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The Dominant Impact of Oil Exports on Economic Growth in Nigeria: A Comparative ARDL Analysis with Non-Oil Exports

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About Article

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ABSTRACT

This study comparatively investigated the relative impacts of oil and non-oil exports on Nigeria's economic growth from 1981 to 2023. An ex-post facto research design was used. Multiple regression analysis was adopted, in which the Autoregressive Distributed Lag (ARDL) was applied. The results showed the presence of long-run relationships among the variables (GDP, oil exports, non-oil exports, and inflation rate), indicating that about 11% of the short-run imbalance is corrected every year. Further findings revealed that oil exports have a positive impact on Nigeria's GDP in both the short and long runs, while non-oil exports have a negative impact on Nigeria's GDP in both the short and long runs. The finding that non-oil exports have a negative impact on Nigeria's economic growth is quite surprising, given the general expectation that diversification away from oil dependence should foster economic expansion. This unexpected outcome constitutes a major contribution of the study, as it challenges the prevailing notion that promoting non-oil exports automatically enhances growth. This research concludes that oil exports have more impact on Nigeria's economic growth than non-oil exports over the studied period. The study therefore recommends, among others, that the Nigerian government should stabilize and strengthen oil export earnings by investing in upstream oil production and infrastructure, and diversify its non-oil exports by focusing on processed and value-added commodities for increased economic growth.

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1. INTRODUCTION

Over time, it has become clear that international trade helps bring more money into an economy. This is especially true when exports are higher than imports. Exports are important for helping an economy grow and develop (Matthew *et al.*, 2017). Exports have a big effect on growth because they bring in money for the government of a country, and provide foreign currency that can be used to build better infrastructure and make the nation more attractive for investors. Also, when exports grow, including both oil and other types of products, companies are encouraged to produce more and cut their costs, leading to more efficient production and bigger economies of scale. Exports also help make the local market bigger and increase competitiveness, which pushes the nation to produce more and use new technologies in its manufacturing (Mohsen, 2015). Adenugba and Dipo (2013) said that when demand for exports is high, production increases. This leads to more jobs, more revenue for the nation, and better trade and payment balances. This shows how important exports are to a country's economic growth.

Before the country became independent, agricultural products and a few key minerals supported the economy until the late 1960s. Since then, the country has become completely dependent on the oil sector, mainly due to its large oil reserves, the strong oil market, and the high price of petroleum. Because of this, the country stopped supporting other industries that used to bring in foreign money, which is an example of deindustrialization that often happens after a natural resource boom. Because of deindustrialization, Nigeria now relies heavily on imported goods for daily use. The nation's capacity to produce its own goods is limited due to the neglect of the industrial sector. (Bature, 2012). Omjimate and Akpolodje (2019) say that Nigeria's heavy dependence on selling crude oil has serious effects on its economy because the oil market is very unstable. Because the economy relies so much on exports of oil, it is at risk from sudden changes in the global oil market. Because of this, any sudden changes in oil prices globally can quickly affect the national economy.

The problems caused by relying too much on the oil trade have made it more important to diversify the economy by moving away from oil and focusing on other kinds of exports. Many people think that non-oil trade has a big chance to help Nigeria grow and develop. Onwualu (2017) said that using the value chain approach in agriculture could help Nigeria's economy grow. This method can create different kinds of activities, create more jobs, and help develop industries. Because of this, non-oil exports are seen as a key part of building a strong and lasting economy in Nigeria. Vincent and Oluchukwu (2013) emphasized that Nigerian leaders have tried again and again to make non-oil exports grow by making good policies. Many different laws have been introduced, and they have had some success. Examples include the import substitution policy in the 1960s, which tried to protect local industries from foreign competition through things like taxes, help, and limits on imports; the Structural Adjustment Programme in the mid-1980s, which made trade more open; and the export promotion laws in the 1990s, which gave more support to small size and medium size businesses to increase production and export overseas.

