

Effect of Non-Oil Exports on Economic Growth in Nigeria

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doi: <https://doi.org/10.37745/ejaaf.2013/vol14n54360>

Published July 15, 2026

Citation: Sholarin W.R., Maitala F.H., Gaiya S.S. (2026) Effect of Non-Oil Exports on Economic Growth in Nigeria, *European Journal of Accounting, Auditing and Finance Research*, 14(5),43-60

Abstract: *This study examines the effect of international trade output from selected non-oil sectors on economic growth in Nigeria. Given how dependent the country is on crude oil exports, and the constant exposure to global oil price swings, this study shifts attention to other sectors. Specifically, agriculture, manufacturing, solid minerals, and services are treated as key areas for export diversification. The study then uses secondary data from 1992 to 2024 to examine how export outputs from these sectors relate to GDP. So, instead of looking at oil, the focus is more on whether these non-oil sectors actually contribute meaningfully to economic growth over time. The study is anchored on the Export-Led Growth theory. Empirical evidence suggests that even though non-oil sectors clearly have the potential to drive economic growth, that potential has not really been fully realised. A lot of it comes down to structural issues. Things like poor infrastructure, weak policy implementation, and limited investment keep holding these sectors back. The study aims to provide sector-specific insights that will guide policymakers in formulating targeted trade and diversification strategies to enhance sustainable economic growth in Nigeria.*

Keywords: international trade, non-oil exports, agriculture, manufacturing, solid minerals, services sector, economic growth, gross domestic product.

INTRODUCTION

International trade is a major driver of economic growth since it allows countries to exchange goods and services beyond their borders. But in Nigeria's case, Nigeria's economy has historically depended heavily on crude oil exports, which makes it quite exposed to global oil price changes and other external shocks (Adegbe et al., 2020; Ikuemonisan et al., 2024). Because of this, the need for diversification has become more pressing. Attention is now shifting toward non-oil sectors like agriculture, manufacturing, solid minerals, and services. These sectors are seen as more sustainable paths to growth in the long run (Adekunle, 2025).

Agriculture still plays a major role in Nigeria's economy, especially in terms of employment and its contribution to GDP. Although its performance declined after the discovery of oil, largely due to resource shifts linked to the Dutch disease (Aruocha, 2023; Faith et al., 2021), it has not lost its relevance. In fact, evidence still shows that agricultural output continues to support economic growth (Gabriel et al., 2022). The same cannot be said for manufacturing, at least not fully. The sector has strong potential for value addition and industrialisation, but in reality, it is held back by poor infrastructure and high production costs (Adegboyoye et al., 2021). Then there is the solid minerals sector. Despite the abundance of natural resources, its contribution to GDP remains low, mostly because of weak policy frameworks and limited investment (Nwinyodee & Kerebana, 2022).

Furthermore, the services sector is different. It has grown to become a major contributor to GDP, driven mainly by telecommunications and financial services (Okogo et al., 2023; Nnangnon, 2020). Still, even with these improvements, inconsistent policy implementation continues to reduce the full benefits of trade openness (Imoagwu, 2023). While non-oil sectors are clearly important, their actual contribution to international trade and economic growth is still not as strong as expected. That observed gap is hard to ignore and points to the need for a more direct assessment of how export outputs from these sectors affect Nigeria's economic growth. Grasping this relationship is fundamental to formulating effective policy responses, building sound investment frameworks, and ensuring that non-oil exports make a genuine contribution to the country's development goals. It is against this backdrop that the present study sets out to examine the degree to which non-oil exports have shaped Nigeria's economic growth over time.

LITERATURE REVIEW

International Trade

International trade is a complex domain shaped by technological advancements, economic policies, and global events. The COVID-19 pandemic severely disrupted supply chains, which caused delays in the movement of goods and services due to restrictions on travels and closure of key trade facilities (Omole, 2023). These disruptions exposed the critical vulnerabilities in global trade networks, it underscored the need for resilience in international trade practices (Li, 2024). Digital technologies have really changed how international trade operates. As information technology has matured, a lot of trade processes have become more standardised and efficient, especially with the shift toward electronic transactions (Chen, 2023). And now, with artificial intelligence being integrated into trade platforms, decision-making is becoming more data-driven, helping firms optimise their trade strategies better than before (Yan, 2023). At the same time, trade agreements still play a key role in driving economic growth. They reduce uncertainty and signal long-term commitment to free trade, which in turn encourages investment and allows countries to benefit from comparative advantage (Falsetti et al., 2022).

