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FOREIGN CAPITAL MOBILITY AND PER CAPITA GDP GROWTH IN NIGERIA

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ABSTRACT: *The movement of capital across national boundaries has remained an interesting area in development narratives considering its role in the development process. This paper provides deeper insights into the empirical relationship between capital inflows and per capita GDP growth in Nigeria between 1980 and 2018. The heterogeneous nature of foreign capital was taken into consideration following its decomposition into its key components of debt, aid and migrants' remittances. Time series for each of the variables were collected from secondary sources including NBS, World Bank World WDI, World Bank, International Debt Statistics and IMF International Financial Statistics. Combinations of ADF unit root and bounds cointegration tests in addition ARDL and Granger causality tests form basis for the analysis. It was found from the unit root test results that the variables are mixed integrated. Again, the bounds test show evidence of long run relationship amongst the variables. The ARDL estimates reveal that migrants' remittances have the significant positive effect on per capita GDP in the long run. With 1 percent increase in remittances, per capita GDP will, on the average, increase by about 2.2595 percent. On the other hand, multilateral debt negatively affects per capita GDP in both short and long run. It was found from the results that bidirectional causality exists between migrants' remittances and per capita GDP while unidirectional causality flows from technical cooperation grants to GDP per capita. Given the findings, it is recommended that policy makers should initiate policies and provide incentives helpful for mobilizing international resources and allow for a paradigm shift that will ensure the allocation of the resources to key sectors with high potentials for growth of per capita GDP.*

KEYWORDS: foreign capital, aid, debt, remittances, per capita GDP,development narrative

INRODUCTION

Traditionally, the neoclassical hypothesis predicts that capital flows from capital-abundant developed economies to capital-scarce developing economies following the high marginal productivity of capital in the latter. According to the International Monetary Fund (IMF, 2016), capital flows constitute an integral part of the "International Monetary System" and as such offer both direct and indirect benefits. The direct benefits include financing of investments, smoothing of consumption, risk diversification, new technology transfer and management practices often associated with Foreign Direct Investment (FDI). In addition to the direct benefits, IMF (2016) identifies improvement in corporate governance, deepening of the financial system, efficient resource allocation and trade promotion as the key indirect benefits of capital flows.

Mowlaei (2018) argues that inflows of international resources inflows are key drivers of economic development and are important sources of technology transfer and foreign exchange earnings in

the recipient economies. Additionally, Chigbu, Uba & Chigbu (2015) are of the view that the resource gap in the capital-scarce economies can be filled by inflows of foreign capital. This follows the Harrod-Domar assumption that domestic investment is inadequate to finance the intended and desired investment. However, the "impossible trinity" paradigm of small open economy suggests that, in the absence of direct capital controls, countries facing large capital inflows need to choose between nominal appreciation and inflation (Obstfeld, Shambaugh, & Taylor, 2005). According to OECD (2011), large capital inflows seem to undermine the absorptive capacity of the recipient economies in the short run by making them vulnerable to external shocks, aggravates the risks of economic overheating and abrupt reversals in capital inflows, and facilitating the emergence of credit and asset price boom-and bust cycles. Based on differential expected rate of return on capital among countries, the Bank for International Settlement (2009) reports that capital should flow from economies with low return to capital to economies with high marginal productivity of capital to stimulate growth and reduce cost in the form of current account deficits. Gourinchas & Obsfield (2012) and Calvo & Reinharf (2002) argue that huge inflows of international resource increase the likelihood of "sudden stop" which has the potential of constraining the performance of the economy wide aggregate.

Notably, productive resources, especially labour and capital tend to shift from manufacturing to non-manufacturing sectors following episodes of huge capital inflows (Beningo, Converse & Fornaro, 2015). Similarly, Beningno & Fornaro (2011) posit that capital inflows cause economic resources to shift from tradable to non-tradable sectors. This seems to undermine the expected positive spill-over effects of international capital mobility. Although Nigeria has been describe as a notable beneficiary of foreign capital inflows, the pace of socioeconomic development in the country has remained a source of concern to policy makers, development partners and other key players in the economy. This has sparked renewed interest on the controversy surrounding the perceived benefits of foreign capital in the recipient economies. Thus, this paper examines the link between capital inflows and economic development in Nigeria.

