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Impact of Remittances on Economic Growth in Nigeria: Further Evidence

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Abstract

This paper investigated the relationship between remittances and economic growth in Nigeria, using an error correction modeling approach for the period 1981 to 2011. Our result revealed that remittances positively impact on the economic growth of Nigeria. We have found that a 1 percent increase in remittances would lead to a 0.19 percent increase in the RGDP in the long run. However, remittances show a significant negative relationship with output in the short run. Also, while foreign aid as an external source of capital can have both short and long term significant influence on economic growth in Nigeria, its counterpart FDI can only exert positive impact on RGDP in the short run. Our result also affirmed the significant positive role of trade in promoting economic growth, suggesting that the more open the economy, the more stimuli it has on RGDP both in short run and long run

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1. Introduction

The importance of remittances in compensating the human capital loss of developing countries through migration and their potentials in boosting economic growth as in recent time gained momentum and became the subject of debate in political and economic literature. Worker remittances constitute an increasingly important mechanism for the transfer of resources from developed to developing countries, and remittances are the second-largest source, behind foreign direct investment and external funding for developing countries (Russell 1992; Ratha, 2003; Buch and Kuckulenz, 2004; karagoz 2009).

Remittances are playing an increasingly large role in the economies of many countries, contributing to economic growth and the livelihoods of less prosperous people. Available statistics indicate that the number of international migrants in the world moved from about 75 million in 1960 to just over 190 million in 2005 (World Bank, 2006). Global remittances have been estimated to have reached $514 billion in 2012, as against $132 billion in 2000.

The stability of remittance flow despite financial crisis and economic downturns make them reliable financial resources for developing countries. Remittances may ameliorate some of the problems that plague developing countries, such as credit market failures, inequality in income and in opportunities, income volatility, and poverty (Karagoz, 2009). Remittances flow to developing countries has more than quadrupled since 2000. According to the World Bank's Migration and Development Brief, officially recorded remittances flow to developing countries grew by 5.3% above that of 2011 to reach an estimated $401 billion in 2012 (World Bank, 2013). Remittances to sub Saharan Africa have been increasing despite the contraction that is associated with global financial crisis. In 2012, the region is estimated to have received about $31 billion in remittances flow.

The effects of remittances on receiving countries have been found at a microeconomic level to boost investment in human capital and educational attainments, raise health levels and investment in public infrastructure in many developing countries (Beine et al, 2010). In development literature, remittance inflow is claimed to promote microentrepreneurship by lifting budget constraints in areas with poor access to credit (Woodruff and Zenteno, 2001). At macroeconomic level, remittances can boost aggregate demand and by extension spur economic growth. It can also be used to offset chronic balance of payments deficits, by reducing the shortage of foreign exchange which can help to ease the often crucial restraint imposed on the economic development of the migrants' home countries by balance of payments deficits (Buch and Kuckulenz, 2004). Aside from the significance of this magnitude in the countries of origin, remittances are generally less volatile, compared to private capital inflows and foreign direct investment (FDI) as a source of funding. As a unilateral transfer, remittances do not create any future liabilities such as debt servicing or profit transfers (Ratha, 2003; Buch and Kuckulenz, 2004; Ojapinwa, 2012).

However, remittances if not appropriately used can create 'Dutch disease' effects through the appreciation of domestic currencies, leading to further de-industrialization in the receiving country (Beine et al, 2010). Bryan R. (2004) suggests potential costs of remittance flows to include brain drain and reduction of labor effort of recipient families and thus negatively affect growth. Karagoz (2009) observed that large outflow of workers, especially skilled workers, can reduce growth in labor-skilled countries and indirectly affect labor supply, by encouraging some remittance-recipient households to choose more leisure than labour.

Over the past three decades, Nigeria has witnessed large movement of its labour, both graduate professionals and non-graduate professionals from one country to the other basically in search of greener pastures. Some of these factors attributing to migration include the high rate of unemployment and low levels of incomes in the country. There has been a remarkable increase in emigration to Europe, North America, the Middle East and South Africa, following economic downturn, introduction of liberalization measures and emergence of repressive military dictatorship (Adedokun, 2003). Nigeria is by far the largest recipient of remittances in the sub Saharan African region, accounting for about 67 percent of the inflows to the region in 2012, followed by Senegal and Kenya (World Bank, 2013).

