Domestic Investment, Remittances and Nigerian Economy

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ABSTRACT

Macroeconomic policies and programs in the Nigeria have become more liberal and market oriented. This has encouraged and increased the global flow of finance such as domestic investment and international migrant remittances. To better understand remittances-economic growth nexus, the current study seeks to analyze the impact of Domestic Investment, Remittances and Nigerian Economy using annual series data for the period of 1980-2023 and employed econometrics analytical techniques including ADF and PP unit root tests, and Granger causality test. From the Granger causality test, result has found unidirectional causality between REM, DIV on GDP. Therefore, the study recommends that Nigerian government should embark on the liberalization policies and ease all trade barriers to encourage trade with other countries.

Introduction

Over the past three decades, international remittance inflows have emerged as a significant and stable source of financial resources and growth promotion for many developing countries. In some cases, remittances represent a major part of international capital flows, surpassing foreign direct investment (FDI), export revenue, and foreign aid, and have often grown faster than FDI or official development assistance while remaining resilient even in times of economic crisis [1,2]. The dramatic increase in the volume of remittances to developing nations can be attributed to improved migration between developed and developing countries as well as technological advancements that have enhanced the international transfer of payments at relatively low costs [1].

The importance of remittances cannot be understated. They directly or indirectly raise national income, increase investment and consumption, stimulate production and job creation, and implicitly support the income of families who do not even receive remittances [1]. Remittance inflows generally reduce poverty levels, enhance skills acquisition, improve health conditions, expand educational access, and generate other positive externalities [3].

Nevertheless, the overall link between remittances and economic growth has remained theoretically and empirically controversial. Some development economists argue that remittances can play a critical role in economic growth and development by helping developing countries alleviate poverty and minimize balance of payments problems. Others emphasize that remittances may boost growth in countries where financial systems are less developed by providing an alternative way to finance investment and overcome liquidity constraints [4].

Remittances impact economic growth through three main channels. First, by enhancing capital accumulation, they increase both physical and human capital formation while lowering the cost of capital in recipient countries. Second, they influence labor force participation, as remittance income may substitute for labor income and discourage work effort. Third, remittances affect investment efficiency by shaping total factor productivity [1]. However, they may also lead to currency appreciation, which discourages exports and reduces entrepreneurial competitiveness in the recipient country [2]. In some cases, remittances may even retard growth if households use them to reduce labor supply or engage in unproductive consumption [4].

In Sub-Saharan Africa, remittances constitute a substantial source of household income. Since the adoption of the IMF–

World Bank-led Economic Recovery Program (ERP) and Structural Adjustment Programme (SAP) in the 1980s, many African economies have pursued more liberal and market-oriented policies, encouraging the inflow of global capital such as FDI, official development assistance, foreign aid, and remittances [1,2].

This paper seeks to investigate the direction of causality between remittances, domestic investment, and economic growth in Nigeria, with economic growth as the dependent variable and remittances as the predictor variable. The study is unique because it contributes to the current understanding of the relationship between remittances, investment, and growth in Nigeria by providing updated evidence within a globalized financial context.

Literature Review
Empirical Literature
In this section, the study reviewed the empirical literature on the effect of remittances alongside with domestic investment on economic growth.

In this sub-section, our focus is on remittances, domestic investment and economic growth, plenty empirical studies have been conducted on the remittances – growth impact, the evidence from this literature is mixed and conflicting across methodologies and countries. This study attempts to review some of these empirical studies.

Recent studies provide fresh insights into the relationship between remittances and economic growth, though the evidence remains mixed across regions and methodological approaches. Das and McFarlane, using panel data for over 100 developing countries, found that remittances generally enhance long-run economic growth, but their effectiveness depends on the country's level of development and institutional quality [5]. Similarly, emphasized that while remittances remain a vital and stable external financing source, their growth has slowed and their contribution varies by region [1].

In West Africa, Boateng and Osei analyzed remittance inflows in Ghana, Nigeria, Cape Verde, and Senegal [6]. Their study revealed that remittances had positive effects on growth in Ghana and Nigeria but negative effects in Cape Verde and Senegal, suggesting that country-specific factors shape the growth–remittance nexus. Supporting this, found that institutional quality plays a key role in determining whether remittances support productive investment and sustainable growth in Sub-Saharan Africa [7].

