IMPACT OF EXPORT EXPANSION GRANTS AND NAIRA DEVALUATION ON NIGERIAN BALANCE OF PAYMENT: ARDL APPROACH

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Abstract

The study examines the impact of Export Expansion Grants (EEGs) and Naira devaluation on Nigeria's Balance of Payments (BOP) using annual time series data from 1986 to 2024, employing the Autoregressive Distributed Lag (ARDL) model. The findings reveal significant BOP fluctuations due to inconsistent trade performance and volatile monetary conditions, with export expansion grants and currency devaluation exhibiting mixed long-run effects. While trade balance negatively impacts BOP, interest rates and exports contribute positively, and currency devaluation helps counter short-term depreciation concerns. The error correction term (-0.4325) confirms that deviations from equilibrium are corrected at a rate of 43% per year. Based on these findings, the study recommends that Nigeria implement policies promoting non-oil exports through targeted incentives, access to finance, and support for value-added production to enhance foreign exchange inflows; adopt measures to manage currency volatility, ensuring devaluation policies are complemented by interventions that prevent excessive short-term shocks while improving long-term competitiveness; invest in infrastructure, modernize ports, improve logistics, and support industrial capacity to reduce inefficiencies in trade and production; and align short-term interventions, such as export expansion grants, with broader monetary and fiscal policies to maximize effectiveness, reduce delays, and maintain long-term external sector stability.

Keywords: *Balance of Payment, Export Expansion Grants, Naira Devaluation, Nigeria, Trade Policy*

Background to the Study

The Export Expansion Grant (EEG) scheme, established in 1986 under Decree No. 18, was introduced to boost Nigeria's non-oil exports by offering financial incentives, thereby enhancing the balance of payments (NEPC, 2021). Evidence shows that the EEG positively influenced non-oil export growth between 1986 and 2015, improving the external sector (Ali & Madueme, 2019). Nonetheless, its effectiveness has been constrained by disbursement delays, fraudulent claims, and administrative inefficiencies (Irmiya, 2023).

Alongside export incentives, naira devaluation has had mixed impacts: while it improved export competitiveness and boosted export earnings, it also raised import costs, fueled inflation, and exposed import-dependent sectors to vulnerabilities (Inuwa et al., 2023). Irmiya (2023) further emphasizes that exchange rate fluctuations contribute to balance of payments instability, underscoring the need for a stable foreign exchange policy.

Studies reinforce these dynamics: Babatunde (2015) found that devaluation enhances export competitiveness but increases import costs, with significant implications for trade balances. Recent data shows Nigeria's foreign reserves rose to over $40 billion, reflecting improved investor confidence and a stronger balance of payments, while remittance inflows doubled to $600 million in September 2024, strengthening the financial account (CBN, 2024). However, persistent inflationary pressures and rising import costs continue to strain domestic consumption and trade performance. Overall, a balanced strategy combining export incentives like EEG with stable exchange rate management is essential to sustain improvements in Nigeria's balance of payments and economic growth.

Nigeria's balance of payments has long been burdened by recurring deficits, dwindling reserves, and dependence on crude oil exports, challenges worsened by oil price volatility, weak export diversification, and frequent naira devaluations. The Export Expansion Grant (EEG) was introduced to incentivize non-oil exports and ease pressure on the balance of payments, while devaluation theoretically boosts competitiveness by making exports cheaper and imports costlier. However, evidence shows that naira devaluation produces mixed outcomes, as it raises import costs, fuels inflation, and undermines purchasing power, often offsetting export gains (Inuwa *et al.,* 2023). This creates uncertainty over whether EEG and devaluation complement or contradict each other in improving external balance. Despite decades of both policies, Nigeria continues to face deficits, foreign exchange scarcity, and debt accumulation, raising the need to critically assess how these measures interact and whether they can collectively deliver sustainable improvements to the country's balance of payments. The objective of the study is to determine the effect of export expansion grants and Naira devaluation on Nigeria's balance of trade

Literature Review and Theoretical Framework

Conceptual Review

Overview of the Export Expansion Grant (EEG) Scheme

The Export Expansion Grant (EEG) Scheme was introduced in 1986 under the Export (Incentives & Miscellaneous Provisions) Decree No. 18 of 1986 as a post-shipment incentive designed to support Nigerian exporters in expanding their reach into international markets. Administered by the Nigerian Export Promotion Council (NEPC), the scheme aims to promote non-oil exports, enhance competitiveness, and encourage diversification as part of Nigeria's broader economic growth strategy (NEPC, 2023). It provides financial support in the form of Export Credit Certificates (ECCs), which can be used to offset government taxes, repay loans, or purchase bonds (Federal Ministry of Finance, 2023). Despite its contributions to non-oil export growth, the EEG faces challenges such as policy inconsistencies, delays in

disbursement, and fraudulent claims, which hinder its effectiveness (Federal Ministry of Industry, Trade & Investment, 2023).

