

Remittances, Exchange Rates Dynamics and Economic Growth in Nigeria

DOI: 10.36108/ljerhrm/6202.60.0120

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Abstract

This study examines the dynamic relationship among remittances, exchange rate and economic growth in Nigeria between 1980 and 2022. This is driven by the conflicting empirical evidence on the impact of remittances and exchange rate movements on growth, and the limited research addressing these variables in an integrated macroeconomic model. To overcome these challenges, this study uses a Vector Error Correction Model (VECM) with Johansen cointegration tests, impulse response functions, and variance decomposition analysis. Findings reveal the presence of three long-run cointegrating relationships, suggesting a stable macroeconomic relationship. The study finds remittances negatively affect economic growth in the short-run but are insignificant in the long-run. The exchange rate shows an initial negative effect on growth but turns positive in the long run, suggesting adjustment in international competitiveness. Public spending has a positive impact on growth in the short term but a negative impact in the long term, possibly due to crowding-out. Inflation has a negative impact on growth while investment has a positive impact. The study shows that the stability of the macroeconomic environment and the effective use of external inflows are important for growth. It suggests policies to stabilise exchange rates, control inflation, increase the efficiency of government expenditure, and ensure remittances are used in an investment-friendly manner. The research contributes to the existing knowledge by offering a multifaceted empirical investigation which resolves contradictory findings and illustrates the dynamic channels of transmission among remittances, exchange rates and growth using the case study of Nigeria.

Keywords: Remittances, Exchange Rate, Economic Growth, Macroeconomic Stability, Inflation.

1. Introduction

Nigeria is one of Africa's most resource-rich economies and still the continent's most populous, providing a massive domestic market and wellspring of labour force that can help drive growth (World Bank, 2023). Yet, the Nigerian economy has been highly susceptible to macroeconomic instability, which is the outcome of changes in crude oil prices, exchange rates, inflation and net external capital flows (Ajakaiye & Fakiyesi, 2009; IMF, 2023). Nigerian development, as an oil-exporting developing economy, is heavily affected in the long run by exchange rate fluctuations, remittance inflows and per capita real GDP growth (Bakare, 2011; Genty, 2013; Udoh & Egwaikhide, 2022). The interplay between these factors has gained significance in development economics, especially in Sub-Saharan Africa, where remittances from migrant workers are now a

significant source of foreign exchange earnings and family income (Gupta et al., 2009; Ratha, 2023).

In the mid-1980s, Nigeria faced significant economic hardship as a result of the global oil price shock, resulting in a reduction in government revenue, an increase in public debt and a decline in income per capita (Lewis, 2007). Since then, macroeconomic outcomes have been influenced by various policy frameworks, exchange rate reforms and structural changes. In 1986, the adoption of the Structural Adjustment Programme signaled a shift in the exchange rate regime from fixed exchange rates to a more flexible arrangement. This led to currency instability, impacting imports, exports, remittances and growth (Sanusi, 2010; Mordi, 2006). Over the period 1980-2022, the impacts of exchange rate fluctuations, policy uncertainty and shocks have also affected real gross domestic product (Adelowokan et al., 2015; Ezenwakwelu, 2021).

Nigeria is also a major recipient of migrant remittances in Africa. Remittances have grown significantly over the past two decades and provide a reliable source of funds for households, poverty alleviation, smoothing household consumption, and private investment (Ratha, 2013; World Bank, 2023). During numerous years of oil export revenue decline, remittances have eased pressure on foreign exchange reserves and boosted domestic consumption (Ojapinwa & Odekunle, 2013). Recent empirical studies provide evidence of positive effects of remittances on financial inclusion, household welfare, and entrepreneurship in Nigeria, particularly among the poor (Olayungbo & Quadri, 2019; Bamidele & Ebe, 2020). This makes remittances an important source of private transfers and macroeconomic stability.

Nigerian exchange rate instability is a recurrent problem. The naira has depreciated several times in the post-SAP, 2008 global financial, 2016 oil price shock, and COVID-19 pandemic periods. These frequently led to higher prices of imports, higher inflation, higher debt service charges, and uncertainty for investors and producers (IMF, 2023; Mordi, 2006). Depreciation can also raise the domestic value of remittances, thus boosting household welfare, but excessive volatility may lower investor confidence and hamper production growth (Adeniran et al., 2014; Olofin et al., 2022). While previous studies have investigated the impact of remittances on economic growth and exchange rates on real GDP in Nigeria, there are still gaps. Existing empirical studies examine bilateral relationships instead of the joint dynamic interactions between remittances, exchange rate and real GDP per capita within a single econometric model (Olayungbo & Quadri, 2019; Olofin et al., 2022).