REVIEW OF RELATED LITERATURE

Theoretical Literature

The neoclassical theory of capital flows assume that capital flows from countries that have relatively high capital-to-labor ratios to countries that have relatively low ratios. It is believed that that free flow of external capital should help in smoothing a country's consumption or production paths and by so doing trigger for economic development. According to Kinda (2010), the neoclassical hypothesis is based on the assumption that that capital should flow from capital-dominant economies to capital-deficient economies which provides basis for equalizing the marginal returns of capital. The two-gap model is based on the assumption that the inflow of international capital is helpful in filling the savings gap and foreign exchange gap. The savings gap is the excess of domestic investment opportunities over domestic savings, causing investments to be limited by the available foreign exchange. The foreign exchange gap exists if a country supplies more foreign exchange to the rest of the world through imports than it receives foreign exchange from the rest of the world through exports. Essentially, it focuses on the export-import gap.

The two-Gap model of development is rooted in the Post-Keynesian growth models for closed economies as designed by Harrod (1939) and Domar (1946). It therefore, assumes that developing economies are faced with the problem of foreign exchange gap in addition to their savings-investment gap as contained in the Harrod-Domar model. For this reason, inflow of foreign capital is expected to provide opportunities for closing these gaps through the importation of capital goods. It is argued that foreign exchange gap is prevalent in developing economies and foreign aid is adjudged to offer the necessary opportunities for closing this gap and make resources available for economic development.

Empirical Literature

Numerous studies have focused attention on the empirical validity of the theoretical predictions of international resource mobility and its link to development indices in capital-scarce economies. The findings from these studies varied overtime as reviewed below:

Hassan and Shakur (2017) assessed the impact of inward remittances flows on per capita GDP growth in Bangladesh over the period 1976–2012. The study employed combined techniques of Ordinary Least Squares; two stage Least Squares and Generalized Method of Moments (GMM) as methods of data analysis. It was discovered that the growth effect of remittances is negative at first but becomes positive at a later stage. The result also revealed that the remittances were put into unproductive use in the beginning when they were received by migrant families. However, better social and economic investments allowed for more productive use of the remittances receipts at later periods. The study therefore, concluded that the finding does not show that the effect of remittances on per capita GDP growth in Bangladesh is predicated on the level of financial development.

Focusing on the Senegalese economy, Adams, Klobodu & Lamptey (2017) analyzed the role played by capital flows in the process of growth in the long term. The timeframe for the study ranged from 1970 to 2014. The ARDL forms basis for estimating the long run and short relationships between the underlying economic variables. It was found from the results that remittances drive the process of economic growth in Senegal in the long run. On the contrary, external debt has a negative impact on economic growth. The result further revealed that no long run association exists between inflows aid and growth. The result of the Quandt–Andrews breakpoint test indicates that year 1991 is the most likely breakpoint location for the remittances–growth model. Based on the outcome of the econometrics analysis, the study recommended that both government and other policy makers should focus attention on creating enabling economic environment to facilitate adequate inflows of remittances in order foster development.

Waweru & Ochieng (2017) explored the immediate and lagged effects of the various forms of capital flows such as FDI portfolio flows and other investments capital on economic growth in Kenya between 1984 and 2014. The study relied on autoregressive distributed model (ARDL) for estimating the dynamic model. it was observed from the results that FDI and portfolio investments flows have a negative impact on the GDP growth rate, but their impact is not statistically significant at the conventional 5 percent level of significance. However, other investments flows, representing corporate, financial institutions, general government borrowings and remittances

from the diaspora, have a significant positive impact on GDP growth rate. The study, therefore, concludes a reversal in capital flows in form of "other investments capital flows" into Kenya triggers significant slowdown in economic growth in the country. The recommendation provided by the study is that policy makers should strive to make the Kenyan economic an attractive destination for international capital in order to take advantage of the associated benefits.

