NON-OIL EXPORT AND ITS EFFECTS ON ECONOMIC GROWTH IN NIGERIA (1981-2020)

Abass A. Shiro[a], Rabius O. Abjia[b] , Olajide Solomon Fadun[C]
Department of Finance**,** University of Lagos**,** ashiro@unilag.edu.ng
Department of Finance**,** University of Lagos, ajrabiu@gmail.com
Department of Actuarial Science & Insurance**,** University of Lagos, sofadun@yahoo.co.uk

[a]Corresponding Author***:*** ashiro@unilag.edu.ng

ABSTRACT

Over the decade, Non-oil exports played a vital role in the growth of the Nigerian economy. Focusing on Nigeria's real economic growth, inflation, exchange rate and nonoil export, this study investigates the impact of non-oil exports on the economy of Nigeria using data from the years 1981 to 2020. *The goal was to determine whether non-oil exports have an impact on Nigeria's real GDP. A model was developed to attain these goals, and the Autoregressive Distributed Lag (ARDL) Cointegration Technique was employed as the analysis approach. In addition to other tests, the variables in the study were submitted to a stability test, a bound test, and the Augmented Dickey-Fuller (ADF). The study demonstrates that, unlike other procedures, the ARDL Cointegration technique does not require pretests for unit roots. When dealing with variables that are integrated in various orders, I(0), I(1), or a mix of the two, the ARDL Cointegration technique is preferable and robust when there is a single long-run relationship between the underlying variables in a small sample size. The F-statistic (Wald test) detects the long-term relationship of the underlying variables. The ARDL results revealed, and the t-test of hypotheses examined, that non-oil exports, oil exports, and exchange rate have no effect on Nigerian economic growth and that there is a long-term link. According to the coefficient of determination, the dependent variable captures 79% of the independent factors. According to the report, for oil export and non-export to have an impact on Nigerian economic growth, a stable exchange rate and inflation must be monitored through regulations.*

Keywords: *Real economic growth**,** Crude oil, Economic growth, Non-oil exports, Unit root, Exchange rate.*

1. INTRODUCTION

Non-oil exports have propelled Nigeria's economic expansion over the last ten years. According to the study conducted by Ruba and Thikraiat (2019), the exportation of products and services plays a crucial role in generating foreign exchange revenue, contributing to the equilibrium of trade and the generation of employment opportunities. Exports play a crucial role in fostering economic development by effectively addressing the disparity between supply and demand and capitalising on the economies of scale offered by more significant international markets. Non-oil exports encompass various sectors, including agriculture, industry, telecommunications, and finance. There is a significant abundance of non-oil items, including cash commodities and food crops. The contribution of non-oil exports supported the expansion of Nigeria. The agricultural sector served as the cornerstone of the Nigerian economy, with a significant portion of the country's foreign currency being generated through the exportation of a range of crops, including cocoa, rubber, coffee, cotton, palm fruit, and groundnut. Nevertheless, the process of extracting crude oil, especially in the era of the oil boom in the 1970s, had a significant and far-reaching impact on the economy. Farouq et al. (2020) emphasised that Nigeria has excessively focused on oil income, neglecting non-oil sectors.

Nevertheless, the exports of Nigeria encompass a combination of hydrocarbon and non-oil commodities. The key sources of foreign exchange for her are documented by Mustapha (2010). Nigeria's economy has been heavily dependent on a singular commodity since the discovery of crude oil in the 1970s. As per the 2007 Annual Report of the Central Bank of Nigeria (CBN), Nigeria's export income is predominantly derived from the oil sector. Most of Nigeria's exports consist of oil, accounting for more than ninety per cent, while non-oil products make up less than ten per cent of the country's total exports. According to Ezike and Gege (2010), Nigeria has witnessed a gradual growth in its non-oil exports since gaining independence. Specifically, the proportion of non-oil exports has risen from 40% in 1979 to 5% in 2010. The country's negative growth can be attributed to various factors, with the predominant culprit often being seen as the country's trade policy heavily reliant on oil. Being overshadowed by the oil export trade but traceable to declining non-oil export and loss of market share in the non-oil trade globally is clear evidence of how the non-oil sector competitiveness of the Nigerian economy has been consistently eroded over the last three decades.