Considering this, it is not always straightforward. Differences in culture and institutions between countries can make negotiations more complex and sometimes slow things down (Shu, 2023). And even after agreements are in place, compliance with trade contracts is still critical, without that, stability in trade relationships becomes difficult to maintain (Widiarty, 2024). International trade, particularly in services, has become a vital engine for economic development, contributing to job creation and innovation (Shao-jun, 2017). The integration of countries that have low and middle incomes into the global economy has transformed trade patterns, a notable rise is in South-South trade driven by emerging economies such as China and India (Hanson, 2012). China's rapid growth in international trade linked to technological advancements and increased global market participation, exemplifies this trend (Chen, 2024; Yang, 2012). Promoting trade liberalization and inter-regional economic collaboration remains essential for enhancing the sustainable development of the global economy (Qian, 2024).

Imports and Exports

Imports and exports represent fundamental components of international trade that shape global economies. Imports refer to goods and services purchased from other nations while exports refer to products and services sold to foreign markets. Their interplay determines the trade balance, indicating whether a country experiences a trade surplus or deficit. This interplay significantly influences economic performance, job creation, and technological advancement.

The principle of comparative advantage articulates that countries should specialize in producing goods in which they have relative efficiency, importing what they produce less efficiently. This kind of specialization generally improves overall economic welfare and exports act as a key driver of development, especially in developing economies that rely on export promotion strategies (Majeed, 2022). At the same time, imports are not just passive, The quality of imported goods can actually improve export performance, since better foreign inputs tend to enhance local production and lead to more competitive export products (Arnoletto et al., 2020), but then again, digital technologies are changing things quite fast. Export capacity is no longer just about production, it is also about how efficiently goods move and how information flows. Using better logistics systems, automation, and stronger communication infrastructure, transportation costs and delays are reduced, which improves international competitiveness (Yuan, 2024).

Also, access to improved information technology seems to play a role, in many developing countries, there is a clear link between better IT access and increased export activities (Ding et al., 2021). So it is not just trade policy anymore, technology is becoming part of the equation too.. Import uncertainties similarly affect how firms behave or operate regarding exports, influencing entry, exit, and survival rates in international trade (Vijil et al., 2023). Increased exports generate foreign exchange while stimulating domestic demand and encouraging expansion across economic sectors (Quddus, 2022), all these underscore the necessity for coherent and stable trade policies that optimize international trade benefits.

Balance of Trade

The balance of trade, also known as net exports, represents the net difference between the total value of a country's exports and imports (Kalu, 2020). A trade surplus occurs when exports exceed imports, while a trade deficit arises when imports exceed exports. The effects of either condition depend significantly on a country's trade policies, as protectionist policies can produce adverse outcomes for surplus nations, while deficit countries may leverage imports to stimulate economic growth (Amadeo & Brock, 2020).

Nigeria's export terrain is still heavily dominated by crude oil, for instance, about 80% of total export revenue in the second quarter of 2022 came from only oil (Laurentia, 2023). That level of dependence is highly risky because it leaves the economy exposed to global price fluctuations and even basic infrastructural constraints (Ebimobowei, 2022). The situation was not always like this, Before the oil boom in the 1970s, agriculture accounted for close to 90% of foreign earnings. But once oil took over, the attention shifted, and agricultural productivity declined. This is often explained using the Dutch disease concept (Mien & Goujon, 2021). Because of this, diversification has become more of a necessity than an option. Sectors like agriculture, manufacturing, and services are now seen as critical for improving economic resilience and creating employment opportunities (Orji, 2021). Nigeria's agri-food exports have been positively influenced by trade engagements with EU member countries, though the share of food exports to the EU declined from 72.1% in 1995 to 41.2% in 2019 (Abdullahi et al., 2021). Bilateral trade relations with China and Brazil have shown considerable growth, with Nigeria exporting timber, cotton, and petroleum to China while importing manufactured goods (NBS, 2022). Brazil remains the third largest importer of Nigerian crude oil after the USA and India, with Nigeria maintaining a favorable trade balance in that relationship (Cole & Aminu, 2018). Regional integration through ECOWAS has further demonstrated potential in enhancing Nigeria's overall export performance (Abdullahi et al., 2021).

Gross Domestic Product

Gross Domestic Product (GDP) quantifies the total economic output of a country over a specified period, encompassing the value of all final goods and services produced within a nation's borders. GDP is derived through three principal approaches: the production approach, which accounts for output generated in the economy; the income approach, which tallies total income earned by factors of production; and the expenditure approach, which aggregates consumption, investment, government spending, and net exports (Tunçsiper, 2023; Nailufar et al., 2023). GDP is usually used as a key measure when evaluating how an economy is performing and when comparing countries. Policymakers rely on it to make sense of issues like inflation, unemployment, and overall economic welfare. Real GDP alone does not always give the full picture. Real GDP, which adjusts for inflation, tends to be more reliable when looking at growth over time. It shows what is actually happening in the economy, not just changes in price levels (Kristiana & Raj, 2023; Karekezi, 2024). The standard GDP equation is expressed as $GDP = C + I + G + (X - M)$, where consumption, investment, government spending, and net exports represent aggregate economic demand (Li, 2022). A lot of factors come into play with Gross Domestic Product, from domestic investments

to broader macroeconomic policies. Government spending, taxation, even decisions made by firms all feed into how GDP grows over time (Nailufar et al., 2023; Đurović-Todorović et al., 2020).

