THE EFFECT OF EXPORT TRADE ON THE ECONOMIC GROWTH OF NIGERIA

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ABSTRACT

This study investigates the effect of export trade on the economic growth of Nigeria, analyzing secondary data from 1992 to 2022 sourced from the Central Bank of Nigeria (CBN) Statistical Bulletin. The Ex-post facto research was used, employing an Autoregressive Distributed Lag (ARDL) model to assess the relationships between oil exports, non-oil exports, export growth rates, and GDP. The findings indicate a positive and significant relationship between oil exports and GDP, demonstrating that increases in oil exports are strongly associated with GDP growth. Despite some of the worst declines in output and trade volume during the pandemic as a result of the lockdown, there was a surge in 2022 due to increased global demand and rising oil prices. Non-oil exports also have a significant positive impact on GDP, highlighting the crucial role of diversifying export sectors to enhance economic growth. Substantial increases in non-oil exports from 2018 to 2019, a slight decline in 2020, and continued growth in subsequent years indicate diversification and increased competitiveness in non-oil sectors. Additionally, the export growth rate positively affects GDP, with higher export growth rates contributing significantly to economic output. The study concluded that export trade contributes to the growth of the Nigerian economy, even though trade was affected significantly by the Covid-19 pandemic, there was a surge in 2022. The study recommends diversifying the export portfolio to reduce dependency on oil exports and mitigate risks associated with commodity price volatility. Also, sectors like agriculture, manufacturing, and services which have significant export potential but are currently underutilized should be promoted.

Keywords: *economic growth, export growth rates, GDP, non-oil exports, oil exports*

1.1 Introduction

The essentiality of trade (export) to the Nigeria's economic structure makes it worth looking into. Previous research on international trade has shown that trade is important for growth and export plays an important role in ensuring growth in the economy (Owolabi-Merus et al., 2015; Ugochukwu and Chinyere, 2013; Duru and Ezenwe, 2020).

The exchange of goods and services across a nation's borders is a crucial component of its economic activities. According to Azeez et al., 2014, there is a close relationship between economic growth and international trade, as imports and exports constitute a substantial segment of a country's Gross Domestic Product (GDP). This increases revenue for the exporting country, gives consumers in the importing country more options for goods and services, and helps both countries' economies and standards of living improve.

Recent report shows that export had a comeback with Nigeria being the 52nd most exporting nation in the world in 2021 with $57.7 billion in exports. Crude oil was Nigeria's largest export during this time, bringing in $41.8 billion for the government. The Nigerian Export Promotion Council (NEPC) stated in January 2023 that Nigeria earned $4.82 billion in non-oil export earnings in 2022, increasing by 39.91% from 2021. This trade figure demonstrates that Nigeria's trade sector has higher potential if the nation's non-oil export potential is harnessed fully (Adeleke, 2023).

Numerous researchers have debated the role of export trade in economic growth. Some assert that export trade has a substantial impact on the rate of economic growth, while others argue that its influence is minimal compared to other contributing factors. Economic growth refers to the rise in the market value of goods and services produced within an economy during a given fiscal year. It involves the enlargement of national economies and macroeconomic indicators, such as GDP per capita, following an upward trend that, although not always linear, leads to positive outcomes for the socio-economic sector. When resources are used effectively and a country's production capacity is increased, economic growth is obtained (Haller, 2012).

Limited studies that have explored the effect of export trade on Nigeria's economic growth often present conflicting conclusions about the validity of the export-led growth hypothesis (ELGH) in Nigeria. According to ELGH, export expansion is a key driver of economic growth. However, these studies often fail to incorporate recent global changes affecting trade (Owolabi-Merus et al., 2015; Ugochukwu and Chinyere, 2013; Duru and Ezenwe, 2020).
Additionally, there is scant research on the impact of COVID-19 on export trade and economic growth. A study by Winifred Chinyere and Aras (2022) found that the global pandemic adversely affected overall exports, with a more significant impact on crude oil exports compared to non-crude oil and non-oil exports.