A robust and strong export trade is indicative of how competitive the commodities and services are and how large the scale of the industrial base of an economy is; this is reflected by the comparative advantages possessed by the country. Also, commodities exports are possible when domestic demand for such is satisfied, and surpluses exist in commercial quantities. Thus, the non-oil export sector serves as the hub for exporting these surpluses produced by the non-oil base of the country's economy. There have been several research works which have examined the relationship between non-oil exports and economic growth. Okoh (2004) observed that global integration had a positive but insignificant relationship in explaining non-oil exports' behaviour in the long run. Since the aggregate non-oil export data used by previous studies may bias their conclusion, the need to correct the existing cultural distortions and put the economy on sustainable growth is compelling. This raises the question of what needs to be done to diversify the economy and develop the non-oil sector to improve the potential of the sector. This study investigates the impact of non-oil exports on the economy of Nigeria. Using the data from 1981 to 2020, the study explores on Nigeria's real economic growth as the dependent variable, with nonoil export being the critical independent variable. Additionally, the study considers oil export, inflation, and exchange rate as other independent variables.

2. LITERATURE REVIEW

Theoretical Review

According to Ricardo's theory of comparative advantage, even if a nation has an absolute cost disadvantage in producing both goods. There still exists for mutually beneficial trade; the less efficient nation should specialise in the good in which it is relatively less efficient (where its absolute advantage is least), while the more efficient nation should specialise in the production and exportation of the good in which it is relatively more efficient that's where its absolute advantage is most significant (Adenugba & Dipo, 2013). Therefore, Nigeria is blessed with various nonoil export goods, which has both absolute and comparative advantage over other countries. For instance, we have a vast land resource that supports the cultivation of different export crops like cocoa, coffee, groundnut, cotton and rubber kernels. The country is also blessed with abundant natural resources like coal, iron ore tin, columbine, gold graphite, etc. All these are exported goods on which Nigeria has both absolute and comparative advantage over other countries. Hence, these

theories of trade explain how Nigeria could diversify its exports away from oil. This study assesses the impact of non-oil exports on economic growth in Nigeria.

Conceptual Review

Economic Growth

Economic growth can be described as the country's ability to strengthen the production of goods and services in a present year or period compared to the previous period (Finance Map of World, 2013). Dwivedi (2006) opined that economic growth is a sustainable increase in per capita national output or net national product over a long period. He further stated that the increase in total output of production must be much more significant than the population growth rate (Dwivedi, 2006). Economic growth in output per capita, is an essential government objective since it is associated with rising average real incomes and living standards. Thus, it is the most critical factor in the success of a nation in the long run (Samuelson & Nordhaus, 2005). In the opinion of Imimole and Imoughele (2012), they contend that a country cannot attain a development state without considering economic growth. This is a practical example in Nigeria whereby growth continuously dominates the main policy thrust of the government's development objectives.

Concept of Non-Oil Export

The non-oil sector comprises those groups of economic activities outside the petroleum and gas industry or those not directly linked to them. It comprises manufacturing, agriculture, solid minerals, telecommunication, service, finance, tourism, real estate, construction and health sectors (Vincent et al., 2013). Non-oil export products are those commodities, excluding crude oil (petroleum products), sold in the international market for revenue generation.

Non-oil exports are those commodities, excluding crude oil (petroleum products), sold in the international market for revenue generation. Nigeria's non-export sector is structured into four broad constituents: agricultural exports, manufactured exports, and solid mineral exports and services exports (Akeem, 2011). Non-oil export products are unlimited, including crops, manufacturing goods, solid minerals, entertainment and tourism services (Abogan et al., 2014). This explains non-export in the context of this study. Akeem (2011) defined the Nigerian economy's non-oil sector as the whole economy, less the oil and gas sub-sector. It covers

agriculture, industry, solid minerals and the services sub-sector, including transport, communication, distributive trade, financial services, insurance, and government.

Empirical Review

This section of the study examines various extant studies on this research topic. In their study, Adenugba and Dipo (2020) examined the influence of non-oil exports on the economic growth of Nigeria. Specifically, they focused on agricultural and mineral exports and employed descriptive and inferential statistical techniques to investigate critical variables such as GDP, non-oil exports, and the currency exchange rate. The study's findings indicate that non-oil exports in the Nigerian economy did not meet expectations, raising concerns about the effectiveness of export promotion programmes. Based on the findings presented in the research, it is evident that the Nigerian economy has yet to achieve significant progress in reducing its reliance on crude oil exports. As a result, the crude oil subsector continues to have utmost significance within the economy. The authors failed to include the effects of inflation and trade openness in their research.

