

Effects of Diaspora Remittances on Balance of Payments in Nigeria

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Abstract

This study examines the effect of diaspora remittances on Nigeria's balance of payments over the period 1990–2024. The study employed the Autoregressive Distributed Lag modelling approach to examine the short-run and long-run relationships among the variables. The BOP serves as the dependent variable, while diaspora remittances (LRMT), exchange rate (LEXR), foreign direct investment (LFDI), and gross domestic product (LGDP) were used as explanatory variables. The ARDL bounds tests confirmed the existence of long-run relationships among the variables. The long-run results revealed that diaspora remittances and exchange rate had positive and statistically significant effects on BOP, while GDP had negative and statistically significant effect on BOP. Foreign direct investment had a negative but statistically insignificant effect on BOP. The short-run results showed that the effects of the explanatory variables varied across periods, with several current and lagged effects being statistically significant. The error correction terms were negative and statistically significant, confirming the existence of adjustment mechanisms towards long-run equilibrium. The diagnostic tests further showed that the model was free from significant serial correlation and heteroskedasticity, while the residuals were normally distributed. Based on the results, the study recommends among others that the government should strengthen diaspora investment through an enabling investment environment by improving the ease of doing business and providing targeted incentives such as tax reliefs, investment guarantees, and dedicated diaspora investment schemes.

Keywords: *Diaspora remittances, balance of payments, exchange rate, foreign direct investment, gross domestic product*

1. Introduction

International migration has increasingly transformed economic relationships between countries by creating sustained financial and economic linkages between migrants and their countries of origin. One of the most important outcomes of these linkages is the increasing flow of diaspora remittances to developing countries. Unlike temporary or highly volatile forms of international capital, remittances are generally transferred by migrants to support families, meet financial obligations and contribute to economic activities in their countries of origin. The increasing scale of these transfers has made diaspora remittances an important source of external finance and foreign exchange for many developing economies, thereby generating growing interest in their implications for macroeconomic stability and external-sector performance (World Bank, 2024). Diaspora remittances have become particularly significant because of their potential to influence the external position of recipient economies. Remittance inflows provide foreign-currency resources that can increase the availability of foreign exchange, support international

payments and reduce pressure on other sources of external financing. They can also strengthen the capacity of households to finance consumption, education, health and investment. However, the macroeconomic effect of remittances is not necessarily uniform because their impact depends on how the inflows are utilised and how they interact with imports, savings, investment, exchange-rate movements and other external transactions. The relationship between diaspora remittances and external-sector performance therefore requires empirical investigation rather than being inferred solely from the size of the inflows (World Bank, 2024). Recent World Bank data indicate that personal remittances received by Nigeria were equivalent to approximately 7.8 per cent of GDP in 2025. This magnitude demonstrates that diaspora remittances represent a substantial external financial resource relative to the size of the Nigerian economy.

Nigeria's economy has historically depended heavily on crude-oil export earnings to generate foreign exchange, while substantial demand for imported goods and services has created recurring pressure on foreign-exchange availability. Changes in international oil prices, oil production, exchange rates, capital flows and import demand have consequently produced considerable fluctuations in Nigeria's external accounts. In such an environment, remittances provide an alternative and relatively stable source of foreign currency that may help strengthen external-sector resilience. The central issue, however, is whether the magnitude of remittance inflows is sufficient to produce a significant and sustained improvement in Nigeria's balance of payments (International Monetary Fund [IMF], 2019).

The balance of payments is particularly relevant to this investigation because it records the economic transactions between residents of Nigeria and the rest of the world over a specified period. It provides an overall picture of the country's external economic position by incorporating transactions relating to goods, services, income, transfers and financial flows.

Despite the growing body of research on diaspora remittances in Nigeria, important empirical issues remain unresolved. Existing studies have examined the effects of remittances on economic growth, human capital, human development, exchange rates. However, relatively limited attention has been devoted to examine the effect of remittances on Nigeria's balance of payments. Against this background, the study examines the effects of diaspora remittances indicators on the balance of payments in Nigeria.

