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Effect of Export on Nigeria's Real Gross Domestic Product (1986 - 2023)

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Abstract

This study was aimed at ascertaining the effect of exports on the real gross domestic product (GDP) of Nigeria. It specifically assessed the extent of the effects of oil and non-oil exports on the country's real GDP within the period from 1986 to 2023. The data utilized were sourced from the Central Bank of Nigeria (CBN) Statistical Bulletin (2023), and a plethora of econometric techniques, such as the Autoregressive Distributed Lag (ARDL), impulse response function, and Granger causality testing techniques, were applied in estimating the research model. The results indicated a sustained (long run) relationship between exports and economic growth in Nigeria. More so, oil exportwas found to exert a positive significant effect of real GDP in Nigeria, both in the short and long runs; while non-oil exports exerted a negative insignificant effect on real GDP in both runs. However, the Granger casuality indicated no causality from oil exports to real GDP whereas a weakcausality was seen to run from non-oil exports to real GDP. The study advocated for the government and its agencies toensure greater efficiency in the oil and gas sector, especially in enhancing capacity utilization and blocking revenue leakages, and this can contribute to higher economic performance while

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greater attention should be paid by all tiers of government to the non-oil sector, especially to agriculture, in order to overturn its poor performance; particularly given that non-oil exports has a causal effect on real GDP in Nigeria.

Keywords: Oil and non-oil exports, Real Gross Domestic Product, ARDL, Granger Causality Test

Introduction

Due to differentials in the quality and quantity of natural and human resource endowments, countries all over the world are constantly involved in the exchange of goods and services. But in doing so, deliberate attempt is made to ensure a more favourable balance of trade, a situation in which the value of goods exported exceeds import. Thus, exportation is a crucial strategy by which countries strive to increase their foreign exchange earnings (Kromtit, Kanadi,Ndangr ,& Lado, 2017), which also translates to higher gross national income. Such increasing national income provides an impetus for greater investment in both economic and social infrastructure, which is necessary for the actualization and sustainability of socioeconomic growth and development of any state.

In the last few decades, due to increased globalization and greater economic integration, exportation activities have become more intense and flatter, owing to improved communication and reduction in trade barriers. Exportation has also played very crucial role in the evolution of many multinational companies in a bid to expand their production base in a more cost-effective manner; with targets at enhancing competitive advantages and achieving economies of scale. As noted by Adenugba, and Dipo (2013), increasing demand for exports will result in the creation

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of more employment opportunities; as well as enhancing national income balance of trade and payments. Consequently, the more exports a country makes, the more its expected economic performance.

In Nigeria, exports, especially non-oil exports have been the dominant foreign exchange earner in the pre-independence era and in the 60's and 70s. Agricultural products and a handful of other important minerals supported the economy from the age before independence all the way until the late 1960s. Today, the country's economy has become utterly reliant on the oil industry as a whole due to the country's rich oil reserves, the robust oil market, and the attractive price of crude oil. Consequently, the economy forsook every other industry that had been bringing in foreign currency. This is a classic example of the de-industrialization that sometimes follows an economic phenomenon called a boom in natural resources. As a consequence of its deindustrialization, Nigeria now relies mostly on imported consumer goods. The domestic production of consumer products in Nigeria is inadequate due to the neglect of the country's industrial sector (Bature, 2012).

According to Omjimite and Akpolodje (2019), Nigeria's heavy reliance on crude oil and natural gas exportation has significant consequences for its economy due to the extreme volatility of the oil market. Due to its reliance on crude oil exports, the Nigerian economy is vulnerable to the unpredictable changes and fluctuations of the global oil market. Consequently, any sudden shifts in international oil prices would have an immediate impact on the home economy. The negative repercussions of over reliance on oil trade have increased the need to diversify the Nigerian economy by shifting away from oil and towards non-oil export commerce. The non-oil trade is widely thought to have significant potential to drive the Nigerian economy towards the desired

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growth and development. Onwualu (2017) argued that adopting the value chain approach to agriculture has the potential to stimulate economic growth in Nigeria. This approach can generate various activities, create jobs, and promote industrialization. Consequently, it positions non-oil sub-sector exports as a key driver for sustainable economic growth in the country.

Vincent and Oluchukwu (2013) state that successive Nigerian administrations have made consistent attempts to promote the growth of non-oil export trade by implementing favourable policies. Some of these include the import substitution policy in the 1960s, which sought to shield domestic industries from foreign competition through tariffs, subsidies, and import quotas; the Structural Adjustment Programme, which liberalised trade in the mid-1980s; and the export promotion policy of the 1990s, which boosted government assistance for small and medium-sized businesses in an effort to boost productivity and ease the export of domestic goods. Given these scenarios, it becomes necessarily to evaluate Nigeria's economic performance in the light of its oil and non-oil exports, which is the borne of this study.

Statement of the Problem:

As Ruba, and Thikraiat (2019) stressed, export operations stimulate economic development through production and demand channels as well as from economies of scale brought about by greater access to bigger international markets. But despite the growth in Nigeria's exports, especially the oil exports, Nigeria's economic performance has been negligible. Nigeria's GDP growth has been on a downward trend since the last two decades, slipping down to -1.6% and -1.8% in 2016 and 2020 (World Bank, 2025).This casts doubt whether such exports have been favourable to the country, which calls for more empirical clarification.