But it is not the same across economies. In developed countries, services tend to dominate. That is where most of the value comes from. Developing economies are different. Agriculture and manufacturing still carry more weight (Ali et al., 2024). Despite its widespread use, GDP faces criticism for failing to account for income distribution, the informal economy, and environmental costs (Karnītis et al., 2019). The concept of green GDP has emerged to incorporate environmental factors into economic assessment and review (Zhang, 2024). Furthermore, GDP per capita serves as a useful tool for comparing economies across countries. But at the same time, it doesn't really capture inequalities within the population (Sajith & Malathi, 2020). Also, there's the standard rule of thumb. When real GDP records negative growth for two consecutive quarters, it is generally taken as a sign that the economy is in recession (Bade & Parkin, 2021).

The Non-Oil Sectors and Economic Growth in Nigeria

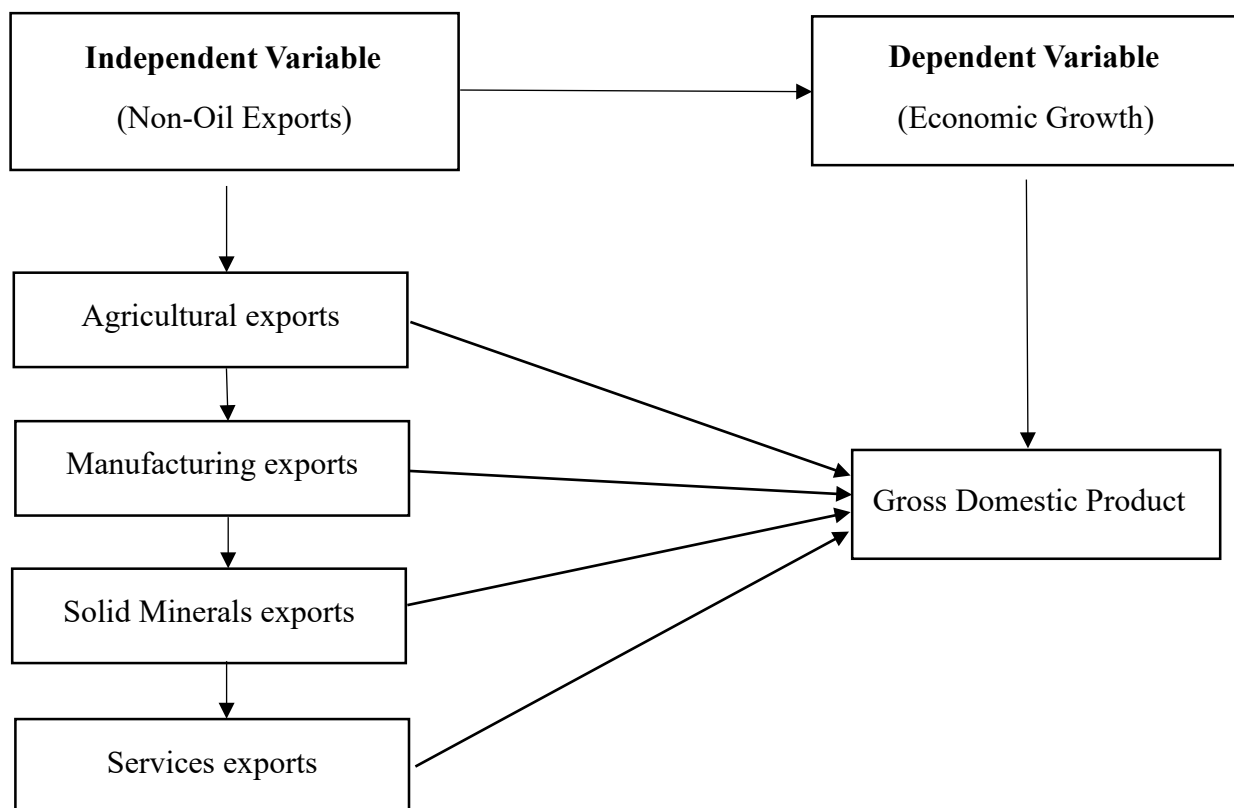
Nigeria's non-oil sectors, comprising services, solid minerals, and agriculture, have become increasingly significant to economic growth amid efforts to diversify away from oil dependency. The services sector is driven by globalization and technological advancement. It also creates room for economies of scale and supports productivity growth. When firms engage in export activities, they tend to gain access to new technologies and better practices, which in turn improves overall productivity (Guevara et al., 2023). Then there is the services sector, especially ICT. Strengthening this sector does more than just boost revenue sources, it also supports human capital development over time (Anser et al., 2025).