Adekunle & Sulaimon (2018) offered new insights in the capital-growth nexus by re-examining the relationship between foreign capital flows and economic growth in Nigeria during 1986-2015. Data for each of the variables were collected from existing sources and analyzed using some econometrics tools. The stationary tests show evidence of mixed results for the variables. The result shows that there is no evidence of long-run relationship between economic growth and its determinants in Nigeria. Furthermore, it was found that net FDI inflows exerted positive short-run influence on growth, while net portfolio flows and net foreign remittance had significant negative short-run effects on growth. Additionally, the result revealed that lower levels of net foreign aids and net external debt stimulate growth, while excessive levels of these flows dampen growth. On the basis of the findings, the study recommended that policy makers in Nigeria should evolve measures of mobilizing more foreign capital with greater potential of stimulating domestic investment and economic growth. The study also recommended for the development of financial sector with in viewing to making the Nigerian economic setting an attractive destination for foreign capital and its efficient utilization.

Utilizing the ARDL econometric methodology, Klobodu & Adams (2016) estimated the differential effects of capital flows on economic growth in Ghana over the period 1970–2014. In addition to the ARDL, the study applied the breakpoint unit root tests to determine extent of structural change and breaks in time series. The study also imputed the break dates are into the ADRL model as dummy variables to allow for the computation of a more robust cointegrating vector. The result shows that FDI, international aid and external borrowing indicate that in both the short and long run models exert significant egative effects on economic growth. However, remittances exhibit positive insignificant elasticity in all the regressions. Further, the empirical results show that while the impact of trade, gross capital formation and population growth on growth are mixed while inflation rate is negatively related to growth. Thus, the study concludes that the findings align with the belief that the impact of capital flows in Africa has been exaggerated.

Egungwu (2018) relied on ex post facto research design in exploring the interrelationship between external debt stock, debt servicing and human capital development in Nigeria. The period of study spanned from 1986 to 2015. The study employed OLS regression to estimate the empirical model. The study found that both external debt stock and external debt servicing had significant negative effect on human capital development. Specifically, the result showed that external debt stock borrowed from Paris club and multilateral creditors had insignificant negative effect; those borrowed from London club had insignificant positive effect while those borrowed from bilateral creditors had significant positive effect. On debt servicing, all the creditors showed insignificant positive effect except London club that had significant positive effect. The study concluded that nations could finance their budget deficits with external funds but should ensure that such funds

are applied on priority projects that have the capacity to deepen the economy and improve the well fair of her citizens. The study therefore, suggested that both the state and federal government should create investment window that will significantly reduce the level of unemployment in the country.

Okafor, Ugwuegbe & Ezeaku (2016) looked into the empirical relationship between foreign capital inflows and economic growth in Nigeria during1981-2014. Specifically, foreign capital inflows were measured by FDI, portfolio investment and international aid while GDP served as the proxy for economic growth. The study employed annual data generated from CBN statistical bulletin, and Toda Yamamoto test of causality was used to determine the relationship between variables of interest. The result revealed that there is bi-directional causality running from GDP to FDI as well as from FDI to GDP. The result also shows that a unidirectional causality runs from FPI to GDP. Furthermore, the result showed that the joint causation between all the components of foreign capital inflow indicates that increase in foreign capital inflow causes GDP to increase positively. The study therefore, recommended for the design and implementation of policies to enhance the inflows of foreign capital with a view to accelerating the speed of growth in the economy. Karagol (2012) extended the Cunningham (1992) model by applying multivariate cointegration techniques to develop a vector error correction model (VECM) to empirical investigate the long-run effects of external debt service on GNP level in Turkey. The study also took into consideration the information on Johansen (1988) and Johansen & Juselius (1990) cointegration specifying the appropriate model. The result of the econometrics analysis showed that external debt service has a negative short -run impact on economic growth. The results also show that there is a unidirectional causal relationship between debt service and GNP level. Hence, the study recommended for effective management in order to minimize the negative implications of servicing the borrowed fund.

