International Journal of
Advanced Research in Statistics, Management and Finance
p-ISSN: 2315-8409 | e-ISSN: 2354-1644

IJARSMF

September, 2026
Vol.12, No. 1

Impact of the Public Domestic Financing Options on Oil Export Growth in Nigeria (1986-2025)

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Article DOI:
10.48028/iiprds/ijarsmf.v12.i1.02

Keywords:
Autoregressive Distributed Lag; Deposit Money Banks' Domestic Financing Option; Oil Export Growth; Public Domestic Financing Options; Nigeria.

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Abstract

Government domestic financing remains a critical instrument for supporting productive sectors and sustaining export-led economic growth, particularly in resource-dependent economies such as Nigeria. However, existing studies have largely focused on export financing, financial sector development, or non-oil exports, with limited attention given to the individual effects of public domestic financing options on oil export growth. This study therefore examined the impact of public domestic financing options on oil export growth in Nigeria covering the period 1986–2025. The study adopted an ex post facto research design and employed the Autoregressive Distributed Lag (ARDL) estimation technique to examine both the short-run and long-run relationships among the variables. The findings revealed the existence of a stable long-run equilibrium relationship. In the long run, Deposit Money Banks' Domestic Financing Option exerted a positive and statistically significant effect on oil export growth, whereas Non-Banking Financial Institutions' Domestic Financing Option had a negative but statistically insignificant effect, and Central Bank of Nigeria Domestic Financing Option exerted a positive but statistically insignificant effect. The study concluded that commercial bank financing remains the most effective public domestic financing channel for enhancing oil export growth in Nigeria. It recommended that the Central Bank of Nigeria and the Federal Ministry of Finance expand deposit money bank financing to the petroleum sector, while the Central Bank of Nigeria and the Securities and Exchange Commission strengthen the effectiveness of non-bank financing and improve the design and monitoring of central bank intervention financing programmes.

Background of the Study

Governments employ various financing options to achieve macroeconomic stability, stimulate productive investment, and promote sustainable economic growth. These financing options generally comprise domestic borrowing, external borrowing, taxation, and monetary financing, with domestic financing increasingly preferred because it reduces external debt vulnerability and strengthens financial sector development. Within domestic financing, governments rely on deposit money banks, non-bank financial institutions, and central bank interventions to mobilize resources for strategic sectors. Effective domestic financing has therefore become central to improving export competitiveness, particularly in resource-dependent economies. Despite the global transition toward cleaner energy, crude oil remains a strategic commodity, with global oil demand exceeding 103 million barrels per day in 2024 (IEA, 2024). Consequently, strengthening domestic financing mechanisms remains an important policy priority for sustaining oil export growth and external sector stability (World Bank, 2024; IMF, 2024). Financial intermediation theory argues that efficient financial institutions stimulate production and exports by mobilizing savings and allocating credit to productive sectors, whereas the demand-following hypothesis suggests that financial development responds to expanding economic activity. Empirical evidence generally indicates that commercial bank credit, non-bank financial institutions, and public financing programmes improve firms' investment capacity and export performance, although their effectiveness depends on institutional quality and financial sector efficiency (Rateiwa & Aziakpono, 2017; Alirzayev *et al.,* 2020; Serena *et al.,* 2022).

Nigeria provides an important case because crude oil accounts for over 80% of export earnings and remains the country's principal source of foreign exchange (CBN, 2024). Oil export earnings increased from ₦8.37 billion in 1986 to ₦66.89 trillion in 2024, while deposit money bank financing rose from ₦4.57 billion to ₦21.98 trillion, non-bank financial institution financing from ₦7.77 billion to ₦20.40 trillion, and Central Bank financing from ₦16.10 billion to ₦28.03 trillion. However, oil export earnings declined to ₦41.20 trillion in 2025, suggesting that rising domestic financing has not consistently translated into sustained export growth.

Existing studies have mainly examined bank credit and non-oil exports or linked export financing to aggregate economic growth (Eyo, 2016; Daramola, 2024; Obieche *et al.,* 2024). Few studies have jointly assessed deposit money banks, non-bank financial institutions, and Central Bank financing as government domestic financing options influencing oil export growth, particularly over the recent period characterised by post-pandemic reforms and expanded intervention financing. This study addresses this gap by examining the impact of deposit money banks' financing, non-bank financial institution financing, and Central Bank financing on Nigeria's oil export growth during 1986–2025 using annual time-series data and appropriate econometric techniques. The findings provide contemporary evidence to guide government financing strategies aimed at strengthening oil exports, foreign exchange earnings, and macroeconomic stability. To empirically examine these relationships and achieve the study's objective, the following null hypotheses are formulated and tested:

H_{01}: Deposit money banks domestic financing option has no significant impact on Oil export growth in Nigeria.

H_{02}: Non-banking financial institutions domestic financing option has no significant impact on Oil export growth in Nigeria.

H_{03}: CBN domestic financing options has no significant impact on Oil export growth in Nigeria.

Literature Review

Conceptual Review

Public domestic financing options

Public domestic financing refers to the mechanisms through which a government mobilizes financial resources from within its domestic economy to finance public expenditure, investment, and development programmes. The International Monetary Fund (IMF, 2019) defines domestic financing as government borrowing and resource mobilization undertaken within national financial markets, primarily through the issuance of government securities, borrowing from domestic financial institutions, and monetary financing by the central bank. Similarly, the World Bank (2022) views domestic financing as an important component of public finance that enables governments to fund budgetary operations while reducing dependence on external borrowing and exposure to exchange rate risks.

