

The impact of foreign exchange rate on international trade in Nigeria: Evidence from the non-oil sector

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Abstract

This study investigates the effects of exchange rate, inflation, and imports on non-oil exports in Nigeria from January 2015 to December 2025 using monthly time-series data. The objectives are to determine the short-run and long-run impacts of these macroeconomic variables on non-oil export performance and to assess the speed of adjustment toward long-run equilibrium. Estimation employs the Johansen cointegration technique and the Vector Error Correction Model (VECM). Pre-estimation unit root testing confirms that all variables are integrated of order one, $I(1)$. The findings reveal that exchange rate depreciation and import activity exert significant positive effects on non-oil exports, while inflation exerts a significant negative effect. The error correction term indicates that approximately 73% of monthly deviations from long-run equilibrium are corrected each month. Diagnostic tests confirm the absence of serial correlation, heteroskedasticity, and structural instability. The study concludes that macroeconomic stability and well-coordinated trade policy are prerequisites for sustainable non-oil export growth in Nigeria. Policymakers are advised to pursue exchange rate stability, inflation control, and facilitation of productive imports.

Keywords: Exchange rate, imports, inflation, non-oil exports, trade performance

1. Introduction

One of the biggest concerns for economies around the world is maintaining a strong and competitive international trade. This trade can help speed up industrial production and overall growth and development. No economy can thrive in isolation; they all rely on one another for producing and exchanging goods and services that are made more efficiently in other countries (Akpan and Akinbode, 2026; Iqbal and Yadav, 2026; Kafeel et al., 2026). However, achieving this goal often depends on the ability to expand and sustain exports of goods and services from that economy.

International trade, often called foreign trade, is the exchange of goods and services across national borders. It

involves the trade of capital goods and services between countries (Sivathas, 2026; Tidu et al., 2026). Today, many businesses around the globe recognize that foreign trade is a vital part of their operations. It provides access to a range of raw materials and products that could not be found in a single area. The stability of a country's exchange rate is a key factor that can help achieve the competitiveness needed for economic growth and development.

Since Nigeria gained independence in 1960, its government has introduced various exchange rate systems (Oyadeyi, 2026), transitioning from fixed to flexible and then to a floating exchange rate system. This ongoing fluctuation in the

currency has led to decreased foreign investment, a low standard of living for the population, high inflation, and increased living costs. The volatility of exchange rates has been a major concern in developing countries, especially in Nigeria since the Structural Adjustment Programme (SAP). The exchange rate policies faced significant opposition to devaluation due to its inflationary effects, among other reasons (Udo et al., 2026).

In Nigeria, the SAP policy introduced in 1986 brought financial sector reforms, including the end of fixed exchange rate systems and the introduction of a free-floating exchange regime in the late 1980s. This change was based on the idea that a flexible exchange rate would allow supply and demand to set market prices for goods and services. This was particularly relevant after the oil boom, and it aimed to help develop the country (Ugwu and Israel, n.d.; Kelikume and Nwani, 2019). The global economic and financial crises had a significant impact on the Nigerian exchange rate, causing the Naira to rise sharply from about ₦150 to the dollar in 2009 to about ₦1,600 to the dollar in 2024. This situation was linked to a sharp decline in foreign earnings and national revenue, excessive imports, a drop in crude oil prices globally, and the recent removal of fuel subsidies in May 2023.

Many studies have examined the relationship between exchange rate volatility and economic development in Nigeria. They show a connection between the two. Research by Adelowokan et al. (2015), Nwankwo (2023), and Ikechi and Nwadiubu (2020) supports this. Recently, most literature has focused on the effects of real exchange rate fluctuations on trade. There has been limited research on foreign exchange and its impact specifically on Nigeria's non-oil export sector across different time horizons. This study aims to fill that gap by investigating the impact of the foreign exchange rate, using the

monthly exchange rate of the US dollar to the Naira, on non-oil export performance in Nigeria. It will also provide timely policy recommendations on how effective macroeconomic management and engagement in international trade can promote stability, growth, and development in the country.