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Since the 1970's to date, oil exports have gradually submerged its nonoil counterpart, which used to be the country's main foreign exchange earner. But despite the pre-SAP experience and repeated calls for the revamping of the non-oil sector, very little or nothing seems to have changed.With the recent efforts of the Nigerian government at increasing crude oil production, there is need to tread cautiously – the global oil market remains fraught with price uncertainties. More so, certain questions need to be unravelled. Has it been more beneficial for the country to rely on the export of oil and gas resources or should more attention be paid to the non-oil sector?

While numerous studies on the impact of exports on the Nigerian economy have been carried out in the past, methodologies have been inconsistent and results mixed. For example, studies by Khayati (2021), Badreldin and Ahmed (2021), Ugwo, Umeh and Ochuba (2019), and more others, have shown that exports of goods and services, contribute positively to economic development. In contrast, those of Onodugo,Ikpe and Anowor (2020), as well asAremu (2016) found the opposite. More so, most of these studies have considered aggregate exports, and mainly employed the ordinary least square (OLS) method of regression, which has some inherent weaknesses. This study therefore seeks to contribute to knowledge by utilizing a blend of modern econometric analytical techniques to provide a more current evidence on the extent to which oil and non-oil exports have influenced Nigeria's economic performance.

Research Objectives:

1. To ascertain the effect of oil exports on Nigeria's real gross domestic product.
2. To determine the effect of nonoil exports on Nigeria's real gross domestic product.

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Research Questions:

1. To what extent does oil exports affect Nigeria's real gross domestic product?
2. What is the extent of the effect of nonoil exports influence Nigeria's real gross domestic product?

Research Hypotheses:

1. Oil exports has no significant effect on real gross domestic product in Nigeria.
2. Nonoil exports has no significant effect on real gross domestic product in Nigeria.

Literature Review

Conceptual Review

Simply put, export refers to the sale of locally manufactured goods to buyers in a foreign country. Export has material effects on economic growth of every nation either as a medium for transferring from countries with surplus production to others deficient in supply. According to many research reports, export provides a base and acts like a catalyst for economic development (Adenugba,&Dipo, 2013; Sheridan, 2014). This they argue is possible as the developing countries like Nigeria participate in foreign trade, thereby generating sufficient foreign capital inflow that will help the development process. In terms of classification, export can be commodity or non-commodity, oil and non-oil.

A lot of studies conducted on export concluded that export played a prominent role in rapid and consistent growth of many countries economy. According to Adam Smith and Ricardo trades, especially between countries provides participating countries comparative advantage enabling each of them to specialise in its offering to the market at best with minimal resources. However, this theory has been variously

criticised by many economists who believed that the "classical foreign trade theory" is not appropriate for real, dynamic conditions, especially in terms of poor countries that need development. Their argument according to Serin (1981) – cited in Kilavuz and Altaytopcu (2012), thesecountries are only dealing in export of primitive substances brought into their country and therefore the hypothesis of foreign trade is not relevant to developing countries. Despite this assertion, Tri-Dung (2015) believed that if a poor developing country can trade, there is some prospect of industrialisation and of dispensing with traditional methods of production. A poor developing country may not develop yet have abundant unutilised resources wasting away.

Mercantilist economists maintained that an underdeveloped country may have, in the absence of international trade, a surplus domestic productive capacity on account of its unutilised or underutilised natural resources, labour resources and to a small extent of domestic market. According to the classical trade theory, the gains that might accrue to nationals of developing countries are enjoyed by foreign investors who own mines and plantations of such countries. International trade promotes specialisation in production of export products which in turn boosts the productivity level, and causes the general level of skills to rise in the export sector

Theoretical Framework

A highly robust theoretical underpinning for international trade lies in:

Theory of Comparative Cost Advantage: The theory of comparative cost advantage states that global output will reach its optimum level if every country specializes in the production of the commodity (or commodities) in which it has comparative cost advantage over others; this is seen as the basis for profitable trade (Ozughalu and Ajayi, 2004). In

contemporary economics, the dominant model of comparative cost advantage is known as Heckscher – Ohlin model. As pointed out by Sodersten and Reed(1994), this is a theory of long-term general equilibrium in which two factors of production – labour and capital – are both mobile between sectors. The Heckscher – Ohlin theory postulates that international trade – of which exports are expected to constitute the major component – will significantly reduce the gap between the rich and poor countries. The theory contends that inter-country differences in factor endowments are the basis for foreign trade.

Comparative cost advantage comes as a result of different factor intensities in the production of various commodities (Sodersten and Reed, 1994). The Heckscher-Ohlin theory also implies that free trade specialization in production based on relative factor endowments will tend to bring about factor price equalization and thus will increase the returns to labour in poor countries to the levels in rich countries; this suggests that international trade in general and exports in particular have the ability to mitigate inequality in income and wealth distribution between and within nations as well as the ability to bring about a convergence in absolute poverty incidence between the rich and poor countries (Ozughalu and Ajayi, 2004).

