Effect of Remittances on Economic Growth of Sub Saharan African Countries

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Abstract

This research paper investigate the effect of immigrants 'remittances on economic growth on 36 Sub Saharan Africa countries spanning from 1980-2015. The previous studies are limited to the examination of the effect of remittances based on aggregated data. This work extends these earlier studies by examining the effect of remittances based on temporary and permanent components. System GMM estimation technique was used and the results showed that both remittances from temporary migrants and permanent migrants contribute positively to economic growth but the contribution by temporary migrants is relatively higher. This paper recommends that policy makers should enhance easy access to foreign currency accounts and foreign currency denominated bonds with permission to repatriate, thereby stimulating additional remittances from permanent migrants who are likely to belong to professional and high skilled categories. In order to maximize the beneficial impacts, temporary migrants' remittances should be redirected towards productive projects. This may include strengthening of good infrastructure which may promote trade and enable ease of access of services.
Keywords: Economic growth, Remittances, System GMM, Sub Saharan Africa

1. Introduction

Remittances are funds transferred from immigrants to their home country. They are private savings of workers that are disbursed in the home country for necessities and other expenditures, and which drive the home economy. Remittances have been considered as imperative sources of economic growth by several international organizations not limited to World Bank, International Monetary Fund and African International Migration (Straubhaar and Vadean, 2005; Oucho, 2008).

Remittance inflows have a tendency of positively influencing economic growth by augmenting savings and investment in health and education. In addition they boost aggregated demand and output through consumption (Karagoz, 2009; Okudua, 2012; Ratha, 2013; Lubambu 2014). They also reduce current account deficit throughincreasing foreign exchange reserves of the recipient country, thus improving the Balance of Payments (BOP) position. Moreover they improve country's credit worthiness as well as reducing dependence on external borrowing, (Abdus and Zafar, 2005; Karagoz, 2009; Javid*et al*. 2012; Simwaka, 2014).

Immigrants can be either permanent or temporary depending on their duration of stay. Those staying more than one year are considered to be permanent, or otherwise they are temporary. The two categories of immigrants' accordingly, may have differences in terms of their patterns of consumption, saving and thus investment which is replicated by their remitting behavior. This in turn may result to dissimilarity on the magnitude at which the two categories of immigrants' remittances impact economic growth at their home country.

Temporary immigrants in a way of optimizing their consumption overtime, take into account the expected drop in their level of income after their return to their home country, where wages are low (Djajic*, 2009). As a result, they are likely to save a significant proportion of their income than permanent immigrants. This implies that temporary immigrants will spend a quite an insignificant proportion of their income while in abroad with the aim of remitting in extreme to their home country. On the other their counterparts' permanent immigrants expect no drop in their income. In addition temporary immigrants are less likely to bring their families along to the host country as compared to permanent immigrants. They are therefore more likely to remit a larger fraction of their earnings to their home country to take care of their families.

In this era of globalization and massive migration, SSA has seen an increase in remittance flows. According to the World Bank, remittances to Sub-Saharan Africa grew by 3.1 percent in 2013 to sum USD 33 Billion in 2014. In 2015 SSA saw a modest growth of 1% to USD 35.2 Billion. Though in 2016 there was decline of 6.1% to USD 33 Billion, the figure is projected to reach USD 37 Billon in 2017. Nigeria is the largest recipient in amounts by far, with migrants sending about USD 21 billion in 2013. In East Africa, remittances grew robustly in 2014, by 10 percent to Kenya and 15 percent to Uganda.

The empirical evidence on the impact of remittances on economic growth, however, fails to reach a consensus. With many studies conducted in SSA focusing on the use of aggregated data on remittances. Aggregated data may suffer from aggregation bias, mainly if the coefficients based on aggregated data are different from the coefficients based disaggregated. This may result to improper policy implications since with aggregated data policy makers focus on integrated policies, therefore ignoring possibility of varying patterns of

remitting among immigrants, which could imply different effect on economic growth. Due to the difference in remitting behavior, there is a need specifically capture the unique effect of each component of remittances on economic growth, by using disaggregated data. Data disaggregation on remittances will reveal distinctive effect therefore crucial in formulation of appropriate, effective and unambiguous policy that may result in optimal resource allocation on remittances-economic growth relationship in SSA.

