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Impact of remittance in developing countries

South Asian countries

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Abstract

There are various examinations of the impact of remittance on poverty, education, governance, human development index, economic growth among several factors in developing countries with scattered result using the panel data of developing countries. This study aims to examine the direct impact of remittance on economic growth and the other development indicator and the long term impact of the remittance in the five south Asian developing countries. The result finds the positive impact on these countries remittance suggests there is mixed findings.

Key words: remittance Empirical study, Panel data Analysis, South Asia, Capital formation,

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1. Introduction

Background

Researches are done day by day to make and implement policies of the remittance in effective manner. Different scholars give advice to the different policy makers to make the policies which create the favorable environment of using and increasing positive flow of remittance. According to the World Bank global remittance is $582 billion. In which $ 435 billion went to developing countries. The amount of remittance is more than the above amount. Remittance through informal channels could add at least 50 percent to the globally recorded flow (World Bank, 2006). At least some part of the growth is attributable to better reporting by recipient countries, it appears that private capital flows and official development assistance (World Bank 2006). According to the data of remittances, it is the most stable external source. Asian countries are the top remittance receiver in recent years. This paper seeks the importance of economic growth, and the impact on these countries. Analyzing the workers remittance inflows significance on economic growth of receiving countries with links between different variables is presented.

International remittance inflow has become one important external source of fund for developing countries. Since couple of decades the world experiencing the remittance inflow is significantly increase in the developing countries. In some developing countries remittance inflow exceeds the revenue, international trade, foreign aid, FDI, investment, and other capital inflows. These issues become an attractive for the scholars and researchers, economists, policy makers so they focus on the study how and what are the impact sectors of remittance. In previous studies there is more focus on why and how the remittance affect to the developing countries. Though the subject is widely explored it is very interesting to do additional research on this interesting subject. There is scattered result shown in different research both positive and negative impact on economic growth. Several evidence of different research also supports this thesis that the remittances have positive impact. Mughal, (2013); Erhijakpor, (2010); Anyanwu & faini, (2006); Srivastava and Chaudhary (2007); Fayissa and Nsiah, (2008) There are several research which are opposite to this thesis like Chami et al (2000); Jawaid and Raza (2012); Barajas et. al,(2009). Corruption has positive relationship with the increase of remittance (Berdier et. al, 2013). Brain drains is another problem when the skilled labor are migrating from the origin country. It is the cause of human capital draining (Rapoport, 2012). Makhlouf and Mughal(2013) argue that the inflow of remittance cause the Dutch disease appears. It will affect the real exchange rate and competiveness of the country in comparing to another world.

Discussing the theoretical parts of the paper, the previous studies use the theory of productivity, neo-classical production function. There are mainly three channels, capital accumulation, labor force growth and total factor productivity which affects the flow of remittance and the economic growth of receiving countries.

Capital accumulation can be divided into two categories. Human capital and physical capital, labor force is known as the human capital and technology/machinery are physical capital. The remittance directly increase the fund to the cost of capital because if remittance increase the credit rating of the domestic investor. It affects in the cost of capital investment. The cost of capital is decrease in this situation. There is increase in borrowing for new investment with the decrease of cost of capital. Remittance is one factor which helps to decrease the risk in the receiving country because the remittance makes the economy stable and make it less volatile. So, it has positive impact on the investment in the country.

Remittances cause the decrease in labor participation in remittance receiving countries. The low level of labor participation cause negative effect on the economic growth. The remittance is taken as the regular income source and move towards the luxuries life. Reduce labor effort of recipient families and thus negatively effect on growth (moral hazard) because the remitter and recipient are separated by the distance. This create hard to monitor the remittance amount and makes enforce to the recipient using applicable measures to use efficiently. In the research done by Itzigshon (1995) in different capital city of Haiti, Jamaica, Guatemala and Dominican Republic, finds that remittance inflows have a significant positive effect on nonparticipation of the head of the family and other members in 3 capital cities, whereas in Guatemala the effect is still positive, but it is not statistically significant. Spend leisure time among women in the recipient countries following by the remittance inflow may encourage higher fertility rate which cause population growth rate high. Another findings by Fargues (2007) by using time series of birth rates and migrants remittance in Turkey, Egypt and one of the top remittance receiver country Morocco. In the findings there is strongly negative relationship between fertility rate and remittance in Turkey and Morocco but still positive relationship with Egypt.

Here these findings supports the literature remittance tend to increase the non-participation rate of household member and other related member in labor market which cause labor market effort decrease. There exists the evidence in the literature on the positive effects of remittance on total factor productivity. In Mexico Woodruff and Zenteno (2001) use data set of 600 small business firms their result shows that remittance represent an important source on total factor production, among total investment in Mexico micro-enterprise 20% of investment is finance by remittance. Effectiveness of the factor of production /investment are depends on how the remittance fund is invested. Banking system help to channelized the remittance wisely and makes more efficiency of fund. The banking system makes the remittance more formal as well. Development of banking system makes higher economic growth increasing economic of scale.

Motivation of the study

There are only few studies were done on the economic impact of remittance in south Asian countries though in south Asia includes top remittance receiving countries. Arusha Coooray (2008) finds the positive effects on economic growth. Significant positive interactive effect of remittance on economic growth is detected through education and financial sector development using the panel data over the period of 1970-2008.

Here to fulfill the short comings of Arusha Cooray (2008) there is one research done by Syed Tehseen Jawaid and Syed Ali Raza on 2014 using the production function framework as previous study but they add some more independent variables life expectancy and fertility rate and finds positive relationship in Nepal, India, Sri Lanka, Bangladesh, but there is negative relationship with Pakistan.

From the above literature there is still controversy and like a scattered type of result. So I am going to add government consumption and polity as the additional variable

The facts from the research shows that there is high percentage of remittance is spend on the consumption it makes the saving less so, the decrease in saving leads to decreasing the investment which directly affects the economic growth. Interest rate affects the investment because the higher interest rates have negative relation with investment. Both interest rate and consumption have relation with economic growth and remittance, foreign direct investment and Official Development adds ladder on the growth so, I want to take and test the impact of remittance.

The selection of the countries

In south Asia's migration, remittance is impacted largely millions of high and semi- skilled workers are work in western countries and for the companies in gulf. It is being critical factor in south Asian economic as a source of livelihood of poor people. It creates positive impact on capital formation. Through the different evidence we can say that remittance helped for Asian countries like natural shocks like tsunami in Sri Lanka, earthquake in Nepal, global economic crisis in 2007/8. The motivation behind selection of these five country is by different factors like family income in origin country, economic condition of origin country, destination, of the migration, immigrates economic status, political situation civil war and geographical location are similar.

The studies find the impact of the remittance with representing new variable then earlier research paper. How the workers remittance can be used in productive investment. Which variables are more significant and what policies should be taken into consideration for appropriateness. Asian countries are in the top list of remittance receiver in the world a good knowledge of the impact will help to regional and international policies which boost the inflow of the remittance and encourage to draft and implement sustainable policies regarding this issue.