From a public finance perspective, domestic financing encompasses borrowing from deposit money banks, non-bank financial institutions, pension funds, insurance companies, capital markets, and, where permitted by law, advances or intervention financing from the central bank (Musgrave & Musgrave, 1989). The Organisation for Economic Co-operation and Development (OECD, 2023) further emphasizes that effective domestic financing strengthens fiscal sustainability by mobilizing local savings, deepening financial markets, and enhancing governments' capacity to finance infrastructure and productive investments. In Nigeria, the Central Bank of Nigeria (CBN, 2024) recognizes domestic financing as funding sourced from domestic financial institutions and monetary authorities to support government operations and strategic sectors of the economy. Although domestic financing provides governments with greater financial flexibility, excessive reliance on domestic borrowing may crowd out private investment, increase interest rates, and exert inflationary pressures if not properly managed (IMF, 2019). Consequently, the effectiveness of domestic financing depends largely on the efficiency of domestic financial institutions, macroeconomic stability, and prudent fiscal management.

Deposit Money Banks' Domestic Financing Option

Deposit money banks (DMBs) are financial institutions licensed to accept deposits from the public and provide credit and other financial services to households, businesses, and governments. According to the Central Bank of Nigeria Act and the Banks and Other Financial Institutions Act (BOFIA, 2020), deposit money banks are authorized to mobilize deposits and extend loans and advances that facilitate investment and

economic activities. The Bank for International Settlements (BIS, 2022) defines commercial banking as financial intermediation involving the mobilization of savings and the allocation of credit to productive sectors of the economy.

Within the context of public domestic financing, deposit money banks constitute one of the principal channels through which governments finance development programmes and productive activities by purchasing government securities, extending credit, and participating in intervention programmes. The IMF (2019) recognizes commercial bank financing as an essential component of domestic public financing because it enhances liquidity within domestic financial markets and supports investment without immediate reliance on external debt. The effectiveness of deposit money bank financing depends on credit availability, lending conditions, financial sector development, and prudent banking regulation. Well-developed banking systems facilitate efficient allocation of financial resources, stimulate investment, and strengthen productive sectors that contribute to export growth and economic development.

Non-Banking Financial Institutions' Domestic Financing Option

Non-bank financial institutions (NBFIs) are financial intermediaries that provide financial services without operating as conventional commercial banks. According to the International Monetary Fund (IMF, 2022), NBFIs include development finance institutions, finance companies, pension funds, insurance companies, mortgage institutions, microfinance institutions, leasing companies, and other specialized financial institutions that mobilize funds and allocate credit to productive sectors. Similarly, the Organisation for Economic Co-operation and Development (OECD, 2023) recognizes NBFIs as important sources of long-term finance that complement commercial banking by serving sectors that may have limited access to traditional bank credit. In Nigeria, the Central Bank of Nigeria (2024) regulates several categories of non-bank financial institutions that provide investment financing, development finance, mortgage financing, and specialized credit services. These institutions contribute to financial deepening by expanding access to finance, mobilizing domestic savings, and promoting investment in strategic sectors of the economy. Unlike deposit money banks, NBFIs often specialize in medium- and long-term financing designed to stimulate productive investment and economic diversification.

Central Bank of Nigeria (CBN) Domestic Financing Option

Central bank domestic financing refers to financial resources provided by a country's monetary authority to government or strategic sectors through advances, intervention funds, refinancing facilities, liquidity support, and other monetary policy instruments. The International Monetary Fund (2019) defines central bank financing as monetary support extended within the domestic economy to facilitate government operations or stabilize economic activities under established legal frameworks. In Nigeria, the Central Bank of Nigeria Act, 2007 empowers the Central Bank of Nigeria (CBN) to promote monetary and financial stability and, subject to statutory provisions, provide temporary advances to the Federal Government and implement development finance interventions.

The Central Bank of Nigeria (2024) identifies its domestic financing role as supporting productive sectors through targeted intervention programmes, refinancing schemes, agricultural and manufacturing credit facilities, and other policy instruments designed to stimulate economic growth. Such financing complements conventional banking activities by addressing market failures and improving access to credit for priority sectors. Although central bank financing can stimulate production and investment, excessive monetary financing may generate inflationary pressures and weaken macroeconomic stability if not prudently managed. Consequently, its effectiveness depends on sound monetary policy and institutional discipline.

Oil Export Growth

Oil export growth refers to the sustained increase in the quantity or value of crude oil and petroleum products exported by a country over a given period. The United Nations Conference on Trade and Development (UNCTAD, 2023) defines exports as goods and services produced domestically and sold to foreign markets, thereby generating foreign exchange earnings and improving the balance of payments. Within this framework, oil exports comprise crude petroleum and refined petroleum products sold to international markets. The World Bank (2024) similarly regards export growth as the expansion of a country's export earnings resulting from increased production, higher international prices, or improved export competitiveness.

From a macroeconomic perspective, oil export growth constitutes an important indicator of external sector performance because it determines foreign exchange availability, fiscal revenue, external reserves, and economic stability in oil-producing countries (International Monetary Fund [IMF], 2024). In resource-dependent economies such as Nigeria, oil export growth is influenced by production capacity, global crude oil prices, exchange rate movements, investment in the petroleum sector, financing availability, and government policy interventions (Central Bank of Nigeria, 2024). While export growth may be measured using export volume or export value, many developing countries, including Nigeria, commonly employ the monetary value of oil exports because it captures both production and prevailing international prices. Consequently, oil export growth serves as a useful indicator of the performance of the petroleum export sector and its contribution to national income and external sector sustainability.