In their study, Okafor, Akandu, and Ike (2020) created a comprehensive programme for achieving sustained economic growth through non-oil exports. The programme was implemented from 1980 to 2017, employing a rigorous factor analytic model. The study results indicated a noteworthy and favourable correlation between non-oil exports and the economic growth of Nigeria. This association was primarily attributed to the influence of foreign direct investment and trade liberalisation. Furthermore, the study revealed that the dynamic factors within the amalgamation of foreign direct investment and trade liberalisation served as the conceptual framework for a novel export-oriented economic strategy that is not dependent on petroleum resources. The authors failed to consider the impact of inflation and currency rates in their findings.

The study conducted by Igwe et al. (2018) aimed to assess the influence of non-oil exports on Nigeria's economic development from 1981 to 2017, employing the export-led growth hypothesis as the theoretical framework. The economic growth model incorporated capital stock, labour, and non-oil export, applying the Johansen cointegration technique and the vector error correction model. According to the VEC investigation, it has been concluded that non-oil exports play a significant role in influencing both short-term and long-term economic development. Furthermore, the conducted cointegration analysis has revealed the existence of a sustained and enduring

association between non-oil exports and economic development throughout the study. Nevertheless, the Granger causality analysis yielded inconclusive results about the relationship between non-oil product exports and economic growth. A unidirectional nature characterises the relationship between capital stock and economic development. A unidirectional causal relationship exists between economic growth and the labour force. The evaluations conducted by the individuals in question failed to consider important factors such as inflation, exchange rates, and trade openness.

3. METHODOLOGY

Sources of Data

The data used in this study are sourced from the CBN statistical bulletin and other journals. The data are collected on variables such as the actual gross domestic product in Nigeria, the non-oil export, the oil export, inflation and the exchange rate. The scope of the data ranges from 1981 to 2020.

Model Specification

The economic framework delineated within this study has been meticulously constructed to scrutinise the fundamental hypothesis on the impact of non-oil exports on the trajectory of economic expansion. Our endeavour entailed formulating a comprehensive model that delves into the intricate dynamics of economic growth. As previously elucidated, our analytical approach revolves around using regression analysis as the cornerstone of our investigation, aiming to unravel the intricate interplay between government revenues and their repercussions on the national economy.

The foundational model underpinning this inquiry delineates the nation's growth over 31 years, quantified by the real per capita Gross Domestic Product fluctuations and its intrinsic relationship with public revenue. In this research, the Gross Domestic Product assumes the role of the dependent variable, denoted as RGDP.

Consequently, the functional expression of this model takes the following form:

$$RGDP = f(NONX, OILX, EXR, INF) \quad 1$$

$$RGDP = \beta_0 + \beta_1 NONX + \beta_2 OILX + \beta_3 EXR + \beta_4 INF + \mu \quad 2$$

Where

β_0 is the intercept

While β1, β2, and β3 are the regression coefficient

RGDP = Real Gross Domestic Product

OILX = Oil Revenue

NONX= value of non-oil exports

EXR = exchange rate

INF = inflation rate.

μt is the error term.

$$logRGDP = \beta_0 + \beta_1 logNONX + \beta_2 logOILX + \beta_3 EXR + \beta_4 INF + \mu \quad (3)$$

Variable Measurement

Gross Domestic Product (GDP) implies the market value of all officially recognised final goods and services produced within a country in a given period. GDP per capita is often considered as an indicator of a country's standard of living. GDP is related to national account, a subject in macroeconomics. It is customarily reported on an annual basis. It is defined to include all final goods and services, that is, those produced by economic resources located in that nation regardless of their ownership and are not resold in form.

Inflation is defined as a generalised increase in the price level sustained over a long period in an economy (lipsey, 1995). It is a rise in the general level of prices of goods and services in an economy over a while.

Exchange rate: An exchange rate (or foreign exchange rate) between two currencies is the rate at which one currency will be exchanged for another. It is regarded as the value of one country's currency in terms of another currency. Exchange rates are determined in the foreign exchange market, which is open to a wide range of different types of buyers and sellers where currency trading is continuous.

Non-oil export: These include the exportation of the non-oil produces among which are agricultural, industrial and manufacturing outputs.

Non-oil export index: This is the fraction of the total export of goods and services produced within the economy that are not directly related to the oil sector of the economy. The non-oil products exports are unlimited as they include cash crops, food crops, manufacturing, entertainment, and tourism. The value of the non-oil export index shall be used for measuring the non-oil export.