Furthermore, few studies have used impulse response functions and forecast error variance decomposition analysis to interpret the impact of shocks across these variables in Nigeria with recent data (Enders, 2015; Asteriou & Hall, 2016). It is important to fill these gaps for improved policy formulation in exchange rates, migration and economic growth. This study broadly explores the relationship between remittances, exchange rates and economic growth in Nigeria from 1980 to 2022. This study specifically:

- (i) Examines the nature and direction of the relationship between remittances, exchange rates and real GDP per capita;
- (ii) Examines the impulse response of economic growth to shocks in remittances and exchange rates; and

(iii) Assesses the contribution of remittances, exchange rates and other macroeconomic variables to the variance of economic growth.

This study adds to the body of literature by presenting fresh evidence based on rigorous time-series methods and by providing policy intuitions for Nigeria and other similarly structured developing countries.

2. Literature Review

2.1 Conceptual Review

Remittances can be broadly defined as the financial and non-financial transfers of migrant workers to their home countries (Adams, 2009; Ratha, 2013). These transfers are a special part of the external financial flows; as compared to other inflows such as foreign direct investment and official development assistance, they are directly targeted at household welfare and are also more cyclical in nature. In the Nigerian economy, remittances play several economic functions: they serve as a source of income for households, they are used as a source of finance for small businesses, to support education and household investment in health care and to play a significant cushioning role in times of macroeconomic crisis.

The exchange rate, which can be defined as the price of one currency in terms of another, is a critical factor of international competitiveness and macroeconomic stability. The naira-US dollar exchange rate is one of the most closely watched economic indicators in Nigeria because of its significant consequences on the price of imported goods, inflation rate, export competitiveness and value of the remittance inflows. Over the years the Central Bank of Nigeria (CBN) has adopted various exchange rate policies in the form of fixed pegs and managed floats with varying impacts on economic growth and the value of remittances. Economic growth is defined as the real GDP per capita as the time- and inflation-adjusted growth of productive capacity. According to the World Bank (2020), economic growth in Nigeria is defined as the slow rise in the market value of the goods and services produced in this country, with emphasis on agriculture, telecommunications and services as the growth drivers on top of the oil sector. How remittances and the exchange rate are being transferred into real changes in the GDP per capita matters in Nigeria.

2.2 Theoretical Review

This study is based on three perspectives. First, the Balance of Payments (BoP) Theory, which was founded by David Hume in the 18th century and advanced by Keynes and Friedman in the 20th century, is the overall structure in which remittances and exchange rates will interact to affect economic growth through the external accounts. In this context, the remittances, as a secondary income in the current account, will help in achieving balance of payments (Obstfeld and Rogoff, 2009). Second, the endogenous growth theory, developed by Lucas (1988) and Romer (1994), focuses on the fact that endogenous variables in long-term economic growth are human capital, innovation and knowledge spillovers. Here the remittances contribute to the growth by providing funds for education, health and investments in small-scale enterprises, which in turn enhance human capital and the productivity of entrepreneurs. The theory would predict that the remittances that are used to invest in productive purposes (and not in consumption) would have a positive multiplier effect on the growth.

Third, the Marshall-Lerner condition is a conceptual framework to assess the positive or negative effects of exchange rate depreciation on the trade balance in reference to the total price elasticity of exports and imports. In the case of Nigeria, where the importation elasticity was traditionally low with the domination of basic goods and equipment on the list of imported goods, the Marshall-Lerner condition is not always true, and, hence, the depreciation of the exchange rate may not improve the balance of trade but, on the contrary, cause inflation and reduce the remittances in real terms.

2.4 Empirical Literature Review

There is a wide range of empirical findings on remittances, exchange rates and economic growth in Nigeria, but the results are mixed. Using annual data from 1980 to 2012, Olubiyi (2014) applied a Vector Error Correction Model (VECM) and Granger causality test and found that remittances and imports both Granger-cause GDP in the short term and thus confirmed both the export-led and remittance-led growth theories. Similarly, Akinpelu et al. (2013) have used the techniques of cointegration and causality and concluded that there are significant relationships between remittances and capital formation and economic growth in the long-run equilibrium, but there is a one-way causality between remittances and GDP. In line with this, Ukeje and Obiechina (2013) have applied the error correction model and found that remittances positively and significantly influence short- and long-run economic growth.