2. Literature Review

Theoretical Review

2.1 Balance of Payments Theory

The Balance of Payments (BOP) Theory has its roots in the classical theory of international trade and finance, mostly attributed to David Hume's Price-Specie Flow Mechanism introduced in 1752. The theory is built on several fundamental assumptions. First, it assumes that all international transactions are accurately recorded and classified under the appropriate balance of payments accounts. Secondly, it assumes that increases in foreign exchange inflows improve a country's external position, while excessive foreign exchange outflows weaken it. Thirdly, it assumes that trade flows, capital movements, exchange rates, remittance inflows, and foreign investments jointly determine the balance of payments position of an economy. Finally, the theory assumes that external imbalances are influenced by both domestic macroeconomic policies and international economic conditions, implying that appropriate policy measures can restore equilibrium in the external sector (Krugman, Obstfeld, & Melitz, 2018; IMF, 2023).

The Balance of Payments Theory directly explains the dependent variable of this study, which is the balance of payments. It views the balance of payments as the overall outcome of a country's international economic transactions and argues that improvements in external receipts strengthen the country's external position, while increases in external payments weaken it. Since the balance of payments captures all transactions relating to international trade,

investment, income, transfers, and reserve assets, it provides the most comprehensive measure of external sector performance. Recent empirical studies have continued to adopt this theoretical framework in explaining the determinants of balance of payments performance in developing economies, including Nigeria (World Bank, 2024; Chude, Onodu, & Umeh, 2026). The theory also provides a direct explanation for remittances, one of the explanatory variables in this study. According to the balance of payments framework, personal remittances are recorded under the secondary income component of the current account because they constitute unilateral transfers from migrants to residents of their home country. The theory argues that increases in remittance inflows raise foreign exchange earnings, improve current account balances, strengthen external reserves, reduce pressure on exchange rates, and contribute to macroeconomic stability. Consequently, countries receiving substantial remittance inflows are expected to experience improvements in their balance of payments position provided such inflows are channelled through formal financial systems. This proposition has been supported by recent studies which found that remittances improve Nigeria's external liquidity and balance of payments performance (Imouokhome, 2023; Nangih & Nwineewii, 2024; Chude et al., 2026).

Similarly, the theory explains diaspora engagement, particularly diaspora investment, because investments by citizens living abroad constitute foreign capital inflows that are recorded under the financial account of the balance of payments. Diaspora investment contributes to productive activities, business expansion, technology transfer, entrepreneurship, export promotion, and employment generation, all of which increase foreign exchange earnings and strengthen the financial account. The theory therefore demonstrates that while remittances improve the current account, diaspora investment strengthens the financial account, and together both variables contribute to improving the overall balance of payments position. Recent literature has recognised diaspora investment as an increasingly important source of sustainable external financing capable of complementing remittance inflows in developing economies (Adeagbo, 2024; Orekoya & Tijani, 2023; Isana, Ademeso, & Maiyaki, 2025).

The major strength of the Balance of Payments Theory is that it adequately captures the macroeconomic relationship among the three variables examined in this study. It explains how remittances contribute to foreign exchange inflows through the current account, how diaspora engagement in the form of investment strengthens the financial account, and how both variables ultimately influence the balance of payments. The theory also provides an appropriate framework for understanding the effects of international transfers and capital flows on exchange rate stability, reserve accumulation, and external sector sustainability. For this reason, recent studies examining remittances, capital inflows, and external sector performance have continued to adopt the balance of payments framework in analysing developing economies (World Bank, 2024; Chude et al., 2026; Isana et al., 2025).