The oil and non-petroleum sectors of Nigeria's economy have played a big role in the country's progress in the last fifteen years. A report from the CBN in 2021 highlights how both oil and non-petroleum exports have had a big impact on the economy. Exports do many important things, like creating jobs, increasing spending by consumers, raising tax money, adding to the GDP, supporting the country's foreign currency reserves, and providing energy for businesses and industries. Basically, exports of oil and non-oil are important for getting foreign money, which helps reduce pressure on the country's balance in international payments and creates job opportunities. Export activities in both the oil and non-oil sectors are often thought to help the economy grow in many ways, such as creating links between production and demand, and achieving cost savings through access to larger international markets (Ruba & Thikraiat, 2014).

1.1. Statement of the problem

Recently, oil prices have gone down, which has resulted in less money coming in from Nigeria's oil industry. This makes it harder for the government to spend more money on public services, which is a way of boosting the economy. This has hurt the level of investment, causing more people to be unemployed. These problems have led to lower foreign exchange revenue, slower economic growth, less money held in reserves, fewer foreign currencies available, and higher prices for goods (inflation), because the country depends a lot on imported products. All of these issues happened because of the sudden drop in world oil prices. The weak achievement of the non-oil segment of the economy, along with how vulnerable the country is to variations in the outside economy, shows the necessity to focus more on developing the non-oil sectors. Researchers have comparatively examined how oil and non-oil exports affect Nigeria's economic growth. Their findings have been mixed. This study aims to add useful information to the existing research, expanding the scope beyond 2022, unlike previous studies reviewed.

1.2. Study objectives

The general objective of this research is to examine how oil and non-oil exports affect Nigeria's economic growth. The specific goals are:

To find out how oil exports influence Nigeria's GDP.

To evaluate how non-oil exports affect Nigeria's GDP.

This study will give a picture of how oil and non-oil exports affect Nigeria's economy, showing how much they influence growth and suggesting ways to support better growth in the country.

1.3. Statement of hypotheses

The research hypotheses are:

H01: Oil exports have no significant effect on Nigeria's GDP.

H02: Non-oil exports have a significant effect on Nigeria's GDP.

2. LITERATURE REVIEW

2.1. Conceptual clarification

• *Export:* An export is a commodity or service made in a nation and traded in another country.



The person or company that sells the product or provides the service is called an exporter. The person or company that buys the product from another country is called an importer. Countries have a long-standing tradition of exporting goods and money through trade. These exports occur on a sizable scale between different countries. Businesses that send a lot of products to other countries usually face more financial risk. (Bbaale & Mutenyo, 2011).

- **Oil exports:** It is the aggregate value of oil sold to other countries annually. Selling oil to another nation helps increase the country's total output. Oil is usually exported in substantial amounts between countries with few trade restrictions, like tariffs or subsidies. The types of oil that Nigeria exports are Bonny Light Oil, Forcados crude oil, Qua Ibo crude oil, and Brass River crude oil. The gas and oil sectors make up about 35% of Nigeria's GDP, and petroleum export earnings make up more than 90% of all export income (Sani *et al.*, 2020).

- **Non-oil exports:** This is the aggregate value of products (not oil), made in a nation like Nigeria, and sold internationally. Selling non-oil products to another country helps increase Nigeria's total output. Many countries with few trade rules, such as an increase in tariffs or government subsidies, export a lot of non-oil goods. Along with oil, Nigeria also has several natural resources (Chinyere *et al.*, 2021).

- **Economic growth:** Economic growth is often measured by the increase in GDP (Owamah & Mgbomene, 2025). A country is said to experience growth if its total output goes up over a certain time (Owamah & Mgbomene, 2025; Owamah *et al.*, 2025). According to Acemoglu and Robinson (2015), several factors contribute to the growth of a nation, including increases in assets (e.g., infrastructure, machinery), human capital (e.g., education, skills), technological innovation, and institutional reforms. Investment in productive assets, technological advancements, and improvements in productivity are primary drivers of long-term economic growth.

2.2. Theoretical framework

This research is anchored on the Two-Gap model developed by Chenery and Strout (1966). The theory that argues that the major limitations to growth in developing nations arise from two potential "gaps," namely:

- Savings gap:** This occurs when a nation's domestic savings are insufficient to finance the investment level needed for growth.