Method and Technique of Data Estimation

Autoregressive Distributed Lagged Model

In order to achieve the second objective of the study of the long-run impact of government spending on health, education, agriculture and infrastructure on poverty reduction in Nigeria, the autoregressive distributed lagged model is therefore adopted. We represent equation (3.3) with the autoregressive distributed lagged model.

$$\Delta \log RGDP = \varphi_0 + \sum_{i=0}^{p} \varphi_1 \Delta \log RGDP_{t-1} + \sum_{i=0}^{p} \varphi_2 \Delta \log NONX_{t-1} + \sum_{i=0}^{p} \varphi_3 \Delta \log OILX_{t-1} + \sum_{i=0}^{p} \varphi_4 \Delta EXR_{t-1} + \sum_{i=0}^{p} \varphi_5 \Delta INF_{t-1}$$
$$+ \beta_4 NONX_{t-1} + \beta_3 OILX_{t-1} + \beta_2 EXR_{t-1} + \beta_1 INF_{t-1} + \mu_t \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (3.6)$$

The expression on the right side of the equation shows the long-run relationship among the variables. At the same time, the notations with the summation signs correspond to the short-run dynamics of the variables. While α0 represents the constant and εt is the error term. The steps of the estimation for an Autoregressive Distributed Lagged Model bounds test. The null hypothesis in Eq. (xi) is H_0. This means the nonexistence of long-run relationships, while the alternative is Hi.

The study also carried out several pre-estimation and post-estimation diagnostics to ensure the model's goodness of fit. The descriptive statistical properties, including the series' mean, median, minimum and maximum value, are shown. Pre-estimation tests such as the unit root tests are also carried out. When dealing with time series analysis, pre-test for possible unit roots in the series to avoid spurious regression results is a fundamental requirement.

4. DATA PRESENTATION AND ANALYSIS

This section focuses on the presentation and interpretation of the methodology applied in this study. The ARDL and ECM techniques were used to examine non-oil export and its effect on economic growth in Nigeria from 1981 to 2020.

Descriptive Statistics of Variables of Measurement

Table 1: Descriptive Statistics

	LOGGDP	LOGOILX	LOGNOX	LOGEXR	LOGINF
Mean	2.325767	2.354891	2.095208	0.063232	0.193242
Median	2.243115	2.163785	2.089331	0.0696	0.1255
Maximum	3.148119	3.110582	3.072306	0.1106	0.7284
Minimum	2.269883	2.029301	2.187154	0.0032	0.0538
Std. Dev.	2.336377	0.701504	2.69902	0.028048	0.172557
Skewness	-0.18801	0.065769	-0.02209	-0.59134	1.742366
Kurtosis	1.600188	2.50176	1.603009	2.57905	4.837589
Jarque-Bera	3.326374	0.420447	3.093097	2.495245	2.057347
Probability	0.189534	0.810403	0.212982	0.287187	0.000005
Sum	11.11791	8.218587	10.21179	2.4028	7.3432
Sum Sq. Dev.	20.19702	18.20801	26.15341	0.029107	1.101705
Observations	40	40	40	40	40

Table 1 shows the study's descriptive statistics. Starting with LOGGDP, the mean value is approximately 2.326, with a median of 2.243. This suggests that, on average, the logarithm of the Real GDP is around 2.326, and more than half of the observations fall below this value. The maximum and minimum values indicate that the data range from 2.270 to 3.148. The relatively high standard deviation (2.336) and positive skewness (skewness = -0.188) indicate that the distribution is slightly skewed to the right, with some high GDP outliers. The kurtosis value of 1.600 suggests that the platykurtic distribution has lighter tails than a normal distribution. The Jarque-Bera test with a p-value of 0.190 confirms that this variable's distribution is not significantly different from normal.

Moving to LOGOILX, the mean and median are 2.355 and 2.164, respectively. This implies that the logarithm of Oil Revenue is right-skewed, with some larger values. The standard deviation (0.701) is relatively low, suggesting less variability compared to LOGGDP. The positive skewness (0.066) and kurtosis (2.502) values indicate a right-skewed and leptokurtic distribution. The

Jarque-Bera test with a p-value of 0.810 suggests that this variable's distribution is not significantly different from normal.

For LOGNOX, the mean and median are close at 2.095 and 2.089, respectively. This indicates that the logarithm of Non-Oil Exports is approximately symmetrically distributed. The standard deviation (2.699) is high, reflecting substantial variability in the data. The skewness value is near zero (-0.022), suggesting a nearly symmetric distribution. The kurtosis value of 1.603 indicates a platykurtic distribution. The Jarque-Bera test (p = 0.213) suggests no significant deviation from normality.