The study thus aims at investigating the effect of export trade (considering both oil and non-oil export) on the economic growth of Nigeria accounting for recent data and in addendum comparing the performance over economic cycles i.e., period of economic stability (e.g., pre-covid) as against uncertainty cum recovery period**.** Time series data from 1992 to 2022 are used in this study.

1.2 Questions for Research

More precisely, it is necessary to answer the following research questions:

1. What is the effect of oil export on the growth of the Nigerian economy?
2. How does non-oil exports affect the economic growth of Nigeria?
3. What is the effect of export growth rate on the growth of the economy?

2.0 Literature Review

The relationship between export trade and economic growth has been a central theme in economic research, especially for developing economies striving to enhance their economic performance. Numerous studies have explored how trade policies, export composition, and global market dynamics influence economic outcomes, with varying conclusions on the efficacy of export-led growth strategies. For Nigeria, a resource-rich nation heavily reliant on oil exports, understanding the theoretical and empirical underpinnings of export trade's impact on economic growth is crucial. This literature review examines the foundational theories and empirical studies that explore this relationship, providing insights into the pathways through which exports may drive economic growth while also highlighting potential challenges posed by a reliance on limited export commodities.

2.1 Empirical Review

Kulu (2024) examined the export-led growth hypothesis (ELGH) for West African countries using annual panel data from 2008 to 2018. Employing system Generalized Method of Moments (GMM) and Ordinary Least Squares (OLS) estimations, the study validated the ELGH in this region. Key determinants of export performance included foreign direct investment (FDI), employment, remittances, land area, and infrastructure, which significantly enhanced export performance. Conversely, population growth, real effective exchange rate, and taxes on international trade were detrimental to export performance.

Okoli, Ezenekwe, Nzeribe, and Umeghalu (2023) examine the impact of Nigeria's non-oil exports on real GDP from 1981 to 2021 using the ARDL bound test and CUSUM stability test techniques. Their results indicate both short-run and long-run relationships between non-oil exports and economic growth. The Engel-Granger error correction model (ECM) analysis reveals a positive impact of non-oil exports on economic growth, while the ARDL bound test shows a negative impact of non-oil export terms of trade on growth. The CUSUM stability test confirms the positive and stable influence of non-oil exports on economic growth, in contrast to the negative and unstable impact of non-oil export terms of trade.

Shido-Ikwu et al., (2023) investigated the connection between international trade and Nigeria's economic development from 1981 to 2019 using the Autoregressive Distributive lag (ARDL) approach. Three long-run vectors were incorporated in the model, and the ARDL bound test technique verified that each variable had a long-run equilibrium relationship. Furthermore, the short- and long-term estimation model results showed that import trade, foreign direct investment, and exchange rates all have a negative and negligible effect on Nigeria's economic growth; in contrast, export trade had a direct and significant impact on Nigeria's economic growth over the study period. The analysis stated that international trade had no effect on Nigeria's economic development over the study period.

Ji et al. (2022) explored the influences of foreign trade on sustainable economic growth in China using the vector error correction model within the VAR system and the Gregory-Hansen co-integration technique. The study utilized data from 1986 to 2020 and found a permanent equilibrium relationship between imports, exports, and sustainable economic growth. Exports were shown to accelerate long-term gains in import capabilities and help GDP increase, indicating a unidirectional causal relationship between GDP and exports.

To assess the COVID-19 pandemic's effect on Nigerian exports, Winifred Chinyere and Aras, (2022) used an Ordinary Least Square (OLS) model and variation analysis. They discovered the pandemic had a negative effect on exports overall, with crude oil exports being more severely affected than non-crude oil and non-oil exports. The findings support the widely accepted belief that in order to reduce the negative effects of external shocks on Nigerian exports and the country's economy, Nigeria must diversify its export sources beyond crude oil.