The remainder of this paper is organised as follows. Section II reviews the theoretical and empirical literature. Section III presents the methodology. Section IV reports the results and discussion. Section V concludes with policy recommendations.

2. Literature Review

2.1 Foreign Exchange Market in Nigeria

The foreign exchange market in Nigeria has developed through various changes in international trade, local institutions, and shifts in production. Before the Central Bank of Nigeria was established in 1958 and the Exchange Control Act was enacted in 1962, private companies earned foreign exchange and commercial banks held it abroad as agents for local exporters. During this time, agricultural exports made up most of foreign exchange earnings (CBN, 2023).

In 1995, the market was liberalized with the introduction of an Autonomous Foreign Exchange Market (AFEM), allowing the Central Bank of Nigeria (CBN) to sell foreign exchange directly to end users through selected authorized dealers at rates determined by the market. The market saw further liberalization in October 1999 with the establishment of an Interbank Foreign Exchange Market (IFEM). Between 2002 and 2015, the bank adopted the Retail Dutch Auction System (RDAS), the Wholesale Dutch Auction System (WDAS), and the Interbank rate system. In 2015, the Interbank Rate System was introduced, with the CBN intervening as necessary. In 2016, due to rising demand pressures, the bank implemented a

managed floating system. Currently, the value of the Naira in the interbank foreign exchange market is mainly driven by supply and demand forces. In 2023, the CBN adopted a “willing buyer, willing seller” model for trade, which unified the foreign exchange market, eliminating market segmentation and merging existing segments into the Investors and Exporters (I&E) window, now called the Nigerian Foreign Exchange Market (NFEM).

2.2 Theoretical Framework

Purchasing Power Parity (PPP) Theory

The Purchasing Power Parity (PPP) theory, rooted in the work of Cassel (1918) and elaborated by subsequent monetary economists, holds that exchange rates between two currencies adjust to reflect differences in price levels across countries. In the long run, the exchange rate between the domestic currency and a foreign currency should equate the purchasing power of both currencies in their respective economies. For a trade-dependent economy like Nigeria, the PPP framework provides a direct link between exchange rate movements and trade competitiveness: when the naira depreciates relative to its PPP-implied value, domestic goods become cheaper in international markets, thereby stimulating non-oil exports. This mechanism is central to understanding how persistent exchange rate depreciation in Nigeria, especially post-2015, may have influenced the relative price competitiveness of non-oil export goods.

Absolute Advantage Theory

In 1776, Adam Smith examined the dominant mercantilist theory and proposed the Absolute Advantage Theory, which highlights a country's ability to produce goods more effectively than others. Smith argued that trade should not be controlled by government restrictions but should occur naturally according to supply and demand. In a two-country scenario, if country A can produce a good more cheaply or more efficiently than country B,

country A has an advantage and should specialize in producing that good. This specialization enhances workforce skills, benefiting both nations.

Comparative Advantage Theory

David Ricardo introduced the Comparative Advantage Theory in 1817 in response to the challenge that some countries might be better at producing multiple goods. Ricardo claimed that even if country A held the absolute advantage in both products, specialization and trade could still occur. Each country should focus on occupations or trades where it is relatively efficient, exporting what it produces well and importing what it does not. This approach supports free trade and suggests that specialization among nations can lead to higher real incomes for all involved.

Competitive Advantage Theory

Michael Porter proposed the Competitive Advantage Theory, which states that a firm's home country environment should be the main source of skills gained through innovation and intense local competition. This approach extends beyond traditional comparative advantage by focusing on industry-specific innovation, demand, and support for local businesses. Intense competition drives companies to innovate more quickly, improve quality, and lower costs. Together, the PPP theory, comparative advantage, and competitive advantage provide the theoretical foundation linking exchange rate movements to non-oil export performance in Nigeria.

2.3 Empirical Review

The empirical literature on exchange rate and trade performance spans both global and country-specific contexts. At the global level, Ruhil et al. (2023) conducted a systematic literature review analysing existing studies on the impact of exchange rate volatility on international trade, revealing that exchange rate volatility has a complex and significant impact on trade flows. Similarly, Bahmani-Oskooee and

Hegerty (2020) reviewed recent evidence on exchange rate volatility and trade flows across multiple economies and found that while the direction of effect varies by country and sector, volatility generally introduces uncertainty that dampens trade investment decisions. These broad findings motivate country-specific investigation.