- Foreign exchange gap:** This gap arises when a country lacks enough foreign exchange earnings to purchase the capital goods and inputs required for development.

The model proposed that for developing economies to grow, external assistance such as FDI, foreign aid, or concessional loans is needed to fill either of the two gaps, depending on the one that is more binding at a particular time. The model is presented as:

$$Y = C + I + (X - M) \quad \dots(1)$$

In which (X-M) equals the net export.

Equation (1) can be rearranged as:

$$Y + M = C + I + X \quad \dots(2)$$

Further breakdown of (2) above will result in:

$$S + C + M = C + I + X \quad \dots(3)$$

$$\text{Deducting } C \text{ from both sides and defining savings } (S = Y - C), \\ S + M = I + X \quad \dots(4)$$

Equation (4) can be written as:

$$M - X = I - S \quad \dots(5)$$

(Exchange gap) = (Savings gap).

Although this model has a realistic contribution, it also has faults. The model's sole concentration on foreign exchange and saving gaps in for achieving growth leaves it vulnerable to certain limitations such as: neglect of other important factors determining economic growth such as technology, institutional quality, political stability, & human capital; failure to resolve the transformation issue of being a closed economy; ignoring governance issues in developing countries such as corruption and inefficiencies; and failure to address how changes in the rates of exchange, tariffs, or trade liberalization might affect the gap in exchange.

2.3. The Model's relevance to this study

The model emphasized how the gap in exchange of foreign currency and the gap in savings can hinder a developing country's economic growth. However, this research focused on exports, which directly relate to the gap in foreign exchange. The model provides a structure for understanding how exports increase foreign exchange revenue (by reducing the gap in foreign exchange) in Nigeria, and subsequently boost growth.

2.4. Empirical literature

The existing empirical literature presents a rich but inconclusive body of evidence regarding the relative contributions of oil and non-oil exports to Nigeria's economic growth. While a consensus appears to exist on the significance of exports for growth, there remains a striking divergence concerning the direction and magnitude of these effects.

For instance, Ayo-Joledo (2025) and Oladosu *et al.* (2023), by examining the effect of oil and non-oil exports on economic growth in Nigeria between 1980 and 2019, using OLS, ARDL, and the Granger causality test methods, reported that both oil and non-oil exports significantly and positively influence Nigeria's economic growth, suggesting a complementary relationship between the two export sectors. Similarly, Atuma *et al.* (2024), who comparatively examined how oil and non-oil exports affected growth in Nigeria between 1981 and 2019, using the Vector Error Correction mechanism, found positive effects for both export categories, though non-oil exports were shown to contribute more substantially to GDP, reinforcing the argument for diversification. In contrast, Raheem (2016), who investigated how oil and non-petroleum exports affect the Nigerian economy between 1981 and 2015, using impulse response functions (IRF) and variance decomposition (VD), found that oil exports exerted a negative effect on growth, while non-oil exports had a positive effect, implying a substitutional rather than complementary relationship between the two. More recently, Oluwatosin (2023), who tested the validity of the export-led growth hypothesis in Nigeria's oil and non-oil exports over the study period of 1970 to 2021, using ARDL and Granger causality techniques, presented an even more nuanced picture, where oil exports negatively affect growth in the short run but non-oil exports contribute positively both in the short



and long run.

Taken together, these findings reveal a persistent empirical inconsistency that raises an unresolved puzzle: Why do oil and non-oil exports exhibit contradictory effects on Nigeria's economic growth across studies, despite being analysed within similar timeframes and methodological frameworks? This inconsistency may be rooted in differences in model specification, the sample periods covered, or the changing structure of Nigeria's economy, especially the post-structural adjustment and post-2016 recession eras, when export patterns and policy environments shifted significantly. Moreover, few have undertaken a comparative long-run analysis covering recent data that reflect post-COVID and post-oil-price-shock realities. This gap underscores the need for a more comprehensive and updated empirical investigation that not only compares the relative effects of oil and non-oil exports but also reconciles the conflicting evidence by incorporating contemporary data. Therefore, this study aims to resolve the existing puzzle by re-examining the oil and non-oil export-growth nexus in Nigeria using recent data (1981–2023) and an econometric framework capable of capturing both short-run fluctuations and long-run equilibrium relationships.

