how investment is effected by the financial institutions and institutional framework same like investment is effected by the remittances.

It is much important to focus on the moderating effect of both financial development and institutes collectively in literature. This paper study the effect of institutional equality and financial development in connection with investment-remittances. An article by Bettin and Zazzaro (2008) is exactly linked to our paper. This article examine that how progress of remittances is being effected

by the institutional equality and financial development. But previous study differ from current because that study is result of financial development and some other dependent variables. In financial development we pay more attention on credit get from banks, bank assets and investment. Bettin and Zazzaro (2008) examine the financial intermediaries' competencies for growth as proxy of financial development.

Another study conducted on Vietnam from 1996 to 2012 observe the effect of remittances on inflation by using VAR model. Some factors have positive effects on the economy, these factors could be growth, way of life, and decrease in poverty and improve in hunger eradication policy. But all these factors as well as high inflation burden show negative effect. This study add some more like remittances of workers in different ways, in growing countries like Vietnam this study examine the effect of remittances related to the part of the economy that is concerned with single factor or individuals. This study observe the impacts of remittances on inflation very 1st time in Vietnam. Major outcomes are; remittances have a vital impact on money stock. 2nd excess of money increase the inflation level of the in the Vietnam in the time period of 1996 to 2012.

Lopez-Cordova and Olmedo, (2005) recommended that an Increase in remittances leads to increase in GDP in the flow of remittances and it will reduce the export percentage almost from 0.2 to 0.4. Furthermore Bourdet and Falck (2006) establish an idea related to remittances that external competitiveness is affected negatively by the remittances. But at the same time World Bank, (2006) and Rajan and Subramanian (2005) proposed that if remittances increase it do not put any impact on export competitiveness. When a large amount is consumed only for the goods and services which are even not be traded then increase in real exchange rate put negative impact on the remittances. But if these funds are directed through investment then real exchange rate would be vanish. It is to be supposed that such types of failure in the domestic country completely determined by the financial development (Acosta, et al., 2009a).

Another research (Mundaca 2009) described that financial development sector also have a sound effect on the remittances. Various studies like, Levine and

Servos (1998); Otker-Robe et al, (2007); King and Levine, (1993) and Levine et al., (2000) clarified that rate of interest in most of the countries is higher mostly where countries are at its highest level of financial development. Hence, we anticipate that only those economies can use their remittances effectively in some productive activities, where financial sector is highly developed and this is the only reason why remittances depends on the financial development.

The Salter (1959), Swan (1960), Corden (1960) and Dornbusch (1974) demonstrate utilized as hypothetical help to experimentally test the effects of the streams of outside capital (i.e settlements) on swapping scale for the example of settlements subordinate economies. This model uncovers that how outside capital streams would value the genuine powerful conversion scale in expanding the savvy in monetary development. The investigation likewise demonstrates that specialist's settlements through money related improvement increments monetary development and furthermore discovered that in the presence of budgetary advancement and exchange receptiveness the laborer settlements assumes a more prominent job in worldwide dimension is steady, the pay increment following the capital streams result an expansion in spending, that further put weight on the household request in the economy. This procedure would be named as a spending impact (Caves et al., 1982). The expansion in the estimation of no tradable products with respect to tradable merchandise aim genuine swapping scale to appreciation. Essentially, information sources, for example, work and capital presumably switch into residential non-exchanged merchandise creations that go over the ascent in local interest. The asset development impact creates from the ascent of non-exchanged division.

Arize, et al., (2000) analyzed the relationship transport between genuine conversion standard unpredictability and exchange, specifically on the stream of fares. The investigation utilized quarterly information over the period 1973-1 to 1996-4 of 13 less created nations. The examination utilized Johansen's multivariate strategy for observational investigation. The examination displays that there is negative connection among settlements and genuine swapping scale unpredictability in both short run and long run timespan. Lucas and Stark (1985) contended settlements includes the formal commonly understanding among family and the

vagrant. The last send the cash to his family in real money for essential needs just as for a few diverse unique intentions. The vagrant needs to guarantee that his advantages at home are suitably oversight, and his needs to improve his family relationship in order to be competent to return home self - regard. This examination demonstrates a positive connection between beneficiary salary and settlements. Kandil and Mirzaie (2003) inspected that the impact of conversion scale variances that disintegrated into pattern and repetitive segments. The interest sides of unforeseen swapping scale variance were fundamentally dictated by fares, imports and neighborhood money request. Be that as it may, on the supply sides, the cost identified with the imported transitional products. The investigation demonstrates that unforeseen trade rates were progressively noteworthy impactsly affecting development and expansion.

Amuedo-Dorantes and Pozo (2004) contemplated the impact of migrants remittances on the genuine swapping scale for 13 Caribbean and Latin American nations. The investigation utilized board information for the examination. The investigation uncovers that settlements convergence to these nations result a huge percent expansion in the genuine conversion scale. In addition, the investigation demonstrates that swapping scale thankfulness because of settlements, likewise cause misfortune in worldwide intensity in the settlement getting nations. Bussolo et al., (2007) analyzed settlements and genuine swapping scale for chosen Latin American economies dependent on most astounding settlements in respect to yield. . The examination finishes up with observational outcomes that settlements fundamentally cause genuine conversion scale appreciation.

Muktarbek (2012) finds that settlements inflow can affect household economy, especially in genuine conversion scale. Also, increment in settlements stream cause thankfulness in genuine conversion scale. These impacts as a rule put upward weight on the genuine viable swapping scale, as accepting huge budgetary streams started from common asset blasts, settlements or outside guide. Lartey, Mandelman, and Acosta (2008) examined the impact of settlements on genuine conversion scale routines, and the Dutch Diseases impact. The investigation utilized board information of 109 creating nations over the period 1990 to 2003. They exact

dissected GDP per capita, exchange receptiveness and GDP development rate in utilizing the Generalized Method of Moments (GMM). The examination demonstrates exchange transparency is factually unimportant. In any case, expanded in settlements would build spending in creating economies that in results cause increment in non tradable products, which further increase the genuine swapping scale appreciation. The ascent in the cost of non-tradable merchandise would results in asset movements and in this manner diminishes efficiency in the assembling (tradable) segment.