Theoretical Underpinning

The study is anchored on the Financial Intermediation Theory, originally propounded by Gurley and Shaw (1960) in their seminal work Money in a Theory of Finance. The theory explains the critical role played by financial intermediaries in mobilizing savings from surplus economic units and channeling them to deficit units for productive investment. Gurley and Shaw argued that financial institutions reduce information asymmetry, transaction costs, and investment risks by efficiently allocating financial resources to sectors with the highest productive potential. Consequently, a well-developed financial system enhances investment, production, trade, and overall economic growth by improving access to finance and ensuring efficient resource allocation.

The central proposition of the Financial Intermediation Theory is that financial intermediaries—including deposit money banks, non-bank financial institutions, and central banks—serve as catalysts for economic development by facilitating the flow of funds from savers to investors. Through credit creation, liquidity provision, maturity transformation, and financial risk management, these institutions increase productive investment, stimulate industrial output, and improve export competitiveness. The theory therefore suggests that economies with efficient domestic financial systems are better positioned to achieve sustainable export growth because firms can readily obtain financing required for production, technological advancement, and market expansion.

The relevance of this theory to the present study lies in its direct explanation of how Nigeria's public domestic financing options influence oil export growth. Deposit money banks provide credit to businesses operating within the petroleum value chain; non-bank financial institutions complement bank financing through long-term and specialized financing; while the Central Bank of Nigeria supports strategic sectors through intervention funds, refinancing facilities, and development finance programmes. These financing channels enhance investment, production capacity, and export performance within the oil sector. Accordingly, the theory provides a sound conceptual foundation for explaining the expected relationship between deposit money banks' domestic financing, non-bank financial institutions' domestic financing, Central Bank domestic financing, and oil export growth. The Financial Intermediation Theory is therefore adopted because it comprehensively captures the financing mechanisms examined in this study and offers the strongest theoretical justification for analysing how public domestic financing options contribute to sustainable oil export growth in Nigeria.

Empirical Review

Wahab (2025) examined the effect of export credit on non-oil export performance in Nigeria between 1981 and 2022. Using annual time-series data, the study employed the Generalized Method of Moments (GMM) alongside Granger causality analysis to evaluate the relationship between commercial bank export credit and export performance. The findings revealed that export credit significantly influences export performance despite some adverse effects arising from inadequate credit allocation. The study recommended expanding export credit facilities and strengthening financing mechanisms to improve export competitiveness and stimulate sustainable export growth.

Shuaibu and Gana (2025) explored the determinants of Nigeria's non-oil exports by explicitly considering trade credit and digital payment systems. The study employed the Autoregressive Distributed Lag Model and the monthly data from 2010 to 2023 so as to achieve its objective. The results show that increased trade credit and better e-payment systems significantly improve the non-oil export sector's performance. They found that increasing trade credit and improving e-payment systems may serve as another alternative to unlocking and boosting Nigeria's non-oil export sector's potential.

Daramola (2024) investigated the relationship between deposit money bank credit and non-oil exports in Nigeria over the period 1986–2022. The study employed annual time-series data and estimated both the long-run and short-run relationships using the Autoregressive Distributed Lag (ARDL) framework together with causality analysis. The results indicated that deposit money bank credit positively and significantly enhances export performance, while high lending rates weaken export growth. Consequently, the study recommended improving credit accessibility and maintaining stable macroeconomic conditions to encourage export expansion.

Obieche *et al.* (2024) assessed the contribution of export financing to Nigeria's economic growth using annual data covering 1990–2023. Multiple regression analysis and Granger causality techniques were adopted to examine the effects of commercial bank credit, export-import bank financing, micro-export credit, and export grants. The findings showed that export financing exerts a positive influence on economic performance, with commercial bank credit emerging as a major financing source. The authors recommended strengthening export financing institutions and expanding government-backed credit programmes to improve export performance.

Mohammed (2023) investigated the impact of export development policy on the performance of non-oil exports in Nigeria from 1986 to 2015 using secondary data in form of time series. The study used unrestricted Vector Auto Regression (VAR), granger causality and Auto Regressive Distributed Lag (ARDL) techniques in the data analysis. The ARDL bound test result reveals long-run equilibrium relationship between the variables. The error correction framework was correctly signed and statistically significant. The impulse response function and variance decomposition reveal a mixed of both positive and negative shocks from non-oil export (NOE), Export Expansion Grant (EEG), interest rate (INTR), Gross Domestic Product (GDP) and trade openness (OPEN) based on past and current values. Base on Vector Auto regression (VAR) result, the study concluded that, increase in Export Expansion Grant, Gross Domestic Product and Degree of Trade Openness and decrease in Interest Rate are ways of improving the performance of Non-oil Export. The study recommended that, government should enforce existing non-oil export policies toward re-sustaining the failing non-oil export industry. Also, government should improve on exports incentives, providing sufficient infrastructure as no economy can grow without adequate infrastructure.

Serena *et al.* (2022) investigated how international bank credit and non-bank financial institutions affect firms' access to external finance using a cross-country firm-level dataset. The empirical analysis examined firms' financing behaviour under changing banking regulations. The results showed that firms successfully substituted declining bank credit with financing from non-bank institutions, thereby improving financial resilience and investment performance. The study recommended developing diversified financial systems that integrate banks and non-bank financial institutions to improve access to productive financing.

Awawdeh *et al.* (2022) examined the contribution of non-bank financial institutions to economic development in Pakistan using annual time-series data from 1990 to 2020. The study estimated the relationships through the Autoregressive Distributed Lag (ARDL) approach. The findings established that non-bank financial institutions positively contribute to financial development and economic growth by improving access to credit and investment finance. The authors recommended strengthening the regulatory framework governing non-bank financial institutions to enhance their contribution to sustainable economic development.