An analysis on the COVID-19 pandemic's effects on Nigerian trade was conducted by Uwizeyimana and Anyika, (2021). Employing a qualitative research approach to determine the extent of the pandemic's effects on trade, identified these effects to include decreased export revenue, a decline in export volume, a decline in crude oil prices due to a decline in global demand, a decline in stock market values, a rise in port clearing delays, delays in clearing banking instruments, an extension of project life spans, a suspension of planned investments, labor force constraints brought on by imposed restrictions, a suspension of unpaid tax obligations, a suspension of trade and productive activities that rely on import

inputs, and a low volume of domestic trade as a result of weak cash flows, among other effects.

Duru and Ezenwe (2020) empirically studied the influence of exports on the growth of the Nigerian economy from 1980 to 2016 utilizing the Autoregressive Distributed Lag Bounds testing approach to cointegration. The study found that although trade openness had a short-term and long-term negative association with economic development, export had a negligible or minor correlation with economic growth.

Research Gap

The research gap in existing studies on the effect of export trade on Nigeria's economic growth is primarily centered around the inconsistent findings regarding the relationship between export performance and GDP growth, particularly in the context of non-oil exports. While several studies, such as those by Okoli et al. (2023) and Shido-Ikwu et al. (2023), highlight both positive and negative relationships, a comprehensive exploration of the interplay between oil and non-oil exports, trade openness, and macroeconomic indicators like inflation and exchange rates is underexplored. Moreover, the impact of recent global disruptions, such as the COVID-19 pandemic on Nigeria's export performance and economic growth, remains insufficiently examined, especially in relation to policy recommendations for diversifying export sources beyond oil. This study aims to fill these gaps by using more recent data (1992-2022) to assess the broader and more nuanced effects of export trade, especially non-oil exports, on Nigeria's economic growth, incorporating both short-term and long-term perspectives.

2.2 Theoretical Review

Export-Led Growth Theory

The export-led growth hypothesis is grounded in both classical and neoclassical economic theory. It posits that exports are the primary driver of economic growth. This can be explained by the notion that increasing exports lead to higher employment in export-oriented industries, which in turn enhances productivity and stimulates economic growth. The objective of an export-led growth strategy is to boost production capacity by focusing on international markets.

Economists generally agree that economic growth is influenced by a complex array of factors including trade, price changes, political conditions, income distribution, capital accumulation, and geographical elements. Strategies such as "export-led growth," "outward-oriented," "export promotion," and "export substitution" characterize countries that have successfully expanded their export markets (Krueger, 1985).

Classical Theories of Trade and Growth

Classical economists, such as Adam Smith and David Ricardo, emphasized the role of trade in enhancing a country’s wealth through specialization. According to Smith’s Theory of Absolute Advantage, countries can maximize efficiency and output by specializing in goods where they have a natural advantage (Smith, 1776). This concept suggests that Nigeria’s economic growth can benefit from focusing on goods like oil and agricultural products, where it holds a production edge.

Extending this, Ricardo’s Theory of Comparative Advantage posits that even if a nation lacks absolute efficiency, it benefits from producing and exporting goods with the lowest relative opportunity cost (Ricardo, 1817). Nigeria’s specialization in oil and natural resources aligns with Ricardo’s principles, suggesting that the country can enhance its economic performance by concentrating on sectors where it holds a comparative advantage.

Neoclassical Growth Theory

Neoclassical growth theory, particularly the Solow-Swan Model, underscores the significance of capital accumulation, labor force growth, and technological progress in driving economic growth (Solow, 1956). Within this framework, revenue from exports provides the capital necessary for domestic investment, which in turn can improve productivity. However, the model also suggests that growth potential may plateau without continual technological advancement, pointing to the limitations of a purely export-driven model in the long term.
Alternatively, Endogenous Growth Theory, pioneered by Romer and others, argues that growth arises from factors within the economy, such as human capital development and innovation (Romer, 1986). According to this view, revenue from exports can support investments in education, technology, and infrastructure, leading to sustained economic expansion. For Nigeria, this theory implies that diversifying exports and reinvesting in human capital can amplify long-term growth beyond the primary export sector.