Empirical Review

In a bid to ascertain the nexus between exports and economic growth in Nigeria, Oladosu, Ibeinmo, andLasisi (2023) employed the Autoregressive Distributive Lag (ARDL) and Error Correction Model (ECM) techniques based on a thirty-three year periodic data (1990-2022) obtained from the statistical bulletin of the CBN. The results arising therefrom indicated a positive and significant effect of both oil and non-oil exports on the gross domesticproduc of Nigeria in both the short and

long runs. They concluded that the duo have positive significant influences on economic growth in Nigeria.

Khayati (2021) examined the impact of both oil and non-oil exports on the economic development of Bahrain from 1977 to 2018. The cointegration study revealed a strong and positive correlation between economic growth and exports. Nevertheless, the impact of oil on real gross domestic product is the most significant. Additionally, the results showed that oil exports contributed to economic growth, both immediately and in the long run.

Badreldin and Ahmed (2021) conducted an empirical research that looked at the impact of Saudi Arabia's exports (oil and non-oil) on the country's economic performance from 2005 to 2019. The information came from Saudi Arabia's General Authority for Statistics. We estimated the study models' linear and non-linear versions utilising the ordinary least squares technique. Oil exports and non-oil exports both contributed positively to Saudi Arabia's economic performance throughout the study period.

In their research, Onodugo, Ikpe, and Anowor (2020) utilised time series data from 1981 to 2018 to analyse the impact of nonoil exports on Nigeria's economic growth. The study analysed data utilising the Endogenous Growth Model (EGM) and the Augmented Production Function (APF). Research demonstrated that non-oil exports contributed little to the overall pace of economic development in Nigeria.

In their 2019 study, Ugwo, Umeh, and Ochuba looked at how crude oil exports affected Nigeria's economic growth. The study found that exporting crude oil improved Nigeria's economic performance by 32%. Researchers concluded that the government should do more to maximise the use of crude oil and its byproducts. This necessitates tackling several elements that lead to the under-, mis-, and non-utilization of crude oil,

including technology, human capital, manpower capital, finance, bureaucratic bottleneck, public policy, and regulatory legislation.

From 1981 to 2015, Aremu (2016) analysed the effects of Nigeria's exports on the economy, both oil and non-oil. In order to analyse the data, the researchers utilised the following tests: ADF and PP unit root, Johansen co-integration, Granger causality, impulse response functions (IRF), and variance decomposition (VD). While oil exports are negatively correlated with economic growth, non-oil exports are positively correlated, according to the research.

Verter and Becvarova (2016)utilized the Ordinary Least Squares, Granger causality, Impulse Response Function and Variance Decomposition techniques to examine the impact of agricultural exports on economic growth in Nigeria. Based on the OLS and Granger causality results, the hypothesis of agricultural exports-led economic growth was supported for Nigeria. However, the results revealed a negative relationship between the agricultural degree of openness and economic growth in Nigeria. The Impulse Response Function depicted an upward and downward shock from agricultural exports to economic growth. Furthermore, the results of the Variance Decomposition test revealed that a shock to agricultural exports can contribute to the oscillation in the variance of economic growth in the long run.

Utilizing the Bound Testing technique, Eboreime and Umoru (2016) estimated Nigeria's exports competitiveness in the World market and concluded that Nigeria's exports are highly competitive in Canada, the United States and Japan but less competitive in the United Kingdom. The results further revealed that for Canada, Japan and the United States, exchange rate and the level of foreign income strongly influences Nigeria's exports. Kromtit, Kanadi,

Ndangra, and Lado (2017)used the Auto-regressive Distributed Lag (ARDL) model to examine the link between non-oil exports and economic growth in Nigeria from 1985-2015. The results revealed a positive and significant relationship between non-oil exports and economic growth in Nigeria.

Ugochukwu, and Uruakpa (2013) applied theOrdinary Least Square (OLS) and the Granger causality determination techniques in exploring the extent of the impact of oil and non-oil exports on Nigeria's GDP as well as possible causality between same. Utilizing time series data sourced from the Central Bank of Nigeria (CBN) statistical bulletin,they found that both oil and non-oil exports had positive and significant impacts on economic growth. However, no causal relations between the variables were established except for unidirectional causality from GDP to oil exports.

Methodology

Research Design

This study relies on the quasi-experimental research design, in a bid to ascertain the effect of exports on Nigeria's Real Gross Domestic Product (GDP). It is specifically geared at determining cause-and-effect relationships among variables (White &Sabarwal, 2014),though it lacks the power to randomly assign subjects (participants) to conditions – it is suitable in conditions or situations in which the manipulation of variables is impractical or impossible.

Nature and Sources of Data

The data employed in this study is of annual time series, which were obtained from the statistical bulletin of the Central Bank of Nigeria (CBN) 2023 Excel Version. The data covers a thirty-eight year period from 1986 to 2023.