At the regional and emerging-market level, Ouattara (2023) explored the impact of exchange rate volatility on international trade using the GARCH Model to estimate conditional exchange rate volatility and CPI effects on trade volume in developing countries, focusing on Türkiye from 2018 to 2022. The analysis found that exchange rate volatility influences export volume and that low inflation can lead to higher exports and lower imports, while high inflation produces the reverse. Mehtiyer et al. (2021) reported that exchange rate volatility significantly impacts the trade balance, with the impact of monetary policy changes on trade activities being most noticeable in the long term. Ijirshar et al. (2022) used linear and non-linear ARDL models, discovering that real exchange rate depreciation negatively affects trade balance and exports in the short term but positively in the long run.

Turning to Nigeria-specific studies, Michael et al., (2024) studied the effect of exchange rate volatility on international trade in Nigeria using monthly data from January 2013 to December 2023 and the GARCH methodology. Their findings suggested that exchange rate volatility significantly negatively affected imports while positively impacting exports, indicating that managing exchange rates is essential for trade policy in Nigeria. Okoh and Nwakwanogo (2024) investigated exchange rate volatility and export of agricultural produce in Nigeria and documented a significant positive relationship between exchange rate depreciation and export volumes, aligning with competitiveness channel theory. Gold

and Yusuf (2025) further confirmed significant positive effects of exchange rate depreciation on non-oil export performance in Nigeria, reinforcing the case for further empirical investigation into the non-oil sector.

Nwankwo (2023) studied the effects of exchange rate fluctuations on Nigeria's economy from 1986 to 2021 using the ECM and found that exchange rate instability did not significantly and negatively affect GDP during this period. Uchechi et al. (2022) examined foreign exchange fluctuations on international trade in Nigeria from 1987 to 2017 and found that exchange rate policy instability significantly impacts international trade. Iheanachor and Ozegebe (2021) employed the ARDL technique to examine the effects of persistent exchange rate fluctuations on Nigeria's economic performance from 1986 to 2019, finding that exchange rate fluctuations, foreign direct investment, and inflation rate adversely affect Nigeria's economic growth in the long term. Nnoli et al. (2023) and Muhammad et al. (2025) further confirmed that inflationary pressures from macroeconomic instability distort price signals and undermine Nigeria's export performance.

From the foregoing, the literature revealed two major gaps that this study addressed. First, while existing Nigerian studies have examined exchange rate and general economic performance or broad trade balance, there is limited attention to the specific dynamics of non-oil export performance using recent monthly data that captures the post-2016 managed float and the 2023 NFEM unification. Second, very few studies have simultaneously modelled exchange rate, inflation, and imports as joint determinants of non-oil export performance within a VECM framework that captures both short-run dynamics and long-run equilibrium adjustment. This study fills both gaps using

monthly data from January 2015 to December 2025.

3. Methodology

3.1 Model Specification and Data

This study examines the effects of exchange rate, inflation, and imports on non-oil exports in Nigeria using a time-series econometric framework. Monthly data spanning January 2015 to December 2025 (132 observations) were sourced from the Central Bank of Nigeria (CBN) Statistical Bulletin. The dependent variable is non-oil exports (NEX), while the independent variables are the foreign exchange rate (FX), inflation rate (INF), and imports (IMP).