The study is limited on 5 south Asian countries Asian developing countries. The countries are: *Sri Lanka, Pakistan, Bangladesh, India, and Nepal.*

Research Questions

Normally, the migrant workers go to work from their country of origin to the next country alone. The families are in home country, the migrant supports financially to their families to country of origin; this money is called remittance it directly and indirectly affected to the millions of poor people. The remittance is mainly spent in the consumption of daily goods, health, education and also savings. These amounts uplift the huge population from poverty. Large numbers of children get quality education and good health care. Besides these impacts; there are macroeconomic impacts of remittance. In many research remittance is treated as the positive factor that impact overall economic growth. It is the important source of developing countries (Ratha and Mohapatra, 2007). So, remittances are similar to FDI and other capital inflows.

Here the main question is whether the remittance flow uplifts the recipient developing countries in long run? This study contributes the exiting literature and investigates the variables that affected economic growth than previous studies.

I. Is there is any contribution of remittance in Government consumption?
II. Is Polity having any relation with inflow of workers remittance?

Hypothesis

The following are the hypotheses which are tested on this study/empirical analysis.

i. Workers remittance does not have relations with government consumption.
ii. Workers remittance has relations with government consumption.
iii. Workers remittance does not significantly impact to Polity.
iv. Workers remittance significantly impact to Polity.

The main data source is the World Bank database. All selected countries are selected according to the criteria of World Bank developing countries. The data for the Polity is taken from the open library of center for systemic peace, some data are form respected countries central banks. Both low income and middle income countries are selected as developing countries. The data of five different countries are included. The data are included from 1990 to 2013 yearly. The independent variables are Remittance to GDP, Labor, and ODI to GDP, Investment to GDP, Government consumption, Polity, Capital formation and dependent variable as the GDP Per Capita.

Rest of the study is organized as follow: Chapter 2 describes review of literature with conceptual framework; chapter3 describes the trends and patterns of the remittance flow. 4 describes the research methodology, and chapter 5 data presentation and empirical study of the data, chapter 6 discussion conclusion and recommendation is presented on last chapter7.

2. Literature Review

Theoretical review

As I already mention that there is huge amount of literature on the topic remittance and the economic growth. Studies suggest that positive relationship between the economic growth and remittance. Yes, there is large number of studies which focus and prove that the economic growth is also impacted by remittance positively. Moving ahead with this fact we can't ignore the negative impact of the remittance on economy. Some of the literatures are discuss below.

In the period of 90s there was a study Bliss (1989) found and prove that remittance can be used as a good tool to fill the gap of foreign currency shortage. He argues that some of the developing countries can't achieve the economic growth because of shortage of foreign Currency and he suggests that to formulate the policies which encourage the remittance inflow.

Fayissia B. and Nsiah (2008) explore the impact of remittance within the framework of neo-classical using the panel data (1980-2004) of 37 African countries. Fayissa Argues that the remittance boost growth in these types of countries where financial system are less developed by providing an alternative way to finance investment and helping overcome liquidity constraints. In the empirical result they show that in these countries if remittance increases by 10% this affect goes positively on GDP per capita income by 0.3% increase.

Same author study in the Latin American countries and find supportive to above literature and add that conventional source of growth such as investment in physical and human capital. They draw the policy recommend that remittance should invest not only in the traditional source. But also by strategically harnessing the contribution by ensuring the effectiveness and efficiency transfer implement the policy that minimize the cost of transfer and suggest improving the governance performance on remittance.

Very much similar to the findings of Fayissia and Nisiah (2010) literature Srivastava and Chaudhary (2007) did research in one of the top remittance dependent country Nepal which remittance to GDP is 30%. They find the positive relationship between remittance and the economic growth but they suggest of improve the effectively and efficiency of remittance to take benefit more than today. The findings are positive except for labor force, but they are marginal which shows that remittance has not been effectively so as to increase the real growth rate of the country.

There is some panel of researchers who always wants to prove that the remittance is using only consumption. So, remittance is not very effective. There is one supportive research from Stahl and Arnold (1986) said that “Yes the remittance goes on consumption but it has multiplier effects so, it helps to economic growth of the nation. Recently, there was one study done by Stojanov and Strielkowski(2013) using Official Development Aid and remittance data from the World Bank (1970-2009) to compare the potential of development between these two variables also proves that remittances have higher potential than ODA in developing countries because of larger net effect on economic growth compare to Official Development Aid.

IFAD (2012) Adds to the evidence and confirm that remittance flow is more beneficial to economic growth while comparing to direct investment flow to developing countries. They use the data from 24 Asia Pacific developing countries panel data. The direct foreign investment is harmful to the economy of the developing countries. While remittance contribute positively in the economic growth and better performance they also add that remittance reach directly to the door- to –door of the poor people .Helps to reduce the poverty by self-effort , with increasing the Living Standard.

It is very interesting and good to know that the newly developed analyzing tool Pooled Mean Group (PMG) is used by Das and Chowdhary (2011) they use the data from 1985 to 2009 of top remittance receiving countries. The results suggest remittance are used for to increase consumption in the recipient countries, the long run remittance- growth coefficient can be small in size. They show that the coefficient of remittance is rather small.

Gyan P. et. Al (2008) use data from 1980-2004 with observing 195 panel data they find the positive effects of workers remittance and the input on economic growth in the developing country. They find as other many literature positive impact adding the variable polity (politics) more democratic countries get more score and autocratic gets less score does raise the rate of economic growth after a period.

Senbeta (2013) tries to present the effect and the source of economic growth by the remittance with using 50 countries panel data. Senbeta present two findings in one hand remittance have positive relationship and effects with economic growth and in another hand they find no significant impact on total factor productivity. So, this paper clears that the relationship of positive with capital formation and conflicting effect in TFP.

Zuniga (2011) investigates which finds that remittances have positive, albeit small impacts on economic growth without considering the roles of intuitions. They investigate the macroeconomic level of developing countries using panel VAR. they finds geographical region also one factor. The evidence from Eastern European economics proves that they receive greatest benefit while comparing to Asia and Americas. Author also add that African countries can’t take benefits and do not have statistically significant impact of remittance on economic growth. Lartey (2011) Analyzed the data from 36 African countries , using separate equation of growth and investment he find positive relationship between growth as well as positive interaction effects with financial depth on growth. Authors adds threshold values of total credit to the private sector and deposit money bank assets, above which the total effect of remittance on growth is positive.

Azam and khan (2011) Running the linear regression of two remittance receiving and same features countries i.e. Azerbaijan and Arminia. They empirically prove workers remittance is significant for the acceleration of growth in the field of study. Recommending formulates the policies and encouraging utilizing more efficiently in order to improve society living standard. They conclude their paper by adding that remittance is not the sole but very decisive and eminent in its nature.

Moreover there was one article published by journal of applied science, author CRK, Ahortor and DE Adentutsi (2011) finds the positive relationship of remittance and economic growth even different cross regional testing. The data are from African, Latin American, and also from Caribbean countries. It proves and authors argue that contemporaneously, remittance contributes more on long run. So, we can say that the positive impact on both short and long runs. If a 10% increase in investment included 5.42 percentages rises in the income level of these regions. It proves the remittance had both contemporaneous as well as dynamic impacts on economic growth.