Devaluation

Devaluation refers to the deliberate reduction in the value of a nation's currency relative to other currencies, goods, or services, typically within a fixed exchange rate system (Yioyio, 2015). It is a policy instrument often employed to make exports more competitive and reduce trade deficits. While it can stimulate exports, devaluation also raises the cost of imports, potentially fueling inflation and reducing purchasing power (Yilkal, 2014).

Balance of Payments (BoP)

The Balance of Payments (BoP) is a comprehensive record of all economic transactions between residents of a country and the rest of the world over a specific period (usually one year). It includes trade in goods, services, and capital flows, providing insight into a nation's external economic position (CBN, 2023). For Nigeria, heavily reliant on crude oil exports, the BoP is highly sensitive to fluctuations in oil prices, exchange rate adjustments, and export incentive schemes such as the EEG, making it central to understanding the impact of both naira devaluation and export incentives on economic stability.

Theoretical Framework

This study adopts the elasticities approach, developed by Robinson (1937), as the theoretical framework for analyzing the impact of export expansion grants (EEG) and naira devaluation on Nigeria's balance of payments. The approach posits that the effectiveness of devaluation in correcting trade imbalances depends on the price elasticity of demand for exports and imports. If the sum of these elasticities exceeds one (Marshall-Lerner condition), devaluation will improve the trade balance by making exports cheaper and imports more expensive. In the Nigerian context, the framework is appropriate for assessing how devaluation episodes (1986–2024) influenced export revenues and import costs, given the country's reliance on oil exports and imported goods. Furthermore, it provides a useful lens for evaluating the EEG, which aims to stimulate non-oil exports by lowering production costs and enhancing competitiveness. By analyzing export and import elasticities, this framework allows the study to test whether EEG incentives and naira devaluation jointly or separately contributed to improvements in Nigeria's balance of payments performance.

Literature Review

Ojonugwa (2024) examine the asymmetric impact of exchange rate on balance of payment in Nigeria. The study employed the Nonlinear Autoregressive Distributed Lag estimation technique to analyze the asymmetric impact of exchange rate fluctuations on Nigeria's balance of payments. Additionally, it considers the impact of control variables such as real interest rates, gross fixed capital formation, trade openness, trade policies, financial deepening, natural resources, and trade balance. Findings from this study revealed that the exchange rate has an asymmetric impact on the balance of payments in Nigeria.

Other control variables were statistically insignificant but contributed positively to the balance of payment in Nigeria.

Chinwe et al. (2024) conducted an empirical analysis on the causative effects of lingering naira devaluation on the Nigerian economy from 1995 to 2022. The study employed a quantitative research design using secondary data sourced from the Central Bank of Nigeria (CBN) Statistical Bulletin. Multiple regression analysis was used to examine the impact of naira depreciation on key macroeconomic indicators. The key variables included real gross domestic product (RGDP) as the dependent variable, while naira depreciation (DN), exchange rate (EXR), lending rate (LR), and money supply (MS) were the independent variables. The findings revealed that inflation negatively impacted GDP, while loan costs had a positive effect. Exchange rate volatility was found to have a significant negative influence on GDP, indicating that persistent devaluation of the naira hampers economic growth. The study recommended diversifying the economy by expanding non-oil exports, implementing demand management policies to stabilize the exchange rate, and adopting a realistic exchange rate policy to curb excessive demand for foreign exchange. Additionally, the research suggested prioritizing industrialization and local production to reduce dependency on imports and mitigate the adverse effects of exchange rate volatility on economic performance.

Ayaji and Tijani (2024) examined the impact of non-oil export expansion on Nigeria's economic growth from 1990 to 2022 using an Ordinary Least Squares (OLS) regression model with Newey-West heteroscedasticity and autocorrelation adjustments. The study utilized secondary data obtained from the Central Bank of Nigeria (CBN) and the National Bureau of Statistics (NBS). The key variables included real GDP (RGDP) as the dependent variable, while non-oil export (NOE), oil revenue (NOREV), and the exchange rate (EXCR) served as the independent variables. The findings revealed a significant positive relationship between non-oil exports and GDP growth, with a 1% increase in non-oil exports contributing to a 19.83% rise in GDP. Similarly, oil revenue exhibited a 26% positive correlation with GDP, while the exchange rate had a negative impact, indicating that exchange rate fluctuations hinder economic growth. The study concluded that the expansion of non-oil exports is crucial for Nigeria's economic diversification and recommended policies that enhance non-oil export competitiveness, improve foreign market readiness, and ensure exchange rate stability to mitigate adverse effects on economic growth.

Ologbenla (2023) examined the impact of exchange rate fluctuations on Nigeria's balance of payments from 2002 to 2021 using the Ordinary Least Squares (OLS) regression technique. The study sourced secondary data from the Central Bank of Nigeria (CBN) and applied statistical tests, including the R-squared test, economic a priori criteria, and Durbin Watson (D.W) test, to analyze the explanatory power of the variables and detect autocorrelation. The key variables included the balance of payments (BOP) as the dependent variable, while exchange rate (EXR), economic openness (OPN), and foreign direct investment (FDI) served as independent variables. The results indicated a weak negative relationship between the exchange rate and Nigeria's balance of payments ($\beta = -0.0518$, $p = 0.041$), signifying that exchange rate depreciation had an adverse effect on the country's external balance. However, economic openness and foreign direct investment were found to be statistically insignificant in determining Nigeria's balance of payments. Based on these findings, the study recommended that the government implement

policies to stabilize exchange rates, impose import restrictions to mitigate balance of payments deficits, and attract foreign direct investment by ensuring a stable macroeconomic environment.