3. METHODOLOGY

An ex post facto research approach was utilised in this study since the data are already available. This research used secondary data between 1981 and 2023, which are available in World Development Indicators (2025), Statistical Bulletin of the CBN (2023), and NBS (2024). The study employed EViews 12 for data analysis. The variables used are oil exports, inflation rate, and non-oil exports, which are the independent variables, while GDP (economic growth proxy) is the dependent variable.

3.1. Model specification

As a post-Keynesian growth model for closed economies, the Two-Gap Model put out by Chenery and Strout (1966) formed the basis of this study's analytical approach. The empirical investigation of the impact of oil and non-crude oil exports on Nigeria's economic growth by Oladosu *et al.* (2023) provided the model for this research. Still, the aim of this particular research informed the changes made to the model.

Hence, this study model in its functional version is given as:

$$\text{GDP} = (\text{OILEXP}, \text{NOILEXP}, \text{INF}) \quad \dots(1)$$

More explicitly, the model is expressed as:

$$\text{GDP} = \beta_0 + \beta_1 \text{OILEXP} + \beta_2 \text{NOILEXP} + \beta_3 \text{INF} + \mu_t \quad \dots(2)$$

Where,

GDP is an economic growth proxy; NOILEXP = Non-Oil Export; OILEXP = Oil Export; INF = Inflation; β_0 = regression constant; β_1 = oil export parameter; β_2 = non-oil export parameter; β_3 = inflation parameter; μ_t = Stochastic or error term. It captures the effect of variables outside the model. A priori expectations are:

$$\beta_1, \beta_2 > 0, \beta_3 < 0$$

3.2. Estimation technique

This study used the ARDL technique. This method involves first estimating the conditional correction of the model after specification. The long-run association between X and Y

variables can be explained using the ARDL method. The ARDL model between two variables, say Y_t and X_t (independent variable), is given as:

$$Y_t = \alpha_0 + \sum_{i=1}^p \alpha_i Y_{t-i} + \sum_{j=0}^q \beta_j X_{t-j} + \varepsilon_t$$

Where,

Y = dependent variable; X = the independent variable at time t ; α_0 = intercept term; α_i = coefficients of lagged dependent variable Y_{t-i} ; β_j = coefficients of lagged independent variable X_{t-j} ; p = the maximum lag length for the dependent variable; q = the maximum lag length for the independent variable; ε_t = error term (white noise).

The error correction form derived from the ARDL model is given as:

$$\Delta Y_t = \gamma_0 + \sum_{i=1}^{p-1} \gamma_i \Delta Y_{t-i} + \sum_{j=0}^{q-1} \delta_j \Delta X_{t-j} + \phi (Y_{t-1} - \theta_0 - \theta_1 X_{t-1}) + u_t$$

Where,

Δ denotes the first difference; γ_i and δ_j are short-run dynamic coefficients; ϕ is = error correction coefficient; $(Y_{t-1} - \theta_0 - \theta_1 X_{t-1})$ = error correction value capturing long-run impact at equilibrium. θ_0, θ_1 are long-run parameters, and u_t is the white noise error term.

3.3. Pre-Estimation tests

- **Unit root:** Most time series require stationarity to give valid results. If a series has a unit root (non-stationary), then the regression results may be spurious. This research utilised the Phillips-Perron test for unit root.

- **Cointegration test:** A co-integration test helps in determining whether a stable, long-term relationship exists among non-stationary variables, making it possible to model both short-run dynamics and long-run equilibrium in models involving time series. Therefore, given that the series in this research have mixed integration order, i.e., $I(0)$ and $I(1)$, the F-Bounds cointegration test was adopted.