Paul and Das (2011) finds long- run co-integration between remittance and GDP. They use combine of Johansen approach to co-integration with VEC model to find out long run and short run relation between variables. There was a belief that remittance does not responds to GDP while correcting disequilibrium after a shock in the system, but this ideology fails and the reverse is true.

Mohamed (2009) Adding the existing literature he did examination on seven remittance receiving MENA countries and find strong evidence of positive impact on growth both directly as well as indirectly through interactions with financial and institutional channels. . In supporting to this literature, a recent IMF (2005) study of 101 developing countries finds a positive and significant impact of remittances on poverty reduction but no impact on economic growth (Adams H. Jr; Cuecuech, Alfredo, 2010) Adams and Page (2005) find that a 10 percent increase in international remittances in a country will lead, on average, to a 3.5 percent decline in the poverty headcount and a 2.8 percent decline in the squared poverty gap.

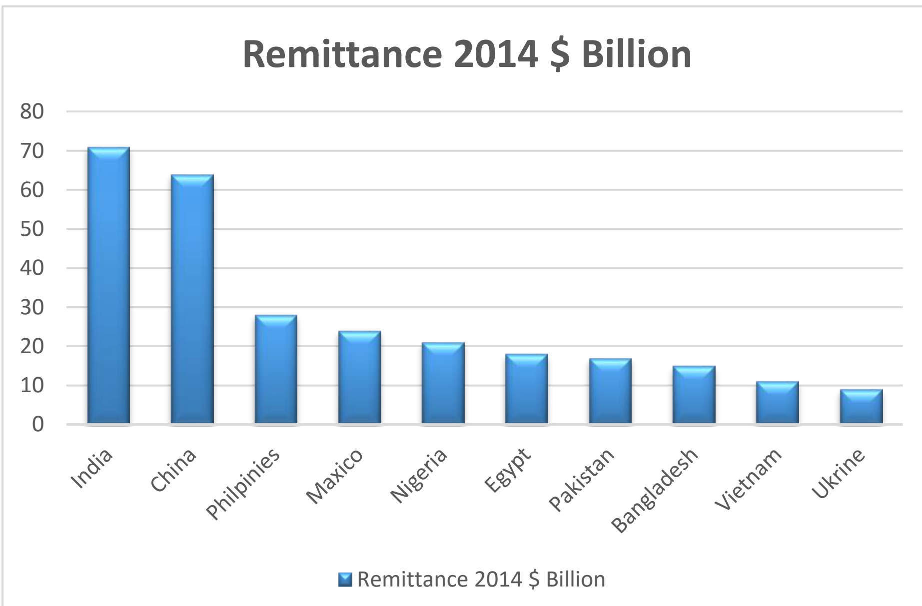
There are some authors who put strong confidence on the negative relationship between remittance and the economic growth as well.

Chami Et al. (2005) test the data for whether remittance act like capital flow? Capital flows such as FDI are profit driven and have positive correlation with GDP. Chami show on empirical estimation that considerable evidence that remittance tend to be negatively co related with GDP growth. This is very interesting and challenging issue for the researcher. Who do research on this topic? Barajas et. Al (2009) also not fully argue that the impact of remittance as others literature do because previous studies are showing dual results. The result is partly due to the implementation of different tools, models and different data and period.

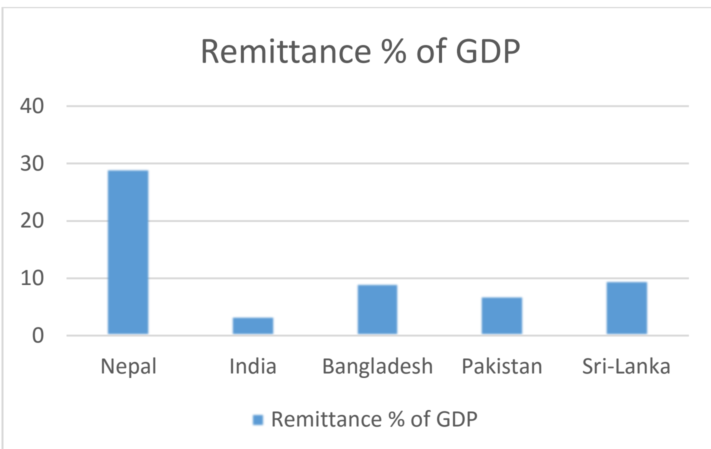
3. Pattern of remittance

Remittance creates the great impact on the development of developing nations in the globe. 247 million people are migrating with different motivation the larger portion of immigrants are economically motivated. The data shows that immigrants are larger than population in Brazil that would be economically larger than France. Remittance is life line for the developing countries and conflict facing countries. 180 million of total migrants are from poor countries. They send money home regularly. Those sums of money are called remittance. The facts surprise us that $ 582 billion remittance and $ 135 billion is official development aid. People send home money small amount of certain dollar monthly adding monthly in a year it become huge so, why not to utilized the remittance in development process. So, In India the inflow of remittance is 70 billion which is larger than its IT export. Birth weight is higher families who use the remittance than families not this proves the improvement on health and population. (Ted talk with dilip ratha)There is no confuse these remittance have huge impact on economy of developing countries and the poor people. Flows of remittances acts like the insurance when the family is in trouble situation, facing the hard time as recent earthquake in Nepal. Unlikely the development aid remittances directly reach to the family the poor. In Nepal the data shows that in 1995 the poor people was 42% of total population after a decades in 2005 it down to 31%, Again the world bank says that the poor population in Nepal is decrease up to 25.2% in 2014 (World Bank, 2014) . Here we can strongly argue remittance directly effects positively in poverty.

Remittances help to decrease the poverty level in south Asian countries. There are several poor countries whose GDP is more than 40 % through remittance. There are very few studies on remittance and its effects on developing countries. This studies help to fulfill the gap of the literature first Asian developing countries and south Asian countries. I run the regression for five south Asian developing countries. The studies shows that there are more migrants are migrating with in developing countries. Developing countries to developing countries 47% of the total migrants are migrating. Dlip Ratha, Williams (2007) the growth of remittance flow to developing countries is expected to moderate sharply to 0.9 percent to $ 440 billion, led by a 12.7 percent decline in ECA and slowdown in East Asia and the pacific, Middle East and North Africa and sub- Saharan Africa. Migration and development brief, April13, World Bank. (2015) .The Main source countries of the remittance are USA, Saudi Arabia, Germany, the Russian Federation and the United Arab Emirates. The key source of developing countries is remittance. The stable source of private debt and portfolio equity flows. India, china, Philippines and Mexico retained their position as earlier. From the late 70s most of the south Asian countries increase migration and remittance significantly more than 90% of the immigrants of south Asia are motivated by economic. As data provided by different authorities most of the immigration is occur to Middle-East gulf countries. When the flows of foreign direct investment increase in gulf countries there is positive flow of migrants towards gulf. With increase of oil price the gulf countries economic status become more competitive in between 2005 to 2008. Migration helps to



the poor people to make their livelihood better along with economic condition of the country such as south Asian. Here According to the data India is one of the top remittance receivers in the world in the south Asia there is huge flow of remittance. In the above chart Pakistan is second largest receiver in this region. Only small amount of remittance is difference in Pakistan and Bangladesh. Bangladesh is one of the top ten remittance receiver in the world. And Sri-Lanka and Nepal are second last and last remittance receiver respectively. We can see that all these countries are receiving in increasing rate each year.