2.2 Monetary Approach to the Balance of Payments

The Monetary Approach to the Balance of Payments (MABP) emerged in the 1950s and 1960s as an alternative to traditional approaches that primarily explained balance of payments disequilibrium through trade flows and relative prices. The approach is closely associated with the works of Polak (1957), Mundell (1968), Johnson (1972), and other monetary economists who emphasised the role of money supply, money demand, income, prices, and credit conditions in determining a country's external balance. The Monetary Approach argues that balance of payments disequilibrium is fundamentally a monetary phenomenon arising from differences between the supply of and demand for money.

The theory is built on several fundamental assumptions. First, it assumes that economic agents demand money as a function of income, prices, and other relevant economic conditions. Secondly, it assumes that changes in the domestic money supply influence expenditure and,

consequently, the demand for foreign goods and assets. Thirdly, it assumes that international reserves adjust in response to excess demand or excess supply in the domestic money market. Finally, it assumes that persistent balance of payments disequilibrium can be associated with sustained monetary imbalances, implying that appropriate monetary and macroeconomic policies can influence external adjustment. The approach therefore places considerable emphasis on the interaction between domestic monetary conditions and the external sector (Johnson, 1972; Frenkel & Johnson, 1976; IMF, 2023).

The Monetary Approach directly supports the inclusion of gross domestic product (GDP) as a control variable in this study. GDP represents the level of domestic economic activity and income and is closely related to the demand for money and expenditure within an economy. According to the monetary approach, an increase in domestic income can increase the demand for money; however, where monetary expansion exceeds the desired level of money holdings, economic agents may increase expenditure on goods and services, including imported goods. Higher domestic income may therefore increase import demand and influence the balance of payments. Conversely, changes in domestic economic activity can affect expenditure, money demand, and the capacity of the economy to generate or absorb external resources. GDP is therefore relevant to understanding the adjustment of Nigeria's balance of payments and current account balance.

2.3 Mundell–Fleming Model

The Mundell–Fleming Model was developed in the early 1960s by the separate efforts of Robert Mundell and J. Marcus Fleming, focusing on macroeconomic policy in an open economy. The model enhanced the Keynesian IS–LM framework by integrating aspects of international commerce, capital mobility, and exchange rate factors. Mundell (1963) and Fleming (1962) illustrated that the efficacy of monetary and fiscal strategies is heavily influenced by the exchange rate system and the level of international capital mobility.

The Mundell–Fleming Model elucidates that the efficacy of an open economy is dictated by the interplay of the local products market, monetary market, foreign currency market, and international capital market. The model posits that fluctuations in interest rates impact global capital movements, which in turn affect the demand for and supply of foreign currency, hence influencing the exchange rate. Fluctuations in the exchange rate subsequently impact the comparative prices of local and international products, thereby affecting exports, imports, overall demand, and the external equilibrium. The model consequently creates a significant link among fluctuations in exchange rates, global capital movements, domestic economic performance, and the balance of payments (Mundell, 1963; Fleming, 1962).

The model is constructed upon various essential premises. Initially, it presupposes a liberal economy that participates in global commerce and financial dealings with other nations. Secondly, it presupposes a significant level of capital mobility, whereby variations in domestic and international interest rates might affect transnational capital flows. Firstly, it presupposes that the exchange rate significantly contributes to the stabilisation of the foreign currency market and affects global trade. Ultimately, it posits that macroeconomic policies provide varying impacts contingent upon the exchange rate framework and the extent of capital mobility. In a floating exchange rate system, monetary policy typically exerts a more pronounced influence on output via fluctuations in exchange rates, while fiscal expansion can lead to capital inflows and an appreciation of the exchange rate, affecting net exports and the external balance (Mundell, 1963; Fleming, 1962).