Bach and Solomon (2008) considered work relocation at a worldwide dimension by utilizing board information from 1990 to 2006. The investigation analyzed that whether settlements exchange reacts to conversion scale vulnerability, political hazard and other macroeconomic determinants. They contend that settlements and swapping scale have negative relationship. For example, an expansion in swapping scale vulnerability. Moreover, political hazard is negative with settlements streams, yet factually irrelevant. At long last, they propose that positive monetary condition and sound political condition are vital variables to draw in extensive offer of the budgetary streams.

Acosta, et al., (2009a) proposed that the expansion in settlements results to macroeconomic unpredictability with regards to has on Salvadorian economy. They saw that ascent in settlements demonstrates that ascent in family unit salary and subsequently the non-tradable items likewise rise. The investigation finds the standard swapping scale thankfulness is set up.

Acosta et al., (2009) additionally examined on the settlements and genuine conversion standard and proposed that settlements lead to ascend in genuine swapping scale. The investigation finds that the nations with further developed monetary market are upgraded to enhance the macroeconomic to trial of increment of the nearby cash as keeping up a focused position. The investigation additionally accept by utilizing similar information that if decline in the money happen, the sum by which cash diminishes relies upon the capacity of household economy to divert settlements toward speculation.

Rehman et al., (2010) inspected outside trade and genuine conversion scale balance in the Pakistani setting. The month to month information was gathered for examination from the periods 1993 (M7) to 2009 (M3). The investigation finds that genuine conversion scale would be acknowledged generously if there should arise an occurrence of both transient settlements and outside direct venture (FDI). Barrett, K. (2014) recommended that settlements and genuine conversion standard have negative impact on the work trading economies, in this way the financial improvement of the nations are decreasing because of the genuine swapping scale thankfulness in accordingly devaluation of fares aggressiveness. Distinctive investigations have brought consideration into the Dutch ailment wonders of work sending creating nations, by utilizing diverse connected methods, for example, board and time arrangement information models. Nonetheless, still the issue is begging to be proven wrong exactly as still no accord exist that settlements dependably influence emphatically the genuine conversion scale. We can give various investigations from the experimental writing. In the event that the settlements increment by 1 percent in result the genuine conversion standard. The investigation recommends that the administration spending, capital inflows and terms of exchange the long haul value the genuine swapping scale. All things considered, irrelevant connections have been found among settlements and genuine conversion standard in the short skyline.

Tuuli, M. (2015) watched for Ghana economy on the effect of settlements and genuine swapping scale. The investigation utilized time arrangement blunder amendment show approach. The examination discovered valuation for the genuine conversion scale because of settlements stream in both the long run and in the short run. Hyder and Mahboob (2006) explored in the event of Pakistan, on swapping scale misalignment and balance genuine viable conversion standard (EREER). They utilized yearly information from the periods FY1978 to FY2005 by utilizing Engle Granger co-joining strategy. The examination demonstrates that balance genuine successful swapping scale (EREER) is dictated in terms of professional career transparency, terms of exchange, relative efficiency differential, net capital inflows, laborers' settlements, and government utilization. Exchange

receptiveness demonstrates that the expansion in capital inflows and government utilization results in the devaluation of genuine viable conversion scale (REER), while increment in enhancement as far as exchange, migrants remittances, and all out factor efficiency in respect to exchanging accomplice results in the valuation for genuine viable swapping scale (REER). A 1 percent expansion in vagrants' settlements as for GDP is related with 0.16 percent thankfulness in REER. A 1 percent expansion in net capital inflows concerning GDP is related with 0.02 percent deterioration in REER.

Hassan and Holmes (2013) examined on the long run connection among settlements and genuine conversion scale, through board information choice for less-created nations. The investigation is gathered through example information and finds that settlements have critical impact on genuine conversion standard thankfulness for high-settlement beneficiary's nations. Roy, R., and Dixon, R. (2016) contemplated the Dutch sickness and settlements streams in the South Asia setting. They find that settlements have noteworthy impact on genuine swapping scale. The investigation finds that in less created nations the development can be upgrades through monetary improvement along these lines settlements enhancing the budgetary assets.

Prakash, K. An., and Mala, A. (2016) think about the Fiji economy in inspects the effect of settlements on genuine swapping scale. They found no effect of genuine conversion standard gratefulness over the long haul. The investigation contended that noteworthy streams of settlements directed to gainful speculation to expand residential limit which applies no weight on the local conversion scale to appreciate. In any case, they contended that in the short run it acknowledges because of increment in settlements.

The present works is on the affinity among settlements and monetary area advancement. There are a few investigations that built up the capacity of monetary go-betweens. When all is said in done, Banerjee and Newmann, (1993), and Greenwood and Jovanovic (1990) contemplates concentrated on layaway to family and private firms through money related go-betweens from banks and nonbank or access to credits. For the most part, money related markets and development has

powerful relationship and gotten consideration in the exact writing. Schumpeter (1911) inspected that money related areas, advances monetary development and mechanical advancement by reallocating assets to business people. Levine and Zervos (1998) dissected that diverse administrations are given by banks and securities exchanges, albeit both securities exchange liquidity and keeping money advancement emphatically anticipate efficiency enhancements, development and monetary aggregation. Beck et al., (2000) exactly clarified that budgetary improvement and development have positive relationship and these relationship works through all out factor profitability. Wurgler (2000) recommended that speculation does not straightforwardly expanded by money related improvement, yet the financial development would be increments if the current venture is better. The profound monetary market isn't the best way to increment financial development however high created securities exchanges are likewise vital variables for monetary development (Beck and Levine 2004) and (Rousseau and Wachtel 2000). Demirguc-kunt et al., (2011) delineate that both securities exchange advancement and bank are related autonomously with development. Billmeier and Massa (2007) proposed that securities exchange improvement is additionally a proportion of money related area, which further connected with yield development. To quantify the budgetary segment improvement in the utilized both saving money and monetary segments factors.