3.0 Methodology

Ex-post facto research, sometimes referred to as "after-the-fact" research, is the research design that was used in this study and secondary data were sourced from the Central Bank of Nigeria Statistical Bulletin from 1992 to 2022. These includes GDP, oil export, non-oil export, trade openness, export growth rate, exchange rate, interest rate and inflation rate released on yearly basis.

Gross domestic product = F (Oil export, non-oil export, trade openness, export growth rate, interest rate, Exchange rate, inflation rate)

3.1 ARDL Model Specification:

$$GDPt=\theta_0+\theta_1OEP_t+\theta_2NEP_t+\theta_3TOP_t+\theta_4EGRt+\theta_5ITRt+\theta_6EXRt+\theta_7IFRt+ECM_{t-1}+u_t$$

Dependent Variable: GDPt: Gross Domestic Product at time t.

Independent Variables: OEP_t, NEP_t, TOP_t, EGR_t, ITR_t, EXR_t, IFR_t: Values of oil exports, non-oil exports, trade openness, export growth rate, interest rate, exchange rate, and inflation rate at time t, respectively.

3.1.1 Variables Measurement and Description

Table: Variables Justification and Description

Variable	Description	Measurement
GDP	Gross Domestic Product	Total monetary value of all goods and services produced within a country's borders in a specific time period, usually annually. Measured in local currency units.
OEP	Oil Export	Value of crude oil exported from the country. Measured in r local currency equivalent.
NEP	Non-oil Export	Value of all exports excluding oil. Includes goods and services. Measured in local currency equivalent.
TOP	Trade Openness	Ratio of the sum of exports and imports to GDP, indicating the level of integration of the country into the global trading system. Expressed as a percentage.
EGR	Export Growth Rate	Annual growth rate of total exports from the country. Expressed as a percentage change from the previous year.

ITR	Interest Rate	The benchmark interest rate set by the central bank, influencing the cost of borrowing in the economy. Expressed as a percentage.
EXR	Exchange Rate	The value of the country's currency in terms of another currency. Typically measured against the US dollar.
IFR	Inflation Rate	The annual rate of increase in consumer prices compared with the previous year's consumer prices. Expressed as a percentage.

Source: Author's Computations

3.2 Method of Data Analysis

In this study, data analysis was conducted using a combination of descriptive statistics and econometric models to ensure a thorough understanding of the effect of export trade on Nigeria's GDP. To address the issue of stationarity, which is pivotal in time series analysis to avoid spurious results, unit root tests were performed. The Autoregressive Distributed Lag (ARDL) approach was chosen for its suitability in handling variables at different levels of integration. This model allows for the exploration of both short-run dynamics and the long-run equilibrium relationships between the variables.

4.0 Data Analysis

4.1 Descriptive Analysis

The result is presented in Table 1

Table 1: Summary of Descriptive Statistics

	GDP	OEP	NEP	TOP	EGR	EXR	ITR	IFR
Mean	47013.41	8011062.00	687560.00	26.418	0.28	161.20	17.52	17.58
Median	45320.08	8107978.00	350061.30	26.679	0.10	132.82	17.57	17.57
Maximum	74752.42	24221596.0	3207100.0	72.729	3.61	458.00	24.85	24.85
Minimum	21881.56	200710.20	4991.30	1.532	-0.39	21.89	11.48	11.55
Std. Dev.	19833.62	6428575.00	886259.50	18.452	0.70	116.35	2.84	2.75
Skewness	0.04	0.51	1.61	0.515	3.61	0.90	-0.03	0.07
Kurtosis	1.39	2.46	4.84	2.586	17.96	3.16	3.57	3.69
Jarque-Bera	3.253	1.641	17.206	1.595	344.815	4.057	0.409	0.615
Probability	0.197	0.440	0.184	0.451	0.453	0.132	0.815	0.735

Source: Eviews output (2024)

4.2 Stationarity Test

For the traditional econometrics approach to be applied, variables must first be stationary according to economic theory. This is to prevent misleading outcomes. A maximum of lag 1 is utilized for the stationarity test, and the intercept is included. The results of the ADF were reported in Table below