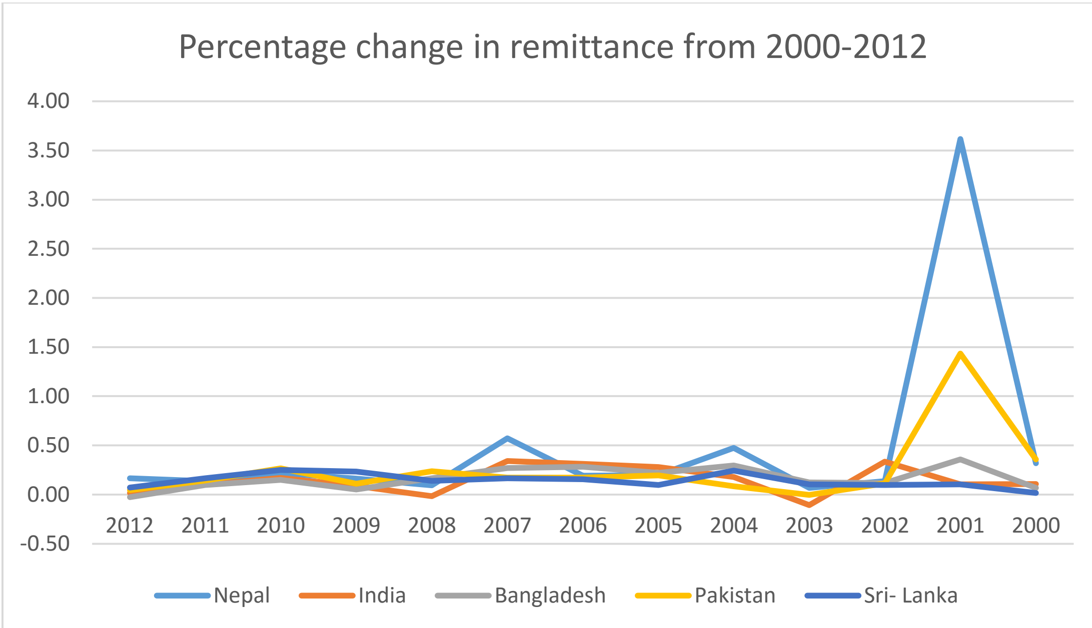


In above figure it is crystal clear that remittance contributes 29% of GDP in Nepal, while Sri-Lanka has 9.6 % of GDP through remittance. Similarly, Bangladesh and Pakistan have 9.2 and 6.9 percentage respectively. However, India stands in last position with 3.40 % of its GDP.

With the rapid increase in the construction of infrastructure like airport, commercial complex administrative blocks, universities there is huge demand of labor from south Asia. The gulf becomes the easy and suitable destination for the country like Nepal, India and Bangladesh. The major destination of South Asian worker is gulf countries i.e. Saudi Aribia, UAE, Kuwait, Oman, Bahrain, Qatar.

Europe is second destination for the Labor of these countries. Sri Lanka and Nepal was in conflict in between 1980 to 2006. The Labor reaches in Europe as refuges. In search of new market the emerging country South Korea is also very good destination because of payments and other benefits while comparison with gulf countries. There is one report publish in www.myrepublica.com more than 30,000 young people are leaving their home country Nepal to South Korea in the time period of couple of years. Here is one good report that more than 80% of returnees are self-employed. It means that in Nepal the remittance help to increase investment on productive sectors.

The international remittance is good to the countries in south Asia because remittance effects to overall development of the country. In Nepal, for instance, remittances make up almost thrice the magnitude of foreign aid. An additional advantage of remittances is the fact that it is person-to person aid that is directed to segments of the population that require it, thus overcoming the governance problems associated with official aid. Remittances have been identified as a key factor in poverty reduction in Nepal, from 42 percent 1995/96 to 31 percent in 2003/04.5 Likewise, remittances have made it possible for Bangladesh to reduce poverty by six percentage points. (Dharshani P. D. de mel,(2009).



Percentage change in remittance from 2000-2012
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
-0.50
2012
2011
2010
2009
2008
2007
2006
2005
2004
2003
2002
2001
2000
Nepal
India
Bangladesh
Pakistan
Sri- Lanka

4. Data and methodology

Here to estimate the effects of remittance in growth of per capita the model have various considerations. As I mention earlier in the previous studies (Sayed t. Ali R., 2014) they took the long time series data with FDI, Education expenditure, life expectancy, export as % of GDP and fertility rate but I believed and found that remittance can add in government consumption and capital formation affected by polity. Remittance helps to increase the productivity of the family who received the remittance. Different studies show that the living standard is also sign positively the line in the curve of living standard is slop upward in the chart. Remittance increases the expenditure and also increases the saving rate of the household which makes the investment increase. These two are the main variables of my study which are included in this model. The remittance is the money transfer by immigrant to his or her home country. It is also called as private flow of money to individual home of origin.

It has direct effect to the economy of the home country/ remittance receiving country. It is the source of capital for the developing economics. Increasing the real capital in the country is known as investment in capital formation. Adding machines, investment in electricity, factories, tolls, transports, materials which are used in production process is capital formation. In modern economy the capital formation is through the saving. Remittance helps to save money are the excess from the daily expenditure. FDI is an investment in a business sector by the investors from another country and full control on the company/ business invested. These days due to open economics of the developing/ developed countries FDI play extraordinary and growing role in the business of the world. Easy access to the advance technology the products, financing with new market and different channels with cheaper production factors. Foreign direct investments have direct impact on the economy of the home country. Today the business is globalized. International trade is important to success of the economy. Openness to trade is crucial for the competitiveness for the economy of the country on long run. Economic gets competitive advantages by exposing the products to international market. Government Consumption is the consumption made by the government in purchase of final goods and services sectors. Like common defense, education, transportation, public health, safety, legal & judicial systems. This affects the overall country economy. Educational expenditure is the governmental expenditure on education which is made expenses in schools, colleges, universities and other private institutions which are involving in the delivery of education and support to the education system. In recent year the debate on remittance is the spending and saving the remittance amount and its effects on local economics. Saving represents those amounts of remittance which is left/ saves after the consumption. Different literature found in recent era the remittance and saving has positive relationships the household spend certain share of remittance in school, food, health and finally invest on small business from saving amount

I investigate the per capita growth rate to the workers remittance, along with the traditional source of economic growth such as foreign aid, investment in human capital and other as mention earlier.

Models

Static model

The basic models are based on the previous research Fayissa and Nsiah (2008), Jongwanich (2007), Gyan et al (2008) states this is the extended version of the neoclassical growth model. Sufian (2009) also use this version of the model. The form of this model is below:

$yit = \alpha i + \delta t + (Xit)\beta + \varepsilon it$------------1

Yit= this is the natural logarithm of per capita GDP in country i at the time period t;

Xit= this is the vactor of independent variables for countries i=1,2,3,4,5 and at the time period t=1,2,3,4,5,…..