In addition, (Deodat, 2013) established that some countries in SSA largely depend on one component of remittances than the other. Some countries such as Lesotho, Botswana and Tanzania largely depend on compensation of employees' from temporary immigrants than workers' remittances from permanent immigrants.

The Table 1.1 and 1.2 below show the top five recipients of workers' remittances and top five recipients' of compensation of employees as average of the five years in SSA. The amount is in Million US Dollars.

Table 1.1: Top Five Receipts of Workers' Remittances in Million US Dollars

	Country Name	2011	2012	2013	2014	2015
WR	Nigeria	20,436	20,362	20,607	20,631	20,837
CE		504	437	406	384	382
WR	Ghana	2,135	2,155	1,864	2,008	4,982
CE		-	-	-	-	-
WR	Senegal	1,512	1,470	1,650	1,799	-
CE		102	106	128	130	1,614
WR	Kenya	934	1,211	1,304	1,441	-
CE		-	-	-	-	1,560
WR	Uganda	813	910	932	886	1049
CE		3	3	-	-	-

Table 1.2: Top Five Recipients of Compensation of Employees in Million US Dollars.

WR	South Africa	-	-	-	-	-
CE		1,158	1,085	970	913	825
WR	Lesotho	6.0	5.49	4.584	4.023	3.618
CE		462.9	549.0	458.3	376.2	362.0
WR	Togo	204	295	342	374	316
CE		40	50	55	53	47
WR	Tanzania	385.163	368.700	351.738	357.609	365.306
CE		24.4	21.44	30.192	31.876	24.062
WR	Botswana	3.411	2.525	4.903	4.073	3.837
CE		16.998	17.702	31.101	42.05	26.656

Source: Calculated from WDI

1.1 Trends on Economic Growth in SSA

Economic growth has been a global concern with many developing economies still being undiversified and thus these countries face major constraints towards sustainable economic growth. Most developing countries, however, have experienced fluctuating trends in economic growth; although these countries have reported an improvement in a hope to catch up with the wealthier nations not all regions have made a significant progress. Figure 1.1 below shows regional comparison of the growth trends with Sub-Saharan Africa (SSA), Latin America and Caribbean (LAC) and Middle East and North America (MENA) slightly lagging behind.
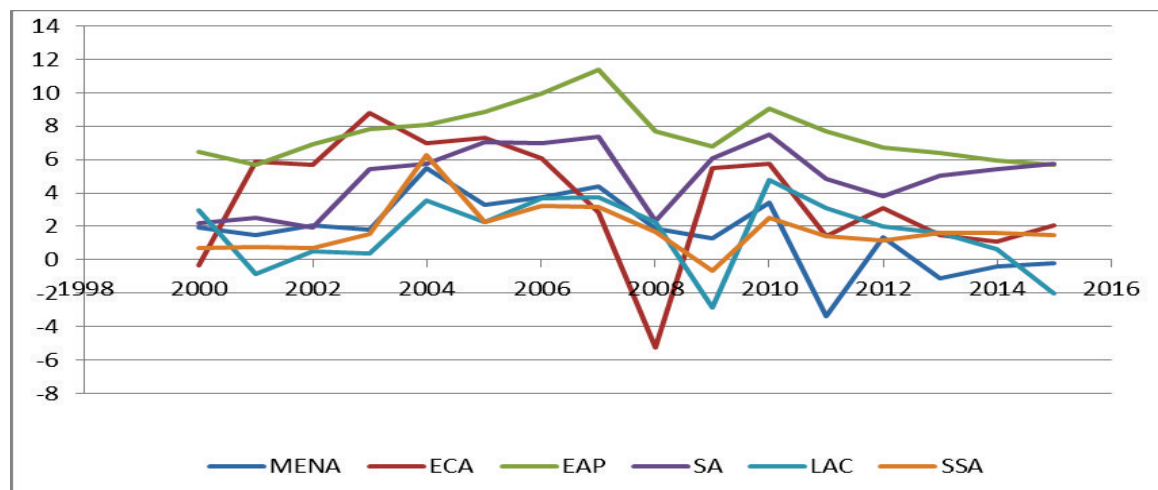
Figure 1.1: Trends in Economic Growth Regional Comparison

