TRADE LIBERALIZATION, NON-OIL EXPORTS AND ECONOMIC GROWTH IN NIGERIA: AN EMPIRICAL INVESTIGATION USING STRUCTURAL VECTOR AUTOREGRESSIVE ANALYSIS

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Abstract *The study assessed the impact of trade liberalization on economic growth in Nigeria through non-oil exports. Employing quarterly time series data from 1986 – 2023, the analysis utilized the Structural Vector Autoregressive (SVAR) model to assess the transmission effects of trade liberalization on economic growth. The findings reveal that trade liberalization exerts a positive and statistically significant influence on economic growth through the channel of non-oil exports. In addition, the impulse response functions confirm a sustained and significant positive relationship among trade liberalization, non-oil exports, and economic growth. The forecast error variance decomposition further demonstrates that trade liberalization accounts for a substantial share of the short-run variation in non-oil exports, while the contribution of non-oil exports to economic growth is modest in the short run but exhibits an upward pattern over time. The major findings of the study are that: Non-oil exports have a positive and statistically significant shock on trade liberalization in Nigeria; real gross domestic product has a positive and statistically significant shock on trade liberalization during the study period; and non-oil exports have a statistically significant contemporaneous effect on economic growth in Nigeria. It is recommended based on the findings that the Federal Government of Nigeria, through the Central Bank of Nigeria (CBN) and the Federal Ministry of Trade and Industry should institutionalize a robust framework for*

supporting the non-oil export sector; the Federal and State Governments, in collaboration with the Ministry of Works and Housing should embark on a deliberate and sustained investment drive in infrastructure that facilitates the movement of agricultural and manufactured products from rural areas and production hubs to ports and export processing zones; and that, the Federal Ministry of Trade and Industry in collaboration with the Nigerian Customs Service and the Federal Ministry of Finance, should undertake a comprehensive review of existing trade tariffs, especially those on critical inputs for non-oil export production. These policies will likely promote the development of the non-oil exports sector which will enhance economic growth in Nigeria. The intuition of the study suggests how a resource-dependent economy such as Nigeria can explore non-oil exports, a relatively underexplored channel in Nigeria's growth literature.

Keywords Economic Growth, Nigeria, Non-oil Exports, SVAR, Trade Liberalization

JEL Classification: C32, F14. F013, F040, F055.

1. 0 Introduction

Foreign trade remains a critical engine of economic growth, particularly for developing economies seeking to strengthen foreign exchange earnings, improve balance of payments positions, and enhance overall macroeconomic stability. Export expansion, in particular, facilitates higher production efficiency, cost reduction, technological diffusion, and economies of scale. Empirical evidence from emerging countries such as Bangladesh, India, South Korea and Sri Lanka suggests that sustained trade liberalization through tariff reduction and export promotion has significantly contributed to long-run economic growth (Jadoon, Rashid & Azeem, 2015; Khalid, 2016; Qayyum, Younas & Bashir, 2018).

In Nigeria, however, the structure of foreign trade has historically been characterized by a strong dependence on oil exports, with non-oil exports playing a relatively marginal role. An examination of Nigeria's trade statistics reveals that while oil exports increased substantially from ₦10.7 billion in 1981 to over ₦32.5 trillion in 2023, non-oil exports grew at a much slower pace, rising from only ₦342.8 million in 1981 to ₦3.7 trillion in 2023. Over the same period, non-oil imports expanded rapidly, widening the non-oil trade deficit in several years. For instance, Nigeria recorded persistent non-oil deficits between 2015 and 2021, reflecting structural weaknesses in domestic production and export competitiveness. This imbalance underscores the fragility of Nigeria's trade structure and the limited success of diversification efforts despite decades of policy reforms.

Theoretically, the classical and modern trade and growth literature provides strong justification for export-led growth. The comparative advantage theory advanced by

Ricardo (1817), the factor endowment framework of Heckscher (1919) and Ohlin (1933), and Romer's (1990) endogenous theory collectively suggest that liberalized trade regimes promote economic growth by stimulating capital accumulation, human capital development, technological transfer, innovation, and productivity improvements. In this context, non-oil exports represent a vital transmission mechanism through which trade liberalization can reduce overreliance on oil, expand the productive base of the economy, and enhance long-term growth prospects. Adzer (2023) further argues that non-oil exports expansion enables economies to leverage underutilized resources, improve competiveness, and gain access to broader to international markets.

Nigeria's growth experience since the adoption of the Structural Adjustment Program (SAP) in 1986 has been largely uneven and volatile. Although certain periods recorded growth rates exceeding 3.5 percent, other episodes particularly between 1993 - 1995 and 2016 – 2020 were marked by economic contractions (Adzer, Okpe & Akighir, 2025). Recent macroeconomic indicators further reflect these vulnerabilities. Reports from the National Bureau of Statistics (NBS) indicate weak macroeconomic performance and heightened instability during 2023Q4 and 2024Q3, characterized by rising inflation, exchange rate pressures, and subdued output growth (NBS, 2023; NBS, 2024). These trends emphasize the urgency of structural transformation policies aimed at stabilizing the economy and fostering sustainable growth. in response to these challenges, successive governments have implemented a range of trade liberalization strategies and export promotion policies. These include the establishment of the Second-Tier Foreign Exchange Market (SFEM), deregulation of the foreign exchange regime, the creation of export processing zones, and targeted financial incentives for non-oil exporters.

Despite these interventions, the outcomes remain mixed. While non-oil exports recorded periods of improvement particularly between 2004 and 2014, the sector has not achieved the scale necessary to offset oil-sector shocks or significantly narrow the non-oil trade deficit. Recent projections from the PricewaterhouseCoopers (PwC) Economic Outlook (2024) estimate Nigeria's GDP growth at approximately 3.1 percent, but this outlook remains constrained by persistent fiscal imbalances, inflationary pressures, exchange rate volatility, and concerns over policy consistency. These challenges continue to adversely affect investor confidence and limit the effectiveness of trade liberalization initiatives, particularly in the non-oil sector.

Against this backdrop, the study empirically investigates the dynamic relationship between trade liberalization, non-oil exports, and economic growth in Nigeria over the period 1986 - 2023. Specifically, the study seeks to address the following research questions: what is the dynamic impact of trade liberalization shocks on non-oil exports in Nigeria? To what extent do non-oil exports contribute to economic growth in Nigeria? How do structural shocks within the trade sector transmit to overall economic growth? To answer these questions, the study employs a Structural Vector Autoregressive (SVAR) analytical framework, which allows for the identification of contemporaneous and

dynamic interactions among trade liberalization, non-oil exports, and economic growth. This methodological approach represents a significant departure from much of the existing literature, which predominantly relies on single-equation or reduced-from VAR models. By adopting SVAR, the study presents the structural transmission mechanisms through which trade liberalization affects economic performance in Nigeria.