αi=time invariant effect for each country specific.

$\beta = the\ scalar\ vactor\ of\ cofficients\ of\ \beta 1 \ldots \ldots \beta 8$;

$\varepsilon it = error\ term$

δt= time specific country invariant effects;

The Models are also very important for finding the accurate result different models developed to analysis the problems. Ordinary least square (OLS) is a constant coefficient model with residual homogeneity and normality. This is the most common statistical tools. Accuracy is one of the important characteristics that make the OLS so popular.

The relationship of the above mention equation (i) should be tested by using different models running on stata as the statistical tools. The reasons behind this model are testing the suitable model for our data, relationship between the models. Three tests are done which are as follows:

1. Ordinary Least Squares
2. Fixed Effects Model / LSDV model
3. Random Effects Model.

To check the appropriateness of the model of fixed effect and random Effect model Hausman test is applied. The serial correlation is tested by Pesaran CD test correlation of the models. In the fixed effect model the time dummy variables are added because, in this model the effects of the variables are constants over the time period so, this omitted the cross sectional and time series nature of data. The main problem of this model is that OLS doesn't separate between the various countries. Adding the time dummy in equation (i) I make the uniform effects for each country variable and denied the heterogeneity or individuality that exist among five countries

Dynamic Model

There is problem with the estimation of the growth effects of remittance is presence of endogenous independent variable in the applied model. There are some traditional factors that determine the economic growth are either pre-determined or endogenous or both Fayissa and Nsiah (2008).

So, GMM method based on the Arellano-Bond (1991) estimation technique is used as the dynamic variant of the model.

$$\Delta Y\ it\ =\ \delta'\ \Delta Y\ i,t-1\ +\ \beta'\ \Delta X\ i,t-1\ +\gamma''Z\ it\ +\ \alpha\ i\ +\ \varepsilon\ it$$

Where,

ΔY it = Lagged change on the log of per capita income growth in the country I at time t. δ , β , γ= coefficient of parameters.

ΔY i,t- 1= difference of log per capita income growth.

ΔX i,t- 1=vector of lagged level and differenced endogenous variables;

Z it= the vectors of endogenous variables.

α i =country effects with independent and identical distribution over countries.

ε it= disturbance term is assumed as independently distributed.

Based on Jongwanich, (2007) regression equation is used to estimation the remittance effects on capital formation. In this paper I add on previous study is consumption expenditure and saving.

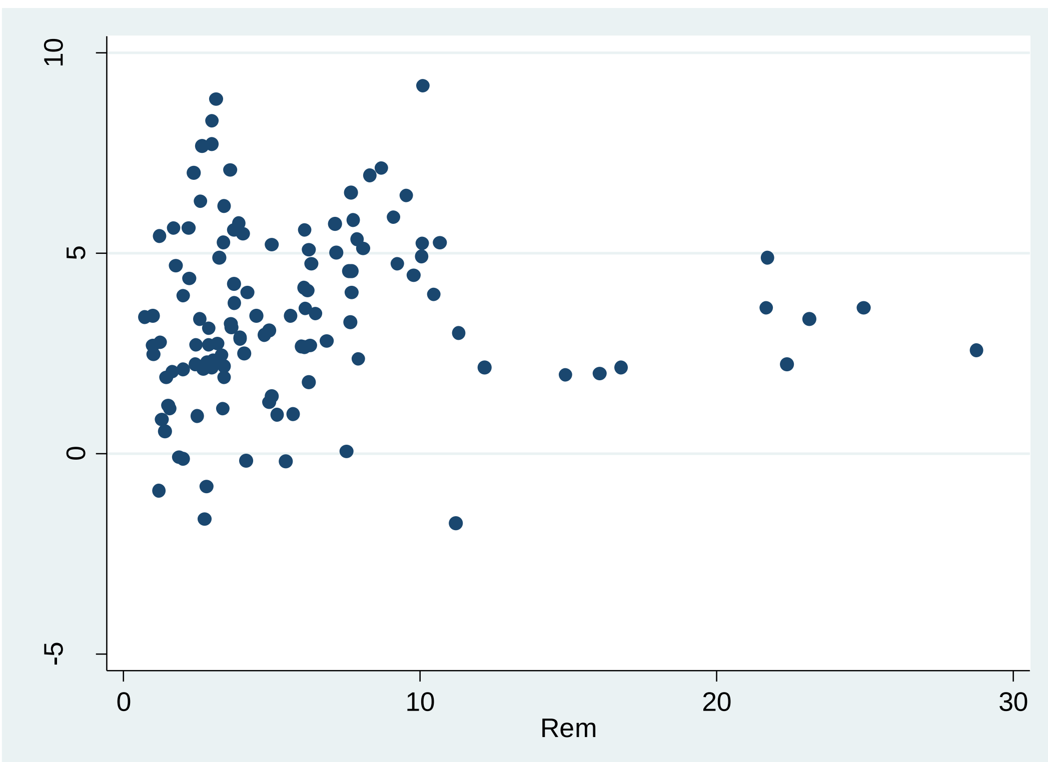
According to the above describe literature and theories workers remittance can effects an economic growth in both prospective i.e. positive as well as negative. So, it is like very hard to assign the sign for Log (rem) without doing regression test.According to the theory on economic growth that predicts that the per capita income tend to grow relatively faster in low level of per capita income countries and it is relatively slower in that countries with higher per capita income countries. So, normally we predict negative sign of the coefficient of parameter, but Casselli et al (1996) find that it takes 7 years approx. of convergences to the steady state point. Contradicting with the previous studies found that it takes 30 years. It is not possible to predict the sign of the level of GDP per capita coefficient. According to (chenery and Strout,1966; Papenek,1973 Lavy,1987) the log of foreign aid is normally helps to increase the inflow of the foreign capital which is source that have positive sign whereas opponents of foreign aid argue that the sign of official add. Has negative. Because it will negatively effects on domestic saving and it makes less investment which economic growth is less in less developed countries (Heller, 1975 and Boone ,1994).

Total trade is the import and export which capture the impact of trade or openness of the economy on the economic growth.

5. .Data Presentation

Here the panel data of the five different countries are used for the behavior study in relation with remittance and its impact on the economic growth. Cross sectional time series data are used from 1990 to 2013. Different entities are observed across time. The panel data are used and use some control the variables.

Before moving to the analysis of the regression it is better to show the relationship between the remittance and the GDP in the scatter plot. So it is very easy to generalize the result.



A positive relationship is found in the GDP growth is increase the government consumption rate is also increases. The detailed description of the data set is presented in the form of the descriptive statistics. The panel data is unbalance.

Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
laggdppc	120	3.363917	2.174634	-1.74	9.17
inv_rate	120	.8485833	.7698273	-.1	3.67
rem	117	6.051795	5.293971	.73	28.77
off_dass	120	3.146217	2.809338	.1	12.6
labor	120	67.10917	12.22333	50.4	88.4
polity	120	4.833333	4.27487	-6	9
capforgdp	120	20.64675	6.325772	7.88	33.64
gov_con	120	9.6625	3.008049	4.14	17.61

Empirical Result

Testing the relationship between remittance and economic growth by estimating the models, this section present the result from the different three models OLS, Fixed effects model and Random Effects Model.