Source of Data: World Bank Development Indicator (WDI)

The slow progress in economic growth of SSA may be linked to the problem of resource gap that is more pronounced than in other regions of the world. Resource gap refers to a situation where there is gap in domestic savings and foreign exchange. According to (Okudua, 2012) successful industrialization and growth are underpinned by rising saving rates, investment and exports.

UNCTAD (2001) poses that though African countries have experienced surges in investment and growth in the past; they have not been able to establish a virtuous circle of investment, savings and exports. SSA has low domestic savings to finance capital investment, saving at 17.51% of the Gross Domestic Product (GDP) as compared to 45 % in East Asia and Pacific and 35% in South Asia in 2014 according to World Bank data.

Shortages of foreign exchange in addition, hinder proper finance of imports of consumer goods and services. In 2014 the region exported 29.58% of GDP in goods and services that is equivalent to 5.0 Billion USD and in return imported 32.37%, 4.8 Billion United States Dollars (USD) according to WDI. As a result the region cannot cater for its BOP requirements through foreign exchange due to current account deficit.

SSA current account deficit grew from 2.6% in 2014 to 3.2% in 2015 with more than 15 countries having a deficit in excess of 10% of GDP (Hutchinsun, 2015). A stable remittances inflow therefore, can fill this gap since remittance inflows is stable and countercyclical source of capital. In addition it is less costly than foreign direct investment (FDI) and official development assistance (ODA) that have proven to be unstable as well as costly sources. Therefore remittances can raise income and savings above the level constrained by export earnings.

2. Literature Review

2.1 Empirical Literature

This section summarizes the previous studies that examine the effect of remittances on economic growth across the world. Many studies generally have found a positive impact between remittances and economic growth. Fayissa and Nsiah (2008) employed GMM and a convectional neoclassical model for 37 African countries spanning from 1980-2004. Muchemwa (2012) studied the effects of remittances on economic growth in Sub Saharan Africa from 1980 to 2008 using panel GMM and found a positive effect. In a study by Oda (2004) on the impact of remittances on economic growth on 91 developing countries, by employing panel GMM found that remittances positively affect economic growth for a period spanning form 1976 to 1991. A standard utility maximization theory was employed.

Katsushi *et al.* (2012) studied remittances, growth and poverty for Asian counties using two stage estimation techniques on a panel of 24 countries spanning from 1980-2009 and found that remittances contribute positively to economic growth as well as poverty reduction. Using ARDL in Pakistan, Javid *et al*. (2012) examined the impact of remittances on growth and poverty covering the period 1973 to 2010 and found that workers' remittances strongly affect poverty reduction and economic growth.

On other hand some studies found negative impact on economic growth. A study by Okudua (2012) on workers' remittances and output growth in SSA using a panel of 21 countries from 2000 to 2007 based on neoclassical theory of growth revealed that remittances have negative insignificant effect of economic growth. System GMM approach was employed. Relatively, there are few studies that found no significant impact of remittances on economic growth. Barajas *et al.* (2009) examined the effect of remittances on economic growth in developing countries as spanning from 1970 to 2004 and found no impact.

In conclusion, the existing literatures fail to provide unanimity on the evidence drawn on the effect of remittance on economic growth on three dimensions. In addition all these studies except for Katsushi *et al.* (2012)

and Javid*et al*. (2012) may suffer from estimation problems linked to the analysis method. Fayissa and Nsiah (2008); Muchemwa (2012) and Oda (2004) employed GMM in estimation which has the disadvantage of providing inconsistent estimators as a result of using first difference to eliminate country specific effects and use of lagged instruments for simultaneity in the first differenced equation. The instruments become weak after the first difference. Okudua (2012) did not perform any test for unit root test to remove any unit root in case it was present in some variables thus possibility of spurious results.