- **Lag selection:** This study considered the lag number to be factored into the model. Selecting the right lag length is crucial to avoid having correlated error terms or loss of valuable information. Hence, this study utilised a systematic process in ascertaining the lag number to be considered in the dynamic model. Specifically, this study made use of the recommendations given by the scientific selection process of either the AIC, SC, or HQ.

4. RESULTS AND DISCUSSION

Table 1 is the descriptive statistics of the data used. From Table 1 above, the average of GDP is 39,902.54; Oil exports (OILEXP) have a much higher average value (6,277,286) than non-oil exports (NOILEXP) with an average of 642,110.8, showing Nigeria's export reliance on oil. Inflation (INF) has an average value of 20.95. The median of GDP is 31,064.27, and the median value of inflation (INF) is 11.12, which shows skewness since their means are greater than medians (right-skewed). The median of non-oil exports (NOILEXP) is 94,731.85, which is highly skewed (the mean is much bigger than the median). Oil exports (OILEXP) with a median value of 6,277,286 also show this pattern, though to a lesser degree. GDP ranges between a maximum of 77,936.10 and 16,211.46. Inflation (INF) varies widely, with a minimum value of 0.69 and a maximum value of 219. Non-oil exports (NOILEXP) range from 203.2 to 6,961,789



Table 1. Descriptive statistics

	GDP	INF	NOILEXP	OILEXP
Mean	39902.54	20.95326	642110.8	6277286.
Median	31064.27	11.12000	94731.85	1920900.
Maximum	77936.10	219.0000	6961789.	29000604
Minimum	16211.46	0.690000	203.2000	7201.200
Std. Dev.	21651.62	33.93978	1269587.	7352525.
Skewness	0.485004	4.870136	3.347085	1.155001
Kurtosis	1.591566	28.45734	15.82772	3.762241
Jarque-Bera	5.239910	1331.117	375.1073	10.60150
Probability	0.072806	0.000000	0.000000	0.004988
Sum	1715809.	900.9900	27610763	2.70E+08
Sum Sq. Dev.	1.97E+10	48380.16	6.77E+13	2.27E+15
Observations	43	43	43	43

Source: Researcher's computation using EViews 12

(showing large dispersion). Oil exports (OILEXP) range from 7,201 to 2,900,060.4, indicating periods of oil boom and bust. The standard deviations for non-oil exports (NOILEXP) and oil exports (OILEXP) are 1.27 and 7.35, respectively, indicating high volatility in Nigeria's exports. Inflation (INF) also shows high variability with a standard deviation of 33.93, which indicates macroeconomic instability in the country. From the skewness

values, GDP is slightly skewed, with a skewness value of 0.49. Oil exports (OILEXP) are moderately right-skewed (1.16), while Non-oil exports (3.35) and inflation (4.87) are strongly right-skewed. From the Kurtosis values, Inflation rate (28.46) and non-oil exports (15.83) have very high kurtosis. Oil exports (3.76) are also leptokurtic. GDP (1.59) is platykurtic. From the Jarque-Bera statistics & their probability values, Inflation, non-oil exports & oil exports with p values less than 0.05 are not normally distributed. However, GDP with a p-value of 0.073 is normally distributed.

Table 2. Correlation matrix

	GDP	INF	NOILEXP	OILEXP
GDP	1	-0.2931	0.7124	0.9218
INF	-0.2931	1	-0.1604	-0.2599
NOILEXP	0.7124	-0.1604	1	0.8625
OILEXP	0.9218	-0.2599	0.8625	1

Source: Researcher's computation using EViews 12

Table 2 is the pairwise Pearson correlation coefficients of the series in the model. From Table 2, oil exports have a very strong positive correlation (0.9218) with GDP, implying that as oil exports increase, GDP strongly increases. Non-oil exports are strongly correlated with GDP (0.7124). Inflation has a weak negative correlation (-0.2931) with GDP, suggesting that as inflation increases, GDP tends to decrease slightly.