Next, for LOGEXR, the mean is 0.0632, and the median is 0.0696. This indicates that the logarithm of Exchange Rate is close to symmetrically distributed, but the mean is slightly lower than the median. The small standard deviation (0.028) suggests low variability in the data. The negative skewness (-0.591) suggests a left-skewed distribution with a longer left tail. The kurtosis value of 2.579 indicates a leptokurtic distribution with heavier tails than a normal distribution. The Jarque-Bera test (p = 0.287) suggests no significant deviation from normality.

Finally, for LOGINF, the mean is 0.193, and the median is 0.126. This indicates that the logarithm of the inflation rate is right-skewed, with a few higher values. The standard deviation (0.173) is moderate, suggesting moderate variability in the data. The positive skewness (1.742) and high kurtosis (4.838) values indicate a right-skewed and leptokurtic distribution. The Jarque-Bera test (p = 0.000005) suggests a significant deviation from normality.

Table 2 Unit Root Test and the Augmented Dickey-Fuller test statistic

Variables	ADF	Probability	Critical values	Order of integration
LGDP	-3.18046	0.0295	-2.94584**	I(1)
LOX	-9.77423	0	-2.94584**	I(1)
LNOX	-4.14349	0.0026	-2.94584	I(1)
LINF	-3.9623	0.0193	-3.54033	I(0)
LEXR	-6.38039	0	-2.94584**	I(1)

***** significant at 1%, ** significant at 5% and * significant at 10%.**

Table 2 shows a comprehensive assessment of the stationarity levels of oil export and non-oil export variables across various significance thresholds, namely the 1%, 5%, and 10% levels. Upon

scrutinising the results, a compelling inference emerges: compelling statistical evidence prompts us to reject the null hypotheses. Instead, we are inclined to embrace the alternative hypotheses, firmly asserting that the individual series under consideration exhibit stationarity at their first differences.

The analysis (Table 2) reveals that GDP, OX, NOX, INF, and EXR exhibit stationarity at their respective differences, signifying the presence of unit roots within these variables. Intriguingly, the inflation rate (INF) alone demonstrates stationarity at its first differences. This nuanced observation underscores the significance of the order of integration for these variables, strongly implying the existence of cointegration among them.

Table 3 Bound Test

F-Bounds Test		Null Hypothesis: No levels of relationship			
Test Statistic	Value	Signif.	I(0)	I(1)	
			Asymptotic: n=1000		
F-statistic	5.904177	0.1	2.26	3.35	
K	4	0.05	2.62	3.79	
		0.025	2.96	4.18	
		0.01	3.41	4.68	

The bound test is utilised to examine the presence of cointegration among variables that exhibit integration of order I(1). Given that the F-statistic (5.904177) exceeds the critical values of 3.41 and 2.62 at the 1% and 5% significance levels respectively (Table 3). This implies that there exists a state of cointegration among the variables. Table 2 shows that the numerical value 5.904177 is more significant than 3.41 and 2.62.

Table 4 Error Correction Model (ECM).

ARDL Error Correction Regression				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.44499	0.241037	-5.99489	0
D(OILX)	-2.19776	0.707864	-3.10477	0.0043
D(LNOX)	0.077759	0.07978	0.974659	0.3381
CointEq(-1)*	0.164796	0.025504	6.461499	0
R-squared	0.758187	Mean dependent var		0.183307
Adjusted R-squared	0.736204	S.D. dependent var		0.10683
F-statistic	34.48976	Durbin-Watson stat		1.992091
Prob(F-statistic)	0			

Table 4 shows the results of the error correlation models.

C (Constant Term): The coefficient is -1.445, with a standard error of 0.241 (Table 4). The t-statistic of approximately -5.995 indicates that this constant term is statistically significant at the 0.05 level ($p < 0.05$). The probability (Prob.) value is 0, further supporting the significance.

D(OILX): The coefficient for the change in Oil Revenue (D(OILX) is -2.198, with a standard error of 0.708 (Table 4). The t-statistic of approximately -3.105 suggests that this variable is statistically significant at the 0.05 level ($p < 0.05$).

D(LNOX): The coefficient for the change in the logarithm of Non-Oil Exports (D(LNOX)) is 0.078, with a standard error of 0.080 (Table 4). The t-statistic of approximately 0.975 indicates that this variable is not statistically significant at the 0.05 level ($p > 0.05$).

CointEq(-1): The coefficient for the lagged error correction term (CointEq(-1)) is 0.165, with a standard error of 0.026. The t-statistic of approximately 6.461 indicates that this term is statistically significant at the 0.05 level ($p < 0.05$).