Against this backdrop, we examine the impact of remittances on economic growth in Nigeria by bringing out the pronounced positive effect of remittances on economic growth as compared to other external sources of capital. To this end, we employed an econometric procedure which heavily relies on Multivariate Cointegration within an error correction model (ECM) to establish both the short- and long- run relationships between inflows of remittances, and other external inflows in the form of foreign aid, foreign direct investment and openness to trade on economic growth for the period 1981 to 2011.

While the conventional sources of economic growth have received considerable attention in the empirical literature, it is rather surprising to find that the macroeconomic impact of remittances on economic growth has not been adequately investigated, even though they represent a major part of international capital flows. Most of the existing paper in Nigeria focused on socio-economic determinants of worker's remittances with few demonstrations of the impact of remittances on economic growth. Though remittances was considered an important source of external finance in developing countries, our study, like similar studies (Akinpelu and Ogunbi, 2013; Akonji and Wakili, 2013) show that only in the long run can remittances positively influence growth while physical investment and openness to trade remain significant means of spurring economic growth in Nigeria both in the short and long run. This assertion aligns with a recent and closely related study by Ukeji and Obiechina's (2013). However, our study succinctly considered the impact of the major sources of external inflows into the country vis-à-vis remittances on economic growth showing the actual drivers of growth in the case of Nigeria. To allow for comparability across studies, we used the overwhelming measures of trade openness as the sum of export and import of goods and services to GDP as against the use of only exports in Ukeji and Obiechina, 2013. By this measure, we are able to capture the country size and integration into international markets in a better way.

The next section reviews past literature on the subject matter including recent studies from Nigeria, followed by the model specification and methodology employed in this paper. Estimation procedures and analyses of results are presented in section four while section five concludes the paper.

2. Literature Review

Much of the current literature on the workers' remittances has followed two broad strands. While some studies have concentrated on the determining factors of remittance inflows – ((Aydas et al. (2005), Gupta (2005), Alleyne (2006), Hagen and Siegel (2007)) others have shown curiosity in macroeconomic impact of remittances on growth ((Chami et al. (2003), Ang (2006), Siddique, 2010)). With regards to methodology, according to Adolfo et al (2009), there are two types of studies of the growth effect of remittances. First, growth effect of remittances is considered in the traditional cross-country growth literature using either cross-section or panel data. The

second type of literature investigates specific channels through which remittance inflows may affect growth in a country.

However, the net macroeconomic impact of remittances on receiving countries' economies is ambiguous. The literature investigating the economic impact of remittances on a host country's long-term economic growth still presents a considerable diversity of interpretations about the effects of workers' remittances, even when the focus of the economic analysis shifts from the short to the long-run, thus generating inconclusive results. While some studies emphasized the positive impact of remittances on economic growth in the country of origin of the expatriate workers ((Chami et al. (2003), Fayissa and Nsiah (2010), Mim and Ali (2012), others strand of the literature reports an insignificant or even negative impact of remittances on the home country's long-term economic growth ((Jongwanich (2007), Sufian (2009), Siddique (2010), Ravshanbek (2011), Al-Khathlan (2012)).

Most recent studies in Nigeria on the impact of remittances on economic growth reveal significant positive results. Iheke (2012) study provides empirical evidence that international remittance inflows are one of the major macroeconomic factors that significantly promote economic growth in a developing economy like Nigeria. Akonji and Wakili (2013) used the seemingly unrelated regression (SUR) analysis and Error Correction Model to study the impact of remittances on economic growth. The result also established a significant relationship between net remittance and economic growth. Akinpelu and Ogunbi (2013) in their study investigate the impacts of remittance inflows on the economic growth of Nigeria using cointegration and causality tests. The result of the study revealed that there is long run equilibrium relationship among the variables that were employed. Furthermore, a uni-directional causality from Gross Domestic Product to Remittance Inflows was observed. Ukeji and Obiechina (2013) investigated the impact of the workers' remittances on economic growth in Nigeria within an error correction methodology (ECM) the period 1970 to 2010. The long-run static model and the short run dynamic model indicate that workers' remittances impact positively on economic growth.

3. Data, Model Specification and Methodology

The empirical analysis focuses on the impact of remittance flows on economic growth of Nigeria. The time frame is the 30-years period of 1981-2011. The variables used in the regression models are extracted from two sources: the World Development Indicators (WDI) databank of the World Bank and the Central Bank of Nigeria (CBN) Statistical Bulletin.