Table: 1 Dependent Variable GDP Per Capita

Variable	OLS	Fixed	Random
Lag GDP Per Capita	.0246789 .0807	.0110948 .0921	.04308 0559
Labor	-0.0714849 .014*	0733626 .0504	-.0679134 .000***

Capital formation	.2436174 .0000***	.2868922 0.024*	.2362541 .000***
FDI	.1009904 .717	.0345786 .0936	.841907 .715
ODA	.071157 .416	.1434543 .0340*	0.0580169 .256
Remittance	.0375364 .283	.0526438 .006**	0358708 .000***
Polity	-043903 .303	-.0394331 .0544	-0.0422366 .347
Government consumption	-04903 .517	.008471 .914	-.0363958 0.051
Constants	3.23499 .099	-8.021948 .344	3.042821 0.000***

Legend: *P<.05; **P<.01;***P<.001

Remittance adds to the economic growth of the developing Asian five countries positively. Though their effects are small there is highly significant in two models. i.e. Fixed and Random. The remittance causes the increase in 3-5% in per capita growth. As expected the capital formation boost the GDP growth. According to our findings the capital formation increase by 10% then the GDP per capita also increase by 2-3%. The coefficient of the capital formation is significant in all there modes. There is negative sign of variable polity and the government consumption use to capture the government consumption and the political status of the country which reflects the employment and the immigration push factor. Both the political and Government consumption are not significant for all there models. It means that these two variables do not have any significance on remittance and it doesn't effects to the remittance inflow and GDP per capita. Official Development Aid is significant on the fixed model only it means it has significant but very less. It supports to the theory that suggests development assistance and transfers are necessary for the development of the overseas countries. Labor has positive impact on the GDP per capita of these countries in with two different models i.e. OLS and Random. It is support that labor is the back bone of the economics of the developing countries.

.Regression for the variables which are added on previous research:

Dependent Variable: Government Consumption

Variables	OLS	Fixed	Random
GDP PC	.0897163 .510	.0050047 .947	-.0897163 .509
Remittance	.1773726*** .000	-.0197952 0.561	.1773726 .000***
Labor	-2447245*** .000	-.2075447* .026	-.2447245*** .000
Capital Formation	.108317* .049	.128066* .035	.108317* .046
FDI	-.3611632 .343	-.5046605* .036	-3611632 .341
ODA	.4818161*** .000	-.3574531*** .000	.4818161*** .000
Polity	.1462078** .0009	.1398136*** .000	.1462078* .008
Const.	21.18528***	21.770052**	21.18528***

	.000	.002	.000

Legend * P<.05; **P<.01;***P<.001

As per we know that the theory of productivity says that the factors that affects the GDP is only the land labor and capital. But I want to add two different variables more than the previous research that is government consumption and polity. Here when the government is take as the dependent variable the remittance is highly significance with OLS and Random but not significance with the fixed affect model. While taking about the variable polity it is also highly significance in all three models in OLS and Random including less influence in fixed model comparing with other two models. As the economists said that the Importance of the Development assistance for government is essential in developing countries government it supports to these findings but in fixed model it is negatively significance. This is because some of the countries are not supportive in the government in developing countries. Interesting thing is that the political condition of the countries also affects in positive direction of the development of governance of developing economics.

I run regression for another variable Polity as the dependent variable but there is no any significance with used variables.

Dependent Variable: Polity

Labor	-0.105311 .881
GDP	-.2399038 .298
Remittance	.1590128 .055

Capital Formation	.2928947 0.001**
Government consumption	.4193015 .009**
FDI	-81287985 .207
ODA	-.1287985 .539
Cons	-1.717284 .0716

Legend * P<.05; **P<.01;***P<.001

As finding in the above table regression we can conclude that the political instability is not good for the nations progress it means the polity and all the choose variables are not significance it except capital formation and the government consumption. The OLS model is run to find the significance of the related variables. We will discuss the impacts of these results in the next session.

6. Discussion

The aim of this study is to provide empirical evidence on the economic growth of developing Asian countries. From 1990-2013 calculation section proves remittance have a positive and contemporaneous impact on the per capita growth across these section of the Asia over the period. Now the remittance becomes one of the major macro-economic factors which have high significance to promote the long run economic growth and prosperous. The study examines the effects and the relationship with remittance and per capita GDP, sing the panel data. The findings help to conclude that remittance is working as one of beneficial factor of economic growth no growth effects on the foreign direct investment. However, the effects on the capital formation are positive and statically significance. Very small significance with Development aid, GDP per capita have high positive significance in both fixed and random, government consumption have no any relational significance with government consumption But negative small relation with polity.

Remittance boost economic environment whose financial system are still underdeveloped. It is very useful to mobilize the resources in the research and findings. The data in this time period the official development assistant and foreign direct investment are fluctuated year by year but the only regular and stable inflow of the fund is remittance. It creates the stability on macroeconomic shocks. Here the question may arise why remittance is so stability and predictability? This is because mostly the flow of funds is between individuals of same family they send for the consumption, it is not for the portfolio investments.

The relationship between labor and economic growth is highly negative significance in our empirical result with the two models random and the fixed. It means that the domestic labor move to the foreign market and negative impact with the local production. The capital formation also has the positive relationship with the labor productivity. It enhances the role of remittance as the observed in the results. A closer look in our sample countries we argue that it increase domestic labor productivity vi increasing up physical capital. The labor supply has negative relation with the domestic production.

Here I would like to add about the transaction (transfer) cost of the remittance. This is one of the burning issues in recent remittance research. Asia is one of the immature corridors, though south Asia is one of the competitive remittance represent. The transaction cost of the remittance still high while comparing with the US –Mexico corridors. There is still difficult to send money from Nepal to India and also Bangladesh to India though they share the open economic, geographical boarders. In these countries there is restriction on the outward flow of the fund. Though the transaction cost are decreasing by massive use of banking as well as Information Technology.

7. Policy Recommendation, Conclusion and recommendation for further research

My empirical result would help to formulate appropriate policy and implement in the foreign employment sectors and more wise use of remittances though there are various changes had been implemented since 1990 to 2013 and in addition this shows that the banking systems and bank branch are expanded to remote and urban places so the banking system is more systematized , formalized we can see its direct impact to the remittance informal channeled are discouraged and more use of e-banking helps to formalized the remittance, the significant changes have been updated but the research finds and shows there should be done more and many changes in utilizing it in economic development and growth. Many online banking system makes low cost of the remittance transaction.

In addition to this this study finds the remittance helps to improve the living standard of these Asian developing countries. Remittance used by the household and make some saving and deposit on the banks which play an important role in small business, and also finance the large industry through banks.

Investment and capital formation should be recognized as the economic drivers of the south Asian countries. As per overall study of remittance in these countries show that most of the inflow of money is not used on productive sectors. So, the policy should be enhancing to tackle this problem. This can be pulled on track by making mandatory documents to remitter and the point of collection.