Furthermore, Alasha (2020) found that the exchange rate volatility has a significant impact on the economic growth in Nigeria, and the trade balance, interest rates and inflation are the channels of transmission. Equally, Oloyede (2018) found that the exchange rate volatility has a negative and significant effect on the economic growth, suggesting that the macroeconomic instability is not good for performance. Similarly, Ewubare and Ushie (2022) also determined that the fluctuations of the exchange rates have a negative impact on the GDP growth, while the interest rates have a positive impact; hence, policy stability in the exchange rate policy has a positive effect on economic stability.

In the relationship between remittances, exchange rates and growth, Ilu (2019) noted a negative impact of remittances on the depreciation of naira, whereas foreign direct investment and oil prices have positive impacts. Similarly, via cointegration test, Osigwe et al. (2016) found that remittances, terms of trade and nominal exchange rates have a positive long-run impact on real exchange rates. Beyond Nigeria, Lawal et al. (2022) examined ten African countries using a frequency domain causality analysis and found “bi-directional causality between remittances, exchange rate, trade and economic growth, which validated the J-curve and Marshall-Lerner conditions”.

Other empirical studies added to the debate. Ikwaagwu et al. (2024) estimated the Autoregressive Distributed Lag (ARDL) model using data from 1981 to 2019 and found remittances have a negative but statistically significant effect on economic growth in the short and long run, although a long-run cointegrating relationship was established. On the other hand, Adekunle (2024), using the same ARDL model, but on data from 1986 to 2021, found that remittances positively impact the growth of the economy in the long term, with a 1 per cent increase in remittance being associated with a 0.32 per cent increase in GDP. Other studies, such as Muhammad et al. (2024), show that remittances and foreign direct investment are positively and significantly impacting economic growth, and this is a critical source of financing. Similarly, a mixed-methods ARDL analysis by

Musa et al. (2025) of data between 1980 and 2024 found that remittances have a positive impact on economic growth and the welfare of households but also cause appreciation of the exchange rate and inflation, supporting the Dutch Disease theory.

Periola (2025) employed the ARDL model and found that remittances reduce productivity in the tradable sector in the short run and raise productivity in the non-tradable sector but do not have any significant long-term effect on the real exchange rate. Finally, Fredrick et al. (2025) used an error correction mechanism and found that remittances are an important source of human capital development, but other variables such as FDI and inflation were not significant. These studies substantiate the diversity of empirical evidence regarding methodology, variables and data used. The results suggest while remittances might affect economic growth and exchange rates, they have neither a uniform nor a unidirectional impact, and thus, a comprehensive analytical approach is needed that incorporates these variables into a macroeconomic model.

3. Methodology

3.1 Model Specification

This study modifies the model specification of the research by Olubiyi (2014) to test the nexus between remittance, exchange rate and economic growth in Nigeria and incorporates other control variables. The base model is as follows:

$$RGDP_t = F(RM_t, EXCH_t) \quad 1$$

In the equation, where $RGDP_t$ is the real gross domestic product at time t , RM_t is the remittance inflows at time t , and $EXCH_t$ is the nominal exchange rate at time t . Since other macroeconomic variables can also have a simultaneous effect on economic growth, there are control variables added to the model: Government Spending (GSt), Inflation (INF_t), Investment (INV_t) and Trade Openness (TRt):

$$RGDP_t = F(RM_t, EXCH_t, GSt, INF_t, INV_t, TRt) \quad 2$$

The model is expressed in logan form to make it stationary and to be able to interpret elasticity:

$$LNRGDP_t = \phi_0 + \phi_1 LNRM_t + \phi_2 LNEXCH_t + \phi_3 LNGSt + \phi_4 LNINF_t + \phi_5 LNINV_t + \phi_6 LNTRt + \varepsilon_t \quad 3$$

In which 0 denotes the fixed term 0, 1-6 denote the coefficients of the respective independent variables and 8 denotes the stochastic error. The complete Vector Error Correction Model (VECM) takes into account dynamic interaction between all variables and is expressed in a matrix form as follows:

$$\Delta X_t = \Phi_0 + \Sigma \Phi_i \Delta X_{t-i} + \Pi X_{t-1} + \varepsilon_t \quad 4$$

X_t is a (7x1) vector of $[LNRGDP, LNRM, LNEXCH, LNGS, LNINF, LNINV, LNTR]$, Φ_i is the (7x) short run coefficient matrix and $\Pi = 0.005.08$ is the long-run relationship represented by the loading matrix 0.005 and the cointegrating vector 0. The VECM model can be used to concurrently estimate short-run dynamics and long-run equilibrium changes across seven variables.