Table 2: Augmented Dickey-Fuller Unit root Stationarity Test

Variables	**Test at Levels**			**Test at 1st difference**			**Inference**
	ADF statistic	t-statistic	Prob.*	ADF statistic	t-statistic	Prob.*	
GDP	**-1.192624**	**-2.967767**	0.6638	- 7.321054	-2.97185	0.0003	I(1)
OEP	-1.87474	-2.96397	0.3391	-4.91027	-2.97185	0.0005	I(1)
NEP	- 1.291616	-2.96397	0.6202	-6.43296	-2.96777	0.0003	I(1)
TOP	0.525955	-2.96397	0.9848	-4.48839	-2.96777	0.0013	I(1)
EGR	-5.25859	-2.96777	0.0002	-7.564865	-2.98103	0.0001	I(0)

ITR	-4.57498	-2.96397	0.0010	-5.93727	-2.97185	0.0002	I(0)
IFR	-4.89994	-2.96397	0.0004	-5.98142	-2.97185	0.0001	I(0)
EXR	-1.24494	-2.96397	0.6414	-5.31452	-2.96777	0.0002	I(1)

Source: Eviews output (2024)

To determine if there was a unit root in each time series, Augmented Dickey Fuller (ADF) tests were employed. By comparing the observed values of the ADF test statistic (in absolute terms) with the critical values of the test statistic (also in absolute terms) at the 1%, 5%, and 10% level of significance, the unit root test can be verified.

If the calculated values of the test statistics are greater than the critical values, the null hypothesis is rejected; conversely, if the calculated values of the test statistics are less than the critical values, the null hypothesis is accepted. This is the decision rule for confirming stationarity. At initial difference, the variables are stationary. We can move on to run other statistical tests based on the outcome.

4.2.1 Co-integration Test

It is highly likely that there is a linear combination of integrated variables that is stationary since the variables are stationary at level and first difference; these variables are referred to be cointegrated. The ARDL approach is used in this study to comprehend the cointegrating relationship between these variables. The table below displays the cointegration findings.

Table 3: Bounds Test

F-Bounds Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Signif.	I(0)	I(1)
			Asymptotic: n=1000	
F-statistic	6.378557	10%	1.92	2.89
K	7	5%	2.17	3.21
		2.5%	2.43	3.51
		1%	2.73	3.9

Source: Eviews output (2024)

The ARDL bound testing/cointegration estimate is shown in Table.3. The null hypothesis that there is no cointegration between the variables is rejected, as shown by the cointegration test. This demonstrates the long-term relationship between the model's variables. Based on the ARDL bound testing for cointegration, the calculated F-statistic (6.378557) is higher than the upper critical bound of I (1) 3.21 at 5 percent critical values, as Table 4.3 implies. This provided evidence to reject the null hypothesis that there is no cointegration at the 5% significance level. At 5% critical levels, the ARDL bound testing results allow for the conclusion that there is a long-term relationship between the variables.

4.2.2 ARDL Test

The Autoregressive Distributed Lag (ARDL) model is a popular econometric model used to analyze the relationships between a dependent variable and several independent variables, accounting for both short-run dynamics and long-run equilibrium without requiring the variables to be of the same order of integration.

$$GDPt=\theta_0+\theta_1 OEP_t+\theta_2 NEP_t+\theta_3 TOP_t+\theta_4 EGRt+\theta_5 ITRt+\theta_6 EXRt+\theta_7 IFRt+ECM_{t-1}+u_t$$

4.2.2.1 Long-run Regression

Table 4: Long Run Regression Estimation (Dependent variable = GDP)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
OEP	0.153455	0.035949	4.268656	0.0021
NEP	0.189191	0.029503	6.412699	0.0001
TOP	-0.002246	0.001371	-1.638429	0.1358
EGR	0.075336	0.032682	2.305112	0.0466
IFR	0.014151	0.017310	0.817496	0.4348
ITR	-0.009239	0.016567	-0.557687	0.5907
EXR	0.085097	0.024086	3.533102	0.0064
C	2.424652	0.175249	13.83544	0.0000

Source: Eviews output (2024)

The model's constant (C) was significant, with a coefficient of 2.425 and a t-statistic of 13.84 ($p < 0.0001$), indicating that there are other constant factors influencing GDP that are captured in the intercept.