Alzyadat (2021) investigated the influence of sectoral bank credit on non-oil economic growth in Saudi Arabia using annual data covering 1970–2019. The study employed the Autoregressive Distributed Lag (ARDL) model to distinguish between short-run and long-run effects of sector-specific bank lending. The findings demonstrated that total bank credit positively contributes to non-oil economic growth, although sectoral impacts differ considerably. The study recommended directing bank credit toward productive sectors capable of promoting economic diversification and sustainable growth. Also, Ogbonna *et al.* (2020) examined the effect of financial system development on oil-dominant economy of Nigeria using Zivot-Andrews unit root test and Autoregressive Distributed Lag (ARDL) model over the period 1981 to 2015. The result revealed that there exist mediating factors that alter the impact of finance on growth. Specifically, the findings indicate that financial system development has a negative and insignificant impact on the growth of oil sector while the influence of financial system development on the growth of non-oil sector is positive and significant. The study therefore recommended that policymakers should channel the high receipts from the export of crude to productive investments through financial institutions that will allocate the resources more efficiently to improve the quality of investment capable of driving growth.

Satriani and Machmud (2020) investigated the influence of banking services and country risk on Indonesia's non-oil export performance using panel data covering 102 export destinations between 2011 and 2018. The study estimated pooled Ordinary Least Squares and Fixed Effects models. The findings showed that banking services, particularly export Letters of Credit, significantly facilitate export growth in low- and medium-risk markets, while high-risk markets remain financially constrained. The authors recommended strengthening export financing mechanisms and introducing government-backed risk-sharing arrangements.

In another study, Alirzayev *et al.* (2020) examined the contribution of non-bank credit organizations to economic growth in Azerbaijan using quarterly data from 2005 to 2018. The study estimated long-run relationships using Canonical Cointegrating Regression (CCR), Fully Modified Ordinary Least Squares (FMOLS), and Dynamic Ordinary Least Squares (DOLS). The findings indicated that non-bank credit significantly promotes non-oil economic growth through improved financial intermediation. The study recommended strengthening the operational capacity of non-bank financial institutions

to expand productive financing and support economic diversification. While, Khowaja *et al.* (2020) assessed the role of non-bank financial institutions in promoting economic growth in Pakistan, focusing particularly on SMEs and agricultural enterprises. Regression analysis and correlation techniques were employed to evaluate the relationship between non-bank financing and economic performance. The results confirmed that asset-based financing provided by non-bank financial institutions significantly supports business expansion and economic growth. The authors recommended expanding non-bank financial services into underserved rural and semi-urban areas to enhance financial inclusion.

Rateiwa and Aziakpono (2017) investigated the relationship between non-bank financial institution development and economic growth in Egypt, Nigeria, and South Africa over the period 1971–2013. Using the Johansen cointegration technique and Vector Error Correction Model (VECM), the study established that the contribution of non-bank financial institutions depends on the maturity of the financial system. The authors recommended implementing policies that strengthen non-bank financial institutions to improve financial intermediation and support long-term economic growth.

Justin (2017) examined the impact of financial sector reforms on non-oil export growth in Nigeria between 1981 and 2015 using annual time-series data. The study employed unit root tests, Johansen cointegration analysis, and Ordinary Least Squares estimation. The findings showed that private sector credit positively influences export performance, whereas high lending rates discourage export activities. The study recommended strengthening financial sector reforms, improving access to credit, and maintaining lower lending rates to stimulate export growth.

Eyo (2016) investigated the relationship between bank lending and non-oil export growth in Nigeria over the period 1980–2013 using multiple regression analysis. The findings indicated that commercial bank loans and advances positively contribute to export performance despite the prevailing high lending rates. The study concluded that increased credit availability remains essential for export expansion and recommended reducing lending rates while improving the implementation of banking policies that support productive export-oriented sectors.

Overall, the empirical literature consistently demonstrates that domestic financial intermediation through deposit money banks, non-bank financial institutions, and government-supported financing schemes plays a pivotal role in promoting export performance and economic growth. However, most Nigerian studies concentrate on non-oil exports rather than oil export growth, while international studies largely examine broader export or economic outcomes. Consequently, limited empirical evidence exists on how public domestic financing options, particularly financing provided by deposit money banks, non-bank financial institutions, and the Central Bank of Nigeria, influence oil export growth in Nigeria, thereby justifying the present study

Methodology

Sources of data and method of analysis

This study adopts an ex post facto research design, utilizing annual secondary time-series data covering the period 1986 to 2025. The study investigates the impact of public domestic financing options on oil export growth in Nigeria. Data on the dependent variable, Oil Export Growth (OEG), measured as the annual value of crude oil exports (₦' billion), were obtained from the Central Bank of Nigeria (CBN) Statistical Bulletin (2024 edition) and updated with the 2025 CBN Statistical Bulletin where applicable. Data on the explanatory variables, namely Deposit Money Banks' Domestic Financing Option (DFO), Non-Banking Financial Institutions' Domestic Financing Option (NFO), and Central Bank of Nigeria Domestic Financing Option (OFO), all measured in billions of naira (₦' billion), were sourced from the Central Bank of Nigeria (CBN) Statistical Bulletin (2024 and 2025 editions). The study employs the Autoregressive Distributed Lag (ARDL) modelling approach developed by Pesaran and Pesaran (1997) and subsequently extended by Pesaran and Shin (1999) and Pesaran, Shin, and Smith (2001). The ARDL approach is particularly appropriate because it accommodates variables integrated of mixed orders, I(0) and I(1), provided none is integrated of order two, I(2).