Mundaca (2009) dissected development and settlements nexus for Latin America and Caribbean areas. They utilized board information systems over the period 1970 to 2003. The investigation built up that the development impact of settlements will be solid in those nations with powerful monetary segment. Ruiz-Arranz, M., and Giuliano, P. (2005) dissected the experimental relationship of settlements, budgetary advancement and financial development for chose rising economies. . The investigation utilized the information from 1975 to 2002. To control the endogeneity issue, they utilized System GMM. The investigation finds that in less created nations the development can be upgrades through monetary improvement Furthermore, the outcomes additionally recommends that settlements enhancing the designation of budgetary assets, encourage in facilitating credit requirements

for poor people, substituting the absence of money related advancement, and along these lines quickening financial development.

There are diverse examinations on settlement which appears in changed angles these resemble effect of settlements on development, training and wellbeing, pay imbalance. (Ratha 2013a) saw that settlement improving the development rate in the creating nations like Pakistan. The investigation demonstrates that settlement makes potential points of interest identified with the worldwide relocation for destitute individuals of the beneficiaries in the creating nations like Pakistan.

Candid et al., (2009) examined on the connections among settlements and protection medicinal services in the America and find that either settlements gotten by the house hold were spending by social insurance or not. The general population living in the family that got settlements and they spend the cash on medicinal services were bound to be protected and for these situation the settlements plays huge contrast impact between the accepting settlements and the non-getting settlements.

While then again the general population living in the house hold and got settlements however they didn't spend the accepting cash on social insurance were bound to be uninsured and for these situation there were no critical distinction impact between the getting settlements and the non-accepting settlements. Ratha (2013b) considered on the effect of settlements on monetary development in the Africa advancement setting by utilizing unequal board information methods from the period 1980 to 2004 for 37 African nations and found that in the less created money related framework the settlements expands the development rate by giving another wellspring of account speculation.

This investigation demonstrates that settlements have constructive outcome on monetary development rate and precisely essential effect on monetary development rate and the present dimension of total national output (GDP) as financing of human and physical capital. Then again Chami et al., (2003) considered 113 nations finished up multiyear time span and find that settlements and financial development have negative relationship, while IMF (2005) found no connection among settlements and monetary development.

Likewise, Chami et al., (2003) additionally seen that settlements negatively affect monetary development. Giuliano and Ruiz-arranz (2006) proposed the connections between monetary development and settlements that how budgetary improvement impacts the extent of the economies. The examination secured 100 creating nations information and found that settlement rise development in economy with profound monetarily created. It additionally recommends that settlements advance budgetary framework where there is no need of credit to the populace. The examination additionally investigated the rehashed properties of settlement demonstrates that they are chiefly benefit driven and generally procyclical.

Aggarwal et al., (2006) examined, monetary development and settlements that they have positive and critical impact over the long haul on the pay development while in the short run ODA has cause positive concerning pay development, settlements and money related improvement have negative impact on the salary level in the short run. This examination saw that a settlement to budgetary advancement gives the huge data of that settlements decreasing neediness and upgrading development rate in economy. This examination additionally seen that effect of settlements to the private part on bank store and on bank credit. In this examination they demonstrate that a settlement assumes a huge job on bank store and credit to GDP. The investigation gives very upheld thought that settlements advance money related improvement in creating nations. Shahbaz (2007) examined on the connection among settlements and money related improvement by utilizing time arrangement information from the period 1971 to 2001 and finds the long run relationship by utilizing Johansen co-joining system and autoregressive disseminated slack (ARDL) approach. The outcome recommends that budgetary advancement can be advances from settlements. Besides, the investigation additionally recommends net national item (GNP) per capita and increment in fares advance the execution of monetary part improvement while increments in expansion pad the impacts.

Srvices, E. (2014) broke down the effect of settlements on money related improvement substitute in financial development by utilizing board information model of

66 creating nations for the period 1970 to 2005. They think about found that monetary advancement decides the viability of national keeping money framework and showed that the effect of settlements on financial development is negative in nations where bank productivity is low and high in nations where bank effectiveness is high. Aggarwal et al., (2011) considered on the connection between specialist settlements and monetary division advancement by offer of store and credit to GDP, by utilizing board information of 109 creating nations information from the period 1975 to 2007. The investigation utilizes the settled impact and summed up technique for minute (GMM) estimation so as to look at the connection among settlements and money related improvement. The investigation found that the effect of settlements on monetary advancement assumes an imperative job in the economy since it improves the development rate impacts of money related improvement. The examination likewise finds that there is a positive and huge connection between laborer settlements and monetary advancement in the beneficiary creating nations in the wake of controlling inverse association and measurement blunder impact. Chowdhury, M. B. (2011) examined on the connection between laborer settlements and monetary advancement for Bangladesh. The examination utilized a period arrangement information over the period 1971 to 2008. The investigation found that the effect of laborer's settlements on monetary advancement assumes a vital job in the economy and it is the second biggest wellspring of remote trade income. Besides, the examination uncovers immediate and noteworthy connection among settlements and budgetary improvement.