3.2 Estimation Procedures

The estimation procedure goes through several stages. First, summary statistics are computed to describe the characteristics of the variables. Next, the Phillips-Perron (PP) and Augmented Dickey-Fuller (ADF) tests for unit root are applied to determine the order of integration of the variables. Third, the Johansen cointegration test is carried out to determine the number of cointegrating

relationships between the variables in the long run. Fourth, Akaike Information Criterion (AIC), Schwarz Information Criterion (SC) and Hannan-Quinn Information Criterion (HQ) are used to determine the best lag length. Fifth, the VECM is estimated, and diagnostic tests like autocorrelation, heteroscedasticity and normality tests are conducted. Finally, impulse response functions (IRFs) and variance decomposition (VD) are estimated to trace out the dynamic effects of the shocks in the explanatory variables on the economic growth.

3.3 Variable Description and Data Sources

The study employs annual data from 1980 to 2022 and presents 43 observations of seven variables. The dependent variable and measure of economic growth is real gross domestic product (RGDP) in constant USD per capita. Remittances (RM) are the total inflows of individual transfers from foreign sources to Nigeria in a given time period, amounting to billions of USD. The bilateral exchange rate of NGN/USD is the exchange rate (EXCH). The control variables are Government Spending (GS) as a percentage of GDP, Inflation (INF) in terms of the consumer price index, Gross Fixed Capital Formation as a proxy of Investment (INV) and Trade Openness (TR) in terms of the sum of exports and imports as a percentage of GDP. The data were obtained from the World Bank World Development Indicators, the Central Bank of Nigeria Statistical Bulletin and the National Bureau of Statistics.

3.4 A-Priori Expectations

Table 1: A-Priori Expectations for Model Variables

Variable	Symbol	Expected Sign	Theoretical Basis
Remittances	RM	+	Household income and investment channel (Endogenous Growth Theory)
Exchange Rate	EXCH	+/-	Dual effect on export competitiveness and import costs (BoP Theory)
Government Spending	GS	+	Keynesian aggregate demand stimulus
Inflation	INF	-	Erosion of purchasing power and investment uncertainty
Investment	INV	+	Capital accumulation and productivity enhancement
Trade Openness	TR	+	Market integration and efficiency gains

Source: Authors' Compilation (2026)

4. Result and Discussion

4.1 Descriptive Statistics

The descriptive statistics of all the variables used in the study are provided in Table 2. The average real GDP per capita (RGDP) is 1,915.73 USD with a median of 1,769.88 USD, indicating a positive skewness that is not large and indicates the growth pattern of Nigeria is not uniform. The exchange rate (EXCH) has a standard deviation of 112.98 NGN/USD and a mean of 112.98 which indicates that over the period of study, the currency has been highly volatile. The average remittance inflows (RM) is 2.50 billion USD with a high degree of variability (SD = 2.55), which is noteworthy of the sensitivity of the diaspora transfers to both the domestic and the global economy. The average of inflation (INF) is 18.74 with a median of 12.88, which indicates the existence of chronic inflation

pressure with occasional hyperinflationary episodes. The Jarque-Bera statistic test indicates that inflation and investment are not normally distributed at the 1 percent level of significance, and therefore, the robust estimation techniques should be employed.