Table 3. Summary of phillips-perron unit root results

Variables	PP Test Statistic	Test the critical value at 5%	P – Value	Order of Integration	Conclusion
GDP	-3.262937	-2.935001	0.0234	I(1)	Stationary
OILEXP	-3.822908	-2.935001	0.0056	I(1)	Stationary
NOILEXP	-4.685715	-2.935001	0.0005	I(1)	Stationary
INF	-10.60985	-2.933158	0.0000	I(0)	Stationary

Source: Author's Computation using E-Views 12

The findings indicate that only inflation exhibits stationarity at the level, i.e., I (0) at 5% significance level, while the others are stationary at first difference, i.e., I (1). Hence, the series has a

mixed order of integration, I (0) and I (1), which supports the use of the F-bounds cointegration test.

Table 4. Summary result of the ARDL bounds test

F-Bounds Test		Null Hypothesis:	No level relationship	
Test Statistics	Value	Significance	I (0)	I (1)
F- Statistic	5.074916	10%	2.37	3.2
K	3	5%	2.79	3.67
		2.5%	3.15	4.08
		1%	3.65	4.66

Source: Researcher's computation using EViews 12



The F-Bounds test from Table 4 indicates that co-integration exists among GDP, OILEXP, NOILEXP, and INF, because the F-statistic (5.074916) exceeds the upper bound (3.67) at 5%

significance level. It means that oil and non-crude oil exports significantly affect Nigeria's economic growth in the long run over the studied period.

Table 5. Summary lag length selection criteria

VAR Lag Selection						
Lag	LogL	LR	FPE	AIC	SC	HQ
0	-1900.850	NA	2.66e+35	92.91952	93.08669	92.98039
1	-1754.621	256.7917	4.65e+32	86.56690	87.40279	86.87129
2	-1713.063	64.87233*	1.37e+32*	85.32013*	86.82473*	85.86802*

Source: Researcher's computation using EViews 12

From the lag selection results in Table 5, all the criteria (LR, FPE, AIC, SC, and HQ) selected 2 as the maximum lag length. Therefore, this research used 2 lags for the ARDL model estimation.

Table 6. ARDL Long-Run Results

Dependent Variable: GDP				
Variable	Coefficient	Std. Error	t-Stat	Prob.
INF	-120.1945	142.1868	-0.845328	0.4046
NOILEXP	-0.014445	0.005568	-2.594264	0.0145
OILEXP	0.005285	0.000781	6.766841	0.0000
C	27179.27	4518.676	6.014874	0.0000

Source: Researcher's computation using EViews 12

Table 6 above shows the long-run influence of the explanatory variables (OILEXP, NOILEXP, and INF) on GDP. From the result, oil exports (OILEXP) with a coefficient of 0.005285 and a p-value of 0.0000 positively and significantly impact GDP in the long period at 5% significance level. This conforms to a priori expectation. A unit rise in oil exports increases GDP by 0.0053 units in the long term.

Table 7. Summary of short-run results (error correction regression)

Dependent Variable: GDP				
Variable	Coefficient	Std. Error	t-Stat	Prob.
D(GDP(-1))	0.314584	0.113741	2.765800	0.0096
D(INF)	-3.401548	11.46448	-0.296703	0.7687
D(INF(-1))	10.63474	4.608064	2.307854	0.0281
D(NOILEXP)	-5.51E-05	0.000311	-0.177217	0.8605
D(OILEXP)	0.000292	8.08E-05	3.614308	0.0011
D(OILEXP(-1))	-0.000325	9.00E-05	-3.611295	0.0011
ECM (-1)	-0.113152	0.021100	-5.362635	0.0000
R-squared	0.688290	Durbin-Watson stat	2.095670	
Adjusted R-squared	0.633282	Mean dependent var	1451.979	
S.D. dependent var	1579.431			

Source: Researcher's computation using EViews 12

Non-oil exports (NOILEXP) with a coefficient of -0.014445 and a p-value of 0.0145 have a negative and significant impact on GDP in the long run at 5% significance level. This does not conform to a priori expectation. A unit rise in non-exports reduces GDP by 0.0144 units in the long term. Inflation (INF) with a coefficient of -120.1945 and a p-value of 0.4046 negatively affects GDP, but the impact is insignificant at 5% significance level. This conforms to a priori expectation. A unit rise in inflation reduces GDP by 120 units.