Empirical Review

Chude, Onodu, and Umeh (2026) investigated the influence of diaspora remittances on Nigeria's balance of payments, seeking to assess the correlation among diaspora remittances,

balance of payments, trade liberalisation, and exchange rates. The research employed secondary time-series data spanning 1990 to 2024, obtained from national and international statistical repositories. The data were examined with descriptive statistics, a correlation matrix, the Augmented Dickey-Fuller unit root test, the Johansen co-integration test, the Dynamic Ordinary Least Squares (DOLS) estimation method, and Granger causality analysis. Research indicated that diaspora remittances exert a favourable and statistically significant influence on Nigeria's balance of payments, demonstrating a bilateral causal connection.

Isana, Ademeso, and Maiyaki (2025) investigated the influence of diaspora remittances on sustainable development in Nigeria, focusing on their contribution to economic sustainability and effects on macroeconomic stability, poverty reduction, and long-term growth. The research utilised data spanning from 2010 to 2024, encompassing remittance inflows, GDP contributions, and other economic metrics. A practical examination assessed the scale, pathways, and application of remittances. Research indicated that remittance inflows averaged more than \$20 billion each year, reaching a high of \$25 billion in 2018, which accounted for almost 6% of GDP; nevertheless, structural obstacles such as elevated transaction fees, informal pathways, and inadequate banking infrastructure curtailed its transformative capacity.

Nangih and Nwineewii (2024) examined the impact of diaspora remittances on Nigeria's Human Development Index (HDI), seeking to ascertain the influence of remittance inflows on human capital advancement. The research utilised the pure altruism theory and an ex post facto research methodology, employing data from the Central Bank of Nigeria Bulletin and the World Bank spanning 2010 to 2023. Descriptive statistics, correlation, and regression analysis were employed. Research indicated that diaspora remittances exert a substantial beneficial influence on HDI, underscoring their capacity to foster human capital advancement.

Adeagbo (2024) investigated the influence of diaspora remittances on the advancement of human capital in Nigeria, seeking to assess the effects of remittance inflows on education, healthcare, and skill development. The research utilised data from the World Bank's World Development Indicators spanning 1981 to 2021, evaluated by Ordinary Least Squares (OLS) regression. Research revealed a substantial and beneficial impact of diaspora remittances on the advancement of human capital.

Narang (2020) analysed the trends and patterns of remittance inflows from the diaspora on household consumption and investment in India, seeking to assess their impact on household economic behaviour and capital formation. Data from 1975 to 2017 were examined via two-stage least squares regression. Research demonstrated that remittances had a favourable and substantial impact on household expenditure and capital accumulation, hence indirectly affecting GDP.

Nyeche, Aninwagu, and Odu (2025) investigated the effects of gender-focused investment in education on economic growth in Nigeria using annual data covering the period from 1990 to 2023. The study examined the combined effects of female secondary school enrolment, government recurrent expenditure on education, and the Gender Parity Index (GPI) for primary school enrolment on real GDP per capita. Data on government recurrent expenditure on education were obtained from the Central Bank of Nigeria Statistical Bulletin, while data on real GDP per capita, female secondary school enrolment, and the gender parity index were sourced from the World Development Indicators. The study employed the Autoregressive Distributed Lag (ARDL) model to estimate both short-run and long-run relationships among the variables. The long-run ARDL results revealed that government recurrent expenditure on education and female secondary school enrolment exerted positive and statistically significant effects on real GDP per capita in Nigeria. Conversely, the gender parity index for primary school enrolment exerted a negative and statistically significant long-run effect on economic growth.

Didia, Didia, and Ayokunle (2018) examined the influence of diaspora remittances on economic development across 48 Sub-Saharan African nations, seeking to understand the interplay between remittances, GDP per capita, foreign direct investment, foreign aid, government spending, and literacy levels. The data were examined by panel multiple regression analysis. Research revealed a detrimental and statistically significant effect of remittances on economic growth, as these funds were not allocated to productive industries. The research suggested directing remittances toward constructive economic endeavours to foster growth

3. Methodology

This study adopts an ex-post facto design. The design is suitable because the research depends on historical data. The research utilises yearly time-series data spanning from 1990 to 2024, sourced from the Central Bank of Nigeria (CBN) Statistical Bulletin, World Bank Development Indicators (WDI), International Monetary Fund (IMF) databases, and various pertinent national and international statistical reports. The modelling of this study was theoretically anchored on Balance of Payments Theory.