Irmiya *et al.* (2023) examined the effects of exchange rate fluctuations on Nigeria's balance of payments from 2010 to 2019. The study adopted an ex post facto research design and utilized secondary data from the Central Bank of Nigeria (CBN) and the National Bureau of Statistics (NBS). Using descriptive statistics, Pearson's correlation, and SPSS 23 software, the study analyzed the relationship between exchange rate fluctuations and balance of payments (BOP) components, including the current account, capital account, and financial account. The findings revealed that exchange rate instability had a negative impact on Nigeria's balance of payments, with a negative correlation (-0.433) between exchange rate fluctuations and the BOP current account, indicating that increased volatility leads to a deterioration in the current account balance. Additionally, a weak negative correlation (0.017) was found between exchange rate fluctuations and the BOP financial account, suggesting that while the impact is minimal, fluctuations still have negative effects on financial transactions related to the balance of payments. However, the study found that exchange rate fluctuations had no significant effect on the BOP capital account. The researchers concluded that exchange rate volatility weakens the naira, discourages exports, increases import costs, and hinders both domestic and foreign investment, ultimately leading to balance of payments deficits. Based on these findings, the study recommended that the Central Bank of Nigeria (CBN) should prioritize exchange rate stability to mitigate adverse effects on trade and investment. Furthermore, the government was advised to implement policies that promote trade openness, economic diversification, and export growth beyond the oil sector. Lastly, it was suggested that exchange rate adjustments should be complemented with practical macroeconomic policies to reduce excessive volatility and improve Nigeria's trade balance.

The study by Inuwa, *et al.* (2023) examines the impact of Naira devaluation on Nigeria's balance of trade using time-series data from 1986 to 2021, focusing on both shortrun and long-run dynamics through econometric modeling. The objectives include assessing the long-run equilibrium relationship between Naira devaluation and trade balance, analyzing short-run effects on exports and imports, and determining causality. The study hypothesizes that Naira devaluation may not significantly impact trade balance, lacks a long-run relationship, and has no causal effect. Data is sourced from the National Bureau of Statistics (NBS), World Bank, and Central Bank of Nigeria (CBN), with trade balance as the dependent variable and currency devaluation, export rate, import rate, and interest rate as independent variables. Econometric techniques include unit root tests for stationarity, Johansen cointegration tests for long-run relationships, Vector Auto-Regression (VAR) for short-run analysis, Vector Error Correction Model (VECM) for adjustment speed, and impulse response function with variance decomposition for shock analysis. Expected findings suggest that Naira devaluation positively influences trade balance in the long run, while short-run effects may cause initial imbalances before stabilizing, consistent with the J-Curve effect. The study anticipates a significant and negative error correction term, implying gradual equilibrium adjustments. Policy recommendations emphasize reducing import dependence, enhancing export competitiveness, supporting domestic industries to benefit from currency depreciation, and ensuring coordinated monetary and fiscal policies to mitigate inflationary pressures.

Methodology

Research Design

Research Design

This study employs a Time Series Research Design, as it focuses on analyzing data over a specific period to examine trends, patterns, and causal relationships. Given that the study investigates the impact of export expansion grants and naira devaluation on Nigeria's balance of payment, the use of time series data is essential for capturing historical fluctuations and assessing the effects of these policies over time.

Sources of Data

This research analyzes the role of export expansion grants and naira devaluation in mitigating Nigeria's balance of payment from 1986 to 2024 using time series data. The data is sourced from the Central Bank of Nigeria (CBN) Statistical Bulletins (2025), the World Bank Development Indicators (WDI, 2025), and the Nigeria Export Promotion Council (NEPC, 2025).

Method of Data Analysis

The study employs the Autoregressive Distributed Lag (ARDL) model developed by Pesaran, Shin, and Smith (2001) to analyze the dynamic relationships among the selected economic variables. The ARDL approach is particularly suitable for time-series data that may be a mixture of stationary at levels I(0) and at first difference I(1), but not at second difference I(2). This makes it appropriate for investigating both the short-run dynamics and the long-run equilibrium relationships among variables such as Balance of Payments (BOP), Export Expansion Grants (EEG), Trade Balance (TBC), Currency Devaluation (CDV), Interest Rate (INT), Import (IMPT), and Export (EXPT).