Asghar, Rehman & Nadeem (2016) investigated the link foreign aid and economic growth taking into account the process of fiscal decentralization in Pakistan. The study utilized time series data for the period 1980-2014 and adopts three stage least squares (3SLS) econometric technique for estimating the model. The results of the study indicate that foreign aid and fiscal decentralization have positive impact on economic growth of Pakistan. Furthermore, economic growth and fiscal decentralization exert positive impact on foreign aid. The results of the study show that economic growth has negative relation with fiscal decentralization and foreign aid has positive effect on fiscal decentralization. The study also reveals that bidirectional causality exists between economic growth and foreign aid, economic growth and fiscal decentralization and between foreign aid and fiscal decentralization. The study therefore, recommended proper management of the aid process in order to stimulate rapid growth of the economy.

Rehman & Ahmad (2016) adopted a comprehensive measure of capital inflows to investigate the link between capital mobility and economic growth in 21 developing countries for the period of 1990 to 2013. The study employed modern econometric techniques such as unit root test and pooled mean group (PMG) estimation for short-run and long-run analysis of the time series data. The results indicate that inflows of capital including net external debt and net official development assistance have significantly negative impact on economic growth of developing countries, while

net foreign direct investment and net remittances have positive and significant impact on economic growth in the long-run. The negative sign of error correction term shows the convergence of the variables towards equilibrium in the long-run. Owing to the findings, the study emphasized on the need for effective and efficient allocation of foreign resources so as to optimize the associated benefits.

Mowlaei (2018) investigated how different forms of foreign capital inflows (FCIs) including FDI, personal remittances and ODA affect economic growth in 26 top African countries between 1992 and 2016. The study uses Pooled Mean Group (PMG) econometric technique to estimate the heterogeneous panels over the study period. It was observed from the result that all three forms of FCIs have positive and significant effects on economic growth in the long and short run. However, the personal remittances had the most impact on economic growth in both long and short run. The study therefore, recommends that policy makers should design and implement appropriate fiscal, monetary and trade policies in order to create and improve an enabling environment to attract FCIs as a supplementary source of domestic investment.

Adedokun & Folawewo (2017) applied the generalized methods of moments (GMM) technique in investigating the impact of aid selectivity practice on aid-growth relationship in Sub-Saharan Africa (SSA) and several groups of countries within the SSA between 1980 and 2012. The outcome of the empirical data analysis shows strong evidence that aid selectivity significantly improved aid effectiveness during the study period. The study further explained that the policy implication of this finding is that donors should embrace aid selectivity in aid administration to improve effectiveness as it will not only make aid available to countries with good governance, but also serve as a tool to improve governance. Owing to the finding, the study recommended that efforts should be made to increase the volume of aid flowing to with a view to promoting the aid effectiveness in SSA countries.

METHODOLOGY

Research Design

Basically, an ex-post facto research design is employed in this paper. Basler (2012) observes that ex post facto research design relies on observation of relationships among phenomena as they occur naturally without intervention from the researcher. The choice of ex post facto design in this study was informed based on the fact that the numerical data required for the actual empirical analysis were collected from secondary sources.

Model Specification

Drawing support from the neoclassical theory of capital flows, this paper models relationship between capital flows and per capital income growth using ARDL framework. The model set up for the ARDL framework allows for the inclusion of lag of the dependent variable as well as of other predictor variables as explanatory variables. The sub-components of foreign capital inflows such as migrants' remittances (MGR), multilateral debt (MLD), technical cooperation grants

(TCG) and bilateral debts (BLD) serve as the explanatory variables while per capita GDP growth form basis for the dependent variable. The functional form of the model is as follows:

PCG = f (MGR, MTD, TCG, BLD) (1)

Based on the notations of each of the series, the ARDL model for this study is formally specified as:

$$PCG_t = C1 + \sum_{i=1}^{p} \alpha_1 \Delta PCG_{t-1} + \sum_{i=1}^{p} \alpha_2 \Delta MGR_{t-1} + \sum_{i=1}^{p} \alpha_3 \Delta MLD_{t-1} + \sum_{i=1}^{p} \alpha_4 \Delta TCG_{t-1} +$$

$$\sum_{i=1}^{p} \alpha_5 \Delta BLD_{t-1} + \theta_1 PCG_{t-1} + \theta_2 MGR_{t-1} + \theta_3 MLD_{t-1} + \theta_4 TCG_{t-1} + \theta_5 BLD_{t-1} + e_{1t} \quad (19)$$

c_1 = vector of intercept

$\alpha_1 - \alpha_5$ = short-run coefficient of the predictor variables

θ_1-θ_5 = the long-run multipliers.

e_{1t} = stochastic term

Δ = first difference notation

P = optimal lag order to be selected automatically using SIC.