Consequently, this study contributes to the literature in three major ways. First, it provides an updated empirical analysis using recent data up to 2023, capturing post-pandemic and recent trade dynamics. Second, it focuses explicitly on non-oil exports, a relatively underexplored channel in Nigeria's growth literature. Third, it applies a structural econometric approach that presents sound policy-relevant evidence for trade and diversification strategies. The remainder of this paper is structured as follows: Section Two reviews relevant literature; Section Three outlines the methodology and data sources; Section Four presents and discusses the discusses the empirical results; and Section Five concludes with policy implications and recommendations for fostering inclusive, stable, and sustainable economic growth in Nigeria.

2.0 Literature Review

This section reviews the conceptual, theoretical and empirical literature on trade liberalization, non-oil exports, and economic growth.

2.1 Conceptual Clarifications

Trade liberalization

Trade liberalization refers to the deliberate reduction or removal of tariffs, quotas, and other non-tariff barriers to international trade, with the objective of promoting cross border trade flows and improving resource allocation efficiency. Mohsen and Chua (2020) conceptualize trade liberalization as a policy framework aimed at increasing openness to international markets by lowering restrictions on imports and exports. Such openness facilitates the proper allocation of resources, productivity gains, particularly when complemented by technological diffusion and innovation as emphasized by (Romer, 1990) in endogenous growth theory. Tariffs may be either *ad-valorem* or specific or a combination of the two. Non-tariffs include licenses, import quotas, voluntary export restriction, and local content requirement. In this study, trade liberalization is measured by Trade Freedom Index (TFI) and this index which reflects the combined influence of tariff rates and non-tariff barriers, making it suitable for assessing the growth implications of trade reforms.

Non-Oil Export

Non-oil exports comprise goods and services produced outside the oil and gas sector and exported to earn foreign exchange. Babawole (2020) defines non-oil exports as all economic activities that fall outside the scope of the oil and gas sector and are not directly linked to it. These include services and industries such as telecommunications, export trade, healthcare, tourism, agriculture, mining, and

manufacturing. Connectedly, Ajudua, Majebi and Odishika (2021) opine that non-oil exports are export goods and services not connected to oil and gas for foreign exchange earnings. The non-oil export-growth nexus reveals that non-oil export raises more revenue, increases investment and savings which lead to economic growth (Kawai, 2017). For resource-rich economies like Nigeria, non-oil exports therefore represent a key structural channel through which trade liberalization can influence long-term economic growth.

Economic Growth

Economic growth broadly refers to the sustained increase in the productive capacity and output of an economy over time. Ahuja (2014) defines economic growth in terms of either total national output or output per capita highlighting both the overall expansion of the economy and improvements in individual income levels. Wells (2018) further clarifies that economic growth is commonly measured by the percentage change in a country's Gross Domestic Product (GDP), adjusted for inflation, thereby reflecting the real increase in the value of goods and services produced within a given period. This inflation-adjusted figure, known as real GDP, provides a more accurate assessment of economic performance by accounting for changes in price levels. The growth in real GDP is often used as a proxy for national wellbeing, as it can indicate improvements in employment opportunities, income distribution, consumption, and overall living standards. Uwakaeme (2015) further distinguishes between nominal or real economic growth, arguing that real growth offers a more meaningful evaluation of the actual economic growth and welfare of a population. Consistent with the literature, this study measures economic growth using real GDP, thereby isolating the real effects of trade liberalization and non-oil exports from price distortions.

2.2 Theoretical Review

The theoretical foundation of the study draws basically from the Heckscher-Ohlin's factor endowment theory birthed by Heckscher (1919) and Ohlin (1933) to supplement Ricardo's comparative advantage theory, and the endogenous growth model by Romer (1990), both of which provide strong justification for focusing on non-oil exports as a growth-enhancing channel. The Heckscher-Ohlin's theory specifically seeks to address the unresolved questions of "what determines comparative advantage and what effect international trade has on the earnings of factors of production in trading nations".

The Heckscher-Ohlin's theory explains that the actual basis for the pattern of production, specialization and trade between nations is the relative availability of abundant factors of production. For Nigeria, abundant arable land, labour, and mineral resources suggest a natural comparative advantage in agriculture, manufacturing and solid minerals - the key components of the non-oil export sector. Trade liberalization by reducing barriers, allows these sectors to integrate into global markets, thereby reallocating resources toward more productive uses. Complementing this static framework, Romer's endogenous growth model (1990) emphasizes that long-run economic growth is driven by knowledge accumulation, innovation, imported

technologies, and new ideas. When channeled through non-oil exports, liberalization enables learning by exporting, productivity gains, domestic market expansion, and scale economies that reinforce sustainable growth indirectly through non-oil exports, making the non-oil sector a critical transmission mechanism rather than a peripheral outcome or trade policy.

2.3 Empirical Review

A substantial body of empirical literature documents a positive relationship between trade liberalization and economic growth, particularly in developing and emerging economies. These studies generally support the proposition that liberalized trade regimes can significantly enhance the performance of the non-oil sector by boosting export activity, fostering competitiveness, and encouraging industrial expansion. For instance, Abubakar, Akpan, and Aigbedion (2024) employed the Autoregressive Distributed Lag (ARDL) model to examine the effect of trade liberalization on Nigeria's non-oil manufacturing sector over the period 1981 to 2022. Their findings reveal a robust and positive relationship between trade liberalization measures and non-oil manufacturing output. This suggests that open trade policies serve as a catalyst for industrial growth, contributing to export diversification and reducing the country's overreliance on crude oil exports. Similarly, Ekeke and Uprasen (2020), using annual data from 1981 to 2017, provided further empirical evidence that non-oil exports exert a significant and positive influence on economic growth in Nigeria. Their study explains the importance of the non-oil export sector as a critical transmission channel through which the benefits of trade liberalization are translated into broader macroeconomic gains.

On a regional scale, Ijirshar (2019) conducted a comparative analysis of trade openness and economic growth among ECOWAS member states over the period 1975 to 2017. Utilizing both the Mean Group (MG) and Pooled Mean Group (PMG) estimation techniques, the study found that trade openness exerts a consistently positive impact on long-run economic growth across the region. However, the short-run effects were found to be heterogeneous, reflecting country-specific differences in trade structures, institutional quality, and economic resilience. These empirical findings collectively reinforce the argument that trade liberalization, when effectively implemented, can be a powerful driver of sustainable economic growth particularly through the growth of the non-oil export sector in resource-rich but diversified economies like Nigeria.

In Nigeria, evidence also support that trade liberalization does not impact positively on economic growth in Nigeria. A study by Duru, Bartholomew, Adikwu, and Njoku (2020) from 1981 to 2018 using the ARDL Bounds technique suggests that trade liberalization does not have a significant effect on economic growth. In addition, their result also indicates that GDP granger-cause trade liberalization without feedback, suggesting that economic growth might precede rather than follow trade reforms. Similarly, a study by Alugbuo and Remadu (2020) reveal that trade openness negatively influenced economic growth over both short and long horizons. In contrast, Mohsen and

Chua (2020), in the context of China from 1980 to 2018, revealed a positive correlation between GDP and trade openness using cointegration analysis. This divergence in findings across contexts and periods highlights the need for country-specific, sector-sensitive, and methodologically sound investigations, especially focusing on unique economic structure and reliance on oil exports in Nigeria.