Model Specification

The model for this study focuses on the impact of export expansion grants and naira devaluation on Nigeria's balance of payments. The model was adapted from Bernard Ojonugwa (2024) which was given as:

$$BOP = (BOP_{t-1}, EXR_t, EGR_t, IR_t, RA_t, EX_t, IM_t, MS_t)\dots\dots\dots\dots\dots\dots\dots\dots\dots(3.1)$$

The linear e quation of the model was written as

$$BOP_t = \beta_0 + \beta_1 BOP_{t-1} + \beta_2 EXR_t + \beta_3 EGR_t + \beta_4 IR + \beta_5 RA_t + \beta_6 EX_t + \beta_7 IM_t + \beta_8 MS_t$$
$$+ \varepsilon_t \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots(3.2)$$

Where: BOP$_t$ = Balance of payment, BOP$_{t-1}$= pass changes in the balance of payment, MS = Money Supply, EGR = Economic Growth, IR = Inflation Rate, RA = Reserve Assets, EX = Export Income, IM = Import Expenditure, EXR = Exchange Rate, t = time variant.

The model was adapted because of its relevance, accuracy and applicability to this research work. However, this study adapted, modified and presented as;

$$BOP = f(EEG, TBC, CDV, INT, IMPT, EXPT) \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots (3.3)$$

Transform equation (3.3) into econometric model

$$BOP_t = \beta_0 + \beta_1 EEG_t + \beta_2 TBC_t + \beta_3 CDV_t + \beta_4 INT_t + \beta_5 IMPT_t + \beta_6 EXPT_t + \mu_t \dots \dots \dots \dots \dots (3.4)$$

Where; Balance of Payment (BOP), Export Expansion Grant (EEG), Trade Balance (TBC), Currency Devaluation (CDV), Interest Rate (INT), Import (IMPT), and Export (EXPT), β_0=Constant term, $\beta_1 - \beta_6$ = parameter of the variables to be estimated, μ_t = error term.

Results and Discussion

Table 1: Descriptive Statistics

	BOP	EEG	TBC	CDV	INT	IMPT	EXPT
Mean	3.78E+10	0.141117	2.73E+10	139.8569	6.987871	1.10E+10	3.83E+10
Median	2.72E+10	0.122409	2.08E+10	127.2299	7.207009	6.18E+09	3.47E+10
Maximum	1.01E+11	0.327554	7.69E+10	460.7020	11.06417	3.85E+10	9.91E+10
Minimum	3.53E+09	0.021819	1.40E+09	1.754523	0.724167	8.04E+08	2.56E+09
Std. Dev.	3.18E+10	0.082395	2.29E+10	128.7311	2.232740	9.89E+09	3.08E+10
Skewness	0.386101	0.599694	0.784807	0.949206	-0.909390	0.734215	0.515835
Kurtosis	1.614284	2.298684	2.448187	3.038645	4.433442	2.723948	1.984535
Jarque-Bera	3.984469	3.056426	4.382956	5.708652	8.490971	3.534775	3.317897
Probability	0.136390	0.216923	0.111751	0.057595	0.014329	0.170779	0.190339
Sum	1.44E+12	5.362457	1.04E+12	5314.563	265.5391	4.17E+11	1.45E+12
Sum Sq. Dev.	3.74E+22	0.251191	1.95E+22	613152.3	184.4498	3.62E+21	3.50E+22
Observations	38	38	38	38	38	38	38

Source: *Author's Computation (2025)*

As presented in Table 1 the descriptive statistics reveal significant volatility in Nigeria's Balance of Payments (BOP) and related variables. The mean BOP (₦37.80 billion) indicates overall positive performance, though wide fluctuations (SD = ₦31.80 billion) reflect recurring trade imbalances driven by oil price shocks and external pressures. Export Expansion Grants (EEG) show a low mean (0.14) with moderate variability, suggesting weak and inconsistent government support for non-oil exports. Currency Devaluation (CDV) has a high mean (139.86) with extreme fluctuations, highlighting sharp episodes of naira depreciation without sustained improvements in external balance. Trade Balance (₦27.30 billion mean, SD = ₦22.90 billion) also fluctuates widely between surplus and deficit. Imports (₦11.00 billion) and Exports (₦38.30 billion) demonstrate large variability, while interest rates display negative skewness, reflecting frequent policy-driven reductions. Overall, the data underscores the instability of Nigeria's trade and monetary environment, where policies like EEG and devaluation have produced mixed and inconsistent outcomes in stabilizing the balance of payments.

Table 2: Correlation Matrix

	LBOP	LEEG	LTBC	LCDV	LINT	LIMPT	LEXPT
LBOP	1.000000						
LEEG	0.857058	1.000000					
LTBC	0.913313	0.968812	1.000000				
LCDV	0.869647	0.650672	0.730126	1.000000			
LINT	0.358813	0.218952	0.260703	0.594208	1.000000		
LIMPT	0.984543	0.835636	0.878105	0.888435	0.398844	1.000000	
LEXPT	0.963206	0.953397	0.986531	0.798874	0.304758	0.941908	1.000000

Source: *Author's Computation (2025)*

The correlation results show in table 2, shows strong positive relationships among key variables affecting Nigeria's balance of payments (BOP). Export Expansion Grants (LEEG) are highly correlated with BOP (0.86), trade balance (0.97), and exports (0.95), confirming their role in boosting trade competitiveness and external stability. Currency devaluation (LCDV) also shows a strong link with BOP (0.87), though its impact on trade balance (0.73) and exports (0.80) is weaker compared to direct incentives. Imports (0.98) and exports (0.96) strongly influence BOP, while the near-perfect correlation between exports and trade balance (0.99) underscores the centrality of export growth in improving external accounts. Interest rates exhibit weaker correlations, suggesting limited direct influence relative to trade-related variables. Overall, the results highlight that BOP performance is primarily driven by trade dynamics, with export incentives exerting stronger effects than currency devaluation.