Method of Data Analysis

This paper employed ARDL in analysing the time series. The choice of the ARDL in this study is justified by the relatively small size and its capacity to produces robust estimates while integrating the short run and long run behaviours in a single equation set up. The selection of the optimal lag length in the ARDL model always shall precede the actual estimation and inference. The selection of the optimal lag length shall be using Schwarz Information Criterion (SIC) as it tends to perform better than the other lag selection criteria in the most of the studies involving time series data. In addition to estimating the ADRL, the direction of the causality among the variables shall be examined using Granger causality test. Siggiridou & Kugiumtzis (2016) argue that the Granger causality is important for investigating the interdependence structure of underlying systems of multivariate time series.

RESULTS AND DISCUSSION

Descriptive Statistics

The descriptive statistics is summarized in table 1.

Table 1: Summary of the descriptive statistics for the variables

	PCG	MGR	MTD	TCG	BLD
Mean	0.564	2.44	15.60	0.182	1.09
Median	1.473	1.575	13.53	0.149	0.10
Maximum	12.458	8.311	29.55	0.608	29.99
Minimum	-15.450	0.004	5.023	0.053	0.00
Std. Dev.	5.324	2.565	8.216	0.117	4.88
Sample	39	39	39	39	39

Source: Author's computation based on data adapted from NBS, World Bank World WDI, World Bank, International Debt Statistics and IMF International Financial Statistics

The descriptive statistics presented in reveal that the annual growth of per capita GDP over the period, 1980-2018 averaged 0.564 percent. As observed from socioeconomic development indicators, migrants' remittances, on the average, accounts for 2.44 percent of the GDP. Additionally, technical cooperation grants as a percentage of GDP averaged 0.182 percent over the study period. As a percent of total external debt, multilateral and bilateral debt averaged 15.60 percent and 1.09 percent respectively. This is a pointer that multilateral sources such the World Bank and IMF are major external creditors to Nigeria. The standard deviation provides insights into the distribution of each of the variables around their corresponding mean values. It was observed from the standard deviation that multilateral debt and technical cooperation grants are convergent to their respective mean values. This is because their standard deviations are less than the corresponding mean values. On the other hand, per capita GDP growth, migrant remittances and bilateral debt are associated with high standard deviation which are greater than their corresponding mean values. It therefore, follows that they are divergent from their respective mean values.

Unit Root Test Results

As an integral part of time series analysis, unit root test was conducted in order to know if the variables are stationary or not and their respective order of integration. The test is conducted using ADF approach to unit root and validated using KPSS method. The results are summarized in table 2.

Table 2: ADF unit root test results

Null hypothesis: Variable has a unit root			
Variable	**Levels test results**	**First difference test results**	**Order of Integration**
	t-statistic	t-statistic	
PCG	-3.005 (0.1448)	-11.6016 (0.0000)	I(1)
MGR	-2.9628 (0.1556)	-6.3037 (0.0000)	I(1)
MTD	-2.4611 (0.3444)	-6.2320 (0.0000)	I(1)
TCG	-2.4447 (0.3521)	-6.8179 (0.0000)	I(1)
BLD	-4.9123 (0.0016)	NA	I(0)

Source: Author's computation based on data adapted from NBS, World Bank World WDI, World Bank, International Debt Statistics and IMF International Financial Statistics.
Note: Figures in parenthesis are the corresponding probability values of the t-statistics, NA denotes not available due to evidence of stationarity at the levels test result.

As observed from the ADF unit root test results, only bilateral debt is stationary at levels while the rest of the variables are found to be non-stationary. Thus, the null hypothesis of unit root is rejected for bilateral debt, but retained for the rest of the variables. However, the nonstationary series were subjected to first difference test and were found to be stationary at first difference given that the corresponding probability values of their t-statistics are less than 0.05. In view of the findings, the variables are considered to be mixed integrated with evidence of I(0) and I(1) orders of integration.