Solid minerals represent another viable pathway for economic diversification. When managed responsibly, mineral resources can augment foreign direct investment, positively influence trade balances, and contribute to technological advancements (Han et al., 2025). Research shows that solid mineral exports are linked to economic growth. But that link does not just happen on its own. It tends to depend on how strong government support is, and whether the right policies are in place to actually promote export performance. (Maduka et al., 2025). While immediate impacts may not reflect strong short-term growth, their long-term benefits advocate for sustained policy development in this sector (Hinmikal & AC-Ogbonna, 2024).

Agriculture remains a critical and important part of Nigeria's economy and its international trade. Exports like cocoa, oil palm, and cassava still play a role in foreign exchange earnings and even shape domestic economic conditions. In fact, higher agricultural exports have been linked to improvements in GDP growth (Gabriel et al., 2022). However, this was not always a secondary sector. Before oil took over in the mid-1970s, Nigeria was actually a major exporter of cocoa, palm oil, and groundnuts (Sunday et al., 2023). Situation eventually changed. The heavy reliance on oil, along with low investment in agriculture and weak processing capacity, has now reduced the sector's competitiveness. Most exports are still in raw form, and that means lower value in the international market, which doesn't really help the economy as much as it should. prices than

processed goods (Ikueomonisan et al., 2024). Agriculture currently employs approximately two-thirds of Nigeria's workforce, further underscoring its broader socioeconomic importance (Tokgöz et al., 2020). A balanced trade approach encouraging robust agricultural exports alongside strategic imports remains essential for building a resilient and diversified Nigerian economy (Abdullahi et al., 2021).

Conceptual Framework



Source: Researcher (2026)

Theoretical Review

This study is theoretically underpinned by the Export-Led Growth (ELG) Theory. The ELG Theory, associated with Balassa (1978) and Krueger (1978), provides the primary framework for this study. The theory posits that sustained economic growth can be achieved through the expansion of exports, as export activities stimulate domestic production, enhance capacity utilization, generate foreign exchange earnings, and promote technological advancement. The

relevance of the ELG theory to this study is quite straightforward. It aligns directly with what the study is trying to achieve, which is to examine how export outputs from agriculture, manufacturing, solid minerals, and services affect GDP in Nigeria. Shifting sights to existing evidence within Nigeria, the pattern is consistent. Studies like Amao et al. (2021) and Abdullahi et al. (2021) show that agricultural and non-oil exports can significantly drive GDP growth, especially when export-focused policies are properly implemented. There is also support from study of Agbonkhese and Salihu (2023). In their findings, over the long run, export growth is positively linked to overall economic performance in Nigeria. So, in a way, the theory does not only align conceptually, it is backed by practice.

Empirical Review

Joan et al. (2024) examined how non-oil sectors relate to economic growth in Nigeria, using GDP as the measure of growth and sectoral outputs for agriculture, manufacturing, and services. Using regression analysis on secondary data, they found a positive and significant relationship. In simple terms, stronger non-oil sector performance translates to higher economic growth. Nwankwo et al. (2024) examined the relationship between agricultural policy interventions, GDP growth, and agribusiness expansion in Nigeria. They utilized regression analysis on secondary data. Their findings revealed that agricultural policies had a significant positive effect on GDP growth. They concluded that consistent and well-coordinated agricultural policies are essential for enhancing sectoral productivity. Ibeh (2024) assessed the impact of trade policies on Nigeria's manufacturing and agricultural sectors, using sectoral output performance as the dependent variable. The Regression analysis employed revealed that trade policies significantly influenced both sectors, in conclusion, they stated that coherent trade policy frameworks are essential for promoting economic growth. Xie and Huang (2023), although in a different context used cointegration and Granger causality, to establish a stable long-run relationship between trade and growth, with causality running from trade to growth. They concluded that trade expansion appears to drive economic performance over time.

Nnoli et al. (2023) examined the relationship between inflation, exchange rate, and agricultural export performance in Nigeria. Their findings showed that exchange rate movements significantly influenced agricultural exports while inflation exerted a negative effect further emphasizing the importance of macroeconomic stability. Sunday et al. (2023) examined the effect of agricultural investments, credit, and exports on agricultural growth in Nigeria from 1981 to 2020. Looking at agricultural investment, credit, and exports over a long period, they find that both exports and investment positively affect agricultural growth and concluded that sustained investment and export promotion are essential for agricultural development. Wahab (2023) examined determinants of manufacturing export performance in Nigeria, they used GMM estimation. Their findings revealed thus; capital investment, stable exchange rates, and improved infrastructure significantly enhanced manufacturing export performance, concluding that strengthening manufacturing exports is essential for expanding non-oil trade output. Briggs and Nteegah (2023) examined the effect of transnational trade on Nigeria's economic growth, proxied by GDP. Using Regression

analysis on secondary time series data, their findings state that international trade has a positive and significant effect on GDP in Nigeria, reinforcing the idea that expanding beyond oil is necessary for sustained growth.