Model Specification

Following the approach of Oladosu, Ibeinmo, andLasisi (2023), this study's research model is estimated thus:

$$RGDP = f(OEXPT, NOEXPT) \quad (1)$$

This was further expressed in econometric forms as:

$$GDP = \alpha_0 + \alpha_1 OEXPT_t + \alpha_2 NOEXPT_t + \varepsilon_t \quad (2)$$

Where RGDP = Real Gross Domestic Product, OEXPT = Oil Exports, Non-oil Exports,α_0= intercept, $\alpha_1 - \alpha_2$= coefficients of the regression, and ε_t=error term. Subscript *t*representStime period.

A priori Expectation:$\alpha_1 - \alpha_2 > 0$ implying that an increase in both oil and non-oil export results in the growth of RGDP

Method of Data Analysis

A plethora of methods were applied in the quest to investigate the extent of the effect of oil and non-oil exports on Nigeria's real GDP. These include the Augmented Dickey-Fuller unit root, Johansen cointegration, Autoregressive Distributed Lag (ARDL), variance decomposition, impulse response functions, as well as Granger causality testing approaches were applied in the course of this study in order to demystify the aforementioned study objectives

Data presentation and Analyses

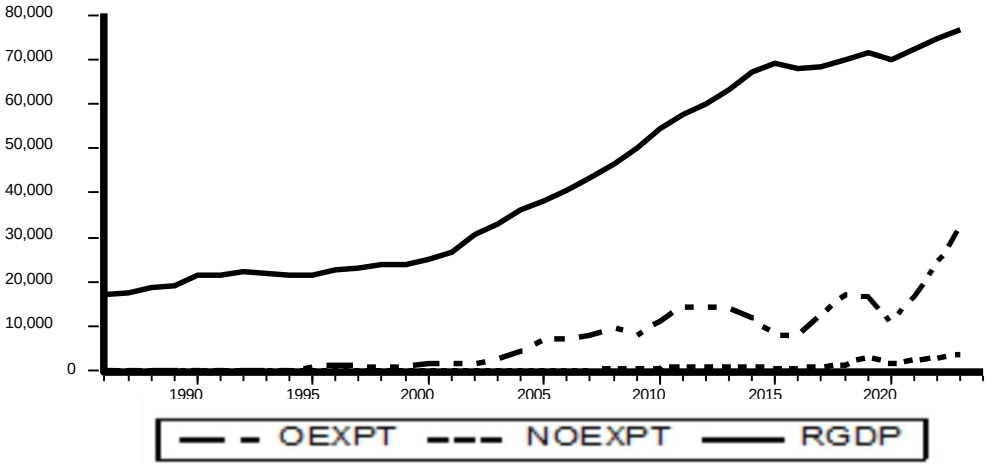
Table 4.1: Oil and Non-oil Exports and Real GDP (1986-2023)

Year	OEXPT	NOEXPT	RGDP
1986	8.37	0.55	17,007.77
1987	28.21	2.15	17,552.10
1988	28.44	2.76	18,839.55
1989	55.02	2.95	19,201.16
1990	106.63	3.26	21,462.73
1991	116.86	4.68	21,539.61
1992	201.38	4.23	22,537.10
1993	213.78	4.99	22,078.07
1994	200.71	5.35	21,676.85
1995	927.57	23.10	21,660.49
1996	1,286.22	23.33	22,568.87
1997	1,212.50	29.16	23,231.12
1998	717.79	34.07	23,829.76
1999	1,169.48	19.49	23,967.59
2000	1,920.90	24.82	25,169.54
2001	1,839.95	28.01	26,658.62
2002	1,649.45	94.73	30,745.19
2003	2,993.11	94.78	33,004.80
2004	4,489.47	113.31	36,057.74
2005	7,140.58	105.96	38,378.80
2006	7,191.09	133.59	40,703.68
2007	8,110.50	199.26	43,385.88

2008	9,861.83	525.86	46,320.01
2009	8,105.46	500.86	50,042.36
2010	11,300.52	710.95	54,612.26
2011	14,323.15	913.51	57,511.04
2012	14,259.99	879.34	59,929.89
2013	14,131.84	1,130.17	63,218.72
2014	12,006.97	955.06	67,152.79
2015	8,184.48	660.68	69,023.93
2016	8,178.82	656.79	67,931.24
2017	12,913.24	1,074.90	68,490.98
2018	17,281.95	1,425.37	69,799.94
2019	16,703.43	3,207.10	71,387.83
2020	11,058.15	1,555.44	70,014.37
2021	16,737.34	2,466.83	72,393.67
2022	24,221.60	3,029.98	74,639.47
2023	32,502.38	3,745.40	76,684.94

Source: Author's Compilation from CBN Statistical Bulletin (2023)

Fig 4.1: Time Plot of Variables



Source: Author's Computation with Evi ews 10

In Figure 4.1, RGDP steady but gradual growth between 1986 and 2001 except for slight dips in 1993, 1994 and 1995, after which it showed much steeper growth up to 2015. In 2016, RGDP fell by about 1.58% from N69tr in 2015 and thereafter continued growing gradually though it fell slightly again in 2020 before maintaining a steady growth till the end of the period. OEXPT followed a similar trend as RGDP, with negligible growth from 1986 to 1995 after which it showed more pronounced growth up to 2008 before falling slightly down by 17.81% to N8.1tr in 2009. From 2010, the growth in OEXPT was inconsistent showing some bell shapes before increasing sharply from N11tr in 2020 to about N32.5tr in 2023. Unlike OEXPT, NOEXPT maintained a uniform pattern of growth which was steady and consistent almost throughout the period except for some slight dips in 1999 and between 2014 and 2016.