Bounds Test Cointegration Results
The bounds test cointegration method was necessitated by the mixed integration [I(0) and I(1)] of the variables in the model. The results are summarized in table 3.

Table 3: ARDL bounds test cointegration result for model 1

Null Hypothesis: No long-run relationships exist		
Series: PCG MGR MTD BLD		
Test Statistic	Value	k
F-statistic	5.309	4
Critical Value Bounds		
Significance Level	Lower Bound I(0)	Upper Bound I(1)
10%	2.45	3.52
5%	2.86	4.01
1%	3.74	5.06

Source: Author's computation based on data adapted from NBS, World Bank World WDI, World Bank, International Debt Statistics and IMF International Financial Statistics.
Note: K denotes number of explanatory variables in the model

Specifically the bounds test was performed at 5 percent level of significance using F-statistic. The result indicates that the computed F-statistic (5.309) is greater than the 5 percent upper bound critical value (4.01). This necessitates the rejection of the null hypothesis of no cointegration in

the series. Thus, the variables have long run relationship. This result conforms to some previous empirical investigations such as Waweru & Ochieng (2017) and Klobodu & Adams (2016).

Estimation of the ARDL models

The estimated ARDL models provide insights into the short and long run relationships between foreign capital and per capita GDP are summarized in table 4.

Table 4: ARDL short and long run estimates

Dependent Variable: PCG				
Sample: 1980 2018				
Short run form				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(PCG(-1))	-0.265733	0.137984	-1.925821	0.0701
D(MGR)	-0.424955	0.420978	-1.009445	0.3261
D(MGR(-1))	-0.145647	1.665580	-0.087445	0.9313
D(MGR(-2))	-5.097759	1.575391	-3.235869	0.0046
D(MGR(-3))	2.522850	1.093059	2.308064	0.0331
D(MTD)	-0.505764	0.162309	-3.116060	0.0060
D(TCG)	-0.618338	8.560123	-0.072235	0.9432
D(TCG(-1))	-10.377840	16.687666	-0.621887	0.5418
D(TCG(-2))	38.806613	14.668079	2.645651	0.0164
D(TCG(-3))	-23.670050	10.025083	-2.361083	0.0297
D(BLD)	0.425005	0.298149	1.425479	0.1711
D(BLD(-1))	0.878007	0.298424	2.942144	0.0087
CointEq(-1)	-0.686618	0.167716	-4.093926	0.0007
Long run form				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
MGR	2.259545	0.941714	2.399395	0.0275
MTD	-0.736601	0.276189	-2.667015	0.0157
TCG	-5.879692	11.007620	-0.534147	0.5998
BLD	0.207578	0.561966	0.369378	0.7162
C	10.210819	4.670220	2.186368	0.0422
R-squared	0.687		Prob(F-stat.)	0.0337

Source: Author's computation based on data adapted from NBS, World Bank World WDI, World Bank, International Debt Statistics and IMF International Financial Statistics.

The short run results reveal that the effect of migrants' remittances on per capita GDP is mixed. On one hand, lag 2 of remittance inflows has significant negative effect on per capita GDP. On the other hand, the third lag of remittance inflows is positively linked to per capita GDP. The mixed effect of remittance inflows on per capita GDP is accordance with earlier finding by Hassan and Shakur (2017). Similarly, second lag of technical cooperation grants positively affect per capita GDP in the short run whereas the short effect of its third lag on per capita GDP is negative and statistically significant at 5 percent level. The positive effect of technical cooperation grants on per capita GDP agrees with the result of Asghar, Rehman & Nadeem (2016) for Pakistan, but differed with the findings of Ogundipe, Ojeaga, & Ogundipe (2014) for the SSA. Additionally, the short run effect of multilateral debt on per capita GDP is negative and significant while that of bilateral debt is positive. Thus, per capita GDP increases by 0.878 percent following 1 percent increase in bilateral debt, but decreases by 0.505 percent due to a percentage increase in multilateral debt. It

is obvious from the result that technical cooperation grants has the most negative effect on per capita GDP whereas bilateral induces the most significant positive effect on per capita GDP. Thus, bilateral borrowing has been helpful in promoting the growth of per capita GDP. The error correction mechanism (ECM) denoted as CointEq(-1) in table 4.5 has a coefficient of -0.6866 with probability value of 0.0007.. This is indicative that the model can adjust to achieve equilibrium relationship in the long run at a speed of 68.66 percent.