Model Specification

This paper employed the Autoregressive Distributed Lag (ARDL) methodology, aligning with the theoretical framework established herein. The model used in this study was derived from the research conducted by of Obieche *et al.* (2024) where they investigated export financing and economic growth in Nigeria: a time series analysis from 1990- 2023. and the functional relationship model is stated as:

$$RGDP=f(CBC, EIB, MEC, EXG, EXR) \quad (1)$$

It was empirically stated as

$$RGDP=\beta_0+\beta_1 CBC+\beta_2 EIB+\beta_3 MEC+\beta_4 EXG+\beta_5 EXR+\mu \quad (2)$$

Where: RGDP = Nigerian Real Gross Domestic Product Proxy for dependent Variable
CBC = Commercial bank credit to export sector
EIB = Export Import Bank credit to exporters
MEC = Micro export Credit
EXG = Export grant
EXR = Nigerian Naira Exchange Rate per US Dollar
β_0 = Regression Intercept
β_1 - 5 = Coefficient of the independent variables to the dependent variable
μ = Error term

Equation 2 is modified based on the research objectives and to establish the functional relationship between impact of the public domestic financing options on oil export growth in Nigeria. Furthermore, the functional form of the model of this study with public domestic financing options variables, oil export growth hence is captured in the implicit model as:

$$OEG = f(DFO, NFO, CFO) \quad (3)$$

Where:
OEG: Oil export growth (dependent variable).
DFO: Deposit money banks domestic financing option at time.
NFO: Non-banking financial institutions domestic financing option at time.
CFO: Other public domestic financing options at time.

The study further specify equation 1 and 2 in a stochastic (linear regression) form to gives:

$$OEG_t = \beta_0 + \beta_1 DFO_t + \beta_2 NFO_t + \beta_3 CFO_t + \varepsilon_t \quad (4)$$

Where:
OEG_t: Oil export growth at time t (dependent variable).
DFO_t = Deposit money banks domestic financing option at time t
NFO_t: Non-banking financial institutions domestic financing option at time t.
CFO_t: CBN domestic financing options at time t.
β_0: Intercept term.
$\beta_1, \beta_2, \beta_3$,: Coefficients of the independent variables.
ε_t : Error term capturing unobserved factors at time t.
β_1 > coefficients of Deposit money banks domestic financing option is expected to have positive impact on oil export growth in Nigeria.
β_2> coefficients of non-banking financial institutions domestic financing option is expected to have positive impact on oil export growth in Nigeria.
β_3 > coefficients of CBN financing options are expected to have positive impact on oil export growth in Nigeria.

The Autoregressive Distributed Lagged (ARDL) model that was used in this paper is specified as follows:

$$\Delta OEG_t = \beta_0 + \sum_{a=1}^{m} \beta_{1i} DFO_{t-1} + \sum_{b=1}^{m} \beta_{2i} NFO_{t-1} + \sum_{c=1}^{m} \beta_{3i} CFO_{t-1} + \beta_{4i} \Delta DFO_{t-1} + \beta_{5i} \Delta NFO_t + \beta_{6i} \Delta CFO_t + \varepsilon_t \quad (5)$$

Equation (4) was employed to assess both the short-run and long-run relationships, as well as the impact of public domestic financing options on oil export growth in Nigeria. The Error Correction Model (ECM) utilized in this investigation is formulated as follows:

$$\Delta OEG_t = \alpha_0 + \sum_{e=1}^{k} \alpha_{1i} \Delta OEG_{t-i} + \sum_{f=1}^{l} \alpha_{2i} \Delta DFO_{t-i} + \sum_{g=1}^{m} \alpha_{3i} \Delta NFO_{t-i} + \sum_{h=1}^{n} \alpha_{4i} \Delta CFO_{t-i} + \lambda ECT_{t-i} + \omega_t \quad (6)$$

Equation (5) was employed to assess both the short-run and long-run relationships, as well as the impact of public domestic financing options variables on oil export growth in Nigeria.

Variable Description, Measurements and Apriori Expectation

Table 1: Description of the Variables Used for the Model

Variable	Measurement	Type	Source	A Priori Expectation
OEG	Oil Export Growth measured as the annual value of Nigeria's crude oil exports in ₦ billion	Dependent	CBN Statistical Bulletin (2025)	
DFO	Deposit Money Banks' Domestic Financing measured as annual domestic financing provided by deposit money banks in ₦ billion	Independent	CBN Statistical Bulletin (2025)	+
NFO	Non-Banking Financial Institutions' Domestic Financing measured as annual domestic financing provided by non-bank financial institutions in ₦ billion	Independent	CBN Statistical Bulletin (2025)	+
CFO	Central Bank of Nigeria Domestic Financing measured as annual domestic financing provided through CBN intervention and credit facilities in ₦ billion	Independent	CBN Statistical Bulletin (2025)	+

Source: Author Compilation, 2026

Based on the Financial Intermediation Theory, increases in public domestic financing options namely Deposit Money Banks' Domestic Financing (DFO), Non-Banking Financial Institutions' Domestic Financing (NFO), and Central Bank of Nigeria Domestic Financing (CFO) are expected to stimulate oil export growth by expanding access to finance for investment, production, infrastructure development, and export-related activities within the petroleum sector. Consequently, all the explanatory variables are expected to exert a positive effect on oil export growth in Nigeria.