A critical investgation reveals that there is limited focus on transmission channels through which trade liberalization affects economic growth. For instance, Omoke and Silva (2021) incorporated institutional quality into their ARDL-based analysis and the outcome suggests a negative and significant effect of trade openness on growth, thus emphasizing the importance of intermediating factors in determining the outcomes of liberalization policies on economies. Similarly, Yameogo and Omojolaibi (2021) incorporated the FDI variable in SYS-GMM, Panel ARDL, and Panel VAR models and observed that while trade openness and FDI positively influence growth, institutional quality weakens this effect in the short-run. These outcomes clearly suggest that the impact of trade liberalization on economic growth are depends on the specific channels such as investment or sectoral productivity through which liberalization impacts on economic growth. These mixed findings suggest that the growth impact of non-oil exports depends on sectoral composition, policy support, and other macroeconomic conditions.

The reviewed literature highlights several methodological and thematic gaps. Most studies examine either trade liberalization – growth or non-oil exports – growth relations in isolation, without explicitly modeling non-oil exports as a transmission channel through which trade liberalization affects economic growth. Additionally, studies using single-equation models such as OLS, ARDL, and ECM limits the ability to capture for simultaneous interactions and structural shocks, which are essential for policy-relevant insights. Furthermore, recent trade dynamics, particularly post-2015 oil price shocks and post-COVID pandemic adjustments remain empirically unattended to. This study addresses these critical gaps by adopting the Structural Vector Autoregressive (SVAR) model to empirically examine how trade liberalization affects economic growth through the non-oil export channel in Nigeria over the period 1986 to 2023.

3.0 Methodology

3.1 Research Design

The study utilized the quantitative approach using Structural Vector Autoregressive (SVAR) technique for data analysis. The SVAR is applied for its macroeconomic impact and the transmission of the impact from one variable to the other. In addition, the study adopts secondary data by utilizing quarterly time series data from 1986Q1 to 2023Q4. This period marks the introduction of the Structural Adjustment Program (SAP) in Nigeria, a period which captures trade and structural changes, with several domestic and global trade shocks, including the 2014 - 2016 oil price crash, the COVID-19 pandemic, and the ongoing Russia-Ukraine war that is significantly influencing Nigeria's recent macroeconomic reforms. This period is used to illicit more

information, capturing short-term and long-term dynamics for the period under review.

In the study, trade liberalization is considered because trade theories suggest that the policy can lead to increased productivity which enhances economic growth. Furthermore, trade liberalization is measured using trade freedom index. This measurement helps to isolate the real effects of trade liberalization and non-oil exports from price distortions in the economy. This index also reveals the value of tariffs and non-tariffs on trade and economic growth. On the hand, non-oil exports are chosen as a critical component of economic growth and serves as a channel of transmission from trade liberalization to economic growth. Non-oil exports are measured in millions of Naira. The measurement in monetary value allows for a common denominator which is used for aggregation across sectors. Furthermore, economic growth is chosen as a crucial indicator of a country's growth and development. Economic growth is measured in terms of real gross domestic product (RGDP), an index used to capture price distortions from trade liberalization regime and non-oil exports. The data on economic growth and non-oil exports were obtained from various issues of Central Bank of Nigeria (CBN) and National Bureau of Statistics (NBS), while data on trade liberalization were obtained from the World Development Indicators 2020 and the Penn World Database.

3.2 Model Specification

The specification of the model is drawn from the tenets of Heckscher-Ohin's model (1919, 1933) on trade and the Romer's endogenous growth model (1990) which suggests economic growth as a function of endogenous drivers such as investment and non-oil exports. This is expressed stochastically as;

$$GDP = f(I + NOX) \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (1)$$

Arising from equation (1), it is shown that trade liberalization has a positive impact on economic growth through non-oil export and hence the functional form for the model is expressed as;

$$RGDP = f(TFI, NOX) \ldots \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (2)$$

Where;

f = Functional Form, $RGDP$ = Real Gross Domestic Product, TFI = Trade Freedom Index (proxy for trade liberalization), NOX = Non-oil Exports.

In structural vector autoregressive (SVAR) form, the transmission channel is stated as:

$$Y = [tfi\ nox\ rgdp]' \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (3)$$

Variables are entered into the SVAR model in level form. The transposed matrix yields:

$$rgdp_t = f(rgdp_{t-1}, nox_{t-1}, tfi_{t-1},) \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (4)$$

$$nox_t = f(rgdp_t, rgdp_{t-1}, nox_{t-1}, tfi_{t-1}) \ldots\ldots\ldots\ldots\ldots\ldots\ldots (5)$$

$$tfi_t = f(rgdp_t, rgdp_{t-1}, nox_t, nox_{t-1}, tfi_{t-1}). \ldots\ldots\ldots\ldots\ldots\ldots (6)$$

Exposition of the over - parameterized SVAR (1) system of equations (4) to (6) becomes:

$$rgdp_t = \varphi_{11}^1 rgdp_{t-1} + \varphi_{12}^1 nox_{t-1} + \varphi_{13}^1 tfi_{t-1} + \varphi_{12}^0 nox_t + \varphi_{13}^0 tfi_t + v_{1t}). \ldots\ldots (7)$$

$$nox_t = \varphi_{21}^1 rgdp_{t-1} + \varphi_{22}^1 nox_{t-1} + \varphi_{23}^1 tfi_{t-1} + \varphi_{21}^0 rgdp_t + \varphi_{23}^0 tfi_t + v_{2t}) \ldots\ldots (8)$$

$$tfi_t = \varphi_{31}^1 rgdp_{t-1} + \varphi_{32}^1 nox_{t-1} + \varphi_{33}^1 tfi_{t-1} + \varphi_{31}^0 rgdp_t + \varphi_{32}^0 nox_t + v_{3t}) \ldots\ldots (9)$$

Collect concurrent effects from equation (7) to (9) yields:

$$rgdp_t - \varphi_{12}^0 nox_t - \varphi_{13}^0 tfi_t = \varphi_{11}^1 rgdp_{t-1} + \varphi_{12}^1 nox_{t-1} + \varphi_{13}^1 tfi_{t-1} + v_{1t}) \ldots\ldots (10)$$

$$-\varphi_{21}^0 rgdp_t + nox_t - \varphi_{23}^0 tfi_t = \varphi_{21}^1 rgdp_{t-1} + \varphi_{22}^1 nox_{t-1} + \varphi_{23}^1 tfi_{t-1} + v_{2t}) \ldots\ldots (11)$$

$$-\varphi_{31}^0 rgdp_t - \varphi_{32}^0 nox_{t-1} + tfi_t = \varphi_{31}^1 rgdp_{t-1} + \varphi_{32}^1 nox_{t-1} + \varphi_{33}^1 tfi_{t-1} + v_{3t}) \ldots (12)$$