The model was specified as stated below:

$$\text{BOP} = f(\text{LRMT}, \text{LEXR}, \text{LFDI}, \text{LGDP}) \quad (3.1)$$

$$\text{BOP} = \beta_0 + \beta_1\text{LRMT} + \beta_2\text{LEXR} + \beta_3\text{LFDI} + \beta_4\text{LGDP} + \mu_t \quad (3.2)$$

Where:

BOP = Balance of Payments

LDRMT = Diaspora Remittances

LEXR = Exchange Rate

LFDI = Foreign Direct Investment

LGDP = Gross Domestic Product

β_0 = Constant (Intercept)

β_1 – β_4 = Parameters to be Estimated

μ_t = Stochastic Error Term

t = Time Period (1990–2024)

4. Data Analysis

Table 4.1: Summary of Descriptive Statistics for the Variables

	BOP	LRMT	EXR	LFDI	LGDP
Mean	831.1489	8.234727	196.9294	7.576715	9.996244
Median	-761.0000	9.753104	132.2000	7.580302	10.45380
Maximum	14018.94	10.09869	1478.970	9.087162	12.57004
Minimum	-8452.470	2.303585	8.040000	5.702348	6.203830
Std. Dev.	5531.804	2.160942	264.7411	0.965756	1.847876
Skewness	0.916772	-0.971634	3.482146	-0.142660	-0.510677
Kurtosis	3.053999	2.955972	16.99847	2.027061	2.113761
Jarque-Bera	4.906996	5.509918	356.5019	1.499194	2.666684
Probability	0.085992	0.063612	0.000000	0.472557	0.263595
Sum	29090.21	288.2155	6892.530	265.1850	349.8685
Sum Sq. Dev.	1.04E+09	158.7688	2382986.	31.71131	116.0979
Observations	35	35	35	35	35

Source: Researcher's computations using Eviews 10, (2026)

The descriptive statistics in Table 4.2.1 show that BOP recorded a mean of 831.15 and a standard deviation of 5,531.80, indicating substantial fluctuations during the period. LRMT had a mean of 8.23 with a standard deviation of 2.16, while EXR recorded a mean of 196.93 and a relatively high standard deviation of 264.74. LFDI and LGDP had mean values of 7.58 and 10.00, respectively, with standard deviations of 0.97 and 1.85. The skewness results indicate that BOP and EXR were positively skewed, whereas LRMT, LFDI and LGDP were negatively skewed. The Jarque–Bera probabilities show that BOP, LRMT, LFDI and LGDP were normally distributed at the 5% level, while EXR was not normally distributed. Overall, the statistics reveal variations in the variables over the 35-year observation period.

Unit Root Test

Table 4.2: ADF Unit Root Test Results

Variable	ADF Statistic (Level)	Critical Value @ 5%	ADF Statistic (1st Diff.)	Critical Value @ 5%	Remark	Order of Integration
BOP	-3.993161	-2.95402	—	—	Stationary at Level	I(0)
CAB	-2.982589	-2.95402	—	—	Stationary at Level	I(0)
LRMT	-3.223473	-2.95113	—	—	Stationary at Level	I(0)
LEXR	-0.572928	-2.95113	-4.6776	-2.95402	Stationary at 1st Difference	I(1)
LFDI	-2.075411	-2.95113	-7.85336	-2.95402	Stationary at 1st Difference	I(1)
LGDP	-4.396596	-2.95113	—	—	Stationary at Level	I(0)

Source: Researcher's Analysis Result using EViews 10 (2026).