Most studies however, used aggregated data on remittances which suffers from aggregation bias which can lead to invalid conclusion and thus inappropriate decisions by the policy makers. This study therefore extends the previous studies by using disaggregated data on remittances so as to reveal crucial information to enable policy makers to make optimal policies based on specific categories of remittances.

2.2 Theoretical Model:
2.2.1 Neoclassical Growth Model
The neoclassical theory of economic growth was developed in the late 1950s and 1960s by Robert Solow. It stresses on capital accumulation and saving as an important determinant of economic growth. The theory considers capital and labor as determinants of output and in addition technology is exogenously determined (Acemoglu, 2008). It also assumes that planned investment equals savings because of the immediate adjustment in price. The growth of output is achieved through higher saving and therefore higher rate of capital formation.

This theory is relevant since remittances can influence savings for productive investment by raising incomes of the receivers, labor productivity through technical skills, reduces credit constraints and accelerate human development through financing of better education and health. According to Sachs (2006), remittances increase savings and in turn investment increase and thus the overall GDP. They act as a buffer stock against adverse productivity shocks. Income growth can be obtained by a combination of high savings, development of human capital and technology among others. Remittances, influence savings necessary for changes in capital stock and on the other hand enhances brain gain through exposure to technical skills (Mayr and Peri, 2008).
The Solow model of growth assumes a Cobb-Douglas production function

$$Y_{(t)} = F\left(K_{(t)}, A_{(t)}L_{(t)}\right) \tag{1.1}$$

Where: - $Y_{(t)}$, $K_{(t)}$ and $A_{(t)}L_{(t)}$ are output, physical capital, and effectiveness of labor respectively. t - refers to instantaneous time.

$$F(\lambda K, \lambda AL) = \lambda F(K, AL), \quad \lambda \geq 0$$

Given the constant return to scale, output can be expressed in intensive form

$$y = f(k) \tag{1.2}$$

The initial levels o**f** capital; labor and knowledge are taken as given and assumed to be strictly positive. Therefore the evolution of effective labor in the Solow model and knowledge grow at constant exogenous rate n and g .Implying that labor and knowledge grows exponentially.

$$\dot{L}(t) = nL(t) \tag{1.3}$$

$$\dot{A}(t) = gA(t) \tag{1.4}$$

Output is divided between consumption and investment. The fraction of output devoted to investment, s is constant and exogenous.

$$S_{(t)} = sY_{(t)} \tag{1.5}$$

Capital depreciates exponentially at rate δ so that the law of motion of capital stock is given by

$$\dot{K}(t) = sF(K(t), L(t), A(t) - \delta K(t) \tag{1.6}$$

The equilibrium of Solow model is described by equation (1.6) and the laws of motion of *A* and *L*.
Thus the dynamics of capital per effective labor is given by equation (1.7) below

$$\dot{k}(t) = sf\big(k(t)\big) - \big(\delta + n + g\big)k(t) \tag{1.7}$$

Where $sf\big(k(t)\big)$, is the gross investment in the physical capital per unit of effective labor, $\big(\delta + n + g\big)k(t)$ is the effective depreciation of capital per unit of effective labor.

Savings rate s is a key parameter of the Solow model. An increase in s implies higher gross investment; k grows until it reaches its new (higher) steady state value. In the transition to the new steady state, the rate of growth of output per worker accelerates. Once the new steady state is attained, all variables grow again at the

same rates as before.

3. Data and Methodology

3.1 Model Specification

In literature, researchers have shown desire to the long run path of economic growth. To determine the responsiveness of economic growth and remittances, some of the important traditional sources of economic growth informed by theories of growth including physical investment, human capital, openness and terms of trade are incorporated. The empirical model follows Javid *et al*., (2012) model and in addition the study incorporated terms of trade to account for effect of real purchasing power of domestic production. A Cobb-Douglass production function is specified as follows;

$$lnGDPPC_{it} = \alpha + \beta_1 lnCE_{it} + \beta_2 lnWR_{it} + \beta_4 lnZ_{it} + \mu_{it} \tag{1.8}$$

Where; $GDPPC_{it}$ represent real GDP per capita, CE denotes compensation of employees in USD, WR denotes workers remittances in USD , represent a matrix vector of the control variables that include private investment, terms of trade, human capital and openness, ε_{it} is the error term. $\alpha, \beta_1 \cdots, \beta_n$, represent the estimated parameters and ln is natural log.