The matrix form for our over-parameterized SVAR model for equation (10) to (12) is specified as:

$$\begin{bmatrix} 1 & -\varphi_{12}^0 & -\varphi_{13}^0 \\ -\varphi_{21}^0 & 1 & -\varphi_{23}^0 \\ -\varphi_{31}^0 & -\varphi_{32}^0 & 1 \end{bmatrix} \begin{bmatrix} rgdp \\ nox \\ tfi \end{bmatrix} = \begin{bmatrix} -\varphi_{11}^1 & -\varphi_{12}^1 & -\varphi_{13}^1 \\ -\varphi_{21}^1 & -\varphi_{22}^1 & -\varphi_{23}^1 \\ -\varphi_{31}^1 & -\varphi_{32}^1 & -\varphi_{33}^1 \end{bmatrix} \begin{bmatrix} rgdp_{t-1} \\ nox_{t-1} \\ tfi_{t-1} \end{bmatrix} + \begin{bmatrix} v_{1t} \\ v_{2t} \\ v_{3t} \end{bmatrix}$$

The restrictions are done on trade freedom index, non-oil exports, and real GDP based on foreign market structure theory, institutional knowledge, and economic theory. For instance, the market structure theory emphasizes on how firms, industries, market competitions, and policy changes in the economy lead to changes in the non-oil export sector. This is because trade liberalization causes the reduction of trade barriers such as tariffs and non-tariffs thus leading to increases non-oil exports levels. In addition, through market competitions, pressure in the productive sectors raises productivity and the capacity of the economy to export non-oil products. This indicates that a shock by trade liberalization can contemporaneously cause a positive impact on the non-oil exports. This also suggests that the expansion in the economy's export sector leads to economies of scale and capacity utilization.

In addition, through institutional knowledge, policy rigidity and other bureaucratic bottlenecks are reduced, thus enhancing the institutionalization of government policies and legislations. However, economic literature reveals that economic growth and non-oil exports do not contemporaneously impact on trade liberalization. By institutional reality, firms are expected to adjust export volumes faster than the way the economy adjusts to output and capital stock or investment in the non-oil exports sector.

Furthermore, the neoclassical and endogenous growth theories explain the translation of the benefits of trade liberalization to economic growth. This is expected to occur through capital accumulation, technology diffusion, and productivity gains. For instance, the export-led growth hypothesis postulates that diversified exports in the economy are expected to stabilize income and enhance economic growth. Higher income levels indirectly support institutional reforms that influence further growth and economic stability.

Hence, $A_0 Y_t = A_1 Y_{t-1} + v_t$ ..... (13)

Thus, the generic SVAR model is: $A_0 Y_t = A_1 Y_{t-1} + A_2 Y_{t-2} + ... + A_P Y_{t-P} + \varepsilon_t$ ..... (14)

$\Rightarrow A_0 Y_t = A_1 Y_{t-1} + \varepsilon_t$ ..... (15)

Where; A_0 is matrix of joint effect coefficients, Y_t represents vector of endogenous variables to be estimated, A_1 matrix of parameter coefficients, Y_{t-1} represents the vector of lagged endogenous variables, ε_t represents vector of error terms. $B\eta_t$ = vector matrix of uncorrelated structural impacts on the system. Thus, restricting A_0 matrix in (15) in the recursive specification yields:

$$rgdp_t = lags + v_{1t} \quad \text{..... (16)}$$

$$nox_t = \varphi_{21}^0 rgdp_t + lags + v_{2t} \quad \text{..... (17)}$$

$$tfi_t = \varphi_{31}^0 rgdp_t + \varphi_{32}^0 nox_t + v_{3t} \quad \text{..... (18)}$$

Thus, the parsimonious form of equations (16) to (18) is specified in a triangular matrix form as:

$$A_0 = \begin{bmatrix} 1 & 0 & 0 \\ -\varphi_{21}^0 & 1 & 0 \\ -\varphi_{31}^0 & -\varphi_{32}^0 & 1 \end{bmatrix} \begin{bmatrix} rgdp_t \\ nox_t \\ tfi_t \end{bmatrix} = \begin{bmatrix} u_{1t} \\ u_{2t} \\ u_{3t} \end{bmatrix}$$

From our equation (4.18), where $A_0Y_t = A_1Y_{t-1} + \varepsilon_t$,

But, $\varepsilon_t = B\eta_t$ ..... (19)

And $B = \begin{bmatrix} \sigma_1^2 & 0 & 0 \\ 0 & \sigma_2^2 & 0 \\ 0 & 0 & \sigma_3^2 \end{bmatrix}$ = unit variance, that is, var(η_t) = 1. . . . . (20)

Thus;

$$A_0 = \begin{bmatrix} 1 & 0 & 0 \\ -\varphi_{21}^0 & 1 & 0 \\ -\varphi_{31}^0 & -\varphi_{32}^0 & 1 \end{bmatrix} \begin{bmatrix} rgdp_t \\ nox_t \\ tfi_t \end{bmatrix} = \begin{bmatrix} \sigma_1^2 rgdp & 0 & 0 \\ 0 & \sigma_2^2 nox & 0 \\ 0 & 0 & \sigma_3^2 tfi \end{bmatrix} \begin{bmatrix} u_t{}^{rgdp} \\ u_t{}^{nox} \\ u_t{}^{tfi} \end{bmatrix}$$

It implies that the normalized SVAR model $A_0Z_t = A_1Z_{t-1} + \varepsilon_t$ simplifies to its reduced form as $A_0e_t = B\eta_t$. Given that $B\eta_t = Bu_t$, the baseline specification of the estimable SVAR model can therefore be expressed as follows:

$A_0e_t = Bu_t$ ..... (21)

Thus:

$$\begin{bmatrix} 1 & 0 & 0 \\ -\varphi_{21}^0 & 1 & 0 \\ -\varphi_{31}^0 & -\varphi_{32}^0 & 1 \end{bmatrix} \begin{bmatrix} e_t{}^{rgdp} \\ e_t{}^{nox} \\ e_t{}^{tfi} \end{bmatrix} = \begin{bmatrix} \sigma^2{}_{rgdp} & 0 & 0 \\ 0 & \sigma^2{}_{nox} & 0 \\ 0 & 0 & \sigma^2{}_{tfi} \end{bmatrix} \begin{bmatrix} u_t{}^{rgdp} \\ u_t{}^{nox} \\ u_t{}^{tfi} \end{bmatrix}$$

$A_0 e_t = B u_t$ .....(22)

Thus, our "S" matrix is specified as:

$$e_t = A_0Bu_t = \begin{bmatrix} e_t{}^{rgdp} \\ e_t{}^{nox} \\ e_t{}^{tfi} \end{bmatrix} = \begin{bmatrix} 1 & 0 & 0 \\ -\varphi_{21}^0 & 1 & 0 \\ -\varphi_{31}^0 & -\varphi_{32}^0 & 1 \end{bmatrix} \begin{bmatrix} u_t{}^{rgdp} \\ u_t{}^{nox} \\ u_t{}^{tfi} \end{bmatrix}$$

Thus, the estimated parameters for the contribution of trade liberalization to economic growth

through non-oil export in the SVAR system are expressed thus;

i) φ_{21}^0 =the impact of non-oil export on economic growth.

ii) φ_{31}^0 = the impact of trade liberalization on non-oil exports.

iii) φ_{32}^{0} =the effect of trade liberalization on economic growth.