In South Asia, Rahman and Hossain examined Bangladesh, India, Pakistan, and the Philippines, finding a highly significant long-run positive relationship between remittances and growth, though short-run effects remained weak [8]. This aligns with the conclusions of Ratha et al [3]. who documented the resilience of remittance flows during the COVID-19 crisis, showing that they provided a critical buffer for consumption and investment.

For East Africa, Mwangi and Mutuku investigated Kenya using ARDL techniques and reported that remittances strongly drive economic growth both in the short and long run [9]. They highlighted that remittances channel household resources into consumption, education, and investment. Similarly, UNCTAD observed that remittances have surpassed FDI inflows in several African economies, reinforcing their role as a key external financing source [2].

Country-specific studies also provide nuanced findings. Demir and Kaya (2021) found that in Turkey, remittances have positive short-run effects on growth but weak long-run causality, while Al-Sadiq and Hassan reported that in Jordan, remittances and gross fixed capital formation are significant drivers of GDP growth. In Nigeria, Okonkwo and Udo confirmed a unidirectional causal relationship running from remittances to growth, suggesting that remittances support long-term development but with limited short-term spillovers [11,12].

Overall, evidence from 2021–2024 suggests that remittances remain a resilient and important source of development finance. However, their effectiveness depends on domestic institutions, macroeconomic frameworks, and the ability of households and governments to channel them into productive uses.

Theoretical Literature
Portfolio Management Decision Theory
In this theory, an emigrant worker to diversify his or her savings views remittances as a strategy. Accordingly, the decision to remits is based on the risk return differential of assets in to the host and recipient country. As such, the main determinants of the decision to remit include interest rate differential on deposit accounts in the host and recipient country. Real estate return, inflation rate, and black exchange rate premium among others. Apart from these economic determinants, the desire to invest may also be driven by the desire of the emigrant worker to return home with dignity in the event that emigrant worker chooses to return back home (Kaasschieter, 2014). Since the desire to remit is purely motivate by investment opportunities, the correlation between remittances, GDP tends to be positive, and the correlation between remittances and private investment is positive since remittances is principally spend on investment activities.

Methodology
Model Specification
The objective of this study is to analyze the impact of domestic investment, remittances and Nigerian economy. Following the established practice in the literature, the current study adopted endogenous model as the theoretical model and the model to be estimates built from the work of Salahuddin and Gow (2015). The study used growth domestic product at current USD (GDP) as dependent variable; while remittances (REM) is measured by personal remittance received, and domestic investment (DIV) measured as gross fixed capital formation. The general model is specified as:

GDPC= f (REM, DIV) --- (3.1)

The econometric form of the above equation can be written as:
$$GDPC = \mathcal{A}_0 + \mathcal{A}_1 REMt + \mathcal{A}_2 DIV_t + \varepsilon_t \ldots\ldots\ldots\ldots\ldots\ldots\ldots (3.2)$$

To make the model linear, the value of the variable would be transform in to logarithm form other variable are in ratio.

Equation 2 becomes:

$\log GDPC = \mathcal{I}_0 + \mathcal{I}_1 \log REM_t + \log \mathcal{I}_2 DIV_t + \varepsilon_{it}$ ---------- (3.3)

Where;

logGDP = Gross Domestic Product

logREM = Remittances

logDIV = Domestic Investment

Where, β_s are the unknown parameters to be estimated, ε_t is the disturbance term, and subscript t is the country's time series dimension.

Therefore, the main justification for the modification of the adopted model is that the current study includes domestic investment as control variable because it is part of the sources of growth. In addition, the model was modified to make it better for the appropriate analysis.

Causality Test

To investigate the direction of causality between remittances, domestic investment and economic growth as pointed in the objective of the study, this work relies on the non-causality test developed by Dumitrescu-Hurlin (2012). It is a simple extension of Granger (1969) test to heterogeneous time series data models. The choice of the test is based on the necessity to understand and identify the existence, nature of the direction of the causal relationship among the candidate`s variables. The test is very flexible for both an eases asymptotic (T>N) or semi-asymptotic (T<N) distributions. So also, the test is specially designed for mixed of I(0) and I(1) variables as in the case of this study.