This study modifies and extends the model used by Ouattara (2023), which explored the effects of exchange rate volatility on international trade in developing countries. In line with the approach adopted by Pesaran, Shin, and Smith (2000) for modelling long-run relationships in time-series data, the study specified both a long-run and a short-run model. The long-run baseline model was expressed as:

$$NEX_t = \alpha_0 + \beta_1 FX_t + \beta_2 INF_t + \beta_3 IMP_t + \epsilon_t$$

where NEX is Nigeria's non-oil sector exports (USD million); FX is the foreign exchange rate (₦/\$); INF is the inflation rate (%); IMP is Nigeria's import volume (USD million); ϵ_t is the stochastic error term; and t denotes the monthly time index. On the basis of the theoretical framework and prior empirical evidence, the a priori expectations are: $\beta_1 > 0$ (exchange rate depreciation enhances export competitiveness); $\beta_2 < 0$ (inflation raises production costs and reduces export

capacity); and $\beta_3 > 0$ (imported capital and intermediate inputs support export production activity).

Following confirmation of cointegration, the corresponding Vector Error Correction Model (VECM) that captures short-run dynamics and the speed of adjustment toward long-run equilibrium is specified as:

$$\Delta NEX_t = \alpha_0 + \Sigma \beta_1 \Delta FX_{t-i} + \Sigma \beta_2 \Delta INF_{t-i} + \Sigma \beta_3 \Delta IMP_{t-i} + \gamma ECT(t-1) + \mu_t$$

where Δ denotes the first-difference operator; $ECT(t-1)$ is the lagged error correction term derived from the long-run cointegrating relationship; γ is the speed-of-adjustment coefficient, which is expected to be negative and statistically significant, confirming convergence to long-run equilibrium; and μ_t is the white-noise error term.

3.2 Estimation Procedure

The estimation strategy employs three sequential steps following Pesaran, Shin, and Smith (2000) and Johansen (1991). First, the Augmented Dickey-Fuller (ADF) unit root test is applied to establish the stationarity properties of all variables. Second, given that all variables are confirmed $I(1)$, the Johansen cointegration test determines whether a long-run equilibrium relationship exists among the variables. Third, the Vector Error Correction Model (VECM) captures both short-run dynamics and the speed of adjustment toward long-run equilibrium. Diagnostic tests for serial correlation (Breusch-Godfrey LM), heteroskedasticity (Breusch-Pagan/White), normality (Jarque-Bera), and structural stability (CUSUM) are conducted to validate the model.

4. Results and Discussion

4.1 Descriptive Statistics

Table 1 presents descriptive statistics for the four variables over the 132-month study period.

Table 1: Descriptive Statistics (January 2015 – December 2025; n = 132 monthly observations)

Variable	Obs	Mean	Std. Dev	Min	Median	Max
FX (₦/\$)	132	778.44	352.05	180.67	791.15	1,381.37
INF (%)	132	18.08	5.98	7.42	18.16	29.50
IMP (USD M)	132	1,258.73	448.92	457.69	1,287.11	2,160.25
NEX (USD M)	132	395.47	177.91	25.63	392.87	710.21

Source: Authors' Computation, 2026

The foreign exchange rate (FX) averaged ₦778.44 per US Dollar, with a standard deviation of ₦352.05, reflecting considerable volatility. The minimum of ₦180.67 and maximum of ₦1,381.37 denote an unusually large span, demonstrating how the naira was continuously devalued throughout the study period. The median of ₦791.15 is close to the mean, suggesting that despite the large range, the distribution is approximately symmetrical. The inflation rate (INF) averaged 18.08%, with moderate variability (SD = 5.98%), implying that Nigeria encountered persistently high inflation. The minimum of 7.42% and maximum of 29.50% highlight periods of relative price stability

alongside episodes of severe inflationary pressure, possibly driven by exchange rate pass-through effects and supply-side factors. Imports (IMP) averaged USD 1,258.73 million, reflecting Nigeria's considerable dependence on foreign goods including machinery, refined petroleum, and consumer goods. Non-oil exports (NEX) averaged only USD 395.47 million, considerably below import levels, illustrating the persistent export diversification challenge facing Nigeria.

4.2 Unit Root Test Results

Before estimation, the ADF unit root test is conducted to determine the stationarity properties of all variables. Table 2 presents the results at level, and Table 3 at first difference.

Table 2: ADF Unit Root Test Results — At Level

Variable	ADF Statistic	5% Critical Value	p-value	Order
FX	-1.85	-2.88	0.67	Non-stationary
INF	-2.10	-2.88	0.52	Non-stationary
IMP	-1.42	-2.88	0.84	Non-stationary
NEX	-1.76	-2.88	0.71	Non-stationary

Source: Authors' Computation, 2026.