4.0 Results and Discussion

This section presents and analyzes the key findings of the study. It includes the results of the descriptive statistics, unit root tests, optimal lag length selection, residual diagnostic tests, the Structural Vector Autoregressive (SVAR) estimation, impulse response functions, and variance decomposition analysis.

4.1 Descriptive Statistics

Table 1: Descriptive Statistics

Tools	TFI	RGDP	NOX
Mean	35.37	37650.30	399.86
Maximum	53.93	72044.30	4187.9
Minimum	2.42	15103.11	-0.26
Std. Dev.	10.37	19814.49	654.36
Skewness	-0.48	0.50	2.95
Kurtosis	3.10	1.66	14.50
Jarque-Bera	5.50	15.83	947.84
Probability	0.06	0.00	0.00
Observations	148	148	148

Source: Culled from E-views output

Table 1 reveals that during the 148 quarterly observations of variables for the period of 1986Q1 and 2023Q4, TFI is growing on a low mean rate of 35.37 percent, suggesting low trends in output level, low foreign reserves, and high tariff and non-tariff barriers to trade. In addition, non-oil exports (NOX) are seen to be growing at an average of 399.86 percent, which is high enough to imply that the subsector has growth potentials. Furthermore, the maximum and minimum values of 4187.93 percent and -0.26 percent for non-oil exports during the study period explains the wavering and low attention that is given to the sector by government and its inability to galvanize the potentials in the non-oil exports sector. Also, the mean growth rate (RGDP) is very high, standing at 37650.30 percent. In addition, the maximum value of 72044.30 percent and a minimum value of 1503.11 percent in economic growth rate are probably due to weak implementation of trade liberalization policy in Nigeria, which stands at 35.37 percent during the study period.

The Jarque-Bera test which uses the skewness (S) and kurtosis (K) statistics assumes that for normality, the joint hypothesis should be that S = 0 and K = 3. Thus, NOX, RGDP, are positively skewed while TFI is negatively skewed. On the other hand, the kurtosis statistic shows that TFI and NOX are leptokurtic (i.e K > 3) in nature while RGDP is platykurtic (low peaked and thin tailed) (i.e K < 3) in nature. Thus, the Jarque-Bera statistics shows that the sample skewness and kurtosis are different from zero (0) and three (3) respectively, implying that the probability for outliers to occur is higher than that of normal distribution. On the other hand, the p-values associated with the Jarque-Bera statistics suggests that the variables are not normally distributed. This is because the p-values of NOX and RGDP have been reported below 5% ($\alpha = 0.05$). Thus, the hypothesis for normality is rejected, suggesting that there is no evidence for statistical significance of the variables while that of TFI is greater than 5% level of significance, suggesting that the null hypotheses for this variable cannot be rejected. Thus, data transformation (by logging) was done to achieve normality.

Unit Root Test Results

Table 2: Unit Root Test Results using ADF and PP

Variables	ADF With a Constant and Trend			PP With a Constant and Trend			Order of Int.
	T-Stat.	Critical Value @ 5%	Prob. Value	Adj. T-Stat.	Critical Value @ 5%	Prob. Value	
TFI	-2.88	0.05	0.02	-2.88	0.05	0.00	I(0)
ΔRGDP	-2.88	0.05	0.00	-2.88	0.05	0.00	I(1)
ΔNOX	-2.88	0.05	0.00	-2.88	0.05	0.00	I(1)

Source: Culled from E-views output.

The absolute t-statistics and absolute critical values for ADF under constant and linear trend of NOX and RGDP reveal stationarity at levels while the p-values for the same variables became stationary upon their first differencing. However, TFI is integrated at levels, I(0) under the ADF and PP. It may be observed that the series is of mixed order of integration such that two variables are stationary at first difference, I(1) and the other is at levels, I(0) which implies that there is no long-run relationship among the variables in the model. Notwithstanding, the SVAR was applied as suggested by Blanchard and Quah (1989). Also, even though cointegrating testing is beneficial, it is not conducted because it is not strictly necessary since the primary focus of SVAR is to identify structural shocks and analyze the dynamic effects in the process.

4.1 Lag Order Selection for the Model

Table 3: Lag Order Selection for Model (LNRGDP, LNNOX, LNTFI)

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-195.78	NA	0.00	2.98	3.05	3.01
1	633.42	1608.55	1.75e-08	-9.34	-9.08	-9.23
2	310.03	186.62*	4.57e-09*	-10.69*	-10.23*	-10.50*
3	735.80	7.16	4.94e-09	-10.61	-9.961578	-10.34

Source: Culled from E-views output

As shown in Table 3, the lag order selection criteria identified lag two (2) as the optimal choice for the model. This selection is supported across multiple information criteria, suggesting that a second-order lag structure provides the best balance between model performance and data representation.

4.2 The Stability Test Using the Inverse Root of Characteristic Polynomial

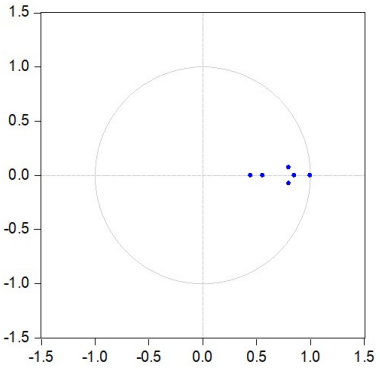


Figure 1: Result of Stability of the VAR model.

Source: Culled from E-views Output

The inverse roots of the AR characteristic polynomial all lie within the unit circle on the horizontal axis, indicating that the model satisfies the stability condition. This implies that the estimated impulse response functions and their standard errors are reliable, and the model is appropriate for forecasting purposes.

4.3 SVAR Post-Estimation Tests for Model

Table 4: VAR Residual Serial Correlation LM Test Results for the Model

Lag	LRE* stat	Df	Prob.	Rao F-stat	Df	Prob
1	10.22	9	0.33	1.14	(9,294.1)	0.33
2	6.71	9	0.66	0.74	(9,294.1)	0.66

Source: Culled from E-views output

The result shows that VAR Residual Serial Correlation LM test as shown in Table 4 at lag 2 reveals that LRE* statistics has a value of 6.71 with p-value of 0.66 while RAO F-statistics at the same lag length has a value of 0.74 with p-value 0.6664 indicate that there is no autocorrelation between the residual errors in the model since the p-values are greater than 5% level of significance.

The VAR Residual Heteroskedasticity Test is presented in Table 5 result is meant to test whether there is constant covariance of the error term in the model or not.