Xu et al. (2023) investigated the effect of agricultural trade on total factor productivity using secondary panel data from G20 countries. Advanced econometric analysis revealed that agricultural trade significantly improved productivity, concluding that agricultural trade expansion contributes to growth through efficiency channels. Okogo et al. (2023) analyzed Nigeria's bilateral trade performance in goods and services with selected international trading partners using descriptive and econometric techniques, the findings of the study revealed that Nigeria's trade in services and non-oil goods remains underdeveloped, concluding that expanding non-oil exports is critical for enhancing economic growth.

Literature Gap

Despite extensive studies on the subject topic international trade and economic growth in Nigeria, there are key gaps. Most existing studies tend to focus on aggregate trade or crude oil exports, with relatively little attention given to disaggregated non-oil exports. Even in cases where non-oil sectors are considered, they are often examined in isolation. For example, some studies concentrate only on agriculture (Amao et al.; Jacob), while others focus on manufacturing (Ogundipe). The problem with this approach is that it gives a somewhat fragmented picture, making it difficult to understand how these sectors work together or interact in influencing overall economic growth. Also, while Nigeria's dependence on oil and the implications of the Dutch Disease are widely acknowledged (Ebimobowei; Oludimu & Alola), there is still limited empirical work that actually tests whether non-oil exports can offset these effects. It is often assumed, but not really examined in detail. Another factor is the focus of many studies. A good number of them lean more toward trade openness or exchange rate movements (Nwosa & Fasina; Briggs & Nteegah), which are important, But that shifts attention away from the real sector, especially actual export performance across different sectors. So there is a bit of a disconnect there between policy discussions and what is really happening. Again, sectors like services and solid minerals are not getting enough attention, even though their importance is gradually increasing (Joan et al.). detailed analysis should have been there, but it is still quite limited. Furthermore, many of these studies either focus on a single sector or use relatively short time periods which makes it harder to draw conclusions about longrun relationships or sustained impacts. Taking all this together, there is a clear need for a more comprehensive approach. One that looks at disaggregated non-oil exports across sectors, over a longer period, and in a way that can provide more practical and reliable policy insights for Nigeria.

METHODOLOGY

The research design employed was ex-post facto research design. This research design basically sets out the framework for how data will be collected and analysed in order to answer the research questions. It outlines the structure for the study. The study itself relies on secondary data, drawn

from credible and verifiable sources. These include publications from the World Bank (WB) and the Central Bank of Nigeria (CBN) Statistical Bulletins. The dataset will cover an annual time series from 1991 to 2024 to capture long-term effects. Dependent Variable: GDP (Gross Domestic Product); Independent Variable: Non-oil exports.

This research employed an Autoregressive Distributed Lag (ARDL) model, the analysis in this study will also follow a structured procedure the study will begin with a unit root test to examine the stochastic properties of the variables. Following the unit root tests and model selection, diagnostic tests will be conducted to confirm the validity of the model. The study will estimate the short-run and long-run relationships using the ARDL Bounds Testing procedure. This methodological approach is meant to give a clearer picture of how export trade outputs affect Nigeria's GDP, especially from the non-oil exports. The use of ARDL, VECM, and Granger causality tests helps with that. It allows the study to capture both short-run and long-run relationships, and not just this, but also the direction of causality between the variables.

Model Specification

To investigate the relationship between international trade output in the non-oil sector and economic growth in Nigeria, the Autoregressive Distributed Lag (ARDL) model will be employed. This model is suitable for analyzing time series data with mixed orders of integration (i.e., I(0) and I(1)) and allows for both short- and long-term relationships between variables (Pesaran, Shin, & Smith, 2001).

The ARDL model is specified as follows:

$$GDP_t = \alpha + \sum_{i=1}^q \beta_1 AGRIC_EXPORT_{t-i} + \sum_{j=1}^q \beta_2 MAN_EXPORT_{t-j} + \sum_{k=1}^q \beta_3 SOL_EXPORT_{t-k} + \sum_{l=1}^q \beta_4 SERV_EXPORT_{t-l} + \epsilon_t$$

Where, GDP_t = Gross Domestic Product at time t, AGRIC_EXPORT_t = Agricultural exports at time t, MAN_EXPORT_t = Manufacturing exports at time t, SOL_EXPORT_t = Solid Minerals exports at time t, SERV_EXPORT_t = Services exports at time t, p, q, r, s = Lag lengths for the respective variables, β₁, β₂, β₃, β₄ = Coefficients of the independent variables alpha = Constant term, ε_t = Error term

RESULTS AND DISCUSSION

Descriptive Statistics

This analysis is conducted to assess the descriptive properties of the research variables in order to ascertain if the data possess requisite characteristics for statistical analysis. These statistics disclose the characteristics of the research variables principally in terms of variance or closeness of the data points to the mean. The ultimate is to determine the degree of variability of the data away from the mean. A high variability indicates high degree of variance and high potential of non-normality of the data thus leading to unreliable estimate. It is desired that the dataset has low level of variability.