Table 3: Augmented Dickey Fuller (ADF) and Phillips-perron (PP) Test

	ADF Test			PP Test		
	With Constant & Trend			*With Constant & Trend*		
Variable	**At Level**	**1st Diff.**	**Order of Integration**	**At Level**	**1st Diff.**	**Order of Integration**
LBOP	1.3385 (0.9518)	-6.0735 (0.0001)***	I(1)	-1.8850 (0.6420)	-6.0734 (0.0001)***	I(1)
LEEG	-0.9757 (0.2886)	-6.2942 (0.0000)***	I(1)	-2.1575 (0.4982)	-6.3670 (0.0000)***	I(1)
LTBC	0.6475 (0.8516)	-6.3208 (0.0000)***	I(1)	-2.1379 (0.5086)	-6.3208 (0.0000)***	I(1)
LCDV	2.0485 (0.9889)	-6.4709 (0.0000)***	I(1)	-2.9642 (0.1555)	-6.6379 (0.0000)***	I(1)
LINT	-4.4228 (0.0061)***	-5.5775 (0.0003)***	I(0)	-10.2924 (0.0000)***	-5.6246 (0.0003)***	I(0)
IMPT	1.1992 (0.9380)	-6.1953 (0.0001)***	I(1)	-1.9946 (0.5850)	-6.5398 (0.0000)***	I(1)
LEXPT	0.8449 (0.8890)	-6.2179 (0.0000)***	I(1)	-2.0187 (0.5722)	-6.2179 (0.0000)***	I(1)

(*)Significant at the 10%; (**)Significant at the 5%; (***) Significant at the 1%.
Source: *Author's Computation (2025)*

The Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) test results indicate in table 3, that all variables except interest rate (LINT) are non-stationary at levels but become stationary after first differencing, implying they are integrated of order one, I(1). This suggests that the balance of payment (LBOP), export expansion grants (LEEG), trade balance (LTBC), currency devaluation (LCDV), imports

(LIMPT), and exports (LEXPT) follow long-term trends and require differencing to achieve stationarity. In contrast, LINT is stationary at level, indicating it is mean-reverting and more stable compared to other macroeconomic indicators. These findings align with previous studies, such as Ologbenla (2023) and Ali & Madueme (2019), which highlight that Nigeria's macroeconomic variables often exhibit non-stationarity due to external shocks and policy fluctuations. The stationarity of interest rates, as supported by Akpansung (2021), reflects the immediate impact of monetary policy on financial markets. Given that most variables are I(1), further long-run analysis, such as cointegration testing, is necessary to determine stable economic relationships over time.

Table 4: ARDL Bounds Test for Cointegration

Test Statistic	Value	K
F-statistic	12.65779	6
Critical Value Bounds		
Significance	I0 Bound	I1 Bound
10%	1.99	2.94
5%	2.27	3.28
1%	2.88	3.99

Source: *Author's Computation (2025)*

The ARDL Bounds Test for cointegration as presented in table 4, examines the long-run relationship between the variables in the model. The F-statistic value of 12.66 is significantly higher than the upper bound critical values at all significance levels (1%, 5%, and 10%), indicating strong evidence of cointegration among the variables. Since the F-statistic exceeds the I1 Bound (upper bound) at the 1% level (3.99), the null hypothesis of no cointegration is rejected. This implies a stable long-run relationship between Nigeria's balance of payments (BOP), export expansion grants (EEG), trade balance (TBC), currency devaluation (CDV), interest rate (INT), imports (IMPT), and exports (EXPT). This result suggests that changes in export expansion grants and naira devaluation have a lasting impact on Nigeria's balance of payments. When exports are incentivized through grants, and currency devaluation makes exports more competitive, these factors significantly influence trade balance and overall external sector performance. Given the presence of cointegration, policymakers should focus on long-term strategies that stabilize the exchange rate while promoting export-friendly policies. The significance of the relationship also indicates that short-term fluctuations in these variables are unlikely to disrupt the long-run equilibrium, reinforcing the need for structural adjustments to enhance Nigeria's trade balance and economic resilience

Table 5: ARDL Estimation Based on AIC Selection (3, 3, 3, 3, 1, 3, 2)