3.2 Data Sources

Data on real GDP per capita, compensation of employees, workers' remittances (proxied by using personal transfers), terms of trade, real private investment, openness (proxied by sum of exports and imports as a % of GDP) and human capital (proxied gross secondary school enrollment of both sexes) was obtained from Econstat and World Bank Development indicators. Compensation of employees' data was obtained from the difference between personal remittances and workers' remittances (PR-WR=CE).

3.3 Justification of Variables

Real GDP per capita is an important indicator of economic growth since if it rises, other components of the economy will also be doing well such as personal income, investments and increased employment thus human development. In addition it captures the effect of population increase on economic growth, which creates demand for goods and services.

Compensation of employees' refers to the gross earnings of workers residing abroad for less than 12 months. They are seasonal and short-term income remitted across the border by workers who are employed in an economy where they are not residents. They measures the value of labor on accrual basis thus contributes to the net output along with other factors of production. In addition some countries in Sub Saharan Africa depend largely on employees' compensation than workers' remittances (Adenutsi, 2013).

Workers' remittances refer to the value of monetary transfer sent home from workers residing abroad for more than one year either in cash or in kind. They constitute an important proportion of remittances inflows and are used for altruistic reasons to support living standards of households, in addition these inflows are influenced by peculiarly gains in relation to incentives offered by the recipient countries such as exemptions of taxes and preferred interests (Mim and Ali, 2012).

Real private investment is the key engine of economic growth. Private investment influences the necessary capital for growth. In addition, private investment is a requisite to skills necessary for development. Private investment enhances diffusion of technology and innovation for countries' prosperity. According to (Bayraktar, 2003) to economic growth and development depend on the country's ability to invest and make efficient and productive use of its resources. It is also seen as an engine for job and income generation not withstanding its contribution to both infrastructure and social services.

Openness index is introduced because most of the countries growth rate occurs as a result of export led development strategies. Trade openness enhances competition, redistribution of skilled workers and reduces rent seeking opportunities in the economy. With openness the countries can access more financial resources and markets. Thus a more open economy is expected to have greater economic growth than a closed economy.

Terms of trade benefits a country in the sense that it can purchase more imports for any given volume of exports. An improvement in the terms of trade due to boom in commodity price may result in appreciation in the real exchange rate that increases real wages in the sectors that produce importable goods. Aggregate output can fall due to this mechanism (Dutch disease) Hernandez (2011).On the other hand increase in export prices relative to imports prices allows a larger volume of imports to be purchased with a given volume of exports. This increase in the real purchasing power of domestic production is equivalent to a transfer of income from the rest of the world.

Human capital development is vital for countries prosperity as it increase the quality of life (Romer, 2012). Of late human capital has been given considerable preference as it opens significant opportunities for economic and social development, therefore improving economic growth. Schutt (2003) and Romer (2012) found that

capital and labor only explain a fraction of output growth in the Solow model and incorporating human capital partially reduces the unexplained growth or Solow residual.

3.4 Analysis Techniques

Anyanwu and Erhijakpor (2010); Muchemwa (2012), suggested that OLS results can be biased because of endogeineity (reverse causality between remittances and economic growth) and does not account for country specific effects in dynamic growth models.

Arellano and Bond (1991) specified a dynamic variant of fixed and random effects as follows:

$$\Delta Y_{it} = \alpha' \Delta Y_{it-1} + \gamma' Z_{it-1} + \mu_i + \varepsilon_t \tag{1.9}$$

Where, ΔY_{it} represent the first difference of natural log of dependent variables, α' and γ' represent the estimated parameters, ΔY_{it-1} is the lagged difference of the dependent variables, Z is the vector of explanatory variables included in the regression equation, ui is the country specific effect and ε_t is the error term. The GMM estimation technique solves for endogeineity problems and biases resulting from measurement error by using lagged instrument variables. Arellano and Bover (1995) developed an improved GMM estimator that allowed the use of lagged first-differences of the series as instruments for equations in levels. However, both estimators become weak after the first differences thus tend to be inefficient.