Data Analysis

The analysis of the data obtained by the researcher was done using both

	OEXPT	NOEXPT	RGDP
Mean	7194.188	641.9154	42379.22
Median	5815.026	109.6326	37218.27
Maximum	32502.38	3745.404	76684.94
Minimum	8.368500	0.552100	17007.77
Std. Dev.	7734.651	977.1774	21107.56
Skewness	1.211825	1.853491	0.313370
Kurtosis	4.369862	5.595804	1.458731
Jarque-Bera	12.27179	32.42654	4.383163
Probability	0.002164	0.000000	0.111740
Sum	273379.1	24392.79	1610410.
Sum Sq. Dev.	2.21E+09	35330403	1.65E+10
Observations	38	38	38

Source: Author's Computation with Eviews 10

descriptive and inferential techniques, and the results obtained are presented in this subsection.

TaFrom the result in Table 4.2, OEXPT, NOEXPT and RGDP have means of N7.19tr, N641.92b and N42.38tr, respectively. Furthermore, their standard deviations are also given as N7.73tr, N977.18b and N21.11tr, respectively, indicating high variability in the data except for RGDP. More so, the results indicate skewness in OEXPT and

NOEXPT, which also show peakiness in the said variables. On the other hand, the Jarque-Bera Statistics and their associated probabilities further show that only RGDP is normally distributed while both OEXPT and NOEXPT do not follow a normal distribution. **ble 4.2: Descriptive Statistics**

Table 4.3: Unit Root Analysis

Variable		t-statistic	5% Critical value	Probability Value	Order of Integration
OEXPT	Level	1.788666	-2.951125	0.9996	
	1st			0.0029	
	Difference	-4.115795	-2.948404		*I*(1)
NOEXPT	Level	5.352358	-2.967767	1.0000	
	1st			0.0000	
	Difference	-8.706466	-2.945842		*I*(1)
RGDP	Level	0.351399	-2.945842	0.9778	
	1st			0.0234	
	Difference	-3.278801	-2.945842		*I*(1)

Source: Author's Computation with Eviews 10

Table 4.4: Co -integration Analysis

	Trace Test				Max-Eigenvalue Test		
Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	5% Critical Value	Prob.	Max-Eigen Statistic	5% Critical Value	Prob.
None *	0.466240	37.42278	29.79707	0.0055	21.97332	21.13162	0.0380
At most 1	0.306692	15.44947	15.49471	0.0508	12.81983	14.26460	0.0835

		2.62963			2.62963		
At most 2	0.072379	9	3.841466	0.1049	9	3.841466	0.1049

Source: Author's Computat ion with Eviews 10

The results in Table 4.4 indicate the presence of 1 co-integrating equation at both the Trace and Max-Eigenvalue tests. This shows that a dynamic long run equilibrium relationship exists between the variables under study.

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Table 4.5: Short Run Test Dependent Variable: RGDP

Method: ARDL

Date: 03/10/25 Time: 09:14

Sample (adjusted): 1988 2023

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
RGDP(-1)	0.910984	0.034949	26.06629	0.0000
OEXPT	0.000235	0.000102	2.300851	0.0288
OEXPT(-1)	0.000107	0.000143	0.749795	0.4594
OEXPT(-2)	0.000260	0.000128	2.036245	0.0509
NOEXPT	-0.000444	0.000574	-0.773571	0.4454
NOEXPT(-1)	-0.001808	0.000577	-3.134310	0.0039
C	2667.908	803.6893	3.319577	0.0024

R-squared	0.997569	Mean dependent var	43773.63
Adjusted R-squared	0.997066	S.D. dependent var	20808.30
S.E. of regression	1127.142	Akaike info criterion	17.06542
Sum squared resid	36843056	Schwarz criterion	17.37333
Log likelihood	-300.1776	Hannan-Quinn criter.	17.17289
F-statistic	1983.239	Durbin-Watson stat	1.460745
Prob(F-statistic)	0.000000		

Source: Author's Computation with Eviews 10

The short run test results in Table 4.5 reveals that 99.7% of the variations in RGDP is explained by oil and nonoil exports. More so, the F- statistic of 1983.24 and its probability value of 0.0000 show a very high fitness of the model. On the other hand, the t-statistics indicate that OEXPT has positive significant effect on RGDP while NOEXPT has a negative insignificant effect on RGDP. However, the Durbin Watson statistic of 1.4607 seems to indicate presence of serial autocorrelation given the rule of thumb benchmark of 2.0. Thus, a further confirmatory test was carried out as shown in Table 4.7.