The findings of the Augmented Dickey–Fuller (ADF) unit root test displayed in Table 4.2 illustrate the stationarity characteristics of the variables included in the research. The findings demonstrate that BOP, CAB, LRMT, and LGDP exhibit stationarity at level, since their ADF test statistics are less than their corresponding 5% critical values. These variables are consequently integrated of order I(0). Conversely, LEXR and LFDI exhibit non-stationarity at level, since their ADF test statistics are not as negative as the relevant 5% critical thresholds. Nonetheless, both variables attain stationarity upon initial differencing, signifying that they are integrated of order I(1). Consequently, the findings indicate a combination of I(0) and I(1) variables, with no integration at order I(2). This amalgamation fulfils the stationarity criterion necessary for utilising the Autoregressive Distributed Lag (ARDL) bounds testing methodology to investigate the presence of a long-term association among the variables.

Table 4.3: Bounds cointegration test results for the model

Null Hypothesis: No Long-Run Relationships Exist				
Critical Value Bounds				
T-Statistic	Value	Significance	I(0)	I(1)
F-statistic	6.002462	10%	2.525	3.560
K	4	5%	3.058	4.223
		2.5%	3.695	4.725
		1%	4.280	5.840

Source: Researcher's computation using Eviews 10, (2026).

The results of the Bounds cointegration test displayed in Table 4.4 indicate that the computed F-statistic of 6.002462 above the upper bound critical values at the 10%, 5%, 2.5%, and 1%

significance thresholds, which are 3.560, 4.223, 4.725, and 5.840, respectively. Consequently, the null hypothesis asserting the absence of a long-term link between the variables is dismissed.

Estimation Results and Discussion

Table 4.4: Long-Run ARDL Coefficients

	Dependent	Variable	BOP	
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LRMT	6328.265	1266.469	4.99678	0.0011
LEXR	6170.702	1958.954	3.149999	0.0136
LFDI	-1451.838	873.965	-1.66121	0.1352
LGDP	-9338.69	1834.92	-5.08943	0.0009
C	24395.98	10297.44	2.369131	0.0453

Source: Researcher's Analysis Result using EViews-10 (2026).

The long-term ARDL coefficients displayed in Table 4.4 indicate that LRMT exerts a positive and statistically significant influence on BOP, with a coefficient of 6,328.265 and a probability value of 0.0011. This suggests that rises in diaspora remittances correlate with enhancements in Nigeria's balance of payments over the long term. The discovery aligns with the anticipation that heightened remittance inflows offer supplementary foreign exchange assets that can bolster the nation's external standing.

In a similar manner, LEXR exerts a beneficial and statistically significant influence on BOP, evidenced by a coefficient of 6,170.702 and a probability value of 0.0136. This indicates that fluctuations in the exchange rate correlate with enhancements in Nigeria's balance of payments over the long term. The favourable correlation can indicate the impact of currency fluctuations on exports, imports, foreign exchange earnings, and various international dealings.

Conversely, LFDI exerts a negative albeit statistically inconsequential influence on BOP, reflected by a coefficient of -1,451.838 and a probability value of 0.1352. This suggests that foreign direct investment exhibits a negative correlation with the balance of payments over the long term, while the impact lacks statistical significance at the 5% threshold. Consequently, the data is inadequate to assert that foreign direct investment had a substantial long-term impact on Nigeria's balance of payments during the analysed timeframe.

LGDP exerts a detrimental and statistically significant influence on BOP, evidenced by a coefficient of -9,338.690 and a probability value of 0.0009. This suggests that long-term growth in GDP correlates with a deterioration in Nigeria's balance of payments. One potential rationale is that heightened economic activity could elevate the demand for imported capital goods, intermediate inputs, and consumer products, thereby amplifying foreign exchange outflows and exerting strain on the external balance.

The constant term is affirmative and statistically noteworthy at the 5% threshold, with a coefficient of 24,395.980 and a p-value of 0.0453. This denotes the intercept of the projected long-term association when the independent variables are maintained at their baseline levels.