Table 3: ADF Unit Root Test Results — First Difference

Variable	ADF Statistic	5% Critical Value	p-value	Order
ΔFX	-6.45	-2.88	0.0000	Stationary I(1)
ΔINF	-5.92	-2.88	0.0000	Stationary I(1)

Variable	ADF Statistic	5% Critical Value	p-value	Order
ΔIMP	-7.10	-2.88	0.0000	Stationary I(1)
ΔNEX	-6.33	-2.88	0.0000	Stationary I(1)

Source: Authors' Computation, 2026. All variables confirm I(1) integration, validating the Johansen cointegration approach.

All four variables are non-stationary at levels (ADF statistics less negative than the 5% critical value; p-values > 0.05) but achieve stationarity at first difference (p-

values < 0.0001). This uniform I(1) integration order validates the application of the Johansen cointegration technique and the VECM framework.

4.3 Correlation Matrix

Table 4: Correlation Matrix

Variables	FX	INF	IMP	NEX
FX	1.000	0.920	0.970	0.900
INF	0.920	1.000	0.880	0.850
IMP	0.970	0.880	1.000	0.930
NEX	0.900	0.850	0.930	1.000

Source: Authors' Computation, 2026. High inter-variable correlations may raise multicollinearity concerns; VECM first-differencing alleviates this.

The correlation matrix reveals strong positive associations among all variables. Exchange rate (FX) is most highly correlated with imports (0.970), indicating that naira depreciation increases the cost of imported goods. The strong FX-INF correlation (0.920) reflects exchange rate pass-through into domestic prices. FX

correlates strongly with non-oil exports (0.900), consistent with the competitiveness channel. While high correlations do not imply causation and raise multicollinearity concerns in levels-based regressions, the VECM framework employing first-differenced variables substantially mitigates this issue.

4.4 Johansen Cointegration Test

Table 5: Johansen Cointegration Test — Trace Test

Null Hypothesis	Eigenvalue	Trace Statistic	5% Critical Value	Probability	Decision
$r = 0$	0.62	78.45	47.86	0.000	Reject H_0
$r \leq 1$	0.41	39.72	29.80	0.004	Reject H_0
$r \leq 2$	0.25	18.91	15.49	0.021	Reject H_0
$r \leq 3$	0.08	4.12	3.84	0.042	Reject H_0

Source: Authors' Computation, 2026.

Table 6: Johansen Cointegration Test — Maximum Eigenvalue Test

Null Hypothesis	Eigenvalue	Max-Eigen Stat.	5% Critical Value	Probability	Decision
$r = 0$	0.62	38.73	27.58	0.001	Reject H_0
$r \leq 1$	0.41	20.81	21.13	0.058	Fail to Reject H_0
$r \leq 2$	0.25	14.79	14.26	0.039	Reject H_0
$r \leq 3$	0.08	4.12	3.84	0.042	Reject H_0

Source: Authors' Computation, 2026.

The Johansen cointegration test confirms the presence of a long-run equilibrium relationship among the variables. The trace statistic of 78.45 exceeds the 5% critical value of 47.86 ($p = 0.000$), rejecting the null of no cointegration. The maximum eigenvalue test corroborates this, rejecting

the null when $r = 0$ ($38.73 > 27.58$). While some uncertainty exists at $r \leq 1$ in the eigenvalue test, the overall evidence strongly supports at least one cointegrating relationship among FX, INF, IMP, and NEX, validating the VECM approach.

4.5 Vector Error Correction Model (VECM) Results

Table 7: VECM Results — Dependent Variable: Δ NEX (Non-Oil Export)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	12.45	5.10	2.44	0.016
Δ FX	0.38	0.11	3.45	0.001
Δ INF	-0.52	0.20	-2.60	0.011
Δ IMP	0.61	0.09	6.78	0.000
ECT(-1)	-0.73	0.15	-4.87	0.000

Source: Authors' Computation, 2026. ECT = Error Correction Term.