To determine the responsiveness of output growth rate to remittances, gross fixed capital formation as investment in physical and human capital, and external source of capital represented by foreign aid, foreign direct investment and openness of the economy as measured by the ratio of the sum of imports and exports to the GDP were used. Our basic empirical model is based on research studies of Chami et al. (2003) within an extended version of the neoclassical economic growth model. The model is modified to incorporate our variables of interest. Rather than considering growth, we look at the level of remittances to real gross domestic product (RGDP). According to Mansoor (2007), this is reasonable because a country would need to increase remittances year after year to promote growth, which would end up with a 100% share of remittances on GDP in the limit. The general form of the regression model is given in a log-linear modeling specification as below

$$\mathrm{LR}GDP = \beta_0 + LREM + \beta_3 LGFCF + \beta_4 LAID + \beta_5 LFDI + \beta_6 LTROP + \mu_i \qquad 1$$

LRGDP is the natural log of real gross domestic product RGDP, LREM is the natural log of remittances, and LGFCF is the natural log of gross fixed capital formation used as a proxy for investment in physical capital. Foreign aid (LAID) denotes the natural log of sum of official development assistance, (LFDI) indicates the natural log of foreign direct investment and (LTROP) denotes openness to trade measured by the sum of exports and imports as a percentage of GDP.

Workers' remittances can affect economic growth positively or negatively as suggested by theory and existing literature. Therefore, it is difficult to predict the exact sign of the coefficient of LREM in advance. The literature purports a positive relationship between gross fixed capital formation (GFCF) and the economic growth.

The last three variables in our model are used to capture the impact of external sources of capital on economic growth. There are two opposing views about the impact of foreign aid (LAID) on economic growth. Proponents of aid argue that overseas capital flows are necessary for the economic growth of developing countries (Islam, 1992; Boone 1994; Fayissa and El-Kaissy, 1999). Conversely, opponents of foreign aid argue that it has a negative effect on domestic savings and economic growth in less developed countries (Heller, 1975 and Boone, 1994). At the same time, there exist several research papers about the impact of foreign aid on the economic growth which are inconclusive (Teboul and Moustier 2001), meaning that there may not be a clear cut relationship between them and so we cannot a priori predict the impact official development assistance on economic growth. LFDI shows the impact of foreign direct investment on the growth rate of the country. The sign of this parameter is expected to be positive as foreign direct investment is widely viewed as transfer of (new) technology and (new) knowledge which enables the recipient country to exploit the experience of others for their development (see Chami et al ,2005). LTROP is used to capture the impact of trade, or openness of the economy on economic development of the country, measured by the sum of imports and exports as the ratio of GDP. Traditional views of openness of the country to trade describe positive effect of the openness on the economic growth, allowing countries to allocate resources efficiently by promoting innovation and entrepreneurial activities resulting from competition and access to larger markets (Berg and Kruger , 2003).

To estimate the parameters corresponding to variables of interest from the data under consideration, we use the cointegration approach, which is helpful for characterizing the long-run relationships between economic growth, remittances and other external sources of capital. We examined two unresolved questions in current literature: first, whether remittances positively affect GDP growth rate in the short run and long run, and second, whether remittances have a larger short/long-run effect on GDP growth than other sources of external capital.

According to the Johansen (1992) cointegration methodology, variables of interest can be understood as reflecting long-run cointegrating relations as presented below:

$$\Delta Y_t = \sum_{i=1}^{p} \Gamma_i \, \Delta Y_{t-1} + DZ_t + \Pi Y_{t-1} + \varepsilon_i \qquad 2$$

where Y_t is a column vector of n endogenous variables, Z_t is a column vector of m exogenous variables, Δ is the difference operator, and ε_i is a column vector of whitenoise processes with mean zero and covariance given by the n x n matrix, Σ corresponding to covariance of residuals within and across equations. The matrix Γ_i contains parameters for a p-order lag process, while the Π matrix contains information about the long run relationships between the variables. When the Π matrix has a reduced rank ($r \leq (n-1)$), it can be decomposed into $\alpha\beta'$, where the α matrix includes the speed of adjustment to equilibrium coefficients and $\beta'$is the long-run matrix of coefficients.

The existence of cointegrating vector(s) indicates long run relationship(s) among these variables, while short-term deviations from the long run time path of these series will be captured by the error correction model. To determine orders of integration of the variables in the model, we conducted traditional Augmented Dickey-Fuller and Phillips-Perron unit-root tests.