Presentation and Discussion Results

Descriptive Statistics

Table 2: Descriptive Statistics

	OEG	DFO	NFO	CFO
Mean	9536723.	3142.239	2813.340	2301.019
Median	7165832.	804.5388	428.6352	405.9413
Maximum	66886357	21975.60	20399.67	28034.60
Minimum	8368.500	3.698600	7.765200	15.64770
Std. Dev.	13120550	4800.495	4527.352	6083.979
Skewness	2.584538	2.171762	2.163860	3.575242
Kurtosis	10.88724	7.789945	7.743526	14.58772
Jarque-Bera	148.2131	69.68296	68.71699	309.0080
Probability	0.000000	0.000000	0.000000	0.000000
Sum	3.810000	125689.6	112533.6	92040.77
Sum Sq. Dev.	6.71E015	8.990008	7.990008	1.440009
Observations	40	40	40	40

Source: Researcher's computation using EViews 12, 2026

Table 2 presents the descriptive statistics for oil export growth (OEG), deposit money banks' domestic financing option (DFO), non-banking financial institutions' domestic financing option (NFO), and Central Bank of Nigeria domestic financing option (CFO) based on 40 annual observations covering the period 1986–2025. The results indicate substantial variations across the variables over the study period. Oil export growth averaged ₦9,536,723 million (approximately ₦9.54 trillion), ranging from ₦8,368.50 million to ₦66,886,357 million, with a relatively high standard deviation of ₦13,120,550 million, reflecting considerable fluctuations in oil export earnings. Similarly, DFO, NFO, and CFO recorded mean values of ₦3,142.24 billion, ₦2,813.34 billion, and ₦2,301.02 billion, respectively, with their large standard deviations indicating substantial variability in domestic financing during the study period. The wide differences between the minimum and maximum values further suggest significant expansions in domestic financing following successive financial sector reforms and intervention programmes.

The distributional properties reveal that all the variables are positively skewed, with skewness coefficients ranging from 2.16 to 3.58, indicating the presence of a few exceptionally high observations. Furthermore, the kurtosis values exceed the benchmark of three for all variables, implying leptokurtic distributions characterized by relatively peaked distributions and heavier tails. The Jarque–Bera statistics are statistically significant at the 1 percent level, with probability values of 0.0000, indicating that the variables are not normally distributed. Although the Jarque-Bera test indicates that the variables are not normally distributed, the ARDL approach developed by Pesaran and Shin (1999) does not require the variables to be normally distributed for consistent estimation (Pesaran *et al.,* 2001). The asymptotic properties of the ARDL estimator remain valid under non-normality, provided the model is correctly specified and the error terms are serially uncorrelated. Furthermore, with 40 observations, the Central Limit Theorem supports the asymptotic normality of the estimators.

Table 3: Correlation Analysis

Correlation Probability	OEG	DFO	NFO	CFO
OEG	1.000000			

DFO	0.960535	1.000000		
	0.0000	-----		
NFO	0.951276	0.980093	1.000000	
	0.0000	0.0000	-----	
CFO	0.855308	0.863953	0.871570	1.000000
	0.0000	0.0000	0.0000	-----

Source: Author's Computation, using E-Views 12 (2026)

Table 3 presents the Pearson correlation matrix for oil export growth (OEG) and the selected public domestic financing options. The results reveal that Oil Export Growth (OEG) is positively and strongly associated with all the explanatory variables. Specifically, Deposit Money Banks' Domestic Financing Option (DFO) exhibits a very strong positive correlation with OEG ($r = 0.9605$, $p < 0.05$), followed by Non-Banking Financial Institutions' Domestic Financing Option (NFO) ($r = 0.9513$, $p < 0.05$), while Central Bank of Nigeria Domestic Financing Option (CFO) also demonstrates a strong positive relationship with OEG ($r = 0.8553$, $p < 0.05$). These statistically significant coefficients suggest that higher levels of public domestic financing options are associated with higher levels of oil export growth over the study period.

Stationary Tests (Unit Root Tests)

This part of the paper looked at the unit root of each of the variable using the augmented dickey-fuller (ADF) test to ascertain stationarity of the data at 5% level of significance.

Table 4: Unit Root Test Result

Variable	Augmented Dickey-Fuller (ADF) Test		
	ADF	Critical Value	Status
OEG	-4.900204	-3.574244	1(0)
DFO	-3.574244	-3.557759	1(1)
NFO	-9.111624	-3.536601	1(0)
CFO	-3.238647	-2.957110	1(1)

Significant level is 5% level

Source: Researcher's Computation Using EViews-12 (2026)

Table 4 presents the Augmented Dickey–Fuller (ADF) unit root test results at the 5 percent significance level. The findings indicate that Oil Export Growth (OEG) and Non-Banking Financial Institutions' Domestic Financing Option (NFO) are stationary at levels, implying that they are integrated of order zero, I(0). In contrast, Deposit Money

Banks' Domestic Financing Option (DFO) and Central Bank of Nigeria Domestic Financing Option (CFO) become stationary after first differencing, indicating that they are integrated of order one, I(1). Since none of the variables is integrated of order two, I(2), the mixed order of integration satisfies the prerequisite for applying the Autoregressive Distributed Lag (ARDL) modelling approach.

Co-integration of ARDL-Bounds Test

This section shows the ARDL co-integration bounds test of the variables used in this paper.

Table 5: ARDL-Bound Testing

Null Hypothesis: No long-run relationships exist		
Test Statistic	Value	K
F-statistic	4.441895	3
Critical Value Bounds		
Significance	I0 Bound	I1 Bound
10%	2.37	3.2
5%	2.79	3.67
2.5%	3.15	4.08
1%	3.65	4.66

Source: Researcher's Computation Using EViews-12 (2026)

Table 5 presents the ARDL Bounds cointegration test results at the 5 percent significance level. The F-statistic of 4.4419 exceeds the upper bound critical value of 3.67, leading to the rejection of the null hypothesis of no long-run relationship. This result confirms the existence of a long-run equilibrium relationship between Oil Export Growth (OEG) and the selected public domestic financing options, namely Deposit Money Banks' Domestic Financing Option (DFO), Non-Banking Financial Institutions' Domestic Financing Option (NFO), and Central Bank of Nigeria Domestic Financing Option (CFO). Consequently, the variables move together in the long run despite short-run fluctuations, justifying the estimation of the ARDL long-run coefficients and the associated Error Correction Model (ECM).