The VECM results confirm significant short-run and long-run relationships between the macroeconomic variables and non-oil export performance. The change in FX is positive and significant ($\beta = 0.38$, $p = 0.001$), implying that short-run depreciation of the naira positively affects non-oil export performance by rendering Nigerian goods comparatively more affordable in global markets. The change in IMP is also positively significant ($\beta = 0.61$, $p = 0.000$), suggesting that increased import activity — particularly of intermediate and capital inputs — is positively associated with export performance. The change in INF is significantly negative ($\beta = -0.52$, $p = 0.011$), indicating that inflation reduces

non-oil exports by increasing the relative cost of domestic production. These results are consistent with the a priori expectations derived from the theoretical framework.

The error correction term ECT(-1) is negative and statistically significant (-0.73 , $p = 0.000$), confirming the existence of a stable long-run equilibrium relationship. The ECT coefficient of -0.73 indicates that approximately 73% of deviations from long-run equilibrium are corrected every month, representing a relatively fast and robust monthly adjustment mechanism within the Nigerian non-oil trade system. This rapid correction speed is consistent with the monthly frequency of the data and reflects the

responsiveness of Nigeria’s export market to macroeconomic shocks.

4.6 Short-Run and Long-Run Coefficient Summary

Table 8: Short-Run Dynamics (VECM) and Long-Run Coefficients

Variable	Short-Run Coeff.	Long-Run Coeff.	Interpretation
$\Delta FX / FX$	0.38***	0.82***	Exchange rate depreciation boosts exports (both horizons)
$\Delta INF / INF$	-0.52**	-0.66***	Inflation reduces export competitiveness
$\Delta IMP / IMP$	0.61***	0.91***	Imported inputs structurally support export production
ECT(-1)	-0.73***	—	73% disequilibrium corrected per month

Source: Authors’ Computation, 2026. *** $p < 0.01$; ** $p < 0.05$.

4.7 Hypothesis Testing

Table 9: Summary of Hypothesis Testing Results (VECM)

Hyp.	Variable	Coefficient	t-Statistic	Probability	Decision
H ₀₁	ΔFX	0.38	3.45	0.001	Reject H ₀
H ₀₂	ΔINF	-0.52	-2.60	0.011	Reject H ₀
H ₀₃	ΔIMP	0.61	6.78	0.000	Reject H ₀
H ₀₄	ECT(-1)	-0.73	-4.87	0.000	Reject H ₀

Source: Authors’ Computation, 2026.

All four null hypotheses are rejected at the 5% significance level, affirming that exchange rate changes, inflation, and

imports collectively and significantly impact non-oil export performance in Nigeria in both the short and long run.

4.8 Diagnostic Tests

Table 10: Diagnostic Tests Summary (VECM)

Diagnostic Test	Test Statistic	Value	Probability	Decision
Serial Corr. (Breusch–Godfrey LM)	F-statistic	1.92	0.148	No serial correlation
	Obs*R ²	3.10	0.212	
Heteroskedasticity (Breusch–Pagan)	F-statistic	1.37	0.245	Homoskedastic
	Obs*R ²	5.88	0.208	
Normality (Jarque–Bera)	JB Statistic	2.84	0.241	Residuals normal
Model Stability (CUSUM)	Graph-based	Within bounds	—	Stable model

Source: Authors’ Computation, 2026. All diagnostic tests confirm model validity.

The estimated VECM satisfies all classical linear regression assumptions. The Breusch-Godfrey LM test confirms the absence of serial correlation ($p > 0.05$). The Breusch-Pagan/White test confirms homoskedasticity ($p > 0.05$). The Jarque-Bera test confirms normally distributed residuals ($p = 0.241$). The CUSUM stability test demonstrates structural stability throughout the sample period, with the test statistic remaining within the 5% critical bounds from 2015 to 2025.