A more consistent system GMM estimator was developed by (Blundell and Bond, 1998) that included time invariant regressors that tend to disappear in Arellano and Bond (1991) GMM. The System GMM estimation on the other hand tend to overcome the weakness shown by Arellano and Bond (1991) and Arellano and Bover (1995) estimators by using forward orthogonal deviations that subtract the average of all future available observations of a variable.

Therefore, given that some of the traditional factors that explain growth are endogenous and economic growth depend on its lagged values, the more consistent system GMM estimator was employed estimate the parameter corresponding to the variables of interest. This estimator will help in eliminating heteroscedasticity, non-normality of residuals and remove biases caused by reverse causality thus produce efficient and consistent results.

4. Results and Discussion

Panel unit root test is conducted since empirical work based on econometrics analysis assumes data is stationary. If data is non-stationary estimating it will yield spurious results and thus invalid inferences. According to the Fisher type unit root conducted based on Phillips-Perron, all variables were found to be stationary at level except for human capital that was stationary at first difference. It is therefore concluded that co-integration test will not be conducted therefore a system GMM model is estimated.

The results of unit root test are presented on Table 1.3.

Table 1.3.: Panel Unit Root Test

Variables	Fisher(Level)		Fisher(First Difference)		Order of Intergration
	Z-Statistic	P-value	Z-Statistic	P-value	
lnGDPPC	-4.5356	0.0000	-	-	I(0)
lnWR	-4.1176	0.0000	-	-	I(0)
lnCE	-6.2807	0.0000	-	-	I(0)
lnRPI	-6.4145	0.0000	-	-	I(0)
lnHC	2.8976	0.9981	-8.6484	0.0000	I(1)
lnOP	-1.9357	0.0265	-	-	I(0)
lnTOT	-5.2949	0.0000	-	-	I(0)

4.1 GMM Estimation Results

Table 1.4 below presents results estimated by system GMM.

Table 1.4: GMM Estimation Results

lnGDPPC	Coefficient	Robust Standard Error	z-Statistics	P-Value
lnGDPPC L1	0.9841	0.0164	59.98	0.000
lnWR	0.0226	0.0099	2.29	0.022
lnCE	0.0251	0.0028	8.92	0.000
lnRPI	0.0494	0.0217	2.28	0.022
lnHC Level	0.1765	0.0411	4.29	0.000
lnOP Level	0.2553	0.0499	5.11	0.000
lnTOT Level	0.1366	0.0263	5.19	0.000
Arrelano –Bond Autocorrelation Test			AR(1) -3.3755(0.0007) AR(2) 1.0209(0.3073)	
Sargan Test of Over identification			chi2(412) = 384.0515 Prob> chi2 = 0.8348	
Pesaran's test of Cross sectional Dependence			= 11.566 Pr = 0.000	

From Table 1.4 above, it is evident that workers' remittances and compensation of employees have a positive effect on real per capita GDP. The coefficient of workers' remittances with respect to real per capita GDP reveals that a 1% increase in workers' remittances will lead to 0.0226% increase in real GDP per capita. These results are significant at 5% significance level. The coefficient has the expected positive sign therefore it is consistent with the economic theory. Workers' remittances that are usually perceived to be permanent are a source of capital accumulation. They also tend to stimulate consumption levels of the recipients households, this implies positive effects in the welfare of the households. According to OECD publishing (2006) permanent migrants devote 2 to 6% of their expenditure on remittances.

The partial slope of real GDP per capita with respect to compensation of employees shows that a 1% increase in compensation of employees will result to 0.0251% increase in real GDP per capita. The results are significant at 5% significance level. The coefficient is positive thus consistent with the economic theory but relatively high as compared to workers' remittances. Compensation of employees' remittances is remitted by temporary migrants and they contribute more to real GDP per capita relative to workers' remittances. This is because temporary migrants, given their shorter duration of stay, may tend to maximize the benefits of migration by remitting more so as to invest in order to access higher earnings streams when they are back. In addition some studies such as (Gorny and Kindler, 2016; Mahmud, 2016) have pointed out that temporary migrants take remitting as an obligation to their families and as a result they are extreme in remitting than permanent migrants.