Oil Exports (OEP) showed a positive and statistically significant relationship with GDP, with a coefficient of 0.153, standard error of 0.036, and a t-statistic of 4.27. The low probability value ($p = 0.0021$) strongly suggests that increases in oil exports are associated with significant increases in GDP.

Non-Oil Exports (NEP) also demonstrated a positive and highly significant effect on GDP, indicated by a coefficient of 0.189, a standard error of 0.030, and a t-statistic of 6.41 ($p < 0.0001$). This underscores the importance of diversifying export sectors to bolster economic growth.

Export Growth Rate (EGR) was found to positively impact GDP with a coefficient of 0.075 and a t-statistic of 2.31. The p-value of 0.0466 indicates that this relationship is statistically significant at the 5% level, pointing to the beneficial effects of growing export rates on economic output.

4.2.2.2 Short Run Dynamics

Table 5: ARDL Error Correction Regression

ARDL Error Correction Regression				
Dependent Variable: GDP				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
GDP(-1)	0.266160	0.063828	4.169944	0.0024
OEP	-0.017245	0.010484	-1.644911	0.1344
NEP	0.046185	0.004576	10.09259	0.0000
NEP(-1)	-0.022934	0.004499	-5.097407	0.0006
TOP	-0.000803	0.000151	-5.333912	0.0005
TOP(-1)	-0.000963	0.000158	-6.086122	0.0002
EGR	0.014354	0.002761	5.198763	0.0006
EGR(-1)	-0.002189	0.001107	-1.978204	0.0793
IFR	0.005488	0.000487	11.26956	0.0000
EXR	0.010130	0.006874	1.473722	0.1747
ECM(-1)*	-0.328270	0.031524	-10.41324	0.0000
R-squared	0.968198	Mean dependent var		0.019044
Adjusted R-squared	0.949491	S.D. dependent var		0.015154
Durbin-Watson stat	2.673135			

Source: Eviews output (2024)

In the short-run estimates using an Autoregressive Distributed Lag (ARDL) error correction model, various variables were analyzed to determine their immediate impacts on Gross Domestic Product (GDP). This analysis offers insights into the dynamics influencing GDP in the short term (Author's Computation).

Lagged GDP (GDP (-1)) showed a significant positive impact with a coefficient of 0.266, a standard error of 0.064, and a t-statistic of 4.17, with a probability of 0.0024. This indicates that past GDP levels have a strong and positive influence on current GDP.

Oil Exports (OEP) in the current period negatively impacted GDP, though the relationship was not statistically significant (coefficient = -0.017; p = 0.1344). This suggests that oil exports do not have a clear immediate effect on GDP in the short run.

Non-Oil Exports (NEP) had a significant positive impact on GDP with a coefficient of 0.046 and a t-statistic of 10.09 (p = 0.0000). Interestingly, the lagged effect of non-oil exports (NEP (-1)) showed a significant negative impact, suggesting that the beneficial effects of non-oil exports might take time to materialize or have immediate negative effects before contributing positively.

Export Growth Rate (EGR) had a significant positive effect in the current period, but its lagged effect was not significantly negative, highlighting the immediate benefits of export growth, which might diminish over time.

Error Correction Mechanism (ECM (-1)) had a significant negative coefficient of -0.328, indicating that deviations from the long-run equilibrium are corrected at a rate of about 32.8% each period. This fast adjustment underscores the model's efficiency in returning to equilibrium aftershocks.

R-squared is 0.968, indicating that the model explains about 96.8% of the variability in GDP. Adjusted R-squared is 0.949, adjusting for the number of predictors, still indicates a very high explanatory power. Durbin-Watson statistic is 2.67, suggesting that there is no autocorrelation in the residuals, indicating that the model is well-specified.