Conclusion and recommendation for further research

In this paper I have investigated the relationship between remittance and economic growth in Bangladesh, India, Nepal, Pakistan and the Sri Lanka using the unbalance data from 1990 to 2013. The panel data is using to run the regression in the statistical tool STATA. the overall assessment from various literature, my empirical study and other public publications and reports is that the flow is steadily increase in the globe mostly in developing countries and becoming dependent day by day. Also increase the living standard of the poor people and the nation's economic condition. Clearly there are two arguments on this topics ;First the remittance helps to improve the nations as well as the poor people economic condition but another parallel line disagree on this and give evidence that remittance only spending on the consumption it is not use on the development of economic condition of the nation. Here my study also support to this first findings Capital formation ,labor, investment, government consumption, are significant so it prove that the remittance have positive impact on the GDP. It is very important to the countries like Nepal, Bangladesh and Sri lanka.

Yes, of course it is true that there is huge amount used on only the consumption of daily needs. Saving and investment is not done as there should be but it is in improving situation. So, need to be able to come up with necessary policy and implement. There are various policies are formulated by these south Asian countries according to the research. But the problem is that the implementation part so, regular monitoring for the authorities should be done. Here the variable polity comes, the impact of the polity should recognized most of the developing countries are influence every sectors by bad polity also in my empirical study finds that the impacts of this variable.

It is hard to prove that any country which is developed only the use of remittance, therefore it may be negative for the government to depend on the workers remittance there are not only the positive findings on the study but also some negative aspects together. Dutch disease, some moral hazard problems may occur. The issues “Brain Drain” large number of skill workers are moving from the country of origin to the developed nations. It creates the scares of the skill labor force in the home country to do the development works. It is finding that more than 5 million dollars are parked on the banks as a deposit without any deposit interest. If the government of these countries can offer the interest is 3-4% the money would be collected can utilized in investment. The research show that in Nepal and India lots of immigrants invest in the infrastructures development of their country of origin. More than 50MW hydroelectricity generation in Nepal is invested by migrant worker and interested to invest more. Here it is not only the flow of the fund but it is very important that they slowly return to serve the country and increase engagement in development. Remittance is the way of sharing prosperity with in people and places it empower the people.

Here as conclusion I see the future of these Asian countries have future only when rapid use of remittance on productive sectors like roads, train, schools which makes prosperous country with labors working for their own country. This money should use in trade, investment and other purposes rather than only consumption.

As recommendation for future research in the use and mobilization of the remittance and making the transaction cost more cheaply as US and Maxico deal.

References:

1. *Adams , Richad H., JR; Cuecuecha, Alfredo, (2008-09) The impact of remittance on poverty and inequality in Ghana.*
2. *Adams , Richad H., JR; Cuecuecha, Alfredo, (2010) The economic impact of international remittances on poverty and household consumption and investment in Indonesia.*
3. *Adams , Richad H., JR; Cuecuecha, Alfredo, (2010) The economic impact of international remittances on poverty and household consumption and investment in Indonesia.*
4. *Dharshani Premaratne Deshal de mel,(2009) Migration and Remittance South Asia.*
5. *World Bank, (2006). World Bank, (2006). Global Economics Prospects: Economic Implications of Remittances and Migration 2006, Washington, D.C.*
6. *.Makhlouf and Mughal,(2013) Remittances, Dutch Disease, and Compet itiveness: A Bayesian Analysis, Journal Of Economic Development , 38, 2, pp. 67- 97*
7. *Adams , Richad H., JR (2005), Remittances, Household Expenditure and Investment in Guatemala*
8. *Adams , Richad H., JR (2005), Remittances, Household Expenditure and Investment in Guatemala*
9. *Adams, Jr., R. and Page, J. 2005. Do International Migration and Remittances Reduce Poverty in Developing Countries? World Development 33, pp. 1645-1669.*
10. *Adams, Jr., R. and Page, J. 2005. Do International Migration and Remittances Reduce Poverty in Developing Countries? World Development 33, pp. 1645-1669.*
11. *Alvin P.ANG, (PHD,) Worker's remittances and economic growth in the Philippines*
12. *Alvin P.ANG, (PHD,) Worker's remittances and economic growth in the Philippines.*
13. *Andreoni, James (1989). "Giving with Impure Altruism: Applications to Charity and Ricardian Equivalence," Journal of Political Economy, 97(6), 1447-1458.*
14. *Arusha Coooray (2012), the impact of remittance on economic growth evidence from south Asia", (2012). Review of international economic'.*

15. Azam, M., and A. Khan 2011 “Workers’ Remittances and Economic Growth: Evidence from Azerbaijan and Armenia”, Global Journal of Human Social Science, 11(7).
16. Barajas et. al,(2009) Barajas, A., Chami, R., Fullenkamp, C., Gapen, M., & Montiel, P. (2009). Do workers’ remittances promote economic growth? International Monetary Fund Working Paper No. WP/09/153. Washington, DC: International Monetary Fund.
17. Becker, Gary S. (1974). "A Theory of Social Interactions," Journal of Political Economy, 82, November/December, 1063-1093.
18. Bichaka Fayissa & Christian Nsiah (2008), the Impact of Remittances on Economic Growth and Development in Africa.
19. Bliss, C. 1989 “Trade and development”, in H. Chenery and T.N. Srinivasan (Eds), Handbook of development economics, 2. Elsevier Science Publishers, Amsterdam: 1187– 1240.
20. Bourdet, Yves, and Hans Falck (2003), “Emigrant’s Remittances and Dutch Disease in Cape Verde,” Working Paper Series 11 (Kristianstad, Sweden: Kristianstad University College).
21. Brown R.P.C (1997), “Estimating Remittance Functions for Pacific Island Migrants”, World Development, Vol.25, No.4 PP. 613-626.
22. Burgess, R. and Haksar, H. (2005). “Migration and Foreign Remittances in the Philippines.” IMF Working Paper WP/05/111
23. Catrinescu, N., Leon-Ledesma, M., Piracha, M., and Quillin, B. (2005), IZA Discussion Paper No. 2139. http://ssrn.com/abstract ¼ 902342
24. Casselli, Francesco, Gerardo E., and Fernando L., (1996), “Reopening the Convergence Debate: A new Look at Cross-Country Growth Empirics”, Journal of Economic Growth, 1 September: pp.363-389.
25. Das and Chowdhary (2011) Remittances and GDP Dynamics in 11 Developing Countries: Evidence from Panel Cointegration and PMG Techniques
26. Dlip Ratha, Williams(2007) South- South Migration And Remittances World Bank working Paper NO.102
27. Doc quier F, & Rapoport H, 2012. Globalization, Brain Drain, and Development. Journal Of Economic Literature , 50 (3), 681- 730