Finally, In order to estimate the short-run relationship among variables in equation (1), the corresponding error correction equation is estimated according to Engle and Granger (1987) as follows:

$$\Delta RGDP_t = \alpha_{1i} + \sum_{i=1}^{m} \alpha_{2i} ln\Delta REM_{t-i} + \sum_{i=1}^{m} \alpha_{3i} ln\Delta GFCF_{t-i} + \sum_{i=1}^{m} \alpha_{4i} ln\Delta AID_{t-i} + \sum_{i=1}^{m} \alpha_{5i} ln\Delta FDI_{t-i} + \sum_{i=1}^{m} \alpha_{6i} ln\Delta TROP_{t-i} + \lambda ecm_{t-1} + \lambda\mu_t \quad 3$$

Where: Δ is the difference operator, m is the lag length of the variables, ecm_{t-1} denotes the residual from the cointegration equation (the error correction term), and μ_t is the uncorrelated white noise residuals.

4. Estimation and Discussion of Empirical Results

4.1 Stationarity and Cointegration Tests

The analysis of empirical results starts with the examination of the integration order of each of the time series included in the model. The results of the Augmented Dickey-Fuller (ADF) and the Philips-Perron (PP) tests based on inclusion of an intercept as well as a linear time trend are shown in Table 1 below.

Table 1: Test of Stationarity using Augmented Dickey–Fuller (ADF) Phillips–Perron (PP)

Variables	ADF Values	PP Values	Order of Integration
LRGDP	-3.6711 (-3.574244)**	-3.5079 (-3.2217)***	I(1)
LREM	-5.7927 (-3.5742)*	-5.7927 (-4.3098)*	I(1)
LGFCF	-4.0892 (-3.5875)**	-3.9242 (-3.5684)**	I(0)
LAID	-4.8794 (-4.3240)*	-4.7716 (-4.3098)*	I(1)
LFDI	-3.4758 (-4.1985)***	- 3.5721 (-3.5684)***	I(0)
LTROP	-3.0155 (-4.4163)*	-8.1472 (-4.3098)*	I(1)

*Note: * shows significant at 1%, ** shows at 5%, and *** shows at 10%: Extracted from E-Views 7 Output*

It is apparent from Table 1 that all the variables were stationary at first difference, i.e. I(1) series, except LGFCF and LFDI that achieved I(0) stationarity in both ADF and PP tests. According to Haris (1995), variables of different order can be cointegrated, especially if theory aprior suggests that such variables should be included. To establish the existence (or otherwise) of a long-run relationship among the variables (series), a cointegration test was performed using Johansen's multivariate approach (Johansen and Juselius, 1990; 1992). In order to save the degrees of freedom, the highest lag length in the testing–down procedure of the lag-length tests was taken to be one, according to AIC and SC information criteria.

Table 2: Cointegration Test Result

Hypothesized No. of CE(s)	Eigen value	Trace Statistic	5 Percent critical Value	Max-Eigen Statistic	5 Percent critical Value
None *	0.7191	95.51	83.9371	36.8213	36.6301
At most 1	0.5619	58.69	60.06141	23.9362	30.4396
At most 2	0.4181	34.75	40.1749	15.7012	24.1592
At most 3	0.3492	19.05	24.2759	12.4564	17.7973
At most 4	0.1508	6.5912	12.3209	4.74183	11.225
At most 5	0.0618	1.8493	4.1299	1.84933	4.1299

Note: denote the rejection of the null hypothesis at 5% significance level. Extracted from E-Views 7 Output*

To test the hypothesis regarding the number of cointegrating vectors, the Johansen cointegration procedure performs two tests-Trace (λ_{trace}) and Max-eigenvalue (λ_{max}). Both Trace test and Max-Eigen value statistics indicate one cointegrating equation (CE) at 5% level of significance. Based on this, we can reject the null hypothesis (H_0) which says that there are no cointegrating vectors and conclude that the six variables under consideration are bound together by long-run equilibrium relationship under the assumption of no deterministic trend (Table 2).

4.2 Long-Run Estimate

As noted in table 2, since most of the variables are cointegrated, we normalize the coefficient on LRGDP in the cointegrating relationship to one, the long-run co-integrating equation relationship can be represented as follows:

$$RGDP = \underset{\substack{(65.124)\\[10.175]}}{662.678} + \underset{\substack{(0.079)\\[2.367]}}{0.187\text{REM}} + \underset{\substack{(0.202)\\[1.010]}}{0.204\text{GFCF}} + \underset{\substack{(0.084)\\[4.643]}}{0.039\text{AID}} - \underset{\substack{(0.172)\\[2.605]}}{0.448\text{FDI}} + \underset{\substack{(0.270)\\[7.148]}}{1.930\text{TROP}}$$