Table 4.1 presents the result of these statistics.

Table 4.1: Descriptive Statistics Analysis Result

	GDP	AGRIC_EX...	MAN_EXPORT	SOL_EXPORT	SERV_EXP...
	47454.96	0.833456			
	45320.08	0.295490	3.001408	1039670.	1.18E+09
	80606.53	7.268343	2.509054	350061.3	8.55E+08
	21757.90	0.005946	10.74753	10967670	5.43E+09
	21114.18	1.623051	0.022718	4227.800	2.55E+08
Mean	0.086144	3.037120	2.802998	2019055.	1.17E+09
Median	1.398257	11.42248	0.941188	3.747209	2.188765
Maximum	3.676624	152.7657	3.196461	18.46232	7.627982
Minimum	0.159086	0.000000	5.074410	418.2701	57.48975
Std. Dev.	1613468.	28.33749	0.079087	0.000000	0.000000
Skewness	1.47E+10	86.93173	102.0479	35348780	4.00E+10
Kurtosis	34	34	259.2743	1.35E+14	4.55E+19
Jarque-Bera			34	34	34
Probability					
Sum					
Sum Sq. Dev.					
Observations					

Source: *Researchers' Computation (2026)*

Unit Root Test

This study proceeds to examining the stochastic properties of the variables considered in the model by analyzing their order of integration based on a series of unit root test using Augmented Dickey Fuller unit root test.

Table 4.2: ADF Unit Root Test

Variables	ADF Value	1%	5%	10%	Prob. values
GDP	-8.079895	-3.661661	-2.960411	-2.619160	0.000
AGRIC_EXPORT	-9.536915	-3.670170	-2.963972	-2.621007	0.000
MAN_EXPORT	-6.534509	-3.679322	-2.967767	-2.622989	0.000
SOL_EXPORT	-10.56873	-3.661661	-2.960411	-2.619160	0.000
SERV_EXPORT	-6.978776	-3.670170	-2.963972	-2.621007	0.000

Source: *Researchers' Computation (2026)*

Residual Diagnostic Tests

To find out if our specification exhibits autocorrelation problem, the Breusch-Godfrey LM test is one of the prominent tests that this is conducted in this study. The null hypothesis is that there is no serial correlation.

Breusch-Godfrey Serial Correlation LM Test**Table 4.3: Breusch-Godfrey Serial Correlation LM Test**

Breusch-Godfrey Serial Correlation LM Test:

Null hypothesis: No serial correlation at up to 1 lag

F-statistic	0.337162	Prob. F(1,10)	0.5743
Obs*R-squared	0.848029	Prob. Chi-Square(1)	0.3571

Source: *Researcher's Computation (2026)*

The null hypothesis of the test as seen in Table 4.3 is that there is no serial correlation problem in the residuals up to the specified lag order since the p-values were greater than 0.10.

Breusch-Godfrey Heteroskedasticity Tests**Table 4.4: Breusch-Godfrey Heteroskedasticity Tests**

Heteroskedasticity Test: Breusch-Pagan-Godfrey

Null hypothesis: Homoskedasticity

F-statistic	0.672860	Prob. F(14,11)	0.7605
Obs*R-squared	11.99415	Prob. Chi-Square(14)	0.6068
Scaled explained SS	1.056740	Prob. Chi-Square(14)	1.0000

Source: *Researcher's Computation via Eviews (2026)***Test of Hypotheses**

ARDL estimation was conducted in order to test the hypotheses using the results from Tables 4.5 and 4.6 respectively.

Table 4.5: ARDL short-run estimation test analysis

Dependent Variable: LOG(GDP)

Method: ARDL

Date: 03/31/26 Time: 14:51

Sample (adjusted): 1999 2024

Included observations: 26 after adjustments

Maximum dependent lags: 2 (Automatic selection)

Model selection method: Akaike info criterion (AIC)

Dynamic regressors (2 lags, automatic): LOG(AGRIC_EXPORT)

LOG(MAN_EXPORT) LOG(SOL_EXPORT) LOG(SERV_EXPORT) ECM(-1)

Fixed regressors: C

Number of models evaluated: 486

Selected Model: ARDL(2, 2, 1, 2, 0, 2)

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
LOG(GDP(-1))	1.805144	0.172703	10.45233	0.0000
LOG(GDP(-2))	-1.004776	0.176040	-5.707649	0.0001
LOG(AGRIC_EXPORT)	-0.000939	0.002846	-0.330003	0.7476
LOG(AGRIC_EXPORT(-1))	-0.004046	0.002219	-1.823333	0.0955