Stevens and Lipsey (1992) contend that there is continuous discussion about whether or not FDI surge decreases household venture. One of the principle contentions in this discussion is that FDI surge substitutes remote exercises for household exercises, and along these lines for DI, when firms move some extent of their creation abroad. Moreover, there are potential interdependencies among residential and outside venture through creation forms. Interests in various areas vie for rare assets because of the increasing expense of outside financing. Subsequently, the choice to contribute rare assets abroad lessens DI at home. Feldstein

(1995), utilizing information from Organization for Economic Co-activity and Development (OECD) nations somewhere in the range of 1970 and 1980, presumed that every dollar of FDI surge decreases DI by around one dollar. Andersen and Hainaut (1998), utilizing information for the U.S.A., Japan, Germany and the U.K. for the timespan of the 1960s to the 1990s, discovered outcomes that were like Feldstein. Desai et al. (2005) utilized two unique ways to deal with discover the nexus between FDI outpouring and DI In the main methodology, they utilized details that were like Feldstein's, however utilized an a lot more extensive example of OECD nations. In the second methodology, they utilized time arrangement information on capital uses of worldwide firms situated in the U.S.A. The discoveries from these two methodologies varied. In the main methodology, they reasoned that FDI outpouring decreases DI In the second methodology, they found that higher capital consumption by U.S. worldwide firms is interlinked with higher household capital consumption by comparative firms, inferring that outside and residential firms are not substitutes, however are rather supplements. Dunning, Van Hoesel, and Narula (1998) clarified that interests in created nations may support innovation exchanges to the nation of origin through obtaining the most recent innovation and may advance monetary development. Desai et al. (2005) clarified that higher OFDI is related with larger amounts of DI; in this manner, OFDI enables firms to import crude material from outside associates at a less expensive rate and to create fares of middle of the road merchandise utilized by remote members. Industry consolidates home creation with firms abroad to lessen the expense of generation and to produce economies of scale, along these lines expanding DO and DI. The course of causality among OFDI and DI can be blended or can shift starting with one nation then onto the next if the nations are contemplated exclusively utilizing time arrangement information investigation due to contrasts in the monetary structures of different nations. In this manner, the nature of the connection between factors can be nation explicit and may rely upon financial strength, exchange receptiveness, and the macroeconomic condition. This ends up evident when we take a gander at the exact writing on the

course of causality among OFDI and GDP. For example, Lee (2010) found long-run positive unidirectional causality from OFDI to GDP per Capita (GDPP); in the short run, there is no Granger causality association among OFDI and GDPP.

Zhang (2001) strove for short-run and long-run Granger causality between the FDI stock and GDP of four Latin American countries and seven East Asian countries. He found short-run causality from interior FDI stock to GDP for Singapore; short-run causality from GDP to inside FDI stock for Korea, Brazil, and Thailand; and no causality for Argentina. He found long-run causality from inside FDI stock to GDP for Hong Kong and Taiwan; bidirectional long-run causality from GDP to FDI stock for Mexico and Taiwan; and unidirectional long-run causality from GDP to FDI stock for Colombia. Stevens and Lipsey (1992), using the firm-level data of seven U.S. multinationals for a period length of 16 20 years, exhibited that there is a strong positive association between FDI outpourings and DI. Sauramo (2008) found an association among DI and FDI flood using macroeconomic data from Finland over the timespan of 1965 2006. He induced that FDI flood decreases DI in a decent extent. Hejazi and Pauly (2003), using industry-level data for Canada over the timespan of 1984 1995, surmised that the impact of FDI overflowing movements as demonstrated by the endeavor associate. For instance, Canada's FDI flood to the U.S.A. assembles DI in Canada, anyway FDI overflowing to the straggling leftovers of the world decreases DI in Canada. Stevens and Lipsey (1992) recognized two channels through which FDI outpourings may impact DI. The principle channel is through nearby cash related markets. Firms expecting to contribute abroad would trade some degree of their capital abroad. Thus, on account of the uncommon openness of advantages and imperfect cash related markets, the budgetary liquidity available to back theory adventures is diminished and adjacent firms face issues in bringing resources up in private money related markets. Subsequently, in perspective on this part, OFDI reduces DI at home, particularly if company's cash their abroad endeavor inside. The second channel is when firms impact thing features by moving age abroad. Goh and Wong (2012) found a negative impact of FDI flood on DI in the midst of the time

scope of 1999–2010 for Malaysia. You and Solomon (2015) inspected the OFDI influence on DI using mechanical measurement data. They used the course of action of summed up procedure for a considerable length of time and found that FDI outpourings decidedly influence DI. By associating these results to the speculative framework through which FDI flood impacts DI, this beneficial outcome can be attributed to plenteous family venture reserves, outlandish remote exchange spares, and the crucial imagined by the state. In total, the above theoretical illuminations prescribe that the impact of OFDI on DI can be negative, positive, or fair, dependent upon the characteristics of every country of inception's financial structure, macroeconomic condition, and the affiliation's shrouded expectations in contributing abroad. The macroeconomic effects of OFDI on DI are speculatively ambiguous and subsequently transformed into a definite issue.

Nonetheless, such information more likely than not thinks little of vagrant numbers and settlement esteems, since a large number of the most unfortunate nations experience vast ows of unrecorded relocation and settlement exchange (Massey and Parrado, 1994; see additionally Elbadawi and Rocha, 1992; Puri and Ritzema, 1999). South-South transient numbers are especially difficult to quantify (UNCTAD/IMO, 1996), yet seemingly are especially significant to poor families as local movement is moderately less expensive and less demanding to compose than North-South relocation. DfID (2002) declares that casual settlements as of now speak to twice or multiple times the measure of formally exchanged assets, while look into in Nepal demonstrates that casual ows represented 80 percent of the all-out exchanged. What is clear is that ows of settlements exceed formal ows of FDI for a large number of the least fortunate nations for instance, Bangladesh, Mexico, Pakistan, Palestine, and Zimbabwe, and areas, for example, Kerala and comprise the most significant 'worldwide' economy connection for the poor who stay behind. Sub-Saharan Africa got around 8 percent of settlements in 1980, yet just somewhere in the range of 4 percent in 1999 (Gammeltoft, 2002, p. 182). Be that as it may, this drop may reect an inclination for casual exchange, given extending inconsistencies among ofcial and unofcial trade rates, the developing of universal transient populaces, and the expansion in electronic.