28. *Douglas S. Massey, Joaquin Arango, Graeme Hugo, Ali Kouaouci, Adela Pellegrino and J. Edward Taylor. Theories of international migration a review and appraisal. Source: Population and Development Review, Vol. 19, No. 3 (Sep., 1993), pp. 431*
29. *Erhijakpor A, 2010, Do International Remitt ances Affect Poverty in Africa? , African Development Review/Revue Africaine De Development, 22, 1, pp. 51- 91.*
30. *Fargues P., (2007), "The demographic benefits of international migration: A hypothesis and its applications to Middle Ea stern and North African contexts", International migration, economic development and policy, World Bank; Washington.*
31. *Fayissa B. and Nsiah Ch., (2008) "The impact of remittances on economic growth and development in Africa", Middle Tennessee SU, Department of economics and finance working paper, February, 2008.*
32. *Fayissia B. and Nsiah (2008) "The impact of remittance on economic growth and development in Africa", Department of economic and finance working paper series feb -2008.*
33. *Glytsos, N.P. (1997), "Remitting Behavior of Temporary and Permanent Migrants: the Case of Greeks in Germany and Australia." Labor, Vol.11 No.3, PP 409-435.*
34. *Gupta, S., C. A. Pattillo, and S. Wagh, 2007, "Impact of Remittances on Poverty and Financial Development in Sub-Saharan Africa," IMF Working Paper No. 07/38 (Washington: International Monetary Fund).*
35. *Gyan P, M. Upadhyay and K. Upadhyaya 2008 "Remittances and economic growth in developing countries", European Journal of Development Research, 20(3): 497– 506.*
36. *Gyan Pradhan , Mukti Upadhaya and kamal Upadhaya, (2011) Remittances and economic growth in developing countries.*
37. *Hassan, G. M. and Holmes, M. J. 2012. "Remittances and the Real Effective Exchange Rate". Department of Economics, University of Waikato*
38. *Hein De Hass (2005) international migration, remittance and development myths and Facts*
39. *IFAD, (2012), Remittance, growth and Poverty, New evidence from Asian countries, Occasional Paper.*

40. *Itzigsohn, J., (1995), "Migrant remittances, Labor markets and Household strategies: A comparative analysis of low- income household strategies in the Caribbean Basin", Social Forces, Vol. 74, No. 2, pp.633- 655.*
41. *Jawaid and Raza (2012); Jawaid, S.T., and S.A. Raza 2012 "Workers' Remittances and Economic Growth in China and Korea: An Empirical Analysis", Journal of Chinese Economic and Foreign Trade Studies, 5(3): 185– 193.*
42. *Johnson, George E., and Whitelaw, W. E. "Urban-Rural Income Transfers in Kenya: An Estimated-Remittances Function." Econ. Development and Cultural Change 22 (April 1974): 473-79.*
43. *Jongwanich, J. (2007), 'Workers' Remittances, Economic Growth and Poverty in Developing Asia and the Pacific Countries,' UNESCAP Working Paper WP/07/01, Bangkok: ESCAP*
44. *Judith Lichenbery, (2010) Opinionator, The New York Times Published on OCTOBER 19, 2010*
45. *Lartey, E.K.K. 2011 "Remittances, investment and growth in sub-Saharan Africa", The Journal of International Trade & Economic Development: An International and Comparative Review, doi:10.1080/09638199.2011. 632692*
46. *Lopez, Humberto, Luis Molina, and Maurizio Bussolo. 2007. Remittances and the Real Exchange Rate. In World Bank Policy Research Working Paper 4213. Washington, DC: World Bank.*
47. *Lowell, B.L., Garza, R.O.D.L., 2000. The Developmental Role of Remittances in U.S. Latino Communities and in Latin American Countries: A Final Project Report. Technical Report Inter-American Dialogue and the Tomas Riviera Policy Institute.*
48. *Lucas and stark (1985) Motivations to Remit: Evidence from Botswana, Journal of political economy, Vol. 93, No. 5 (Oct., 1985), pp. 901-918*
49. *Mezgebu K. Feleke and Johan De Tavernier (2011) Selfishness, self- interest, and self-love.*
50. *Nick Wilkinson, Mathias Klaes (2012), an introduction to Behavioral Economics.*

51. *Organization for economic co-operation and development. (2006), "International Migration Remittances and their Role in Development" in International Migration Outlook, OECD.*
52. *Paul and Das (2011) The Remittance-GDP Relationship in the Liberalized Regime of Bangladesh: Co-integration and Innovation Accounting*
53. *Perkins, D., Radelet, S., Snodgrass, D., Gillis, M., and Romer, M. (2001), Economics of Development*
54. *Puja Guha (2013), Macroeconomic effects of international remittances: the case study of developing county.*
55. *Ratha D., and Mohapatra S., (2007) "Increasing macroeconomic impact of remittances on development" World Bank, Development P rospects Group, November*
56. Reena Aggrawal ,Nikos Passas, Richard H Adams, JR. Samuel Munzele Maimbo,(2005) Migrants Labor Remittances in South Asia.(The World Bank, 2015) Migration and development: Recent Development and Outlook. Special topic: Financing for development.
57. *Russell, S.S. (1986) 'Remittances from International Migration: A Review in Perspective', World Development, 14(6): 677–696.*
58. *Solimano, A. (2003). "Workers Remittances to the Andean Region: Mechanisms, Costs and Development Impact", Paper prepared for the Multilateral Investment Fund-IDB's Conference on Remittances and Development, May, Quito Ecuador.*
59. *Srivastava and Chaudhary (2007); Srivastava, N.L., and S.K. Chaudhary 2007 "Role of Remittance in Economic Development of Nepal, the Journal of Nepalese Business Studies, 4(1): 28– 37.*
60. *Stahl, Charles W. and Fred Arnold, (1986), "Overseas Workers' Remittances in Asian Development," International Migration Review, 20 (4): 899-925.*
61. *Stahl, Charles W. and Fred Arnold, 1986), "Overseas Workers' Remittances in Asian Development," International Migration Review, 20 (4): 899-925.*
62. *Stark, O (1991 a), the Migration of Labor, Cambridge; Basil Blackwell.*
63. *Stark, O. and Lucas, R.E.B. (1985) 'Motivations to Remit: Evidence from Botswana', Journal of Political Economy, 93(5): 901–918*
64. *Stark, O., and Lucas, R.E.B. (1988) 'Migration, Remittances, and the Family', Economic Development and Cultural Change, 36(3): 465–481.*

65. *Stojanov R, & Strielkowski W , (2013), The Role of Remittances as More Efficient Tool of Development Aid in Developing Countries , Prague Economic Papers , 22, 4, pp. 487- 503 .*
66. *Straubhaar, T., Vadean, F.P., 2006. International migration outlook: Sopemi 2006 edition. International Migrant Remittances and their Role in Development. OECD, pp. 139–161.*
67. *Syed Tehseen Jawaid and Syed Ali, (2012) Workers' Remittances and Economic Growth in South Asia, http://mpra.ub.uni-muenchen.de/39001/.*
68. *Woodruff, C., and Zenteno, R. (2001). "Remittances and Micro-enterprises in Mexico" Working paper, UCSD,*
69. *World Bank (2014) Press release on October 6*
70. *Zuniga (2011), on the path to economic growth, do remittance help? Evidence from panel VARs. Department of Business and Economics, The Catholic University of America, Washington, D.C., USA First version received August 2009; final version accepted November 2010.*

Web sites:

http://www.ted.com/talks/dilip_ratha_the_hidden_force_in_global_economics_sending_money_home?language=en.

www.worldbank.org

www.factfish.com

www.ted.com

www.uia.no