Table 4.6: Error Correction Model (ECM) Test

Date: 03/10/25 Time: 15:39

Sample: 1986 2024

Included observations: 36

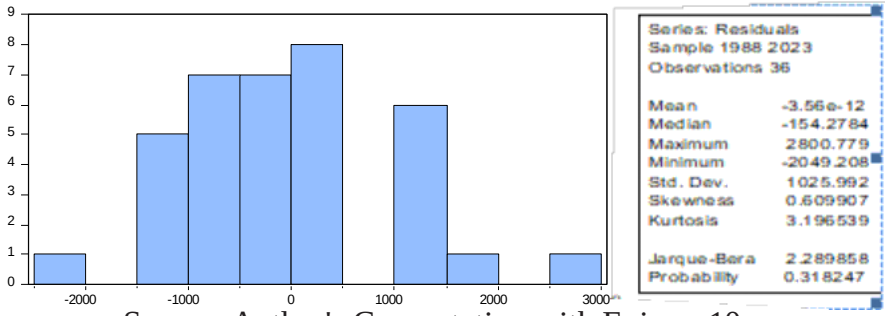
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2667.908	297.0417	8.981594	0.0000
D(OEXPT)	0.000235	9.63E-05	2.434256	0.0213
D(OEXPT(-1))	-0.000260	0.000103	-2.535706	0.0169
D(NOEXPT)	-0.000444	0.000539	-0.824710	0.4163
CointEq(-1)	-0.089016	0.017261	-5.156912	0.0000

R-squared	0.511856	Mean dependent var	1642.579
Adjusted R-squared	0.448870	S.D. dependent var	1468.487
S.E. of regression	1090.177	Akaike info criterion	16.95431
Sum squared resid	36843056	Schwarz criterion	17.17425
Log likelihood	-300.1776	Hannan-Quinn criter.	17.03108
F-statistic	8.126474	Durbin-Watson stat	1.460745
Prob(F-statistic)	0.000133		

Source: Author's Computation with Eviews 10

The ECM test, as shown in Table 4.6, reveals that 44.89% of the variations in RGDP is explained by oil and nonoil exports. The F- statistic of 8.13 and its probability value of 0.0001 also indicates a very high fitness of the model. Also similar to the short run test results in Table 4.5, the t-statistics reveal that OEXPT has positive significant effect on RGDP (though its 1-period lag was negative but also significant) while NOEXPT has a negative insignificant effect on RGDP. Lastly, the error correction term (CointEq(-1)) show that the model adjusts itself backwards with a speed of 8.9% to attain its long run equilibrium. The Normailty and stability tests for the model are given in Figures 4.2-4.4, while the serial correlation and heteroskedasticity tests are shown in Tables 4.7 and 4.8, respectively.

Figure 4.2 Histogram Normality Test



Source: Author's Computation with Eviews 10

The Jarque-Bera Statistic and associated probability value of 2.29 and 0.3182 reveals that the residuals of the model estimate follow a normal distribution.

Table 4.7: Serial Correlation Test

F-statistic	0.981652	Prob. F(2,27)	0.3877
Obs*R-squared	2.440294	Prob. Chi-Square(2)	0.2952

Source: Author's Computation with Eviews 10

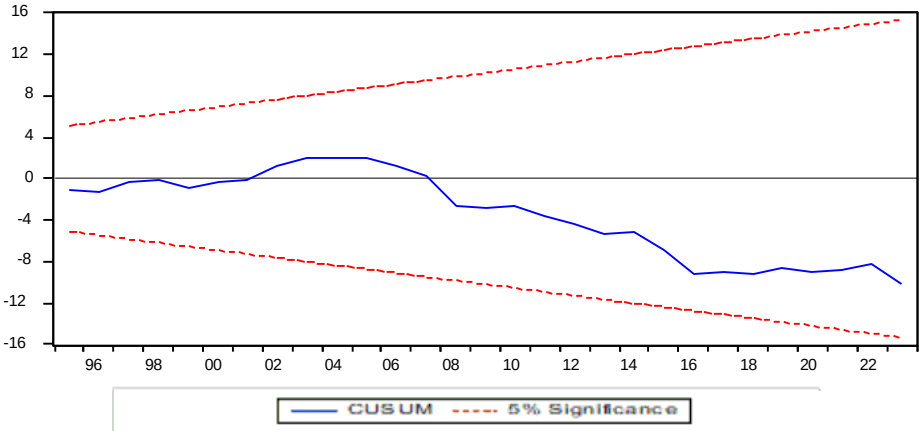
Table 4.8: Heteroskedasticity Test

F-statistic	0.093603	Prob. F(6,29)	0.9965
Obs*R-squared	0.683935	Prob. Chi-Square(6)	0.9948
Scaled explained SS	0.487433	Prob. Chi-Square(6)	0.9980