Table 5: VAR Residual Heteroskedasticity Testsfor the Model

Joint test:	Chi-sq	Df	Prob
	98.10	72	0.12

Source: Culled from E-views output

Table 5 presents the results of the VAR residual heteroskedasticity test. The test, based on the levels and squared residuals of the estimated model, yielded a Chi-square statistic of 98.10726 with an associated p-value of 0.1221. Since the p-value exceeds the 5 percent significance threshold, the null hypothesis of homoskedasticity cannot be rejected, indicating no evidence of heteroskedasticity in the model. This suggests that the model's residuals exhibit constant variance over time, reinforcing the reliability and robustness of the estimation results.

Table 6: Recursive SVAR Result for the Model

	TFI	NOX	RGDP
TFI	1	0	0
NOX	6.26	1	0
RGDP	5.05	0.26	1

Source: Culled from E-views output

The contemporaneous results from the recursive Structural Vector Autoregressive (SVAR) model, as reported in Table 6 provide important insights into the short-run transmission mechanism linking trade liberalization, non-oil exports, and economic growth. the recursive identification structure, based on the Cholesky decomposition, imposes a theoretically consistent ordering whereby real gross domestic product (lnRGDP) is assumed to be contemporaneously exogenous, followed by non-oil exports (lnNOX), while trade liberalization (lnTFI) responds contemporaneously to shocks in both output and exports.

The results indicate that non-oil exports (lnNOX) have a structural positive shock as evidenced by 6.26 percent on trade

liberalization (lnTFI). This result is statistically significant with a p-value of 0.0002 percent level of significance. This suggests that short-run increases in non-oil export activities contribute to enhanced trade openness by encouraging export-oriented policy reforms, improving institutional support for trade, and strengthening Nigeria's integration into global markets. As non-oil exports expand, the need for more liberal trade openness becomes stronger, prompting adjustments in tariff structures, export incentives, and trade facilitation measures. This result supports the notion of a feedback mechanism in which export diversification and trade liberalization reinforce each other in the short run. This finding aligns with the results of Ekeke and Uprasen (2020) whose research indicated that trade liberalization has a significant and positive impact on non-oil exports.

In addition, the contemporaneous impact of economic growth (lnRGDP) on trade liberalization (lnTFI) is both positive at about 5.05 percent and statistically significant with a p-value of 0.0000 at 5 percent level of significance. The result implies that short-run improvements in output growth exert strong pressure on trade liberalization outcomes, possibly through increased demand for imported inputs, policy reforms aimed at sustaining growth momentum, and greater openness to international markets. In periods of economic expansion, governments may be more inclined to reduce trade barriers, streamline customs procedures, and adopt liberal trade policies to support production and export diversification. This finding reinforces the argument that trade liberalization is not only a policy-driven process but also an outcome that responds endogenously to macroeconomic performance. This result aligns with the findings of Duru, et al. (2020) and Abubakar, at al. (2024) who argued that trade liberalization has positive effect on economic growth in Nigeria.

Furthermore, the results indicate a statistically significant contemporaneous effect of economic growth (lnRGDP) on non-oil exports (lnNOX) as evidenced by a positive coefficient of 0.26 on lnRGDP. This finding suggests that, in the short-run, improvements in economic activity stimulate the performance of non-oil exports through enhanced productive capacity, improved infrastructure utilization, and increased firm-level export readiness. Higher output levels may also reduce unit production costs and improve competitiveness, thereby facilitating export expansion. This outcome aligns with endogenous growth theory and export-led growth hypotheses, which emphasize the role of domestic economic conditions in shaping export performance, particularly in developing economies where supply-side constraints are prominent.

4.4 Impulse Response Functions for the Model

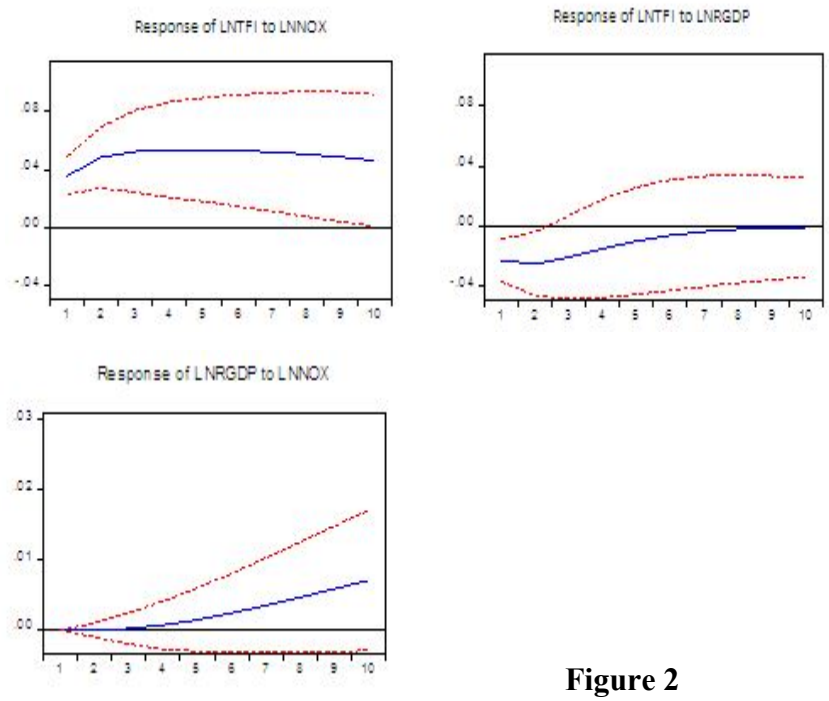


Figure 2

Figure 2 reveals that a shock on TFI leads to a positive impact on NOX and this appears to be permanent till the end of the forecast period. This suggests that trade liberalization significantly influences non-oil exports, which permanently raises and sustains economic growth in Nigeria. In addition, Figure 2 reveals that a shock on TFI leads to a negative impact on RGDP but the impact appears to be mean-reverting and eventually becomes positive in the long run. This suggests that trade policies adjust slowly but eventually absorb positive shocks if they are well-harnessed. This is expected to have positive effects on economic growth depending on the utilization of the potentials in the liberalized trade of the non-oil exports sector. Furthermore, Figure 2 reveals that a shock on RGDP leads to positive, significant, and permanent impact on NOX during the study period. This implies that economic growth has a long-lasting or permanent impact on the growth of non-oil exports if economic policies are well implemented and properly harnessed.