Auto regressive Distributed Lag (ARDL) Regression Results

This part of the paper shows the shortrun, longrun impact ARDL regression analysis, the error correction and the model fit.

Table 6: Autoregressive Distributed Lag (ARDL) Model Results
Dependent Variable: NIS

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DFO	0.090693	0.106783	0.849317	0.4022
DFO(-1)	-0.258304	0.128080	-2.016748	0.0525
CointEq(-1)	-0.379197	0.075725	-5.007516	0.0000
R-squared	0.972415			
Adjusted R-squared	0.967076			
F-statistic	182.1318			
Prob(F-statistic)	0.000000			
Durbin-Watson stat	1.834351			
Long Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
DFO	0.812186	0.224383	3.619649	0.0010
NFO	-0.296789	0.249414	-1.189943	0.2431
CFO	0.242479	0.173516	1.397447	0.1722
C	10.71922	0.728373	14.71667	0.0000

Source: Researcher's Computation Using EViews-12 (2026)

The estimated Error Correction Model (ECM) confirms the existence of a stable long-run equilibrium relationship between Oil Export Growth (OEG) and the selected public domestic financing options. The coefficient of the error correction term, CointEq(-1), is negative and statistically significant (β = -0.379197, p = 0.0000), satisfying the a priori expectation. The coefficient indicates that approximately 37.92% of short-run disequilibrium is corrected annually, implying that deviations from the long-run equilibrium adjust at a moderate speed. The statistical significance of the error correction term further confirms that the system converges to its long-run equilibrium following short-run shocks.

The estimated model exhibits a high explanatory power, with an R-squared of 0.9724, indicating that approximately 97.24% of the variations in Oil Export Growth (OEG) are explained by Deposit Money Banks' Domestic Financing Option (DFO), Non-Banking Financial Institutions' Domestic Financing Option (NFO), and Central Bank of Nigeria Domestic Financing Option (CFO). Similarly, the Adjusted R-squared of 0.9671 shows that after adjusting for the number of explanatory variables, about 96.71% of the variation in oil export growth is accounted for by the model. The F-statistic of 182.1318 with a probability value of 0.0000 indicates that the explanatory variables are jointly significant at the 5 percent significance level. Furthermore, the Durbin-Watson statistic of 1.8344, being close to the benchmark value of two, suggests the absence of first-order serial correlation. Collectively, these diagnostic statistics indicate that the estimated ARDL model is adequate, reliable, and suitable for empirical inference.

The long-run coefficient estimates reveal that Deposit Money Banks' Domestic Financing Option (DFO) exerts a positive and statistically significant impact on Oil Export Growth (OEG) (β = 0.812186, p = 0.0010). This implies that an increase in deposit money banks' domestic financing option enhances oil export growth in Nigeria over the long run. Since the probability value is less than 0.05, the null hypothesis is rejected, indicating that DFO has a significant impact on oil export growth. In contrast, Non-Banking Financial Institutions' Domestic Financing Option (NFO) has a negative but statistically insignificant relationship with oil export growth (β = -0.296789, p = 0.2431). The probability value exceeds the 5 percent significance level; therefore, the null hypothesis is failed to reject (accepted), indicating that NFO does not exert a significant long-run impact on oil export growth. Similarly, Central Bank of Nigeria Domestic Financing Option (CFO) exhibits a positive but statistically insignificant effect on oil export growth (β = 0.242479, p = 0.1722). As the probability value is greater than 0.05, the null hypothesis is failed to reject (accepted), implying that CFO has no statistically significant long-run impact on oil export growth during the study period.

Overall, the findings indicate that Deposit Money Banks' Domestic Financing Option (DFO) is the only public domestic financing option that significantly influences Oil Export Growth (OEG) in Nigeria. Conversely, Non-Banking Financial Institutions' Domestic Financing Option (NFO) and Central Bank of Nigeria Domestic Financing Option (CFO) do not exert statistically significant long-run effects. These results suggest that commercial bank financing remains the most effective domestic financing option for promoting oil export growth, while financing provided through non-bank financial institutions and the Central Bank of Nigeria has yet to translate into significant improvements in oil export performance over the study period.

Post-Estimation Checks (ARDL Diagnostic Test)
The ARDL result as in table are hereby validated in this section

Table 7: Results of ARDL Diagnostic Checks

Tests		**Outcomes**	
		Coefficient	**Probability**
Breusch-Godfrey-Serial-Correlation Test	F-stat.	1.626024	0.2161
Heteroscedasticity-Breusch-Pagan-Godfrey Test	F-stat.	1.689336	0.1387
Normality Test	Jarque-Bera	2.065774	0.3559
Linearity Test	F-stat	0.531730	0.4722

Source: Author's Computation Using EViews-9 (2026)

The diagnostic test results presented in Table 8 confirm the adequacy and reliability of the estimated ARDL model for empirical inference. The Breusch-Godfrey Serial Correlation LM Test produced an F-statistic of 1.626024 with a probability value of 0.2161, which exceeds the 5 percent significance level, indicating the absence of serial correlation in the residuals. Similarly, the Breusch-Pagan-Godfrey Heteroscedasticity Test yielded an F-

statistic of 1.689336 with a probability value of 0.1387, which is greater than 0.05, confirming that the residuals are homoscedastic and thus the error variance remains constant across observations. The Jarque-Bera Normality Test reported a statistic of 2.065774 with a probability value of 0.3559, which exceeds the 5 percent threshold, confirming that the residuals are normally distributed and validating the use of standard t-statistics and F-statistics for hypothesis testing. Furthermore, the Ramsey RESET Linearity Test produced an F-statistic of 0.531730 with a probability value of 0.4722, which is greater than 0.05, indicating that the model is correctly specified and does not suffer from omitted variable bias or functional form misspecification. Collectively, these diagnostic findings demonstrate that the estimated ARDL model is free from serial correlation, exhibits homoscedastic residuals, satisfies the normality assumption, and possesses appropriate functional form, thereby confirming that the model is well-specified, reliable, and suitable for drawing valid empirical inferences regarding the impact of public domestic financing options on oil export growth in Nigeria.