Table 2: Descriptive Statistics of Study Variables

Statistic	RGDP	RM	EXCH	GS	INF	INV	TR
Mean	1915.73	2.503	112.98	2.951	18.74	37.10	50,139,530
Median	1769.88	1.586	111.23	2.481	12.88	34.05	44,779,171
Maximum	2679.56	8.334	425.98	5.84E+11	72.84	97.32	98,608,076
Minimum	1408.21	0.005	0.547	1.231	5.39	14.17	23,350,065
Std. Dev.	460.16	2.548	119.06	1.471	16.32	20.77	18,525,992
Skewness	0.342	0.516	1.050	0.427	1.914	1.206	0.826
Kurtosis	1.467	1.870	3.279	1.702	5.589	4.124	3.019
Jarque-Bera	5.048	4.196	8.045	4.323	38.267***	12.695***	4.892

Note: *** significant at 1%

Source: Authors' Computation (2026)

4.2 Unit Root Test Results

The ADF and PP unit root results are shown in Table 3. Each of the variables, except the Inflation (INF) which is stationary at levels below the ADF test, is of order one I(1), meaning that it only becomes stationary after first differencing. This combined nature of integration (I(0) and I(1)) meets the requirements conditions of the VECM and ARDL estimation model. The similarity in the results of the ADF test and the PP test is more likely to boost the confidence in the stationarity aspects of the variables.

Table 3: Unit Root Test Results (ADF and PP)

Variable	ADF Level	ADF 1st Diff	PP Level	PP 1st Diff	Integration Order
RGDP	-0.724 (0.829)	-4.719*** (0.000)	-0.869 (0.788)	-4.833*** (0.000)	I(1)
RM	-1.608 (0.470)	-6.556*** (0.000)	-1.462 (0.543)	-7.465*** (0.000)	I(1)
EXCH	2.954 (1.000)	-4.242*** (0.002)	3.359 (1.000)	-4.156*** (0.002)	I(1)
GS	0.897 (0.995)	-6.842*** (0.000)	0.897 (0.995)	-6.842*** (0.000)	I(1)
INF	-3.135** (0.032)	—	-2.999** (0.043)	-12.589*** (0.000)	I(0)
INV	-3.200** (0.027)	-4.563*** (0.001)	-4.046*** (0.003)	-4.463*** (0.001)	I(1)
TR	-2.243 (0.195)	-6.214*** (0.000)	-2.302 (0.176)	-6.209*** (0.000)	I(1)

Note: ** significant at 5%; *** significant at 1%. P-values in parentheses

Source: Authors' Computation (2026)

4.3 Cointegration Test Results

Table 4 results of the Johansen cointegration test indicate that three cointegrating equations exist between the seven variables, which means that there are three long-run equilibrium relationships. The Trace Test and the Maximum Eigenvalue Test reject the null hypothesis of no cointegrating equation ($r = 0$), and the hypothesis of at most one ($r = 1$) and at most two ($r = 2$) cointegrating equation at the 5% level of significance. The null hypothesis is not rejected beyond $r = 3$, which means that the number of cointegrating vectors is three. This result is very important as it proves that the series exhibit stable long-run correlations and that the VECM framework is suitable.

Table 4: Johansen Cointegration Test Results

Null Hypothesis	Trace Statistic	5% Critical Value	Prob.	Max-Eigen Statistic	5% Critical Value	Prob.
$r = 0^*$	191.623	125.615	0.0000	72.454	46.231	0.0000
$r \leq 1^*$	119.170	95.754	0.0005	46.153	40.078	0.0092
$r \leq 2^*$	73.016	69.819	0.0272	35.205	33.877	0.0345
$r \leq 3$	37.811	47.856	0.3103	17.655	27.584	0.5240
$r \leq 4$	20.156	29.797	0.4123	11.818	21.132	0.5657
$r \leq 5$	8.338	15.495	0.4300	8.174	14.265	0.3613
$r \leq 6$	0.164	3.841	0.6859	0.164	3.841	0.6859

Note: * denotes rejection of null hypothesis at 5% significance level

Source: Authors' Computation (2026)

4.4 Impulse Response Analysis

Table 5 shows the impulse response of the real GDP (LNRGDP) to one standard deviation shocks of each variable in a ten-period horizon. The findings show that RGDP reacts positively to its shocks initially but then the reaction intensifies to a plateau of 0.075 at period 10. Government spending (GS) always has a positive impact on RGDP with response value increasing to 0.025 in period 1 and to 0.040 in period 10, which highlights the Keynesian aspect of fiscal policy in stimulating aggregate demand and growth. Remittance shocks have a negative and sustained effect on RGDP with the initial period showing a -0.018 shock and the tenth period showing -0.020. This result supports the Dutch Disease hypothesis: high remittance inflows can lead to appreciation of the real exchange rate, and in turn, lower export competitiveness and growth. The effect of exchange rate shock is that initially it reduces RGDP by -0.012 in period 1, but as time progresses, the effect changes to a positive value starting in period 6, indicating that through an adjustment period, exchange rate changes can drive export-based growth. The pressure of inflation is always negative on the RGDP, increasing in value to a negative of -0.017 in period 1 to a negative of -0.057 in period 10, which is in line with the economic literature on the growth-dampening impact of persistent price instability.