4.5 Forecast Error Variance Decomposition (FEVD) of the Model

Table 7: Variance Decomposition of Trade Liberalization

Period	S.E	RGDP	NOX	TFI
1	0.08	7.41	18.65	73.93
3	0.17	5.18	21.39	73.42
6	0.23	3.45	27.33	69.20
9	0.26	2.79	33.07	64.12

Source: Culled from E-views output

The results in Table 7 suggest own shock of TFI due to policy changes or ongoing economic reforms. With time, the forecast error of TFI is explained by shocks of RGDP and NOX such that a shock on TFI leads to maximal variations in NOX both in the short run and long run periods, while the variations in RGDP are minimal both in the short run and long run. Also, in the long-run, the variations in TFI appear to be less self-driven, becoming more responsive to increases in non-oil exports (NOX) and economic growth increase (RGDP) overtime. However, it is evidenced that RGDP is decreasing, which is probably due to economic downturn in Nigeria's economy or slow trade liberalization efforts caused by inhibitive trade policies. This suggests that Nigeria's weak economy cannot drive effective trade policies. Furthermore, it is evidenced that NOX is increasing during the period, which suggests that trade liberalization is boosting non-oil exports even during periods of weak economic performance in Nigeria. The movement of TFI vis-à-vis NOX means trade liberalization is directly connected to the performance of non-oil exports outcomes.

Table 7: Forecast Error Variance Decomposition of Non-Oil Exports

Period	S.E	RGDP	NOX	TFI
1	0.13	9. 10.	90.89	0.00
3	0.32	9.52	90.47	0.00
6	0.47	10.78	89.08	0.12
9	0.55	12.84	86.58	0.57

Source: Culled from E-views output

In addition, the results in Table 7 indicate own shock of NOX, suggesting that FEVD are explained less by its own shocks and more by economic growth and trade liberalization in the economy. It is evidenced that non-oil exports are becoming more dependent on trade openness and economic growth with the passage of time. A shock on NOX leads to absence of variations in TFI in the initial forecast period but it would improve in the long run. The marginal increase in TFI suggests that increases in the non-oil exports are driven less by trade liberalization policy shocks and more by economic growth. This also suggests that since the positive changes in the trade liberalization policy are only marginal, the performance of the economy will likely become positive overtime with trade openness. Furthermore, variations in RGDP are maximal both in the short-run and long-run throughout the forecast period. This suggests a growing economy. Thus, as the economy grows, decrease in non-oil exports will become more connected to the overall performance of the economy which is increasing.

Table 7: Forecast Error Variance Decomposition of Economic Growth

Period	S.E	RGDP	NOX	TFI
1	0.00	100.00	0.00	0.00
3	0.01	98.52	0.01	1.46
6	0.03	94.67	0.60	4.71
9	0.05	90.16	0.63	7.20

Source: Culled from E-views output

Furthermore, the results of the forecast error variance decomposition in Table 7 shows own shock on RGDP and to other variables such non-oil exports (NOX) and trade liberalization (TFI). The decrease of FEVD on RGDP suggests that economic growth is becoming more dependent on the performance of trade-related factors such as non-oil exports and the prevalent trade policy rather than on own shocks. That is, fluctuations in economic growth suggest a structural transformation in the economy toward a trade-oriented economy. In addition, the shock on TFI leads to minimal variations in the short-run but would improve in the long-run. As shock of trade policy in terms of tariffs, non-tariffs, and other trade regulations increase, it will negatively affect economic growth since economic performance is dependent on factors including trade openness. Furthermore, variations in NOX are minimal and increasing throughout the forecast period. The economic intuition here is that non-oil exports are sensitive to trade openness and this holds the potential to drive economic growth.

Conclusion and Policy Recommendations

This study applied the Structural Vector Autoregression (SVAR) methodology to examine the dynamic interplay between trade liberalization, non-oil exports, and economic growth in Nigeria over the period 1986 to 2023. The empirical results reveal that trade liberalization has a statistically significant and positive effect on non-oil exports, with an estimated increase of approximately 6.26%. This finding suggests that enhanced trade openness serves as a catalyst for improving the performance of the non-oil export sector. Further insights from the impulse response functions and forecast error variance decomposition reinforce the existence of a strong, positive, and interdependent relationship among trade liberalization, non-oil exports, and economic growth. These results highlight the critical role of trade reforms in promoting export diversification and, by extension, sustainable economic growth.

In light of these findings, the study concludes that trade liberalization positively impacts non-oil export performance, which subsequently contributes to overall economic growth in Nigeria. Based on the evidence, the following policy recommendations are proposed;

i. Given the findings of the study that trade liberalization significantly boosts non-oil exports and that these exports in turn drive economic growth, it is imperative that the Federal Government of Nigeria, through the Central Bank of Nigeria (CBN) and the Federal Ministry of Trade and Industry, institutionalizes a robust framework for

supporting the non-oil export sector. Specifically, export grants and concessional credit facilities should be made available to organized private sector players, including agro-allied industries, textile manufacturers, solid mineral processors, and SMEs engaged in value addition. These support mechanisms should be administered transparently through existing financial inclusion channels, such as the Development Bank of Nigeria (DBN), Bank of Industry (BoI), and Export-Import Bank (NEXIM). To ensure effectiveness, eligibility criteria must prioritize firms with verifiable export contracts or demonstrable potential in foreign markets. Furthermore, the export loan schemes should be paired with technical assistance and capacity-building programs that help producers meet international quality and packaging standards. Doing so will increase the competitiveness of Nigerian non-oil exports in global markets and stimulate sustainable economic growth via a more diversified external sector.

ii. Another key finding of the study is the role of improved non-oil export performance in driving economic growth, which implies a need for seamless logistical support for trade. In this regard, the Federal and State Governments, in collaboration with the Ministry of Works and Housing, must embark on a deliberate and sustained investment drive in infrastructure that facilitates the movement of exportable goods especially agricultural and manufactured products from rural areas and production hubs to ports and export processing zones. This includes constructing and rehabilitating key feeder roads, rural-urban highways, rail lines, and logistics hubs across the country's six geopolitical zones. To implement this, public-private partnerships (PPPs) should be encouraged, especially through concession models or infrastructure bonds, while leveraging donor support from institutions like the African Development Bank (AfDB) and the World Bank. The government should also map high-export potential clusters and prioritize them for infrastructure rollout. Efficient transport systems will reduce post-harvest losses, lower export costs, and enhance the global competitiveness of Nigerian products, thereby strengthening the liberalization-growth link identified in the study.

iii. The study highlights that trade liberalization serves as a catalyst for export growth, which positively affects economic development. However, to fully harness the benefits of international trade, there is a need for strategic tariff policy reform. The Federal Ministry of Trade and Industry, in collaboration with the Nigerian Customs Service and the Federal Ministry of Finance, should undertake a comprehensive review of existing trade tariffs, especially those on inputs critical for non-oil export production. The objective should be to rationalize tariffs reducing or removing those that unnecessarily raise production costs, while selectively maintaining protective tariffs for nascent local industries. This should be achieved through an evidence-based approach using input-output models and trade elasticity analysis to identify sectors where tariff

adjustments will yield the highest export and growth dividends. Furthermore, the tariff review process must be aligned with Nigeria's commitments under the African Continental Free Trade Agreement (AfCFTA) and the WTO framework to avoid trade disputes. A transparent and phased approach to tariff liberalization will ensure that domestic producers are not suddenly exposed to competitive shocks and will allow for a smoother transition toward a more open and growth-oriented trade environment.

iv. In addition to financial and infrastructural interventions, there is a need for policy initiatives that connect Nigerian non-oil exporters with international markets. The Nigerian Export Promotion Council (NEPC), in partnership with the Ministry of Foreign Affairs, should intensify diplomatic and commercial efforts to open new trade corridors, sign bilateral trade agreements, and negotiate favorable market access for Nigerian products. This includes organizing trade missions, supporting participation in international trade fairs, and expanding Nigeria's footprint in global value chains. To do this effectively, export promotion agencies should build databases of viable exporters, provide market intelligence on trends and pricing, and offer training on international trade documentation, e-commerce logistics, and digital trade compliance. By creating targeted programs for both established exporters and new market entrants, this initiative will ensure Nigeria's non-oil sector can effectively respond to liberalization opportunities and amplify the economic gains demonstrated in this study.