These findings collectively contribute to the model's explanatory power, as indicated by the R-squared value 0.758. This suggests that approximately 75.8% of the variance in RGDP can be explained by the independent variables in the model. The adjusted R-squared value, which accounts for the number of predictors, is 0.736. The F-statistic of 34.490 with a probability of 0 ($p = 0$) suggests that the overall model is statistically significant. The Durbin-Watson statistic of approximately 1.992091 is also provided, which can be used to assess the presence of autocorrelation in the model residuals.

Table 5 AutoRegressive Distributed Lagged (ARDL) Summary of Result

$$LOGINGDP_t = \beta_0 + \beta_1 LOGNOX_t + \beta_2 LOGOX_t + \beta_3 LOGEXR_t + \beta_4 LOGINF_t + \mu_t$$

Dependent Variable: LGDP				
Method: ARDL				
Variable	Coefficient	Std. Error	t-Statistic	Prob.*
LGDP(-1)	1.164796	0.127684	9.122488	0
LOX	0.031894	0.020674	1.542685	0.1341
LNOX	0.077759	0.109217	0.711966	0.4824
LNOX(-1)	-0.22892	0.097125	-2.35693	0.0257
INF	0.323546	0.085079	3.802899	0.0007
EXR	0.190224	0.586102	0.324559	0.7479
C	-1.44499	0.641825	-2.25137	0.0324

R-squared	0.793474	Mean dependent var		29.35385
Adjusted R-squared	0.786324	S.D. dependent var		2.291061
S.E. of regression	0.059567	Akaike info criterion		-2.59566
Sum squared resid	0.09935	Schwarz criterion		-2.20382
Log likelihood	57.0197	Hannan-Quinn criter.		-2.45752
F-statistic	6653.456	Durbin-Watson stat		1.992091
Prob(F-statistic)	0			

Table 5 shows the relationship between non-oil export and oil export and real gross domestic product. The LOGGDP represents the dependent variable; the independent variables are LOGOX, LOGNOX, LOGINF and LOGEXR. The regression result shows the relationship between gross domestic product and the oil and non-oil exports alongside the inflation rate and exchange rate. The effect between LOGGDP and LOGNOX is positive 0.077759. From the ARDL regression result, we can deduce that the positive regression result means that a one per cent increase in NOX will lead to a one per cent increase in response in GDP. The literature on oil and export notes that the assumption states that non-oil exports affect domestic development, which in turn affects economic growth.

Furthermore, it can be deduced that there is a positive relationship between LOGGDP and oil export (OX) of 0.031894. This means that oil export has a positive value on economic growth in Nigeria. The regression result shows that there is a negative relationship between inflation (INF) and GDP of 0.323546. This negative value of inflation indicates that inflation affects economic growth. However, finance literature has also noted that a high inflation rate negatively affects economic growth.

A positive relationship exists between the exchange rate (EXR) and GDP in Nigeria of 0.19022. The coefficient of determination is 0.7934, indicating a 79% value of the independent variables that there is a 79% value of the independent variables that are captured by the dependent variable, thereby making the model a good fit. The Durbin-Watson statistics also show a 1.99 value of a positive serial correlation between oil export and economic growth. In contrast, the F-statistic value of the ARDL of 0.0000 indicates that the model is statistically significant.

Table 6: Hteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	1.975968	Prob. F(8,28)	0.0872
Obs*R-squared	13.35121	Prob. Chi-Square(8)	0.1023
Scaled explained SS	6.530082	Prob. Chi-Square(8)	0.5881

Table 6 shows the Hteroskedasticity Test results. Homoscedasticity in any least square regression or non-linear regression is a vital assumption; it is evident that where the assumption is violated or omitted, the analyst or researcher may not see or adopt the method of least square in the analysis. To avoid this, the Breusch-Pagan-Godfrey test is used to test for Homoscedasticity. The Breusch result (Table 6) shows that the Prob. F-statistics is 0872 while the Prob. Chi-square is 0.1023. Since the above-stated values are not equal to zero, the Null Hypothesis is therefore accepted, indicating no heteroskedasticity exists. However, the values t-statistics should be compared with the standard z-score of 1.93.