Sending Money Home? 635 types of correspondence. Research in Uganda directed by the Bank of Uganda, the Investment Authority and Bureau of Statistics, demonstrated that private capital flows, which incorporates vagrant settlements, usually known as kyeyo, ascended from \$443.7 million to \$661.9 million every year somewhere in the range of 1999 and 2002 (Odomel, 2003). Sumata composes that most settlements to Congo are executed casually, either by methods for relatives going to the country, or through private offices which have developed since the 1980s, and who utilize broadcast communications and cost around 10 percent of the sum executed (Gammeltoft, 2002, p. 622). In spite of the fact that proof is rare, it very well may be reasoned that in many challenged administration routines, casual money related exchanges will be significant, and will create 'casual settlement exchange frameworks' (IRTS). These have a long history, as the precursor of official keeping money divisions, and continue, either lawfully or not, due to operational qualities, for example, speed, lower cost, comfort, adaptability and potential secrecy, which are great when contrasted with the formal saving money part (El-Qorchi, 2002). They additionally improvement into trans-mainland informal communities which sidestep formal state financial structures, and subsequently can possibly go about as elective associations of asset assignment and political influence.

The impact of settlements on improvement has been as of late talked about inside a more extensive writing encompassing the impact of movement on destitution decrease. Skeldon, for instance, contends that the connection among movement and neediness 'shifts by dimension of advancement of the region under thought', however that by and large, 'the heaviness of the proof is that versatility upgrades monetary development and enhances the part of most, if not all, of the populace' (Skeldon, 2002, pp. 67, 79). Notwithstanding, the discussion has created contrasting positions, outlined by Taylor (1999) as sectioned by 'two boundaries'. To begin with, the 'developmentalist' extraordinary that vagrant settlements add to family unit methodologies to raise pay, safeguard against dangers and release creation and venture imperatives. Second, the cynical 'Dutch malady' type see, where movement channels human and capital assets, abandoning a few territories 'filling in as nurseries and nursing homes for their generally transient workforces'

(Taylor, 1999, p. 64). For Taylor, the proof from economy wide displaying is for the most part 'hopeful', and he proposes that the example of spending of settlement accepting family units, the arrangement condition, neighborhood factor blessings and the supply reaction of nearby markets, all influence the formative effect. Settlements can likewise ease capital and hazard requirements on creation (Stark and Bloom, 1985). These outcomes are resounded by the more sociological examination of de Haan, who contends that relocation has complex impacts, some of the time expanding pay imbalance, however all things considered supporting helpless families (De Haan, 2000). In an ongoing report, it was likewise noticed that in Mali global settlement salary had contributed considerably to enhancing the lives of the individuals who stayed behind by subsidizing schools and facilities, in spite of the fact that not the foundation of huge quantities of organizations that 'guarantee stay-at-home improvement' (Martin et al., 2002, p. 87). In the interim, Quibria contends that, independent of the welfare criteria received, migration can be benelial to one side behind, "whenever joined by sufcient settlements" (Quibria, 1997, p. 29, creator accentuation). Or then again in monetary terms, settlements of a greatness sufficiently extensive to measure up to or Fsurpass the estimation of creation

# Chapter 3

## Research Methodology

This chapter has four sections. First section includes the model. Second section includes descriptions of variables. Third section includes descriptive analysis which is further subdivided into two subsections, descriptive statistics and correlation matrix. Fourth section includes econometric techniques. Econometric techniques contains panel unit root test, common coefficient model, fixed effect model and random effect model.

### 3.1 The Model

Keeping in view the previous literature, the model for this study is given below.

$$DKF = f(REMIT, FDI, ODA, GROWTH, OPEN, FD, INF) \quad (1)$$

Where,

DKF = Domestic capital formation

REMIT = Remittances

FDI = Foreign direct investment

ODA = Official development assistance

GROWTH = GDP Growth rate

OPEN = Trade openness

FD = Financial development

INF = Inflation

This study uses 38 years annual data for the period of 1980 to 2016. The sample consists of Bangladesh, India, Pakistan, and Sri Lanka. This study has used secondary data and data is obtained from the World Bank websites. Data for each country has been used in US Dollars.

Domestic capital formation is a function of several determining variables given below.

## **3.2 Construction of Variables and Data Sources**

### **3.2.1 Domestic Capital Formation (DKF)**

Domestic capital formation refers to accumulated investment in the previous years. Generally it refers to tangible assets at a point in time. Data for each country is taken in US dollars. Domestic capital formation is being effected through a number of factors which can contribute to the capital.

### **3.2.2 Remittances (REMIT)**

A remittance is a transfer of money by a worker who is working abroad in his home country in other words, money sent by foreigners to their home country is known as remittances. Different studies shows that domestic investment increase if there is any rise in the remittances. Remittances data has been collected from the website of the World Bank. For each country data is taken in US dollars. Yiheyis and Woldemariam conducted a study in 2016 and found that remittances are negatively linked with investment in two different countries Nigeria and Senegal. This negative connotation found in Nigeria, although significant, but could not favor the results stated by Ojapinwa and Odekunle (2013) for that country, over all study shows that two countries show negative results while other two countries have negative impact. It means that overall remittances have the mixed effect

domestic capital formation. Therefore, the sign of coefficient of remittances in our model can come out either positive or negative.