Source: Author's Computation with Eviews 10

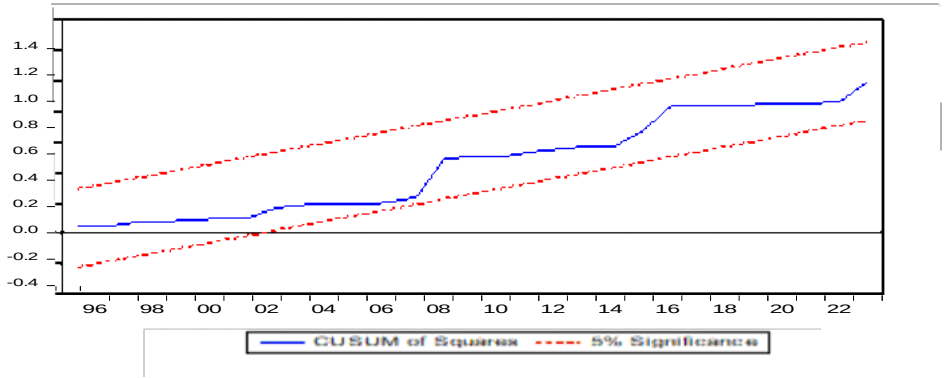
The results in both Tables 4.7 and 4.8 reveal that the model estimates are neither auto-serially correlated nor are they heteroskedastic.

Figure 4.3 Cumulative Sum (CUSUM) Test



Source: Author's Computation with Eviews 10

Figure 4.4 Cumulative Sum of Squares (CUSUM) Test



Source: Author's Computation with Eviews 10

Both the CUSUM and CUSUM of Squares tests in Figures 4.3 and 4.4 reveal that the model estimate revolves within the 5% upper and lower bounds, implying that the model is stable over time.

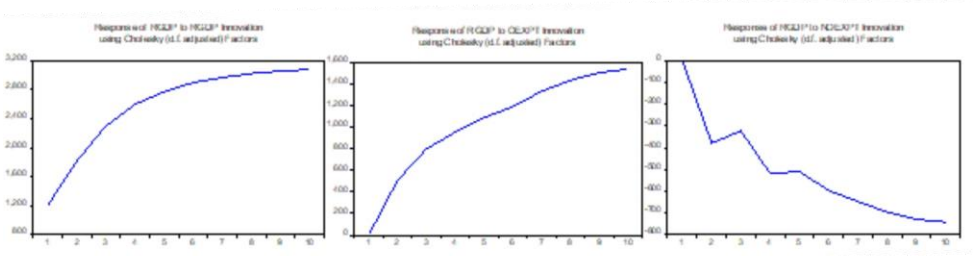
Table 4.9: Variance Decomposition

Period	S.E.	RGDP	OEXPT	NOEXPT
1	1208.344	100.0000	0.000000	0.000000
2	2274.068	92.22618	4.994754	2.779065
3	3347.837	89.75866	8.029544	2.211800
4	4375.505	87.80015	9.497631	2.702221
5	5318.608	86.58911	10.66567	2.745220
6	6202.087	85.49150	11.56389	2.944614
7	7033.992	84.25652	12.60775	3.135725
8	7821.714	83.07656	13.59502	3.328419
9	8563.675	82.03817	14.46089	3.500936
10	9259.854	81.21122	15.15261	3.636174

Source: Author's Computation with Eviews 10

In Table 4.9, the results reveal that the dependent variable (RGDP) explains at least 80% of the variations in itself within the ten year-period – with 100%, 92.2% and 90% explanatory power in the 1st, 2nd and 3rd periods, respectively. On the other hand, OEXPT and NOEXPT were responsible for about 5% and 2.8% of the variances in RGDP in the 2nd period; and thereafter the former exerted about 4 times as much explanatory power as the later. However, OEXPT showed less than proportionate increase (less than 1%) as from the 6th period, except in the 7th period where it increased by 1.04% from 11.56%. In contrast, NOEXPT contribution to RGDP fell from 2.78% in the 2nd period to 2.21% in the 3rd period but thereafter more than proportionate increases till the end of the 10th period.

Figure 4.5 Impulse Response of RGDP to own, OEXPT, and NOEXPT Shocks



Source: Author's Computation with Eviews 10

From the results in Figure 4.5, shocks from itself and from OEXPT induce a positive and consistent increase in RGDP throughout the 10-year period whereas the shocks due to NOEXPT induce a positive effect on RGDP throughout the period.

Table 4.10: Causality Analysis

Date: 03/10/25

Time: 09:08Sample: 1986 2024

Lags: 2

The Granger Causality Test results in Table 4.10 indicate unidirectional causality flowing from RGDP to OEXPT, and also weakly from NOEXPT to RGDP. These results imply that RGDP granger-causes OEXPT while NOEXPT granger-causes RGDP.

Testing of Research Hypotheses

The research hypotheses were tested using the ARDL ECM approach. The decision rule was to reject the null hypothesis if the probability value of the t-statistic is less than or equal to 0.05. The results and conclusions are summarized in Table 4.11.

Table 4.11: Research Hypotheses Tests Summary

Hypothesis	**Independent Variable**	**Dependent Variable**	**t-statistic**	**p-value**	**Decision**
H_{01}	OEXPT	RGDP	2.434256	0.0213	Reject
H_{02}	NOEXPT		-0.824710	0.4163	Accept

Source: Researcher's Compilation from Table 4.6.

Discussion of Findings

First, there exists a dynamic long-run equilibrium relationship between exports (as proxied by oil and non-oil exports) and real GDP growth in Nigeria. This draws from the Johansen cointegration test result presented in Table 4.4. Thus, exports have a sustained impact on the economic performance of the country, especially as it is critical in determining our trade performance and more importantly the value of the national currency.