Table 5: Impulse Response of LNRGDP to Variable Shocks (Selected Periods)

Period	LNRGDP	LNRM	LNEXCH	LN GS	LNINF	LNINV	LNTR
1	0.0385	-0.0180	-0.0125	0.0253	-0.0173	-0.0100	-0.0003
2	0.0528	-0.0248	-0.0171	0.0335	-0.0210	-0.0146	0.0007
4	0.0679	-0.0253	-0.0079	0.0381	-0.0381	-0.0167	-0.0016
6	0.0728	-0.0221	0.0013	0.0398	-0.0505	-0.0161	0.0014

8	0.0747	-0.0207	0.0049	0.0401	-0.0552	-0.0164	0.0023
10	0.0753	-0.0201	0.0064	0.0402	-0.0570	-0.0166	0.0027

Source: Authors' Computation (2026)

4.5 Variance Decomposition Analysis

The variance breakdown of LNRGDP is shown in table 6. The first period has 100% explaining the variation in RGDP by its own innovations, indicating it does not have contemporary spillovers. With the increase of time horizon, the exchange rate (LNEXCH) is the second factor that is most significant in the variation of the RGDP, explaining 7.997% of the variance in forecast error at period 10. Remittances (LNRM) and inflation (LNINF) make a contribution of 2.731 and 1.792 respectively. The contribution of government expenditure, investment and openness in trade is about 0.905. RGDP has an 86.576% self-persistence at period 10, suggesting a high self-persistence but significant external effects of exchange rates and remittances.

Table 6: Variance Decomposition of LNRGDP

Period	S.E.	LNRGDP (%)	LNRM (%)	LNEXCH (%)	LNGS (%)	LNINF (%)	LNINV (%)	LNTR (%)
1	0.039	100.000	0.000	0.000	0.000	0.000	0.000	0.000
2	0.066	99.301	0.000	1.550	0.071	0.254	0.001	0.374
4	0.115	97.247	0.433	1.533	0.307	0.233	0.007	0.240
6	0.158	92.398	1.484	4.575	0.227	0.862	0.011	0.444
8	0.196	88.885	2.236	6.659	0.179	1.410	0.008	0.623
10	0.229	86.576	2.731	7.997	0.151	1.792	0.006	0.748

Source: Authors' Computation (2026)

4.6 VECM Long-Run Estimates

According to the VECM estimation, the long-run cointegrating equation demonstrates that there is a statistically significant positive relationship between the exchange rate and the RGDP ($B = 0.163$, $t = 5.040$), which is in line with the argument that a depreciating Naira has a positive impact on external competitiveness and export-led growth in the long run. The government spending has a negative long-run coefficient ($B = -1.027$, $t = -13.588$), which indicates potential crowding-out effects in which increased spending by the government crowds-out investment by the private sector. Inflation also has a negative long-run effect ($B = -0.286$, $t = -10.985$), which validates the fact that long-term price instability is harmful to the growth of the economy. Remittances have a statistically non-significant long-run coefficient (-0.009), indicating that although remittances have significant short-run effects on household welfare and aggregate demand, they do not have a statistically significant long-run effect on RGDP growth in this specification.

Table 7: Long-Run Cointegrating Equation (VECM)

Variable	Coefficient	Std. Error	t-Statistic	Interpretation
LNRM(-1)	-0.0095	0.0254	-0.373	Negative, not significant
LNEXCH(-1)	0.1633	0.0324	5.040***	Positive, significant
LNGS(-1)	-1.0275	0.0756	-13.588***	Negative, significant (crowding out)
LNINF(-1)	-0.2863	0.0261	-10.985***	Negative, significant
LNINV(-1)	0.1495	0.0721	2.075**	Positive, significant

LNTR(-1)	-0.0955	0.0670	-1.424	Negative, not significant
Constant	20.8139	—	—	Intercept term

Note: ** significant at 5%; *** significant at 1%.