### **3.2.3 Foreign Direct Investment (FDI)**

Foreign direct investment is an investment that is made for the purpose of profit in another country either by individuals or by a legal entity, incorporated firms. FDI has an impact on the domestic capital formation but its relation is not clear as discussed in the introduction. Its little bit ambiguous. FDI is important especially for growing countries. According to different studies, foreign direct investment has negative as well as positive on domestic capital formation. Some studies shows that foreign direct investment has positive impact on domestic capital formation e.g found that FDI has positive impact on domestic investment.

### **3.2.4 Official Development Assistance (ODA)**

Official development is a foreign or Government aid to support the economic growth and development of developing countries. In case of domestic use, ODA can encourage the domestic investment only in case if investment is being used for the productive purpose or it may also serve through some other facilities According to Yiheyis and Woldemariam, if foreign aid like ODA is used for some non-productive purpose then it may put some negative effects, or no effect on the domestic capital. A number of studies have mixed results regarding official development assistance. It shows that ODA has diverse effects on fixed domestic capital formation. Data for official development assistance used in (\$) dollar.

### **3.2.5 GDP Growth Rate**

The rate at which a country's Gross Domestic product fluctuate from year to year. GDP is the market value of all the products produced in a country in a certain time period. Best measure of growth is GDP. GDP can exactly predict the growth of any country. Annual %age of growth is used as proxy of growth. According

to previous study Yiheyis and Woldemariam (2016) Economic growth boost up domestic investment in Burkina Faso and lower in Nigeria and Senegal, statistically significant in all cases. But in case of selected SAARC countries (Bangladesh, India, Pakistan, and Sri-Lanka) Growth has no impact on domestic investment. All previous studies shows diversified effect of Growth on fixed domestic capital formation.

### **3.2.6 Trade Openness (OPEN)**

Each country go through the process of trade just to full their own needs. Tariffs and taxes are imposed by the countries on different transactions include in export and import. Capital formation of any country can also be estimated through the rate of imports and export. Different researcher show different results that foreign exchange play an important in case of capital formation. Trade openness can be measured by using a number of proxies. Trade openness is measured by using the proxy of import plus export (percentage of GDP). Data of import and export has been collected from website of World Bank.

### **3.2.7 Financial Development (FD)**

Financial development referred as a developments in generating facts and figure regarding that investment which may receive or not and transmission of funds, examining firms and focus on use of corporate governance, exchange, deviations, and handling of ambiguity, use and allocation of investments, help in the exchange of products. Financial development play a main role in the development of emerging markets. Financial development is all about growth of markets and make strategies to boost up the economic growth. It is used in the model and taken as domestic credit extension to private sector (%age of GDP) as its proxy. A study on financial development in 2003 (Lonce Ndikuma) suggest that FDI has positive and significant impact on domestic capital. Data is taken in US\$ currency.

### 3.2.8 Inflation (INF)

The term “inflation” originally referred a rise in the general price level caused by an imbalance between the quantity of money and trade needs. Inflation is taken as annual percentage of consumer price. According to Yiheyis and Woldemariam, there is a negative and statically significant relationship between inflation and domestic capital formation in Burkina Faso and Senegal General.

## 3.3 Descriptive Analysis

Descriptive analysis is divided into two parts. These are descriptive statistics and correlation matrix. Descriptive statistics gives the general pattern of the data and correlation matrix shows te apparent relationship between every pair of variables included in the study.

### 3.3.1 Descriptive Statistics

Descriptive statistics helps to develop an impression about the nature of the data that is being used for analysis before attaining the purposes by applying specific techniques. Descriptive statistics is divided into measure of central tendency and measures of dispersion. Mean value is given in the table shows the central tendency and minimum maximum values, and standard deviation show the dispersion of the data.

### 3.3.2 Correlation matrix

Correlation matrix shows the relationship between every pair of variables included in the model. The correlation between dependent and every independent variable helps to forecast the sign of estimated coefficients. The correlation between every pair of independent variables helps to identify the problem of multicollinearity. If correlation between any lairs of independent variable is greater than 0.6 in absolute

terms, then it is the indication of multicollinearity problem. In such case either of the two variables has to be drop from the list of independent variables.

### **3.4 Estimation Technique**

The econometric model for this study is given below.

$$DKF_{it} = Remit_{it} + FDI_{it} + ODA_{it} + Growth_{it} + Open_{it} + FD_{it} + Inf_{it} + \varepsilon_{it} \quad (2)$$

The subscript (i) represents the country and it varies from 1 to 8. The order is same as given in table. These countries are. Bangladesh, India, Pakistan, and Sri-Lanka.

#### **3.4.1 Fixed Effect Model**

Fixed effect model study the effect variables over the course of time. It is also recognized as 1st difference model. Fixed effect model shows that each variable may have any effect on other variable or not, or is there any relation between endogenous and exogenous variables. Every entity has its own features and characteristics so its not necessary that every independent variable can influence dependent variable. For instances remittances have impact on domestic capital formation or not. In case of single entity fixed effect model is not vary over the time. In fixed effect model Even a single entity should not be correlated with Properties or else fixed effect model will not be appropriate.

# Chapter 4

## Results and Discussion

This chapter has three subsection. In first section, we discuss description analysis. It has three subsections, first one is, descriptive statistics for aggregate data, second is descriptive statistics for each country individually and the third one is correlation matrix.

Second section gives the results of unit root test. The third section shows the results of fixed effect model.

### 4.1 Descriptive Analysis

Descriptive analysis first gives descriptive statistics and they show the behavior and characteristics of the data for both dependent and independent variables. This table 4.1 includes mean, median, maximum, minimum and standard deviation for aggregate data. All-time series and cross sectional data is enclosed by the average value which is also known as mean value.

Standard deviation represents the deviation of the data from mean. Highest value of the data is shown by the maximum and lowest value of the data is presented as the minimum. Descriptive statistics are from the period of 1980 to 2016.