Second, the Auto Regressive Distributed Lag (ARDL) model short run and ECM results in Tables 4.5 and 4.6 indicate that OEXPT has positive significant effect on RGDP in both the short and long runs. This result is in consonance with the theoretical a priori and implies that an increase in oil exports will lead to an increase in the real GDP. This can be attributed to the fact that oil and gas remains the economic fulcrum of our society and the more they are exported the more foreign exchange the country earns, and the more funds can be allocated for governments economic and social activities, which are critical in enhancing welfare through the redistribution of income.

The variance decomposition and impulse response functions in Table 4.9 and Figure 4.4, respectively, also reveal that oil exports stimulate more significant growth in RGDP much more than its counterpart (non-oil exports).However, the negative significant effect of the 1-period lag of OEXPT in Table 4.6 also suggests that oil exports could also negatively affect the economy. This is because if such resources are not meaningfully engaged, the country can remain economically backward – this could explain why the rate of growth and development in Nigeria had been very sluggish.

In contrast, NOEXPT exerted negative though insignificant effect on RGDP in both the short and long runs, which is inconsistent with the a priori expectation. The implication of this is that an increase in non-oil exports has not translated to positive economic growth for the country. This could probably be explained by the years of neglect of the sector by the government due to overconcentration on the oil and gas sector, which is the main stay of the Nigerian economy. More so, the rising foreign exchange rate and weakening domestic currency makes non-oil earnings quite meagre in terms of the real economic value of such products. The

impulse response function presented in Figure 4.3 also indicated that shocks on NOEXPT result in the negative performance of the real economy.

Third, despite the positive and significant effect of oil exports on RGDP, it exerts no causality effect on the latter, as shown in the Granger causality test results in Table 4.10. That is, OEXPT does not exert a deterministic effect on RGDP. Rather, there is a flow of causality from RGDP to OEXPT. Thus, the level of real economic performance is what determines the level of oil exports. On the other hand, there is causality (though weak) that runs from NOEXPT to RGDP. This implies that non-oil exports, despite its poor performance still has the potential to critically enhance economic growth.

Summary of Findings

The underlying framework of this study was to ascertain the nexus between exports (using oil and non-oil exports as proxies) and Nigerian economic performance. The extent to which oil and non-oil exports explained the dynamics in Nigeria's Real Gross Domestic Product (RGDP) were the main targets of the study. The study explored conceptual, theoretical and empirical literatures with a view to demystifying the above-stated objectives. The data for the study were drawn from the Central Bank of Nigeria (CBN) Statistical Bulletin (2023),andanayzedusinbg various econometric techniques, such as the ARDL unit root test, Johansen Cointegration test, ARDL short run and error correction model (ECM) techniques, variance decomposition and impulse response functions, as well as the Granger Causality technique. The results obtained were as follows:

i. Oil and non-oil exports are cointegrated with real GDP in Nigeria.

That is, there is a sustained (long run) relationship between exports and economic growth in Nigeria.

ii. Oil exports exert a positive significant effect of real GDP in Nigeria, both in the short and long runs.

iii. Non-oil exports exert a negative insignificant effect on real GDP in Nigeria in the short run as well as in the long run.

iv. Oil exports has no causal effect on real GDP – it has trickling down causality on oil exports, whereas non-oil exports exert howbeit weak causality on real GDP.

Conclusion

In view of the findings made therefrom, the following conclusions are inherent:

i. The level of the Nigeria's exports will continue to affect its economic performance for a long time to come, due to the dynamic relationship that exists between exports and real GDP.

ii. An increase in the level of oil exports will result in higher and significant real economic performance of the country.

iii. The non-oil export sector in Nigeria has performed poorly in stimulating real economic growth in Nigeria.

iv. Oil exports has no causal effect on Nigeria's real GDP whereas non-oil exports hasa weak causal impact on real GDP.

Recommendations

Based on the findings and conclusions reached in this study, the following policy recommendations are advocated.

i. Given the conintegrating relationship between exports and real economic growth, the government should pay more attention to the external sector performance as this has been established to have a sustained impact on real economic growth.

ii. Since oil exports has positive significant effect on real GDP, the government and its agencies should ensure greater efficiency in the oil and gas sector, especially in enhancing capacity utilization and blocking revenue leakages, and this can contribute to higher economic performance.
iii. Greater attention should be paid by all tiers of government to the non-oil sector, especially to agriculture, in order to overturn its poor performance; given that non-oil exports has a causal effect on real GDP in Nigeria.

Contribution to Knowledge

This study contributes to knowledge by using more robust analytical approach, such as the ARDL Error Correction Model (ECM), Impulse Response Function, and Granger Causality techniques, among others,in a bid to provide a more reliable inference on the relationship between exports and Nigeria's economic growth. The study also provides empirical evidence that support the notion that oil exports is the main contributor to Nigeria' real economic performance whereas non-oil exports has negative insignificant impact both in the shot and long runs. Lastly, the study finds oil exports has no causal effect on real GDP whereas non-oil exports exerts weak causal effect on real GDP.

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