Source: Authors' Computation (2026)

4.7 Discussion of Findings

This study demonstrates that remittances have a negative short-term effect on economic growth, which is in accord with the view that remittances have a Dutch Disease effect, and with previous evidence of distortions in the productive sector. This result is consistent with that of Ikwuagwu et al. (2024), who found a negative and significant association between remittances and growth, and that of Musa et al. (2025), who linked remittances to exchange rate appreciation and inflation. But the lack of long-run significance of remittances differs from other studies, such as Adekunle (2024) and Muhammad et al. (2024), which reported a positive long-run growth impact. This suggests that the growth effect of remittances depends on how they are used and supports claims that remittances spent on consumption may inhibit long-term productivity gains.

The long-run effect of the exchange rate on growth follows a period of negative impact, suggesting a shift from negative to positive effects. This result is in line with Alasha (2020), who found significant macroeconomic pathways, and with the theoretical expectation that exchange rate depreciation increases export competitiveness in the long run. Likewise, Ewubare and Ushie (2022) stressed the negative short-run impacts of exchange rate fluctuations but also the need for policy stability. The positive long-run coefficient found in this study supports the export-led growth theory and underscores the importance of exchange rate policy in improving the performance of the external sector.

The mixed effect of government expenditure- positive in the short run and negative in the long run- suggests inefficiencies and crowding-out effects. This finding is at odds with Keynesian views on fiscal policy and ongoing government spending and implies inefficiencies in public expenditure. While previous studies such as Ukeje and Obiechina (2013) stressed the positive effects on economic growth of financial inflows, the current study suggests that in the absence of efficiency and accountability, government expenditure may slow economic growth. This suggests the need for fiscal restraint and efficient resource allocation. The inflation effect has been found to be negative and significant on economic growth, supporting the macroeconomic instability hypothesis and corroborating the result of Oloyede (2018) who noted that volatility has a negative impact on economic growth. This finding also confirms the empirical evidence that inflation complicates investment decisions and lowers real income. On the other hand, investment is found to have a positive and significant impact on growth, suggesting its importance in capital accumulation and efficiency improvement. This is in line with Akinpelu et al. (2013), who emphasised the role of capital formation in long-run economic growth.

The findings highlight the multifaceted and interwoven relationships among remittances, exchange rates and macroeconomic factors in influencing growth. The multiple cointegrating relations supports the claim by Lawal et al. (2022) on two-way causal relationship between external flows and growth. The results imply that the effectiveness of policy initiatives depends not only on specific variables but also on their interactions with other macroeconomic variables.

5 Conclusion

This paper has investigated the dynamic nexus between remittances, exchange rates, and Nigerian economic growth between 1980 and 2022 using a framework of a Vector Error Correction Model (VECM). Three consistent relationships across the seven variables that were the likely long-run equilibrium were established by the Johansen cointegration test. Analysis of impulse response showed that although government spending always has a positive impact on economic growth, remittances and inflation have negative effects on the RGDP, especially in the short-run period. The exchange rate changes its initial negative impact to a positive long-term impact, implying that once there has been an adjustment of the market, a competitive exchange rate eventually promotes growth.

The result of the variance decomposition indicates that the exchange rate is the most significant external factor explaining the RGDP fluctuation at the 10-period horizon with almost 8 per cent of the forecast error variance, followed by remittances with around 2.7 per cent. The long-run VECM estimates find government spending, inflation and exchange rate to be statistically significant determinants of real GDP, with investment also making a positive and significant contribution. The findings highlight the importance of a multi-dimensional policy response which should focus on exchange rate stability, inflation management and strategic channelling of remittances to productive investment.

6 Recommendations

Based on these results, the following recommendations are promoted. First, the Central Bank of Nigeria ought to seek a more predictable and transparent system of exchange rate management in order to minimise volatility, increase the attractiveness of remittances and help in promoting export competitiveness. Second, the fiscal officials need to review the structure and effectiveness of government spending to reduce the crowding-out implications for the investment by the private sector. Third, policies designed to enable productive utilisation of the remittance inflows, including matching fund programmes, diaspora bonds and incentives to encourage investment among the recipients need to be given priority. Fourth, ongoing attempts at ensuring the inflation is kept in check by having monetary and fiscal policy tightening measures are essential in ensuring that the macroeconomic stability necessary to sustain GDP growth is achieved. Fifth, enhancing the business environment and institutional capacity will enable the conversion of remittances and government expenditure to long-term gains in productive capacity and economic growth.

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