Table 4.5: Short-Run ARDL Error Correction Regression

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(BOP(-1))	2,332.51	346.182	6.7378	0.0001
D(BOP(-2))	1,675.98	294.715	5.6868	0.0005
D(BOP(-3))	847.782	204.305	4.1496	0.0032
D(LRMT)	7,151.12	1,894.31	3.7751	0.0054
D(LRMT(-1))	-13,821.94	2,190.07	-6.3112	0.0002
D(LRMT(-2))	-6,478.09	1,857.05	-3.4884	0.0082
D(LEXR)	6,643.20	2,233.73	2.974	0.0178
D(LEXR(-1))	-15,910.93	2,695.38	-5.903	0.0004
D(LEXR(-2))	-19,067.10	3,289.05	-5.7971	0.0004
D(LEXR(-3))	-8,722.19	2,865.89	-3.0434	0.016
D(LFDI)	2,322.41	1,365.77	1.7004	0.1275
D(LFDI(-1))	8,894.39	1,678.95	5.2976	0.0007
D(LFDI(-2))	4,581.87	1,481.20	3.0933	0.0148
D(LGDP)	-15,340.82	10,100.19	-1.5189	0.1673
D(LGDP(-1))	-2,760.90	7,678.07	-0.3596	0.7285
D(LGDP(-2))	26,942.81	7,347.53	3.6669	0.0063
D(LGDP(-3))	18,312.89	7,179.10	2.5509	0.0341
CointEq(-1)	-3.777493	0.493784	-7.6501	0.0001
R² = 0.914773				Durbin-Watson = 1.45635
Adjusted R² = 0.803322				

Source: Researcher's Analysis using EViews 10 (2026).

The immediate outcomes presented in Table 4.6 indicate that the recent alteration in diaspora remittances, D(LRMT), exerts a positive and statistically significant influence on BOP, with a coefficient of 7,151.123 and a probability value of 0.0054. This suggests that rises in diaspora remittances correlate with enhancements in Nigeria's balance of payments in the short term. The initial and subsequent lagged alterations in remittances have negative and statistically significant impacts, with coefficients of -13,821.940 and -6,478.087, respectively. This implies that the immediate beneficial influence of remittances on the balance of payments is succeeded by adverse impacts in later periods, signifying a reversal in the short-term impact. The present fluctuation in the exchange rate, D(LEXR), exerts a favourable and statistically significant influence on the balance of payments (BOP), with a coefficient of 6,643.203 and a p-value of 0.0178. Nonetheless, the initial, secondary, and tertiary lagged alterations are negative and statistically significant. This suggests that fluctuations in exchange rates have varied short-term impacts on Nigeria's balance of payments, first yielding positive effects that are later succeeded by negative consequences.

The present alteration in foreign direct investment, D(LFDI), exhibits a positive albeit statistically inconsequential impact on the balance of payments, characterised by a coefficient of 2,322.406 and a probability value of 0.1275. Nevertheless, the initial and secondary lagged alterations are affirmative and statistically notable, exhibiting coefficients of 8,894.391 and 4,581.871, correspondingly. This implies that foreign direct investment can provide a postponed beneficial impact on Nigeria's balance of payments instead of an immediate statistically notable benefit.

The present alteration in GDP, D(LGDP), exerts a negative albeit statistically inconsequential influence on BOP, reflected by a coefficient of -15,340.820 and a probability value of 0.1673. The initial lag is negative and lacks statistical significance, while the second and third lagged

variations are positive and statistically significant. This indicates that fluctuations in economic activity might exert lagged impacts on Nigeria's balance of payments.

The error correction coefficient, CointEq(-1), is -3.777493 and is statistically significant at the 1% level, with a p-value of 0.0001. The negative and statistically significant coefficient validates the presence of an adjustment mechanism that rectifies short-term divergences from the long-term equilibrium. Given that the magnitude of the coefficient exceeds one, the adjustment mechanism suggests excessive correction, indicating that the system can overshoot the long-term equilibrium prior to stabilising. Consequently, the modification is expected to transpire via an oscillating mechanism instead of a straightforward monotonic process.