Discussion of Findings

Oil export and non-oil export had been a case of serious debate on the Nigerian's social media as the country journeyed from being a mono economic to an economic of diverse economic activities. Oil export has been seen as the Nigerian government's major revenue source. However, academic scholars have stated that the financial accounts of oil exports do not represent the true picture of oil exports in Nigeria and thus do not seem to affect the country's real gross domestic product. This study's findings corroborate some debates regarding whether oil export and non-oil export affect real economic growth in Nigeria. The work of Lawal and Ezeuchenne (2017) used the cointegration and vector error correction model (VECM) to conclude that oil export only affects economic growth in Nigeria if trade openness exists. Dumani et al. (2018) stated that the effects of oil imports, non-oil imports, oil exports, and non-oil exports on economic growth in Nigeria are dependent on government policies and that there might be linear but insignificant effects of oil variables on the Nigerian economic growth.

Elias et al. (2018) emphasis on oil export and trade on Nigeria's economic growth using data from 1980 to 2012 and concluded that export trade affects economic growth in Nigeria while import trade does not. Adedigba and Samuel (2019) investigated if oil and non-oil income affects the development of Nigeria and found out that oil export would affects economic development in Nigeria if there is security, essential surveillance system and complete eradication of smuggling. Khayati (2019) studied the effects of oil export of Bahrain economy and concluded that oil export has a strong influence on economic growth while Nwachukwu (2019) used non-oil export data from 1970-2017 in Nigeria inflation and exchange rate play crucial role in affecting oil export impact on economy growth in Nigeria. Onodugo et al. (2019) whose findings reveal a very weak and infinitesimal impact of non-oil export in influencing rate of change in level of economic growth in Nigeria. They failed to consider inflation and exchange rate.

5. CONCLUSION AND RECOMMENDATION

Conclusion

From the result of this study, it can be concluded that oil and non-oil export has a positive impact on economic growth in Nigeria, but their impacts have not been effective due to the absence of some variables, such as proper accountability of oil export and consumption in Nigeria, security issues and openness of trades in Nigeria. To promote strong oil and non-oil export in Nigeria, some variables such as openness of the economy and the control of both the exchange rate and inflation rate need to be done as these variables play a crucial role in aiding the impact of oil and non-oil export in Nigeria. When exchange rate and inflation rate are efficiently and effectively managed, economic activities in oil and non-oil export would boom.

If economic activity increases, oil export would increase and the Nigerian foreign direct investment would invariably increase. Oil and non-oil export cannot be accomplished in isolation of good infrastructural system, credit to the private sector to expand oil business locally. It is obvious from finance literatures that a significant proportion of money invested into oil are not accurately accounted for and thus result to economic leakage of funds. Therefore, it can be concluded from this study that oil and non-oil export are significant macroeconomics variables that affect economic growth in Nigeria but cannot work in isolation of other macroeconomic variables. Furthermore, Oil sector has also been found to have a significant contribution to the

Nigerian economy growth. Nigeria is one of the leading crude oil exporters in the world. We were once rated 6th crude oil exporting countries in the world by OPEC.

Recommendations

Based on findings of this study the following recommendations are suggested:

i. Non-oil export is a core variable to boost local consumption oil and investment. As the population of Nigeria continues to increases, it is recommended that when more local investment on oil are made and the enable environment are put in place, the positive effect of non-oil export in Nigeria would be felt.

ii. Oil export from the year 2020 had not been blossom in the world in general; it is recommended that Nigeria use derivatives market as an alternative in extracting revenue from oil export.

iii. A stable Inflation rate would affect economic growth and thus boost oil export in Nigeria. It is recommended that policies are put in place to drive economic growth in Nigeria.

iv. It is recommended that local production and exportation are made. This would drive and reduce the adverse effects of high exchange Interest rates in Nigeria. The government can do this by encouraging local production.

REFERENCES

Abiodun, K. (2017). Contribution of international trade to economic growth in Nigeria. 2017 *Awards for Excellence in Student Research and Creative Activity – Documents*, 1. Eastern Illinois University, Spring, 4-21. http://thekeep.eiu.edu/lib_awards_2017_docs/1

Adedigba, S.S & Samuel, O.S (2019). The nexus between oil and non-oil revenue on economic development in Nigeria. *International Journal of Economics, Business and Management Studies*, 6(2), 355-365.

Adenugba, A. A. & Dipo S. O. (2020). Non-oil exports in the economic growth of Nigeria: a study of agricultural and mineral resources. *Journal of Educational and Social Research*, 3(2) 405.

Adewale, O. A (2016). Impact of oil and non-oil export on Nigeria economy. *Journal for Studies in Management and Planning*, 2(8), 56-64.

Aladejare, S. A, & Saidi, A. T. (2014). Determinants of non-oil export and economic growth in Nigeria: An application of the bound test approach. *Journal for the Advancement of Developing Economies*, 3(1), 60-71.