TABLE 4.1: Results of Descriptive Statistics

	DKF	REMIT	FDI	ODA	GROWTH	OPEN	FD	INF
Mean	22.803	4.875	0.887	2.438	5.383	40.989	27.809	8.314
Median	23.628	4.895	0.793	1.644	5.246	35.574	25.363	7.683
Maximum	35.57	10.587	3.668	9.878	10.259	88.636	52.385	26.145
Minimum	12.52	0.752	0	0.092	-1.545	12.352	8.821	1.481
Std. Dev.	5.511	2.533	0.739	2.446	1.985	19.378	10.045	4.186
Skewness	0.117	0.262	1.334	1.533	-0.09	0.703	0.801	1.243
Kurtosis	2.26	2.032	5.404	4.439	3.555	2.589	3.141	5.569

## 4.2 Descriptive Statistics

Above table shows the descriptive statistics of all variables. Table comprises of different descriptive results which shows that remittances have average return 4.8% during the period at average risk 2.5%. Standard deviation shows how far observations are from the sample average the maximum value is 10.5% whereas minimum return is 0.7%. The median shows the middle value of each variable from highest to the lowest. Foreign direct investment shows that average return for the period is 0.8% at average risk 7%. Maximum value is 3.6% is known as higher return during the period and minimum value 0%, known as lower minimum return or loss incurred for the period. Official development assistance has average return 2.4% with minimum return 9% and maximum return for the specific period is 9.8% above table also include descriptive analysis growth, as it shows in table that average return of the ODA is 5.3%. Its minimum value is -1.55. Which shows the minimum loss and maximum return for the period is 10.2%. Average risk of growth is 1.9%. Average return for trade openness is 40.9%. Maximum high return during the period is 88.6% and minimum profit is 12.3%. Risk involve in trade openness is 19.3%. Financial development also have high return but less than trade openness, its value is 27.8%. Its minimum profit is 8.8 and maximum return is 52.3% with risk value 10%. It shows better results and as it has high return. Inflation average return 8.3% minimum 4.1% and maximum value 26.1%. Risk involve in inflation is 4.1%. Normal value of skewness is 0. Kurtosis measure the peakness and flatness of the measure of dispersion. A normal distribution is with the kurtosis of 3. Positive kurtosis mean values are higher than three.

### 4.3 Correlation Matrix

Relationship among the variables is being found by the correlation analysis. It shows that whether it has positive or negative relationship between different variables. The value of correlation coefficient is within the range of -1 to +1. High value of coefficient shows the strong relationship between the dependent and independent variables. In case of perfect relationship between variables, value will be 1. But if the value is zero then it shows no relation between variables. For every variable, direction of the relationship among variables is provided by the coefficient sign. An increase or decrease in the variables in the similar direction shows that coefficient is positive. But on the other hand if variables are increasing or decreasing in the opposite direction then there is a negative relationship. Correlation analysis explains the dependencies of different variables at a time.

TABLE 4.2: Results of Correlation Matrix

	DKF	REMIT	FDI	ODA	GROWTH	OPEN	FD	INF
DKF	1							
REMIT	0.084	1						
FDI	0.376	0.244	1					
ODA	-0.158	0.111	-0.22	1				
GROWTH	0.395	0.06	0.158	-0.229	1			
OPEN	0.387	0.538	0.456	0.395	0.016	1		
FD	0.667	0.178	0.524	-0.544	0.378	0.192	1	
INF	0.057	0.024	0.179	0.342	0.378	0.345	-0.128	1

Correlation among all variables include in the study have shown in the table 4.2 Domestic capital formation is negatively correlated with ODA, and positively correlated all other variables. Remittances is also positively correlated with ODA. Foreign direct investment is negatively correlated ODA and positively correlated with others. Highest correlation exist between domestic capital formation and financial development. Official development assistance is also negatively correlated with GROWTH and positively correlated with other variables and financial development. Growth is positively correlated with FD INF and OPEN. Trade openness is positively correlated with FD and INF. Financial development and INF are negatively correlated.

## 4.4 Regression Analysis

To investigate the impact of remittances on domestic capital formation, fixed effect model is used. All control variables are included in the base model and dependent variable is regressed upon interest variables individually as respective model shows the strength of effect of individual interest variables.

### 4.4.1 Redundant Fixed Effect Model

TABLE 4.3: Results of Redundant Fixed Effect Model

Effects Test	Statistic	d.f.	Prob.
Cross-section F	81.533	-3,133	0
Cross-section Chi-square	150.261	3	0

In table 4.3 shows that fixed effect model is appropriate, as it shows that probability of chi-square is significant. So we can use fixed effect model for analysis. Random effect model is only applied when number of cross sections or countries are greater than number of parameters. So that's why we cannot use random effect model.

### 4.4.2 Fixed Effect Model

Analysis includes independent variables, remittances, inflation, official development assistance, financial development assistance, financial development, growth, trade openness, and dependent variable is domestic capital formation. F-statistics predict the effect of the whole model. R square shows that how much change is explained in dependent variable due to independent variables. Modification or adjustments in other factors are shown by the adjusted R square statistics is all about the appropriateness of the hypothesis. Table shows the results of fixed effect model. Likelihood ratio is used to choose between the common effect model and fixed effect model.

TABLE 4.4: Results of Fixed Effect Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	11.188	1.029	10.863	0
REMIT	0.084	0.116	0.729	0.467
FDI	0.713	0.347	2.05	0.042
ODA	0.13	0.13	1.001	0.318
GROWTH	0.286	0.102	2.801	0.005
OPEN	0.096	0.023	4.067	0
FD	0.171	0.031	5.411	0
INF	-0.002	0.05	-0.05	0.96
R-squared	0.859			
Adjusted R-squared	0.848			
F-statistic	81.39751			
Prob(F-statistic)	0			

**Notes:** The table depicts Robust standard errors along with coefficients where, \*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$ . This table shows OLS Model where DKF is the dependent variable that is domestic capital formation, ODA stand for official development assistance, FD is financial development, OPEN is trade openness, FDI is foreign direct investment, REMIT stand for remittances and INF stands for inflation while C shows the constant term of the equation in the model.