These findings are comparable with Fayissa and Nsiah (2008) who found that 10% increase in remittances led to 0.3% increase in average per capita income. In addition Azam and Khan (2011) found that 1 unit increase in workers' remittances will result to 0.40 unit change in gross domestic product.

The coefficient of other control variables including real private investment with respect to real GDP per capita is positive and significant at 5%. This implies that 1% increase in real private investment will result to 0.0491% increase in real GDP per capita. The results are consistent with the economic theory. Investment is necessary to increase productivity and to gear up the economies towards high levels of social and economic development.

The partial slope of real GDP per capita with respect to human capital is positive and significant at 5%.1% increase in human capital lead to 0.1765% increase in real GDP per capita. Human capital enhances continued productivity in skills and knowledge. On the other hand the coefficient of openness and terms of trade are positive and significant at 5%. 1% increase in openness and terms of trade will lead to 0.2553% and 0.1366% increase in real per capita GDP respectively. A positive relationship can be explained by the fact that exports as well as trade in SSA are becoming productive.

The coefficient for the lagged real GDP per capita with respect to real GDP per capita is relatively large, positive and significant at 5%. A 1% increase in the lagged real GDP per capita will lead to 0.98% increase in its contemporaneous level. This explains that real GDP per capita has a way of feeding back on its past values. Panel post diagnostic tests were conducted to ensure that the model was well specified and the economic problems that were found to be present were corrected accordingly to enhance consistent results.

The results of autocorrelation first process AR (1) indicated that the p-value (0.0007) is less than 0.050; this implies the presence of first order autocorrelation. AR (2) process indicated that the p-value (0.3073) is greater than 0.050, therefore the null hypothesis that there is no autocorrelation is accepted using the second order process. According to Mileva (2007), AR (2) process in first difference is the most crucial since it detects autocorrelation in levels unlike the AR (1) in first difference that usually rejects the null hypothesis

The p-value of Sargan test (0.8348) is greater than 0.05, therefore the null hypothesis that the over identifying restrictions are valid is accepted. This means that the instruments were valid thus the Sargan test reflects the goodness of fit. According to Baum (2013) when using GMM estimation the R-squared is no more bounded between 0 and 1, there is no measure of goodness of fit except checking the validity of the instruments. The p-value for cross sectional dependence (0.000) is less than 0.050. This implies rejection of the null hypothesis that there is no cross sectional dependence. However the problem had been initially found to be present and corrected by using spatial error components that corrects for error spatial dependence. This was estimated by Driscoll and Kraay (1998) non parametric covariance matrix estimator which was implemented in STATA.

5. Conclusion

This research paper investigated the effect of remittances on economic growth of 36 SSA countries spanning from 1980-2015.The empirical frame work is based on neoclassical model and disaggregated data on temporary and permanent migrants remittances is analyzed using a system on GMM. To test for stationarity of the variables, Fisher type unit root was conducted. Post estimation diagnostic techniques including autocorrelation, cross-section dependence and over identification test were tested and corrected accordingly to ensure that the model was well specified. The results revealed that both temporary and permanent immigrants' remittances contribute positive to economic growth but the contribution by permanent immigrants is relatively lower. The paper recommends that policymakers to formulate policies that can stimulate additional remittances from permanent immigrants. The governments can create easy access to foreign currency accounts and foreign currency dominated bonds with permission to repatriate. This will stimulate remittances from migrants belonging to professional and high skilled categories. On the other hand remittances obtained from temporary immigrants' to be redirected to productive projects of the economy such as infrastructural development. This may include strengthening of good infrastructure which will help promote trade and enable ease access of services. In addition the governments can offer incentives for returning migrants who start or expand businesses establishments. This will promote investment out of remittances into productive sectors such as export processing zones.

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