Overall, the short-run estimates reveal that both current and past values of various economic indicators significantly influence GDP. The significant coefficients of the ECM further confirm the relevance of integrating both short-run dynamics and long-run equilibrium in understanding GDP behavior.

4.3 Analysis of Export during Pre and Post Covid Period

Table 4.3.1 Pre-COVID Period (2018-2019)

Year	Oil Exports (₦'million)	Non-Oil Exports (₦'million)	Export Growth Rate (%)
2018	17,281,953.13	1,425,374.30	33.74
2019	16,703,434.07	3,207,099.74	6.43

Source: CBN Statistical Bulletin

Table 4.3.2 During and Post-COVID Period (2020-2022)

Year	Oil Exports (₦'million)	Non-Oil Exports (₦'million)	Export Growth Rate (%)
2020(During)	11,058,151.84	1,555,440.86	-36.65
2021	16,737,339.63	2,466,831.25	52.25
2022	24,221,595.93	3,029,976.46	41.90

Source: CBN Statistical Bulletin

Comparative Analysis

Oil Exports

Pre-COVID, oil exports showed a slight decline from 2018 to 2019. In post-COVID, there was a significant drop in 2020 due to the global economic shutdown. However, recovery in 2021 and a surge in 2022 suggest a strong rebound, possibly influenced by increased global demand and changes in oil prices.

Non-Oil Exports

There was a substantial increase in non-oil exports from 2018 to 2019, which slightly declined in 2020 but continued to grow in the following years, indicating diversification or increased competitiveness in non-oil sectors.

Growth Rate:

The overall export growth rate was high in 2018 but significantly decreased in 2019. The negative growth in 2020 reflects the impact of COVID-19 on global trade. The subsequent years show robust recovery, with 2021 displaying a particularly strong rebound, which could be attributed to both pent-up demand and stabilization in global markets.

Implications:

The volatility in export growth rates indicates the impact of external shocks (like the pandemic) on export-oriented economies. The recovery in 2021 and 2022 suggests resilience and possibly effective response strategies in export sectors. The growth in non-oil exports even during the pandemic highlights potential strategic shifts towards non-oil sectors or the development of new markets and products that could reduce dependency on oil exports.

4.4 Diagonistic Test

4.4.1 Test for Heteroskedasticity in Residuals

Further, the study performed a heteroskedasticity test to ascertain whether the conditional variances among all regression residuals were equal (homoscedastic) or different (heteroskedastic). The results are shown in Table 4.3.4

Table 6: Heteroskedasticity Test: Breusch-Pagan-Godfrey

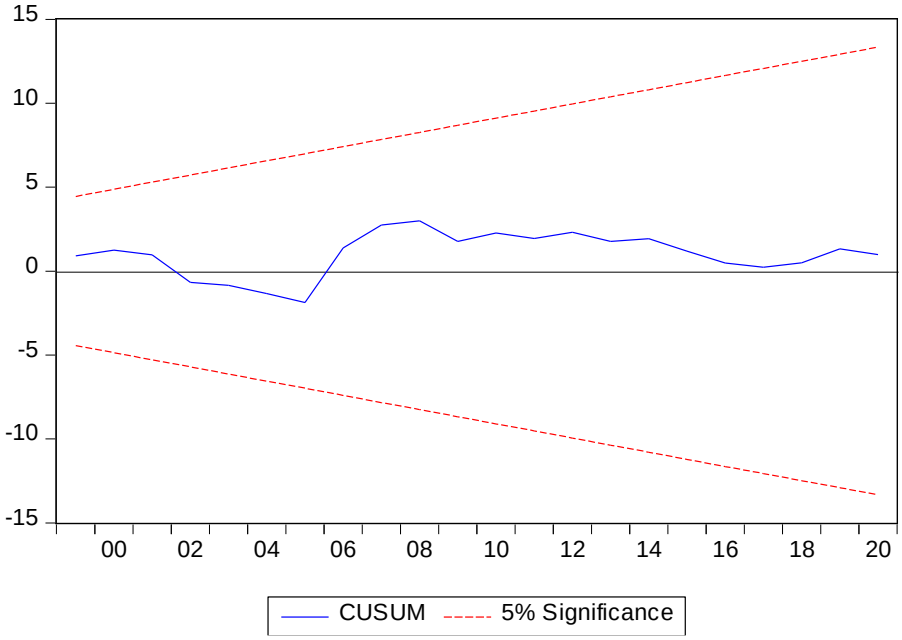
Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	0.545815	Prob. F(18,9)	0.8689
Obs*R-squared	14.61331	Prob. Chi-Square(18)	0.6883
Scaled explained SS	3.320454	Prob. Chi-Square(18)	0.9999