Table 7 above shows the short-run influence of the explanatory variables on GDP. From Table 7, $R^2 = 0.688290$, indicating that about 69% of the variation in GDP (economic growth) is explained by the independent variables. The remaining percentage (about 31%) is explained by other variables outside the model. The Durbin-Watson statistic of 2.095670 shows no autocorrelation problem.

The coefficient of oil exports (0.000292) is positive and significant (p-value = 0.0011). This conforms to a priori expectation. Hence, oil exports positively and significantly influence GDP in the short term at 5% significance level. A unit increase in oil exports increases GDP by 0.0001 units in the short term. However, the lag of oil exports (coefficient = -0.000325) is negative but insignificant (p-value = 0.0011). This shows that past oil exports strongly affect current GDP negatively in the short period. A unit rise in oil exports in the previous period decreases GDP in the current period by 0.0003 units in the short period. The negative lagged oil export coefficient in the short run could be linked to the "resource curse" narrative that oil revenues can lead to short-term macroeconomic volatility or corruption, which might dampen growth with a lag.

The coefficient of non-oil exports (-5.51E-05) is negative but insignificant (p-value = 0.8605). This reveals that non-oil exports negatively but insignificantly impact GDP in the short term at 5% significance level. A unit rise in non-oil exports decreases GDP by 0.0001 units in the short term. This does not conform to a priori expectation.

Inflation with a coefficient of (-3.401548) is insignificant (p-value of 0.7687). This conforms to a priori expectation. This indicates that inflation negatively but insignificantly impacts GDP in the short term at 5% significance level. A unit rise in inflation decreases GDP by 3.40 units in the short term.

Lagged GDP with a coefficient of 0.314584 is positive and significant (p-value = 0.0096). This shows that past GDP



positively and significantly impacts current GDP in the short term. A unit rise in GDP in the previous period increases GDP in the current period by 0.32 units in the short term. The error correction term with a coefficient of -0.113152 is negative and significant, as shown by its associated p-value of 0.0000. This shows that about 11% of the short-run disequilibrium is

corrected each year.

4.1. Results of diagnostic tests

The diagnostic or post-estimation test results are summarised in Table 8. The aim of these tests is to check the appropriateness or validity of the model.

Table 8. Summary of diagnostic tests

Test	Null Hypothesis	Test Type	Test Statistic	Prob.
Normality Test	Normally Distributed Residuals	Jarque-Bera	JB-statistic (0.751206)	0.686875
Autocorrelation Test	Serial Correlation does not exist	Breusch-Godfrey LM Test	F-statistic (0.138563)	0.8712
Heteroscedasticity Test	Homoscedasticity exists	Breusch-Pagan-Godfrey	F-statistic (0.460808)	0.9020

Source: Researcher's computation using EViews 12

From Table 8, the Jarque-Bera test indicates that there is a normal distribution of the residuals, because the probability of the test statistic (0.686875) is higher than 0.05 (significance level). The Breusch-Godfrey LM Test shows no autocorrelation because the probability of the F-statistic (0.8712) is more than 0.05. Additionally, the Breusch-Pagan-Godfrey test shows no heteroscedasticity since the probability of the F-statistic (0.9020) is greater than 0.05.