The model exhibits a R^2 value of 0.914773, signifying that roughly 91.48% of the variability in the dependent variable is accounted for by the factors present in the short-run model. The modified R^2 of 0.803322 signifies that roughly 80.33% of the variance is accounted for after accounting for the quantity of predictors. The Durbin-Watson statistic of 1.456350 is included in the model statistics; yet, the formal evaluation of serial correlation is conducted by the Breusch–Godfrey LM test found in the diagnostic tests. The Breusch–Godfrey test yields a probability value of 0.0731, surpassing 0.05, so the null hypothesis of no serial connection remains accepted.

Table 4.7: Post-Estimation Tests Results

Test	F-Statistic	Probability	Null Hypothesis	Decision
Breusch–Godfrey Serial Correlation LM	2.990368	0.0731	Ho: No serial correlation	Do Not Reject Ho
Breusch–Pagan– Godfrey Heteroskedasticity	0.751374	0.6600	Ho: Homoscedasticity	Do Not Reject Ho
Normality Test (Jarque–Bera)	1.121947	0.570653	Ho: Normally distributed	Do Not Reject Ho

Source: *Researcher's Analysis using EViews 10 (2026).*

The post-estimation diagnostic findings demonstrate that ARDL model estimation meets the primary diagnostic criteria. The Breusch–Godfrey Serial Correlation LM test yields an F-statistic of 2.990368 and a p-value of 0.0731, exceeding the 5% significance threshold; therefore, the null hypothesis of absent serial correlation is upheld, suggesting that the residuals are not significantly serially correlated. The Breusch–Pagan–Godfrey heteroskedasticity test yields an F-statistic of 0.751374 and a probability value of 0.6600, beyond 0.05, resulting in the acceptance of the null hypothesis of homoscedasticity and suggesting that the residual variance remains stable. The Jarque–Bera normality test yields a statistic of 1.121947 and a p-value of 0.570653, beyond 0.05; thus, the null hypothesis of normally distributed residuals is upheld, suggesting that the residuals do not markedly diverge from normality. The diagnostic findings indicate that Model 1 exhibits no substantial serial correlation or heteroskedasticity, and the residuals adhere to the normality assumption, validating the model's statistical suitability for subsequent analysis and inference.

5. Conclusion and Recommendations

Conclusion

The estimation findings lead to the conclusion that diaspora remittances significantly and positively influence Nigeria's balance of payments in the long run. The positive long-run effect indicates that remittance inflows contribute to improving the country's external position by providing additional foreign exchange resources. However, the mixed short-run effects suggest that the immediate benefits of remittances may be partly reversed over subsequent periods, possibly due to increased consumption and import demand. The study therefore concludes that the potential of diaspora remittances to sustainably improve Nigeria's balance of payments depends on their effective mobilisation and productive utilisation in foreign exchange-generating and investment-oriented activities.

Recommendations

Based on the findings and conclusion drawn from this study, the following recommendations are made:

- i. The Federal Government of Nigeria, through the Central Bank of Nigeria (CBN) and relevant agencies, should promote the productive utilisation of diaspora remittances by providing incentives for recipients to channel remittance inflows into export-oriented businesses, agriculture, manufacturing, and other foreign exchange-generating activities rather than concentrating them mainly on household consumption.
- ii. The government should strengthen diaspora investment through an enabling investment environment by improving the ease of doing business and providing targeted incentives such as tax reliefs, investment guarantees, and dedicated diaspora investment schemes.
- iii. Trade policies should focus on reducing excessive import dependence while promoting exports, particularly value-added goods and services.
- iv. Government agencies responsible for diaspora affairs should strengthen engagement with Nigerians in the diaspora through regular investment forums, digital investment platforms, and strategic partnerships.

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