Source: Eviews output (2024)

All three metrics from the Breusch-Pagan-Godfrey test (F-statistic, Obs*R-squared, and Scaled Explained SS) consistently indicate that there is no significant evidence of heteroskedasticity in the model. This implies that the assumption of homoscedasticity holds, which is crucial for the validity of the standard errors, t-statistics, and confidence intervals calculated in the regression analysis. Thus, the regression results can be considered reliable under the assumption of constant error variance, enhancing the model's robustness in predicting or explaining changes in GDP.

Stability Test

Figure 1



A graphical representation of the Cumulative Sum (CUSUM) and the Cumulative Sum of Square (CUSUMSQ) of the Recursive Residual are also established. The cumulative sum (CUSUM) and cumulative sum of squares (CUSUMSQ) plots which is shown in Figure 1 from a recursive estimation of the model also indicate stability in the coefficients over the sample period.

5.0 Summary of Findings

In the long-run regression model, the significant positive effects of oil exports (OEP), non-oil exports (NEP), export growth rate (EGR), and exchange rate (EXR) on GDP are consistent with classical economic theories. These theories advocate that exports contribute to national income through inflows of foreign exchange, increased production, and employment, thus driving economic growth (Smith, 1776; Ricardo, 1817). For example, a study by Agbo (2018) empirically supports the export-led growth hypothesis, showing that countries with higher rates of export growth tend to experience faster GDP growth. This underscores the relevance of focusing on export diversification as a strategy for economic development. The positive impact of non-oil exports on GDP reflects immediate benefits from diversifying export bases, aligning with the export-led growth hypothesis. However, the negative effect of its lagged value suggests a J-curve effect, a phenomenon where the benefits of an increase in exports are preceded by initial economic downturns due to costs related to adjustments and market entry (Baldwin, 1989). Empirical studies, such as those by Duru and Ezenwe (2020), have noted similar patterns where trade balances initially worsen before improving following a devaluation or an increase in export activity.

A positive relationship was found between the exchange rate and GDP, indicating that a stronger domestic currency, which enhances purchasing power, can stimulate economic growth. That is fluctuations in the Exchange Rate were found to adversely affect economic growth, indicating the vulnerability of Nigeria's economy to such fluctuations. There was a positive correlation between inflation and GDP in the short run, suggesting that moderate inflation can be a sign of growing economic activity.

The impact of trade openness on GDP was negative, although not statistically significant, suggesting that increased economic exposure can have complex effects, possibly harming less competitive domestic sectors.

Findings also demonstrates that the export growth rate positively affects GDP, with higher export growth rates contributing to economic growth. Overall, the results confirm that both oil and non-oil exports, as well as the growth rate of exports, play crucial roles in driving economic growth.

5.1 Recommendations

Based on the findings of this study, the following recommendations are proposed to enhance the positive impact of export trade on Nigeria's economic growth:

1. To reduce dependency on oil exports and to mitigate risks associated with commodity price volatility, Nigeria should diversify its export portfolio. This includes promoting sectors like agriculture, manufacturing, and services, which have significant export potential but are currently underutilized.
2. Encouraging export trade by implementing commercial policies like “export subsidy”, especially on non-oil export so that producers are encouraged to pump more of the product to the international market. Improving infrastructure related to transportation, logistics, and communication can significantly boost export efficiency. Investments in ports, roads, and digital infrastructure will facilitate smoother trade processes, reduce costs, and increase competitiveness on the global stage.

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