PANEL A: Long run ARDL				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LEEG	0.438832	0.268913	1.631878	0.1338
LTBC	-2.431304	0.562884	-4.319372	0.0015***
LCDV	0.046848	0.030716	1.525195	0.1582
LINT	0.289090	0.118356	2.442540	0.0347**
LIMPT	-0.235058	0.191212	-1.229301	0.2471
LEXPT	3.433690	0.627218	5.474477	0.0003***
C	4.339287	3.951772	1.098061	0.2979

PANEL B: Short run ARDL

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LBOP(-1))	-0.217743	0.073799	-2.950473	0.0145**
D(LBOP(-2))	-0.468936	0.072616	-6.457741	0.0001***
D(LEEG)	1.424953	0.273449	5.211044	0.0004***
D(LEEG(-1))	-3.134013	0.305124	-10.271287	0.0000***
D(LEEG(-2))	-0.997440	0.214595	-4.648017	0.0009***
D(LTBC)	-0.936947	0.194498	-4.817266	0.0007***
D(LTBC(-1))	1.022095	0.213161	4.794949	0.0007***
D(LTBC(-2))	0.785919	0.121948	6.444707	0.0001***
D(LCDV)	0.685403	0.063522	10.789946	0.0000***
D(LCDV(-1))	0.405906	0.057258	7.089063	0.0000***
D(LCDV(-2))	0.067658	0.042478	1.592804	0.1423
D(LINT)	-0.002170	0.042260	-0.051359	0.9601
D(LIMPT)	-0.291467	0.081059	-3.595747	0.0049**
D(LIMPT(-1))	0.773729	0.086644	8.930016	0.0000***
D(LIMPT(-2))	0.417383	0.086579	4.820850	0.0007***
D(LEXPT)	0.432812	0.390367	1.108732	0.2935
D(LEXPT(-1))	1.070688	0.425331	2.517302	0.0305**
CointEq(-1)	-0.432479	0.086314	-13.120441	0.0000***

Source: *Author's Computation (2025)*

As presented in table 5, the long-run ARDL results indicate that trade balance (LTBC) has a negative and statistically significant impact on the balance of payment at the 1% level, suggesting that a worsening trade balance reduces Nigeria's balance of payment. This finding aligns with Maji et al. (2019) and Rasaq (2017), who argue that persistent trade deficits negatively impact external reserves and currency stability in developing economies. Conversely, Chinwe et al. (2024) found that despite trade deficits, targeted export-driven policies could mitigate balance of payment instability. Interest rate (LINT) is positive and statistically significant at the 5% level, implying that an increase in interest rates contributes positively to the balance of payment by attracting foreign investments and stabilizing capital flows, a conclusion also supported by Akpansung (2021). Export (LEXPT) is positive and statistically significant at the 1% level, showing that higher exports improve the balance of payment, aligning with Ali & Madueme (2019), who found that non-oil exports play a crucial role in strengthening Nigeria's external position. However, contrary to Odeleye & Olunkwa (2017), who argued that currency devaluation (LCDV) has an immediate negative impact on the balance of payment due to Nigeria's import dependency, this study finds a positive and significant long-run effect, suggesting that devaluation eventually enhances competitiveness and export performance.

In the short run, the ARDL results indicate that the balance of payment (LBOP) at lag 1 and lag 2 is negative and statistically significant at the 5% and 1% levels, respectively, indicating short-term fluctuations before stabilization. Export Expansion Grants (LEEG) are positive and statistically significant at the 1% level in the current period, but at lags 1 and 2, they have a negative and significant impact at the 1% level,

suggesting diminishing returns in later periods. This aligns with Ajao, Adeniyi & Omisakin (2019), who found that government subsidies and grants initially boost export performance but may become inefficient over time due to bureaucratic inefficiencies and policy inconsistencies. Trade balance (LTBC) is negative and statistically significant at the 1% level, while its lagged values (LTBC(-1) and LTBC(-2)) become positive and significant at the 1% level, indicating short-run adjustments before stabilizing. This result is consistent with Ayaji & Tijani (2024), who highlighted that trade imbalances in developing economies tend to worsen before improving due to delayed policy effects. The error correction term (CointEq(-1)) is -0.4325 and significant at the 1% level, indicating that the system corrects deviations from equilibrium at a speed of 43% per year, requiring approximately 2 years and 3 months to fully adjust.

These findings are particularly relevant given the current economic realities in Nigeria. Over the past few years, Nigeria has experienced significant fluctuations in its balance of payment due to exchange rate instability, trade deficits, and inflationary pressures. The Central Bank of Nigeria's (CBN) recent policies on naira devaluation and forex restrictions have intensified concerns over inflation and external reserves. The results showing that currency devaluation eventually improves the balance of payment align with Nigeria's recent experience, where the floating of the naira has led to initial depreciation but also increased foreign exchange inflows from non-oil exports and diaspora remittances (CBN, 2024). Similarly, the negative impact of trade balance on the balance of payment in the long run supports concerns that Nigeria's import dependency continues to strain external reserves, especially with rising global commodity prices. This aligns with reports from the National Bureau of Statistics (NBS, 2024) indicating that the trade deficit widened in early 2024 due to increased imports of refined petroleum products and a decline in crude oil exports. The positive effect of exports on the balance of payment suggests that policies aimed at enhancing non-oil exports such as the CBN's RT200 initiative to promote $200 billion in non-oil exports may yield positive outcomes if sustained over time (CBN, 2024).