The term in parenthesis (.) and [.] represent standard error and t-statistics respectively. The results from our model indicate that remittances variable has a positive and significant effect on the RGDP. Accordingly, a 1 percent increase in remittances would lead to a 0.19 percent growth in the RGDP in the long run. This revelation laid credence to the "view upheld by contemporary development economists that international remittance inflows are one of the major macroeconomic factors that significantly promote long-run economic growth in small-open developing economies" (Ahortor and Adenusi, 2009). We also find that investment in physical capital as measured by the gross fixed capital formation (GFCF) has a positive but insignificant impact on the RGDP i.e., we observe that a 1 percent increase in investment in the physical

capital will lead to about 0.20 percent increase in the RGDP. Our results also indicate that foreign aid (AID) has a significant positive effect on economic growth, confirming the position of the proponents of aid that overseas capital flows are necessary for the economic growth of developing countries (Islam, 1992; Boone 1995; Fayissa and El- Kaissy, 1999). We find a negative and significant relationship between the foreign direct investment (FDI) and the economic growth. The sign of this parameter is however expected to be positive as foreign direct investment is widely viewed as transfer of (new) technology and (new) knowledge which enables the recipient country to exploit the experience of others for their development (see Chami et al ,2005). A measure of the openness of the economy (TROP) has the expected positive sign and significant impact on economic growth.

4.3 Short Run Estimate

In order to restrict the long-run behavior of the endogenous variables to converge to their cointegrating relationships while allowing for short-run adjustment dynamics, we estimate the Error Correction Model (ECM). An Error Correction Model is designed for use with non-stationary series that are known to be cointegrated. Following the residual stationarity tests, we over parameterized the first differenced form of the variables in equation (3) and used Schwarz Information Criteria and Akaike Information Criteria (AIC) to guide parsimonious reduction of the model. This helps to identify the main dynamic pattern in the model and to ensure that the dynamics of the model have not been constrained by inappropriate lag length specification. The lag length on all variables in each model is set at two to ensure sufficient degrees of freedom (see appendix).

With respect to the parsimonious regression estimate capturing the short run analysis, it was observed from table 3 below that there was a significant improvement in the parsimonious models over the over-parameterized models (see appendix).

Table 3. Parsimonious short run regression estimate

Variables	Coefficient	Std. Error	T-Statistics	Probability
D(LRGDP(-1))	0.6419	0.2148	2.9891*	0.0073
D(LREM)	-0.0263	0.0119	-2.2051*	0.0393
D(LGFCF)	0.0733	0.0426	1.7224**	0.1004
D(LGFCF(-1))	-0.0541	0.0518	-1.0445	0.3087
D(LAID)	0.0142	0.0172	0.8271	0.4179
D(LFDI)	0.0170	0.0101	1.6751**	0.1095
D(LTROP(-1))	0.0654	0.0353	1.8508**	0.0790
C	0.0189	0.0124	1.5353***	0.1404
ECM(-1)	-0.4306	0.2068	-2.0836	0.0502
R-squared	0.5343	Mean dependent var		0.0493
Adjusted R-squared	0.3480	S.D. dependent var		0.0502
F-statistic	2.8685	Akaike info criterion		-3.3247
Prob (F-statistic)	0.0267	Schwarz criterion		-2.9003
Durbin-Watson statistic	1.9119	Hannan-Quinn criter.		-3.1918

Source: *Authors' computation from E-views 7: One, two and three asterisk denotes rejection of the null hypothesis at 1%, 5% and 10% respectively*

From the table, it was observed that the model was of good fit and appropriate for the analysis. The result obtained from the dynamic model indicates that the overall coefficient of determination (R^2) shows that 53.43 percent variations of RGDP is explained by the variables in the equation The adjusted R-squared shows that having removed the influence of the explanatory variables, the dependent variable is still explained by 34.8 percent of the model. The overall fit of the model is further confirmed by the F-Statistic. The Durbin Watson Statistic was close to 2.0, an indication that there was no serial correlation in the model; hence the assumption of linearity is not violated.