Discussion of Findings

The findings reveal that Deposit Money Banks' Domestic Financing Option (DFO) exerts a positive and statistically significant effect on Oil Export Growth (OEG) in Nigeria. This implies that increased financing from deposit money banks enhances investment and operational activities within the oil sector, thereby improving oil export performance over the long run. This finding is consistent with Daramola (2024), who reported that deposit money bank credit significantly promotes export performance in Nigeria. It also corroborates the findings of Wahab (2025), Obieche *et al.* (2024), Alzyadat (2021), Justin (2017), and Eyo (2016), all of whom established that improved bank financing enhances productive activities and export growth by expanding access to credit.

The results further indicate that Non-Banking Financial Institutions' Domestic Financing Option (NFO) has a negative but statistically insignificant effect on oil export growth. This suggests that financing provided by non-bank financial institutions has not made a meaningful contribution to Nigeria's oil export performance during the study period. This finding contradicts the studies of Alirzayev *et al.* (2020), Khowaja *et al.* (2020), Awawdeh *et al.* (2022), Serena *et al.* (2022), and Rateiwa and Aziakpono (2017), which found that non-bank financial institutions significantly enhance economic growth and productive investment. This divergence may be attributed to differences in the study focus, as previous studies largely examined overall economic growth or non-oil sectors rather than oil export growth. It may also reflect the relatively limited involvement of Nigeria's non-bank financial institutions in financing large-scale oil export activities.

Similarly, Central Bank of Nigeria Domestic Financing Option (CFO) exhibits a positive but statistically insignificant effect on oil export growth. Although the positive sign suggests that Central Bank financing has the potential to support export activities, the insignificant result indicates that such financing has not translated into sustained improvements in oil export performance. This finding contrasts with Mohammed (2023), who found that government export support measures improve export performance, and

with Shuaibu and Gana (2025), who reported that trade financing significantly enhances export growth. The observed difference may be explained by variations in the financing instruments examined, study period, estimation techniques, and the fact that the present study focuses specifically on public domestic financing options and oil exports rather than non-oil exports.

Overall, the findings demonstrate that Deposit Money Banks' Domestic Financing Option (DFO) is the only public domestic financing option that significantly promotes Oil Export Growth (OEG) in Nigeria, while Non-Banking Financial Institutions' Domestic Financing Option (NFO) and Central Bank of Nigeria Domestic Financing Option (CFO) do not exert significant long-run effects. The results underscore the importance of strengthening commercial bank financing to the petroleum sector while improving the effectiveness of non-bank financial institutions and Central Bank financing programmes to enhance their contribution to oil export growth.

Conclusion and Recommendations

This study examined the impact of public domestic financing options on oil export growth in Nigeria over the period 1986–2025 using the Autoregressive Distributed Lag (ARDL) approach. The findings established the existence of a stable long-run relationship between oil export growth and the selected public domestic financing options. In the long run, Deposit Money Banks' Domestic Financing Option (DFO) exerted a positive and statistically significant influence on oil export growth, indicating that increased financing from deposit money banks enhances investment and productive activities within the oil sector. Conversely, Non-Banking Financial Institutions' Domestic Financing Option (NFO) exhibited a negative but statistically insignificant effect, while Central Bank of Nigeria Domestic Financing Option (CFO) showed a positive but statistically insignificant impact on oil export growth. These findings suggest that commercial banks remain the most effective domestic financing channel for supporting Nigeria's oil export sector, whereas financing from non-bank financial institutions and the Central Bank has not translated into significant improvements in export performance. Overall, the results underscore the importance of strengthening efficient domestic financial intermediation to enhance oil export growth, improve foreign exchange earnings, and promote sustainable economic development in Nigeria.

Therefore, the recommends the following:

I. Since Deposit Money Banks' Domestic Financing Option (DFO) was found to have a positive and statistically significant impact on oil export growth, the Central Bank of Nigeria (CBN), in collaboration with the Federal Ministry of Finance, should introduce policies that encourage deposit money banks to expand long-term credit facilities to viable firms operating within the petroleum value chain. This would enhance investment, increase production capacity, and improve oil export performance.

ii. Given that Non-Banking Financial Institutions' Domestic Financing Option (NFO) exerted a negative but statistically insignificant effect on oil export growth, the Central Bank of Nigeria (CBN) and the Securities and Exchange Commission (SEC) should strengthen the regulatory and operational framework for non-bank financial institutions by expanding specialized financing products for the energy sector. This would improve the effectiveness of non-bank financing in supporting productive investments and export growth.

iii. Because Central Bank of Nigeria Domestic Financing Option (CFO) had a positive but statistically insignificant impact on oil export growth, the Central Bank of Nigeria (CBN) should review and strengthen its intervention financing programmes by improving targeting, monitoring, and evaluation to ensure that funds are directed toward export-oriented oil sector activities with high productive capacity. This would enhance the effectiveness of intervention financing and improve its contribution to sustainable oil export growth.

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