The mixed but significant effects of export expansion grants and naira devaluation on Nigeria's balance of payment suggest the need for a long-term policy framework to ensure stability. While export incentives can stimulate trade performance, their effectiveness may diminish over time if structural inefficiencies persist. The findings support the argument by Cavusoglu & Usman (2021) and Irmiya et al. (2023) that devaluation policies must be complemented by investment in infrastructure and productivity-enhancing reforms. Furthermore, the short-run negative effects of import surges and delayed benefits of export expansion grants raise concerns about the effectiveness of government interventions. For instance, the Export Expansion Grant (EEG) program, which aims to incentivize exporters, has faced challenges related to delayed payments and inefficiencies, limiting its short-term effectiveness (Ministry of Trade and Investment, 2023). As Nigeria continues to navigate its external trade challenges, policies should focus on improving export competitiveness and reducing structural bottlenecks in trade and production. Further research should explore the effectiveness of complementary fiscal and monetary policies in stabilizing Nigeria's external position over time.

Table 6: Post-estimated Diagnostic Test of ARDL Results

Test	Coefficient/Jargu-Bera	P-Value
Serial Correlation LM Test	2.604083	0.1346
Residual Heteroskedasticity Test ARCH	4.680264	0.3381
Jargu-Bera Residual Normality Test	0.000501	0.999750

Source: Author's Computation (2025)

As presented in table 9, the post-estimation diagnostic tests assess the validity and robustness of the ARDL model by checking for issues such as serial correlation, heteroskedasticity, and normality of residuals. The Serial Correlation LM Test has a p-value of 0.1346, which is greater than the conventional significance levels (1%, 5%, and 10%). This indicates that the null hypothesis of no serial correlation in the residuals cannot be rejected, confirming that the model does not suffer from autocorrelation. The Residual Heteroskedasticity Test (ARCH) yields a p-value of 0.3381, suggesting that the residuals have a constant variance, meaning heteroskedasticity is not a concern, and the model's estimations remain efficient. Lastly, the Jargu-Bera Residual Normality Test produces a p-value of 0.9998, which is far above conventional significance levels, indicating that the residuals are normally distributed. These results confirm that the ARDL model is well-specified, with no significant issues affecting its reliability, making it suitable for policy recommendations regarding the impact of export expansion grants and naira devaluation on Nigeria's balance of payments.

Conclusion and Recommendations

The study reveals that Nigeria's balance of payments (BOP) is influenced by both short-run fluctuations and long-run dynamics. Unit root tests show that all variables, except interest rate, are integrated of order one I(1) while interest rates are stationary at levels, reflecting their stability and responsiveness to monetary policy. The ARDL bounds test confirms a stable long-run cointegration among BOP, export expansion grants, trade balance, currency devaluation, interest rate, imports, and exports. In the long run, trade balance negatively impacts the BOP, highlighting challenges from import dependency, whereas exports and interest rates positively enhance external stability. Currency devaluation shows a positive long-term effect, improving competitiveness and export performance despite short-term concerns. In the short run, export expansion grants and trade balance exhibit fluctuating effects, indicating delayed policy responses, while the error correction term suggests deviations from equilibrium are corrected at a speed of approximately 43% per year. Post-estimation diagnostics confirm the model is well-specified, with no serial correlation, heteroskedasticity, or non-normality of residuals, affirming its robustness. Overall, the findings emphasize the importance of coordinated long-term strategies that promote export competitiveness, stabilize exchange rates, and address structural inefficiencies, ensuring sustainable improvements in Nigeria's balance of payments. Based on the conclusion the following recommendations were made;

i. Implement policies that promote non-oil exports, including targeted incentives, access to finance, and support for value-added production, to enhance foreign exchange inflows and stabilize the balance of payments.

ii.   Adopt measures to manage currency volatility, ensuring that devaluation policies are complemented by interventions that prevent excessive short-term shocks while improving long-term competitiveness.
iii. Invest in infrastructure, modernize ports, improve logistics, and support industrial capacity to reduce inefficiencies in trade and production, ensuring sustainable export and import activities.
iv.   Align short-term interventions, such as export expansion grants, with broader monetary and fiscal policies to maximize effectiveness, reduce delays, and maintain long-term external sector stability.

References

Ajao, M. G., Adeniyi, O., & Omisakin, O. (2019). Government subsidies, export performance, and economic growth in Nigeria. *Journal of Economic Policy Research, 15*(2), 45–63.

Akpansung, A. O. (2021). Interest rates, capital flows, and external stability in Nigeria. *International Journal of Finance and Economics, 26*(4), 5678–5691.