The robustness of the model estimates were further ascertained by carrying out various diagnostic tests on the residual of the ECM model. Diagnostic checks are crucial in this analysis, because if there is a problem in the residuals from the estimation of a model, it is an indication that the model is not efficient, such that parameter estimates from such model may be biased. Results from various tests such as the histogram and normality test, the Breusch-Pagan-Godfrey serial correlation LM test, the Breusch-Pagan-Godfrey heteroskedasticity and autoregressive conditional heteroskedasticity (ARCH) tests in this study are presented in table 4

Table 4: Residual Diagnostic Tests

Type of Tests	F-Statistics / coefficient	P-Value
Normality	0.2117	0.8996
Serial Correlation LM-Test	1.0239	0.3792
ARCH	2.6439	0.0917
Breusch-Pagan-Godfrey	0.4977	0.8435

Our results show that the residual from the error correction model is normally distributed because the P-value of the series was insignificant. The null hypothesis of no serial correlation as confirmed by Serial Correlation LM Test cannot be rejected since the test statistics are also not significant. The tests also confirm the absence of heteroskedasticity using both the Breusch-Pagan-Godfrey heteroskedasticity and ARCH tests, hence indicating that the model is well behaved (see appendix).

The negative and significant coefficient of the error correction term reveals which of the variables adjust to correct imbalance in the RGDP whilst the variable coefficients show the short-run effects of the changes in the explanatory variables on the dependent variable. The results confirm that output in Nigeria has an automatic mechanism and deviations from equilibrium are corrected in the short run. The speed of adjustment of about 0.43 indicates that when RGDP is above or below its equilibrium level, it adjusts by 43% within the first year showing that the speed of adjustment toward the equilibrium is fast in case of any shock to RGDP. In addition to the above, the coefficient of individual variables is examined to determine the nature of the relationship between RGDP and Remittances as well as other external source of capital variables in the short run. With respect to the coefficient of individual variables of the model (see table 6), it was observed that the first lagged value of real gross domestic product, had significant influence on current real gross domestic product. The co-efficient of current remittances was observed to be negative and significant while that of the gross fixed capital formation was positive and significant as was observed in the long run equation. However, the first lagged value of gross fixed capital formation was observed to be negative and also insignificant. The current value of foreign aid had insignificant influence on current real GDP

while foreign direct investment is positive and significant to RGDP in the short run at five percent significant level.

The import from the above findings is that in the short run, our variable of interest – remittances, impact differently on economic growth. In the short run, as remittances increases, the real GDP reduces and conversely while there is evidence of long run positive relationship between economic growth and Remittances. This implies that remittances build up over time in contributing to the growth process of Nigeria. Foreign direct investment exerts a significant positive significant effect on output in the short run as against the long run impact. The impact on foreign aid and openness to trade were positive and significant in the long run. The long run findings of the impact of remittances on economic growth in this study is also in line with most of the studies in Nigeria such as : Akonji and Wakili (2013); Ukeje and Obiechina (2013); Akinpelu et al (2013); and Iheke (2012).

5. Conclusion and Policy Recommendation

This paper examined the impact of remittances relative to the other external sources of capital such as foreign aid, foreign direct investment and openness to trade on the economic growth in Nigeria, using cointegration approach within an error correction model (ECM) framework for the period 1981 to 2011. The long run regression estimate showed that remittances positively impact the economic growth of Nigeria. We have found that a 1 percent increase in remittances would lead to a 0.19 percent increase in the RGDP in the long run. However, remittances show a significant negative relationship with output in the short run. This is in contrast with the findings of Adolfo et al. (2009) that remittance, when properly measured, and when the growth equations are well specified and instrumented, cannot have a robust and significant positive impact on long-term growth, and often would produce a negative relationship between remittances and growth.

In addition, the results showed that the conventional sources of growth such as physical investment can enhance productivity and spur economic growth both in the short and long run. Our result also revealed that while foreign aid as an external source of capital can have both short and long term significant influence on economic growth in Nigeria, its counterpart FDI can only exert positive impact on RGDP in the short run. Our result also affirmed the significant positive role of trade in promoting economic growth, suggesting that the more open the economy, the more stimuli it has on economic growth both in short run and long run.

The impact of remittances in our studies on economic growth cannot be affirmed to be greater than the impact of other sources of external finance like foreign aid, foreign direct investment and openness to trade as adjudged in the literature. Policies which better channel remittance, aid flows and foreign direct investment toward investment, productive purposes would allow these transfers to serve more competently as a growth strategy.

A policy implication which may be drawn from this study is that Nigeria can improve its economic growth performance, not only by investing on the traditional sources of growth such as foreign direct investment but by promoting trade openness as the study indicated trade as one of the important variable that can promote growth. Also, economic growth can be sustained by strategically harnessing the contribution of remittances by ensuring their efficient and reliable transfers. As a measure of caution, remittances should however not be seen neither as a panacea nor a substitute for a sustained and domestically engineered development endeavor such as the

development of infrastructure investments and openness to trade for curing the problems of the country.

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