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LOG(AGRIC_EXPORT(-2))	0.002881	0.002304	1.250254	0.2371
LOG(MAN_EXPORT)	0.008490	0.003628	2.340013	0.0392
LOG(MAN_EXPORT(-1))	-0.016864	0.004474	-3.768910	0.0031
LOG(SOL_EXPORT)	0.033143	0.009916	3.342424	0.0066
LOG(SOL_EXPORT(-1))	-0.011815	0.010903	-1.083637	0.3017
LOG(SOL_EXPORT(-2))	0.046668	0.010491	4.448414	0.0010
LOG(SERV_EXPORT)	-0.031572	0.016816	-1.877489	0.0872
ECM(-1)	-0.023276	0.015708	-1.481775	0.1665
ECM(-2)	-0.110799	0.021759	-5.092172	0.0003
ECM(-3)	0.080547	0.033652	2.393552	0.0356
C	1.942527	0.425068	4.569922	0.0008
R-squared	0.999559	Mean dependent var	10.85398	
Adjusted R-squared	0.998997	S.D. dependent var	0.379526	
S.E. of regression	0.012021	Akaike info criterion	-5.710717	
Sum squared resid	0.001589	Schwarz criterion	-4.984892	
Log likelihood	89.23933	Hannan-Quinn criter.	-5.501706	
F-statistic	1779.263	Durbin-Watson stat	2.250859	
Prob(F-statistic)	0.000000			

*Note: p-values and any subsequent tests do not account for model selection.

Source: *Researcher's Computation (2026)*

Table 4.6: ARDL long-run estimation test analysis

ARDL Long Run Form and Bounds Test
 Dependent Variable: DLOG(GDP)
 Selected Model: ARDL(2, 2, 1, 2, 0, 2)
 Case 2: Restricted Constant and No Trend
 Date: 03/31/26 Time: 14:55
 Sample: 1991 2024
 Included observations: 26

Conditional Error Correction Regression				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.942527	0.425068	4.569922	0.0008
LOG(GDP(-1))*	-0.199632	0.042751	-4.669623	0.0007
LOG(AGRIC_EXPORT(-1))	-0.002104	0.002786	-0.755200	0.4660
LOG(MAN_EXPORT(-1))	-0.008374	0.005515	-1.518465	0.1571
LOG(SOL_EXPORT(-1))	0.067996	0.018000	3.777618	0.0031
LOG(SERV_EXPORT)**	-0.031572	0.016816	-1.877489	0.0872
ECM(-2)	-0.053527	0.034869	-1.535089	0.1530
DLOG(GDP(-1))	1.004776	0.176040	5.707649	0.0001
DLOG(AGRIC_EXPORT)	-0.000939	0.002846	-0.330003	0.7476
DLOG(AGRIC_EXPORT(...	-0.002881	0.002304	-1.250254	0.2371
DLOG(MAN_EXPORT)	0.008490	0.003628	2.340013	0.0392
DLOG(SOL_EXPORT)	0.033143	0.009916	3.342424	0.0066
DLOG(SOL_EXPORT(-1))	-0.046668	0.010491	-4.448414	0.0010
D(ECM(-1))	-0.023276	0.015708	-1.481775	0.1665
D(ECM(-2))	-0.080547	0.033652	-2.393552	0.0356

* p-value incompatible with t-Bounds distribution. **
Variable interpreted as $Z = Z(-1) + D(Z)$.

Levels Equation				
Case 2: Restricted Constant and No Trend				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(AGRIC_EXPORT)	-0.010541	0.013998	-0.753054	0.4672
LOG(MAN_EXPORT)	-0.041947	0.025636	-1.636270	0.1300
LOG(SOL_EXPORT)	0.340608	0.056129	6.068278	0.0001
LOG(SERV_EXPORT)	-0.158153	0.082497	-1.917062	0.0816
ECM(-1)	-0.268131	0.170155	-1.575802	0.1434
C	9.730544	1.085076	8.967618	0.0000

EC = LOG(GDP) - (-0.0105*LOG(AGRIC_EXPORT) -0.0419
*LOG(MAN_EXPORT) + 0.3406*LOG(SOL_EXPORT) -0.1582
*LOG(SERV_EXPORT) -0.2681*ECM(-1) + 9.7305)

F-Bounds Test				
Null Hypothesis: No levels relationship				
Test Statistic	Value	Signif.	I(0)	I(1)
Asymptotic: n=1000				
F-statistic	4.175034	10%	2.08	3.417
k	5	5%	2.39	3.38
		2.5%	2.7	3.73
		1%	3.06	4.15
Finite Sample: n=35				
Actual Sample Size	26	10%	2.331	3.417
		5%	2.804	4.013
		1%	3.9	5.419
		Finite Sample: n=30		
		10%	2.407	3.517
		5%	2.91	4.193
		1%	4.134	5.761

Source: Researcher's Computation (2026)

DISCUSSION OF THE FINDINGS

The four hypotheses tested revealed inconsistent results. It was found that agricultural exports do not have any significant effect on GDP in Nigeria. This finding is consistent with the finding of Nnoli et al. (2023) that exchange rate movements significantly influenced agricultural export performance, while inflation exerted a negative effect leading to insignificant effect on GDP. Another finding revealed that manufacturing exports do have significant effect on GDP in Nigeria.