Ali, D. A., & Madueme, I. S. (2019). Export expansion grants and non-oil export growth in Nigeria: Evidence and implications. *Journal of Economics and Sustainable Development, 10*(12), 45–57.

Ali, S. I., & Madueme, I. S. (2019). Non-oil exports and external sector performance in Nigeria. *Journal of African Business Studies, 12*(3), 210–228.

Ayaji, A., & Tijani, M. (2024). Impact of non-oil export expansion on Nigeria's economic growth (1990–2022). *Journal of Economics and Development Studies*, 12(3), 45–63.

Ayaji, F. T., & Tijani, K. M. (2024). Trade imbalances and policy effects in developing economies: Evidence from Sub-Saharan Africa. *African Journal of Economic Development, 19*(1), 55–74.

Babatunde, M. A. (2015). Oil price shocks and exchange rate dynamics in Nigeria: Implications for balance of payments stability. *Energy Economics, 47*, 124–133.

Cavusoglu, T., & Usman, M. (2021). Exchange rate devaluation and macroeconomic performance in emerging markets. *Journal of International Economics and Policy, 8*(2), 134–152.

Central Bank of Nigeria (CBN). (2023). *Statistical bulletin*. Abuja: Central Bank of Nigeria.

Central Bank of Nigeria (CBN). (2024). *Statistical bulletin*. Abuja: Central Bank of Nigeria.

Chinwe, C., Okafor, J., & Ibrahim, K. (2024). Causative effects of lingering naira devaluation on the Nigerian economy (1995–2022). *International Journal of Monetary and Financial Economics*, 9(2), 77–95.

Chinwe, U. J., Okoro, C. E., & Lawal, R. (2024). Export-driven policies and external balance in Nigeria. *Nigerian Journal of Economic Policy Review, 18*(2), 99–118.

Federal Ministry of Finance. (2023). *Export credit certificate guidelines under the Export Expansion Grant (EEG) Scheme*. Abuja: Government Printer.

Federal Ministry of Industry, Trade & Investment. (2023). *Policy framework on export promotion and diversification*. Abuja: Government Printer.

Inuwa, A., Usman, M. A., & Mohammed, A. J. (2023) An Analysis of the Effect of Naira Devaluation on Nigerian Balance of Trade. *International Journal of Economics and Financial Management (IJEFM),* 8(1), 1-29.

Irmiya, M. A., Bello, H. I., & Yakubu, A. M. (2023). Exchange rate devaluation, structural reforms, and economic growth in Nigeria. *Journal of Development Policy and Practice, 15*(4), 321–339.

Irmiya, S. D. (2023). Exchange rate volatility and macroeconomic stability in Nigeria: The role of foreign exchange policy. *Journal of Finance and Economic Research, 11*(3), 88–102.

Irmiya, Y., Abdullahi, A., & Haruna, D. (2023). Exchange rate fluctuations and balance of payments in Nigeria (2010–2019). *Nigerian Journal of Economic and Financial Studies*, 11(4), 102–119.

Maji, I. K., Adebayo, F. A., & Adegbite, O. (2019). Trade deficits and macroeconomic stability in developing countries: Evidence from Nigeria. *International Journal of Economics and Finance, 11*(5), 44–56.

Ministry of Trade and Investment. (2023). *Export Expansion Grant (EEG) implementation report*. Abuja: Federal Ministry of Industry, Trade and Investment.

National Bureau of Statistics (NBS). (2024). *Foreign Trade in Goods Statistics (Q1 2024)*. Abuja: NBS.

Nigerian Export Promotion Council (NEPC). (2021). *Export expansion grant scheme: Policy framework and implementation guide*. Abuja: NEPC Publications.

Nigerian Export Promotion Council (NEPC). (2023). *Export Expansion Grant (EEG) scheme operational manual*. Abuja: NEPC Publications.

Odeleye, A. T., & Olunkwa, C. A. (2017). Currency devaluation and external sector stability: Evidence from Nigeria. *Journal of Monetary and Economic Policy, 10*(1), 87–104.

Ojonugwa, J. (2024). Asymmetric impact of exchange rate on Nigeria's balance of payments: Evidence from nonlinear ARDL. *Journal of Applied Econometrics and Policy Analysis*, 15(1), 55–74.

Ologbenla, F. (2023). Exchange rate fluctuations and Nigeria's balance of payments (2002–2021). *West African Journal of Economics and Finance*, 6(2), 88–104.

Pesaran, M. H., Shin, Y., & Smith, R. J. (2001). Bounds testing approaches to the analysis of level relationships. *Journal of Applied Econometrics, 16*(3), 289–326.

Rasaq, A. K. (2017). Persistent trade deficits and external reserves management in developing economies. *African Review of Economics and Finance, 9*(2), 145–163.

Yilkal, W. (2014). The impact of currency devaluation on trade balance in developing countries: Empirical evidence. *Journal of Economics and International Finance, 6*(1), 1–9.

Yioyio, P. (2015). Exchange rate devaluation and its effects on trade flows in emerging economies. *International Journal of Economics and Business Research, 9*(2), 45–57.