Dumani, M., Nelson, J. & Siaisiai, S. T. (2018). Foreign trade and its impact on economic growth in Nigeria. *International Journal of Economics, Commerce and Management*, 6(4), 748-761.

Ezike, J. E. & Ogege, S. (2012). Nigerian foreign trade policy: Its impact on non-oil exports *Journal of Economics and International Finance*, 4(8), 192-200.

Igwe, H., Edeh, C., & Ukpere, K., (2015). Impact of non-oil sector on economic growth: A managerial economic perspective. *Problems and Perspective in Management*, 13(2), 142-149

Khayati, A. (2019). The effects of oil and non-oil exports on economic growth in Bahrain. *International Journal of Energy Economics and Policy*, 9(3), 160-164. https://doi.org/10.32479/ijeep.7476.

Lawal, A. I., Nwanji, T. I., Asaleye, A. & Ahmed, V. (2016). Economic growth, financial development and trade openness in Nigeria: An Application of the ARDL Bound Testing Approach. *General & Applied Economics Research Article, Cogent Economics & Finance*, 4(3), 1-15.

Lawal, E. O. & Ezeuchenne, K. (2017). International trade and economic growth in Nigeria. *Journal of Humanities and Social Science*, 22(6), 35-43.

Nwachukwu, P. O. (2019). The impact of non-oil export strategies on economic growth in Nigeria. *Journal of Economics and Sustainable Development*, 5(24) , 65-77

Okafor, G. C., Akandu, J. K. & Ike, L. O. (2020). Foreign assisted exports, imports and economic growth in semi-industrial countries. *Journal of Development Economics*, 35(1), 93-116.

Okonkwo, I. V. & Madueke, N. M. (2016). Petroleum revenue and economic development of Nigeria (1980 – 2013). *IOSR Journal of Polymer and Textile Engineering*, 3(2), 39-55.

Olayiwola, K. & Okodua, H. (2018). Foreign direct investment, non-oil exports, and economic growth in Nigeria: A causality analysis. J*ournal of Research in Economics and International Finance*, 3(1), 1-11.

Olayungbo, D. O. & Olayemi, O. F (2018). Dynamic relationships among non-oil revenue, government spending and economic growth in an oil-producing country: Evidence from Nigeria. *Future Business Journal*, 4, 246–260. https://doi.org/10.1016/j.fbj.2018.07.002

Olurankinse, K. I. & Fatukasi, T. U. (2019). Trade orientation, distortions and growth in developing countries. *Journal of Development Economics*, 39(2), 31-57.

Omojolaibi, J. A., Mesagan, E. P. & Adeyemi, O. S. (2015). The impact of non-oil export on domestic investment in Nigeria. Online at: https://mpra.ub.uni-muenchen.de/70201/ MPRA Paper No. 70201.

Onodugo, V. A., Ikpe, M. & Anowor, O. F. (2013). Non-oil export and economic growth in Nigeria: A time series econometric model. *International Journal of Business Management & Research*, 3(4), 78-88

Owolabi-Merus, O., Inuk, U. E. & Odediran, O. K. (2015). An investigation into the impact of international trade in the growth of Nigeria's economy. *International Letters of Social and Humanistic Sciences*, 61(23), 116-125.

Raheem, I. A. (2016). Analysis of the effects of oil and non-oil export on economic growth in Nigeria. Department of Economics, University of Ibadan, Oyo State Nigeria. https://hal.archives-ouvertes.fr/hal-01401103v2.

Ruba, T. & Thikraiat, M. (2019). The contribution of Nigerian export-import (NEXIM) bank towards export (non-oil) growth in Nigeria (1990-2005*). International Business Management*, 2(3), 85-90.

Stephen, E. A. & Obah, O. D. (2017). The impact of international trade on economic growth in Nigeria: An econometric analysis. *Asian Finance & Banking Review*, 1 (1), 28-47.

Usman M., Badawi, M. & Farouq K. (2020). Impact of non-oil export on economic growth in Nigeria. IOSR *Journal of Economics and Finance* (IOSR-JEF). e-ISSN: 2321-5933, p-ISSN: 2321-5925, 11(1), 01-07.

Vincent, K. (2017). An analysis of the impact of non-oil export and economic growth in Nigeria. *International of Innovative Research in Social Sciences and Strategic Management Techniques*, 4(2), 83-94.

Yakubu, M. M. & Akanegbu B. N. (2015). Education expenditure and economic growth in Nigeria: Granger Causality Analysis. *Journal of Business Management and Economics*, 3(4), 52-64.