Limitations

The empirical results reported in the study are constrained by unavailability of reliable data on non-oil exports during the early periods of the sample from 1986 - 1990, which could affect the reliability of empirical results of the research. In addition, the study spans several periods of different policy regimes, trade reforms, and structural changes in the Nigerian economy. These structural breaks and changes are likely to violate the stability assumptions of parameters in the SVAR model, which can lead to biases in the outcome of the results. Furthermore, the dominance of the oil sector over the non-oil exports sector in Nigeria negates the attempt to isolate the benefits of trade liberalization and non-oil exports on economic growth. Due to this dominance, oil price and revenue shocks orchestrated by external market dynamics may weaken the perceived benefits of trade liberalization on economic growth through non-oil exports. Lastly, while the SVAR methodology can provide useful insights to short-term dynamics, it fails to provide long-term relationships, thus making the interpretations of the results with extreme caution.

Suggestion for Further Research

Apart from adopting non-oil exports as a channel of transmission of benefits from trade liberalization to economic growth, another study could improve on this study by adopting time-varying or regime-switching models to capture the presence of structural breaks or changes in the economy

into the models. In addition, another study could incorporate the oil exports variable in the SVAR model in order to observe the combined effects of oil exports and non-oil exports. In another study, the SVAR approach could be combined with a cointegration based approach, such as ARDL models, to provide short-run insights and long-run relationships on trade liberalization, non-oil exports, and economic growth.

References

Abubakar, A., Akpan, M., & Aigbedion, I. M. (2024). Impact of trade liberalization on non-oil manufacturing sector output in Nigeria: 1981 – 2022. *International Journal of Advanced Research in Accounting, Economics and Business Perspectives, 8*(1), 13-27

Adzer, K. T. (2023). Trade liberalization and economic growth in Nigeria. A structural vector autoregressive analysis (SVAR). PhD Thesis, Economics Department, Benue State University, Makurdi.

Adzer, K. T., Okpe, I., & Akighir, D. T. (2025). Trade liberalization, human capital and economic growth in Nigeria: A Structural Autoregressive Analysis. *ADSU International Journal of Applied Economics, Finance and Management*, *10*(2), 597- 614.

Ahuja, H. L. (2014). *Modern Economics*. 18th edition, S. Chand and Company PVT Limited. Higher Academic.

Ajudua, E. I., Majebi, E. C., & Odishika, V. A. (2021). Harnessing the potentials of non-oil sectors of the Nigerian economy to enhance sustainable growth. *Ilimu Journal of Economics, 10*(1), 51-62.

Alugbuo, J. C. & Remadu, S. O. (2020). Trade liberalization and trade inflows: A study of Nigeria's economy using ARDL model approach. *GSC Advanced Research and Reviews*, *4*(1), 31–45.

Babawole, F. O. (2020). Challenges undermining the promotion of non-oil export in Nigeria. *Open Journal of Economics and d Commerce*, *3*(3), 1-10.

Duru, I. U., Bartholomew, O. N., Adikwu, F. O., & Njoku, F. C. (2020). Trade liberalization and economic growth: an assessment of Nigerian experience. *Asian Development Policy Review*, *8*(3), 194-213.

Ekeke, S. & Uprasen, U. (2020). An empirical analysis of the impact of non-oil exports on the economic development of Nigeria. *Journal of International Trade and Commerce*, *16*(5), 39 – 60.

Ijirshar, V. U. (2019). Impact of trade openness on economic growth among ECOWAS Countries: 1975-2017. *CBN Journal of Applied Statistics (JAS)*, *10*(1), 4.

Jadoon, A. K., & Sarwar, A. (2020). Is trade liberalization pro-poor in Pakistan? Evidence from large-scale manufacturing. *Australian Economic Review*, *53*(3), 360-394. https://doi.org/10.1111/1467-8462.12360

Jadoon, A. K., Rashid, H. A. & Azeem, A. (2015). Trade liberalization, human capital and economic growth: Empirical evidence from selected Asian countries. *Pakistan Economic and Social Review*, *53*(1), 113-132.

Kawai, V. (2017). An analysis of the impact of non-oil exports and economic growth in Nigeria from 1980-2016. *International Journal of Innovative Research in Social Sciences and Management Techniques, 4*(2), 83-94.

Khalid, M. A. (2016). The impact of trade openness on economic growth in the case of Turkey. *Research Journal of Finance and Accounting*, *7*(10), 14-28.

Mohsen A. S. & Chua, S. Y. (2020). Trade liberalization and economic growth in China. *Asian Journal of Economics and Business*, *1*(2), 169-184.

National Bureau of Statistics (2023). Gross domestic product, (Q1-Q4), 2023.

National Bureau of Statistics (2024). Gross domestic product, (Q1-Q4), 2024.

Ohlin, B. (1933). *Interregional and International Trade*. Cambridge M. A: Harvard University Press.

Omoke, P. C. & Silva, O. (2021). Trade openness and economic growth nexus: Exploring the role of institutional quality in Nigeria. *Cogent Economics and Finance*, 9(1), 14-30.

PcW (2024). Nigeria economic outlook: Navigating economic reforms. Obtained from https://www.strategyand.pwc.com

Qayyum, M; Younas, N. & Bashir, M. A. (2018). The Impact of trade liberalization on economic growth: A case study of Pakistan. *Journal of Economics and Sustainable Development*, *9*(9), 34-49.

Romer, P. M. (1990). The Problem of development: A conference of the institute for the study of free enterprise systems. J. Pol. Econ., *98*(5), S71-S102

Smith, A. (1776). *An Inquiry into the Nature and Causes of the Wealth of Nations*. Edited by Canaan. New York, NY: Modern Library.

Uwakaeme, O. S. (2015). Economic growth in Nigeria: An empirical investigation of determinants and causal relationship (1980 - 2012). *American Journal of Economics*, *5*(1), 9-20.

Wells, F. (2018). Retrospective: On the definition of economics. *Journal of Economics Perspectives*, *23*(1), 221-233.

Yameogo, C. E. W. & Omojolaibi, J.A. (2021). Trade liberalization, economic growth and poverty level in sub-Saharan Africa (SSA). *Economic Research-Ekonomska Istraživanja*, *34*(1), 754-774.