More importantly, the result reveals that migrant remittances have positive and significant effect on per capita GDP in the long run. With 1 percent increase in remittances, per capita GDP, on the average, increases to about 2.2595 percent. This finding authenticates the result of Chigbu & Promise (2015) for Nigeria Ghana and India between 1986 and 2012. This implication of this finding is that inflows of migrants' dollars provide opportunity for rapid and sustained increase in per capita income and soothing of household consumption. On the contrary, the long term effect of multilateral debt is negative and significant. This is in accordance with the short run result as it indicates that a percentage increase in multilateral debt, on the average, contracts per capita GDP by 0.737 percent. The result further revealed that both technical cooperation grant and bilateral are statistical insignificant in influencing per capita GDP. However, the R-squared (0.687) and probability value (0.033) of the F-statistic are indicative that, on balance, the regressors are jointly significant in influencing per capita GDP and possess high explanatory power to the tune of 68.7 percent in explaining changes in per capita. Overall, the underlying international resource measures are collectively important in explaining changes in per capita GDP.

4.5 Causal Links between International Resources and Per capita GDP

The test for the direction of causality between the variables was examined using granger causality test. The results are summarized in table 5.

Table 5: VAR Granger causality test results for mode 1

Null Hypothesis (H_0): No causality in the series Series: PCG MGR MTD BLD			
Direction of causality	**Chi-square (X^2) Statistic**	**P-value**	**Inference**
MGR → PCG	18.653	0.0022	Reject H_0
PCG → MGR	15.352	0.0090	Reject H_0
MTD → PCG	9.982	0.0757	Accept H_0
PCG → MTD	4.100	0.5351	Accept H_0
TCG→ PCG	11.667	0.0397	Reject H_0
PCG→ TCG	5.548	0.3526	Accept H_0
BLD→ PCG	7.871	0.1635	Accept H_0
PCG→BLD	3.574	0.6122	Accept H_0
MGR, MTD, TCG and BLD →PCG	33.065	0.0332	Reject H_0

Source: Author's computation based on data adapted from NBS, World Bank World WDI, World Bank, International Debt Statistics and IMF International Financial Statistics.
Note: → shows direction of causality

It was found from the results that bidirectional causality exists between migrants' remittances and per capita GDP. Hence, both variables are useful in forecasting changes in each other. This result does not agree with the result of Loto & Alao (2016) which found no evidence of causality between the two variables in Nigeria. The result further shows that no causal links exist between multilateral debt and per capita GDP. Thus, the null hypothesis is retained. It was also found that unidirectional causality flows from technical cooperation grants to GDP per capita. This necessitates the rejection of the null hypothesis. This result is consistent with the result of Al-Foul (2013) for Egypt and Jordan. It therefore, follows that technical cooperation grants have forecasting ability for changes in per capita GDP. Overall, the joint causality test results indicate that all the explanatory variables can jointly be relied upon in forecasting variations in per capita GDP.

CONCLUSION

Boosting per capital GDP remains central to Nigeria's development goal and overall macroeconomic policy initiative. Following the global recognition accorded to increasing mobility of international capital, this paper offers deeper and country specific insights into the dynamic relationship between foreign capital and per capita GDP. The findings reveal that migrants' remittances have the largest positive effect on per capita GDP in the long run. This is suggestive that inflow of remittances triggers the per capita income growth and helps household in achieving a sustained consumption path. Similarly technical cooperation grants and bilateral debt are positively linked to per capita GDP in the short run. On the other hand, multilateral debt negatively affects per capita GDP in both short and long run. Owing to the findings, it is concluded that migrants' remittances, technical cooperation grants and bilateral debt are important for rapid and sustained growth in per capita GDP. Thus, this paper recommends that policy makers should initiate policies and provide incentives helpful for mobilizing international resources and allow for a paradigm shift that will ensure the allocation of the resources to key sectors with high potentials for growth of per capita GDP.

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