This finding corroborates the finding of Ikuemonisan et al. (2024) that manufacturing exports exerted a positive and significant effect on economic growth. The result also showed that solid minerals exports do have significant effect on the GDP in Nigeria. This finding is consistent with the finding of Han et al. (2025) that mineral sector output, supported by appropriate financial and technological policies, significantly enhanced economic growth. This finding further corroborates the finding of Owamah (2025) that non-oil exports also had a positive and statistically significant effect, particularly in the long run. It was further found that services exports do not have any significant effect on GDP in Nigeria. This finding is consistent with the finding of Okogo et al. (2023) that Nigeria's trade in services remains underdeveloped relative to potential.

One major implication of the finding that agricultural exports have no significant effect on Nigeria's GDP is the urgent need for value addition and agro-processing. This result often suggests that Nigeria is primarily exporting raw agricultural materials, which command low prices and limited multiplier effects. It implies structural failures—poor rural roads, inadequate storage, unstable power—and that current export policies are not bridging farm output and national wealth. Government focus might shift to low-interest credit for agri-tech and research–farmer partnerships to reduce oil-shock vulnerability. Furthermore, one major implication of the finding that manufacturing exports significantly affect GDP in Nigeria is that diversifying the export base away from crude oil can provide a more stable, value-added growth path, pull other sectors (agriculture, services), and reflect “learning by exporting.” One significant implication of the finding that solid mineral exports have a significant effect on Nigeria's GDP is the reduced vulnerability to global oil price shocks, stronger FX earnings, and benefits from domestic processing that spur jobs, regional development, and infrastructure. One major implication of finding that services exports do not significantly affect Nigeria's GDP is that diversification is constrained by underperforming tradable services, misaligned incentives (e.g., EEG), power and cost challenges, and weak digital foundations, leaving youth-led talents underutilized for export revenue.

CONCLUSION AND RECOMMENDATIONS

Nigeria's non-oil exports affect growth unevenly and depend on sectoral structure and value addition. Manufacturing and solid minerals exports are sectors that are both more processed and linked to broader supply chains, they have statistically significant positive effects on GDP. Agricultural and services exports are largely growth-neutral, reflecting low value addition, weak global value-chain integration, and structural inefficiencies. There is a stable long-term connection between non-oil exports and GDP, but the economy is slow to catch up to it because of bottlenecks that limit the benefits. Overall, the problem is such that, simply expanding non-oil exports is insufficient, Nigeria must shift its export mix toward higher-productivity, technology-intensive, and competitive activities, without this structural realignment, non-oil exports will continue to underperform as a driver of sustainable growth. The main objective of the study was to examine the impact of non-oil exports on economic growth in Nigeria. This study empirically investigated

the short-run and long-run dynamics between sectoral non-oil exports (agriculture, manufacturing, solid minerals, and services) and GDP using an ARDL framework over 1991–2024.

Therefore, this study recommends that:

1. To achieve sustainable economic growth, the focus must first shift toward upgrading the agricultural sector from raw-commodity exports to integrated agro-industrial chains. This transition requires a deliberate investment in processing zones, modern cold-storage facilities, and reliable logistics network infrastructure. By introducing targeted incentives, the domestic economy can ensure that export-driven agribusinesses capture and retain more value right at home.
2. The industrial sector should aggressively pursue export-oriented manufacturing. Rather than spreading resources too thin, the strategy should focus on expanding Special Economic Zones (SEZs), slashing energy tariffs, and scaling up accessible export finance. Prioritizing manufacturing sectors that feature both strong backward linkages and high export responsiveness will naturally multiply job creation and spread financial gains across the wider economy.
3. Transparent regulatory frameworks should be established, forming public-private partnerships (PPPs), and driving technology adoption will provide the stability needed to anchor long-term growth. Crucially, strict local beneficiation policies must be enforced to ensure that high-value minerals are processed domestically instead of being shipped out as cheap raw materials.
4. The services sector needs to pivot away from low-productivity activities toward tradable, high-value niches like ICT, specialized finance, and the creative industries. Unlocking this potential requires substantial investments in broadband infrastructure and data centers, alongside deliberate talent development programs. Eliminating the regulatory barriers to global market entry is essential; otherwise, the services sector will remain massive within domestic borders but functionally invisible on the global stage.

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