Stability Tests

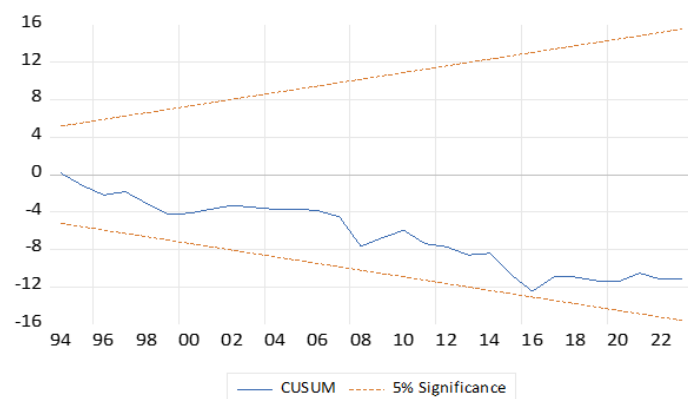


Figure 1. CUSUM Stability Tests

Figure 1 is the result of the CUSUM stability test. The result indicates stability of the model, since the blue line inside the two red lines falls within the 5% boundary level. I.e., it does not cross the 5% critical lines. This means that the estimated coefficients are reliable and suitable for policy making.

4.2. Discussion of findings

This research comparatively investigated the relative impacts of oil and non-petroleum exports on Nigeria's economic growth. The results indicated that oil exports positively and significantly impact GDP (economic growth proxy) in both the short and long runs. This underscores the importance of oil revenue in Nigeria's economic performance. Exports of petroleum are Nigeria's major source of income, foreign exchange, and government spending, which supports aggregate

investment and production capacity. Conversely, non-oil exports negatively impact economic growth. However, it was only significant in the long run. Non-oil exports may have a negative long-run effect on growth in the country as a result of economic & structural reasons, such as a decrease in non-oil exports (particularly agricultural products), bottlenecks in the petroleum sector (poor infrastructure and limited access to credit), external shocks, and market volatility, etc.

This result agrees with that of Oladosu *et al.* (2023), who concluded that oil exports positively and significantly impact Nigeria's GDP in both the short and long runs. This finding also agrees with that of Ayo-Jolede (2025), who concluded that both oil and non-petroleum exports significantly impact Nigeria's growth. Although in this research, non-oil export was only significant in the long run.

However, the result of this study contradicts that of Atuma *et al.* (2024), who found that non-oil exports had a bigger positive effect on Nigeria's economy than oil exports. The result also contradicts that of Oluwatosin (2023), who found that oil exports and non-oil exports negatively and positively impact growth in Nigeria in the short run and long run, respectively. Lastly, the result disagrees with that of Raheem (2016), who discovered that oil exports negatively impact growth in Nigeria, while non-oil exports positively impact growth in Nigeria.

Further findings indicate that inflation negatively but insignificantly affects GDP in the short term and long term. In economic theory, high inflation increases uncertainty and discourages investment and consumption, which harms economic growth. The insignificant effect of inflation on GDP in the long run in Nigeria may be due to its effect being usually overshadowed by structural issues, weak monetary transmission, & cost-push factors, making it less significant in driving long-run output.

5. CONCLUSION

This work investigated the relative impacts of oil and non-oil exports on Nigeria's economic growth from 1981 to 2023, utilising the Ex-post factor research design with the following variables: GDP, oil exports, non-oil exports, and inflation rate. From the results, non-oil exports negatively and significantly



impact growth in Nigeria in the long term. However, the impact is insignificant in the short term. Findings also indicated that oil exports positively and significantly impact growth in Nigeria in the short and long runs. This research concludes that oil exports have more impact on Nigeria's economic growth than non-oil exports over the studied period.

RECOMMENDATIONS

The recommendations drawn from the research findings are:

- Given that oil exports positively and significantly affect economic growth in the long run, Nigeria should stabilize and strengthen oil export income by investing in upstream oil production and infrastructure, diversifying oil export markets to reduce over-reliance on some trading countries, hedging against global oil price shocks through forward contracts, and combating oil theft and pipeline vandalism.
- Given that non-oil exports negatively and significantly impact growth in the long run, which may be due to inefficiencies, low quality of non-oil exports, or volatile global demand, Nigeria should diversify from exporting raw goods to processed and value-added commodities, improve the standards and logistics involving non-oil exports, and support schemes such as the Nigeria Export Promotion Council.
- Given that inflation impacts negatively on Nigeria's growth in the long term, policymakers in Nigeria should maintain monetary policy discipline to keep inflation within target, improve food supply chains and energy access to lower cost-push inflation, and promote stability of the exchange rate to support export competitiveness.

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