Discussion of Findings

The study's results confirm that the exchange rate exerts a significant positive effect on Nigeria's non-oil exports. The depreciation of the naira improves export competitiveness by rendering Nigerian goods comparatively more affordable in global markets, consistent with the Purchasing Power Parity framework and the competitiveness channel embedded in comparative advantage theory. This finding aligns with Okoh and Nwakwanogo (2024) and Gold and Yusuf (2025), who documented significant positive effects of exchange rate depreciation on non-oil export performance in Nigeria. The finding reflects the structure of a mono-product economy where a weaker currency can encourage exports but simultaneously increases the cost of imported inputs.

The significant adverse impact of inflation on non-oil exports is consistent with Nnoli et al. (2023) and Muhammad et al. (2025), who found that inflationary pressures stemming from macroeconomic instability distort price signals and undermine Nigeria's export performance. When domestic prices rise, it becomes costlier to produce export goods, eroding the competitiveness advantage that exchange rate depreciation would otherwise confer. Nigeria's structural problems — high production costs, limited energy resources, and exchange rate pass-through effects — compound this inflationary pressure.

The positive and significant impact of imports on non-oil exports confirms that the importation of capital and intermediate goods is a necessary input into Nigeria's export production process. This finding agrees with Gelle et al. (2024) and Kamo et al. (2024), who highlighted that trade-related inputs and external linkages are key determinants of export performance in Nigeria's non-oil sectors, particularly in agriculture and manufacturing, which depend heavily on imported machinery, technology, and raw materials.

The significant negative ECT (-0.73) demonstrates that deviations from the long-run equilibrium among exchange rate, inflation, imports, and non-oil exports are corrected at a speed of 73% every month, indicating a robust self-correcting mechanism within Nigeria's trade system. This result aligns with Nnabu and Awoke (2025) and Ijirshar et al. (2022), who similarly confirmed cointegrated long-run relationships among exchange rate and trade variables using VECM frameworks.

5. Conclusion and Recommendations

5.1 Conclusion

This study examined the impact of the foreign exchange rate, inflation, and imports on non-oil exports in Nigeria over the period 2015 to 2025, using monthly time-series data and the Johansen cointegration and Vector Error Correction Model (VECM) framework. The findings establish that: (i) exchange rate depreciation exerts a significant positive effect on non-oil exports, confirming that a weaker naira enhances Nigeria's external competitiveness and encourages non-oil export activity; (ii) inflation adversely affects non-oil exports, as persistent price instability increases production costs and diminishes the capacity of domestic producers to compete in global markets; and (iii) imports exhibit a significant positive effect on non-oil exports, indicating that the importation of capital

and intermediate goods is structurally integral to Nigeria's export production capabilities. The error correction term confirms a stable long-run equilibrium relationship and a rapid monthly adjustment mechanism, with 73% of disequilibrium corrected each month.

These findings establish that macroeconomic stability — particularly exchange rate management and inflation control — is a prerequisite for sustainable improvement in Nigeria's non-oil export performance. The study also demonstrates that import policy and export policy cannot be designed in isolation: the productive role of imported inputs in generating exports implies that indiscriminate import restrictions may inadvertently harm the very export sectors they are intended to protect.

5.2 Recommendations

Based on the findings, the following policy recommendations are offered. First, policymakers should formulate exchange rate policies that promote stability and protect the competitiveness of export industries, since exchange-rate-instability distorts trade outcomes. A critical intervention area is the management of

exchange rate volatility through coordinated monetary and foreign exchange reserve policies.

Second, inflation control through a well-coordinated fiscal and monetary policy approach is imperative. Price stability will facilitate expansion of exports and enhance production efficiency. The monetary authorities should ensure that exchange rate pass-through effects are minimised through supply-side interventions and targeted subsidy policies.

Third, the government should establish mechanisms to support productive imports, including machinery and industrial materials, by reducing tariff barriers on capital and intermediate goods used in export-oriented industries, while simultaneously developing domestic substitutes over the medium term.

Fourth, the government should invest in addressing the structural constraints — poor energy infrastructure, inadequate transportation networks, and limited access to trade finance — that drive up production costs and prevent Nigerian producers from fully capturing the competitiveness gains that exchange rate depreciation would otherwise provide.

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