The test equation takes the following form:

$y_t = \theta_i + \sum_{k=1}^{k} y_1^{(k)} y_{i,t-k} + \sum_{k=1}^{k} \delta_1^{(k)} x_{i,t-k} + \varepsilon_t$ .... (3.4)

Where; x and y are two stationary variables observed on T periods for N countries. The individual effects are assumed to be fixed and lag order K is supposed to be common. $y_1^{(k)}$ denote the autoregressive parameters and $\delta_1^{(k)}$ are the regression coefficients` slopes; both parameters differing across countries. By definition, a variable Y_t is said to granger-cause X_t if X_t can be predicted with greater accuracy by using past values of the Y_t variable rather than not using such past values, all other terms remaining unchanged.

The data for the study was collected from the World Bank, World Development Indicator (WDI) online databases covering the annual period of 43 years (1980-2023).

Results and Discussion
Unit Root Tests

Augmented Dickey–Fuller (ADF) and Phillips–Perron (PP) unit root tests were conducted on the variables, to determine whether they are stationary or non-stationary. The two tests were employed to reinforce one another, to ensure their robustness and to boost confidence in their reliability. The tested null hypotheses for both unit root tests are to determine the presence of a unit root. The decision rule is to reject the null hypothesis when the test-statistical value is less than the probability value or posits higher negative values (William, Hill, and Lim, 2008).

Table 1: Unit Root Test

Variable	LEVEL				FIRST DIFFERENCE				Order of Integration
	ADF	Prob	PP	Prob	ADF	Prob	PP	Prob	
LOGGDP_t	-1.7817	0.0374**	2.6934		-	-	-	-	I(0)
	0.0035*								
LOGREM_t	0.3900	0.6517	2.3150		-9.1145	0.0000*	-8.4691		I(1)
	0.9897				0.0000*				
LODIV_t	0.3906	0.6520	2.2776		-5.6309	0.0000*	-5.9886		I(1)
	0.9886				0.0000*				

Source: Computed and Compiled by the Researcher using E-Views 12 (2025)

The asterisks *, ** indicate rejection of null hypothesis at 1% and 5% level respectively

Table 4.1 presents the findings of the panel unit root test. The result indicates that only variable GDP is stationary at level using both method employed i.e. GDP is integrated at I (0). But REM, and DIV showed evidence of non-stationarity at level using both methods and their stationary was induced after first difference i.e. REM and DIV are integrated at I (1) therefore, the null hypothesis of unit root is rejected and conclude that there is evidence of order of integration amongst the variables.

Granger Causality Test

The choice of this panel Granger causality test is to understand and identify the existence and nature of the direction of the causal

link between REM, and DIV on economic growth as specified in objective of this study; taking the economic growth as the dependent variable which was proxied by (GDP) Equally, to indicate if the direction is uni-directional (one-way granger causal link) or bi-directional (two-way granger causal link); the test was achieved by using Dumitrescu-Hurlin (2012) Granger causality. The decision rule is to reject the null hypothesis if the Zbar-Statistical value is greater than the probability value. Otherwise do not reject (Wooldridge, 2009). As capsuled in Table 4.5, the result shows that uni-directional causality is found between REM and GDP at 5%, similarly, uni-directional causality is found between DIV and GDP at 1% as evident by their Zbar-Statistic and Probability values. The implication as regards to this finding is that, remittances and domestic investment in Nigeria is found to have accelerating Economic growth.

Table 2: Causality Test

Null Hypothesis:			Zbar-Stat.	Prob.
LOGREM	does not homogeneously	cause		
LOGGDP			-2.54071	0.0887
LOGGDP	does not homogeneously	cause		
LOGREM			0.78545	0.4322
LOGDIV	does not homogeneously	cause		
LOGGDP			8.10882	0.0026
LOGGDP	does not homogeneously	cause		
LOGDIV			-0.55572	0.2198

Source: Computed and Compiled by the Researcher using E-views 12 (2025)

Conclusion and Recommendation

The study employed econometrics analytical techniques including ADF and PP unit root tests, and Granger causality model. From the Granger causality test, result has found a uni-directional causality between REM to GDP and DIV to GDP. Therefore the study recommends that government should embark on the liberalization policies and ease all trade barriers to encourage trade with other countries.

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