First model includes DKF (domestic capital formation) as dependent variable and ODA (official development assistance), FD (Financial development), GROWTH (growth), OPEN (trade openness), FD (financial development) and (Remittances). In the above table results shows that some independent variables have positive and significant impact with independent variables, while there are some independent variables which shows negative impact or no impact on dependent variable.

Remittances have no effect on domestic investment. Results in table 4.4 shows that value of probability is insignificant. According to Yiheyis and Woldemariam (2016) a short run investigation shows that relationships suggests that remittances slow down the domestic investment in Kenya and, less significantly, in Senegal, while the long-run remittances have no impact as it shows insignificant impact for the other countries. Remittances intended for investment purposes may decline when the source country's economy is strong and rates of return are high. Coefficient value of foreign direct investment is 0.713\*\*\* which shows that FDI has significant impact on domestic investment. According to Hejazi and Joseph (Rotman School

of Management, University of Toronto, and Toronto, Ontario) foreign direct investment effect positive effect on domestic capital formation. Official development assistance has no impact on domestic investment. Coefficient value of growth is 0.286\*\*\*, which shows that it has significant impact on domestic capital formation. According to previous study Yiheyis and Woldemariam (2016). Economic growth boost up domestic investment in Burkina Faso and lower in Nigeria and Senegal, statistically significant in all cases. Trade openness has significant positive impact on domestic investment having coefficient 0.096\*\*\*. Financial development has positive significant impact on domestic investment. Its value of coefficient is 0.171\*\*\*. The outcomes show a positive association between domestic investment and of financial development. Financial development enhances the levels of investment. Financial development long run positive impact on domestic investment (Leonce nidikumana, 2000). R-square 0.859 is the fraction of the variance of dependent variable explained by the model. Probability value of (F-statistics) is significant.

# **Chapter 5**

## **Discussion and Conclusion**

### **5.1 Conclusion**

This study is intended to measure the impact of remittances on domestic fixed capital formation. This study use 38 year data annually for the period of 1980 to 2016 to find the relationship of domestic capital formation and remittances. The sample consists of selected SAARC countries (Bangladesh, India, Maldives, Pakistan, and Sri Lanka). The estimation technique involves panel data model a combination of cross section and time series of data.

As previous research has somewhat overlooked the impact of remittances and domestic capital formation and most of the studies are conducted for individual country or for the country of socio economic background. But remittances play an important role in the formation of domestic capital is a matter of attention. The remittances can boost the level of domestic capital by enhancing the economic activities or by supporting these economic function. The effect of remittances on domestic capital structure in selected SAARC countries (Bangladesh, India, Pakistan and Sri-Lanka. It is not investigated by previous study. So this study has attempted to capture this relationship in the context of developing countries.

Results of remittances are align with the previous results. Remittances shows that it has insignificant impact. Remittances are not contributing to the domestic investment. It means the remittances received by the poor or extremely rich

countries which seconder these remittances on luxury items instead of increasing the income in the country. Worsening inequality is detrimental for domestic capital formation. This study accept the null hypothesis and reject other two.

To investigate the relationship between remittances and domestic capital formation this study also used some control variables that are, foreign direct investment, official development assistance, growth, trade openness, financial development and inflation.

Previous study reveals the negative relationship between remittances and domestic capital. Sometime remittances enhance the consumption rate as compare to savings even when credit hurdles exist and sometime it enhance the dependency level of the recipient which results in negative effect on economy. Foreign direct investment has positive and significant relationship with domestic investment. Knowledge spillover and technology establish a positive relation between FDI and domestic investment. Official development assistance is helpful as it perform as a foreign aid and play an important role in the domestic investment if it is used for productive purpose. But in the context developing countries ODA does not have any impact on the domestic investment. Growth also has no impact on domestic investment. Trade openness includes both imports and export and according to previous study imports support the domestic investment Yiheyis and Wolde-mariam (2016). In case of developing countries this study shows that trade openness and domestic investment have negative relationship. Inflation has no effect on domestic investment. Results shown the study accept the second hypothesis that remittances effect the domestic capital formation negatively in developing countries.

## **5.2 Recommendations and Policy Implications**

The policy recommendation of the study is that policy maker shall provide incentive for investment to the receiver of remittances. To provide the awareness about the importance of the investment for their own future life and for the future life of the country. That is, the more the investment out of their remittances, the more

the prosperous life they will live in the future by themselves and the whole country as well due to multiplier effect of investment. The policy recommendation of the study is that policy makers should create awareness about the importance of savings and investment for receivers of remittances that it is in their own interest as they will have higher income and consumption in their future life. They should also provide incentives to receivers of remittances if they decide to invest a big part of their remittances.

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# Appendix

## Fixed Effect Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	12.191	1.498	8.138	0.000
REMIT	-0.141	0.072	-1.946	0.053
FDI	-0.413	0.380	-1.086	0.278
ODA	0.071	0.164	0.433	0.665
GROWTH	0.063	0.127	0.496	0.62
OPEN	0.107	0.030	3.583	0.000
FD	0.258	0.032	7.898	0.000
INF	0.051	0.069	0.747	0.455
R-squared	0.890			
Adjusted R-squared	0.880			
F-statistic	119.132			
Prob(F-statistic)	0.000			

## Redundant Fixed Effect Model

Effects Test	Statistic	d.f.	Prob.
Cross-section F	55.906	-5,165	0.000
Cross-section Chi-square	176.412	5.000	0.000