Non-Oil Exports, Exchange Rate Management and Economic Growth in Nigeria

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DOI: 10.56201/ijefm.v8.no8.2023.pg19.34

Abstract
In Nigeria like most developing countries, especially the sub-Sahara African countries, exports are largely determined by factors other than a country's trade policy, such as world demand and prices with major commodity-exporting nations having high export/GDP ratios even if they have very restrictive trade policies. Oil and gas accounted for over 90 percent of Nigeria's foreign exchange earnings since the oil boom of the 1970s to date. The non-oil exports had shown significant positive trends of improvement beginning from 1960 to 1986 when SAP was introduced in Nigeria. At the instance of SAP, the flexible exchange rate policy was introduced in 1986 with the core objective to reduce over-dependency on imports and diversify the non-oil export base by immediately abolishing the marketing boards. This study empirically examines the effects of foreign exchange management and non-oil exports on economic growth rate in Nigeria. Annual data spanning 1981 to 2021 was used and the Autoregressive Distributed Lag (ARDL) estimation technique was employed in analyzing the data of the study. Findings of the study revealed that foreign exchange rate has a negative and significant impact on economic growth rate in Nigeria.

Keywords: *Non-oil export, Economic Growth, Foreign exchange earnings, diversification.*
JEL Codes: E23, L52, O10.

1. Introduction

A cursory glance at Nigeria's government finances shows that the oil sector contributes over 90 percent export earnings and 70 percent overall revenues for the past three decades. Meanwhile, governments' budgets are predicated on world market crude oil prices. The United States of America, the United Kingdom, China, and India are Nigeria's largest crude oil importers resulting in the seamless transmission of external shocks into the Nigerian economy. Furthermore, the falling crude oil prices over the years had led to the sharp fall in the projected governments' revenues which affected governments' abilities to meets its commitments to workers wage bills as was the case in 2007/2008 when most state governments were unable to pay workers salaries, some states for upwards of 12 months. They had to rely on federal government bailout and Paris Club refund to off-set parts of salaries and pensions.

Over the years, the Nigerian governments have continued to pay lip service to the issue of diversifying the economy (both in production and export bases). The oil sector continues to dominate the nation's sources of revenues averaging 96 percent of total export earnings between 1981 and 2017. Agricultural exports over the years have considerably slumped since the disbandment of the marketing boards in 1986 at the instance of the Structural Adjustment Programme (SAP) imposed on Nigeria by the International Monetary Fund (IMF). Nigeria's major agricultural export products of cocoa, rubber, palm produce, and timber have since then lost their place in the international markets, drastically dropping in values and volume of trade, (Utomi, 2004).

Unfortunately, Nigeria has become a net importer of food irrespective of her rich and abundant agricultural endowments, spending 2.9 billion dollars on food import in 2015 and 2017 it rose to 4.1 billion dollars with rice import constituting the highest (NBS, 2019). Although the Minister of agriculture, Audu Ogbeh, in reaction to the federal government sudden closure of her land borders in 2018, claimed in September the same year on national television that Nigeria spends 22 billion dollars annually on food importation. This policy of the federal government on land border closure triggered off over a 150 percent increase in the price of rice in the domestic market, the price moved from ₦9000.00 ($25.00) to ₦23000.00 ($62) per 50 kilograms, that is, at ₦360/$1, and by 2023 the price of rice per 50kg have moved to ₦60,000 ($70) ₦860/$1. This no doubt has attracted massive investment in rice production locally in the recent past even though domestic rice production is still far from meeting the domestic demand of Nigerians that eat rice daily as a staple food. However, should this momentum be sustained, then Nigeria will not only meet her domestic demand for rice but will have to add rice to her export list in the nearest future. Therefore, the government needs not to hesitate to review all bottlenecks (in the areas of legislature, policies, institutions, and infrastructure) militating against agricultural sector growth in Nigeria.

The manufacturing sector had continued to be faced with enormous challenges inhibiting her export performance. The entrepreneurial spirit of investors in Nigeria is not in doubt. However, the resultant abysmal performance of the sector can be traced to multiple challenges confronting it, ranging from foreign exchange rate policies to infrastructure deficit, institutional failures, regulatory quality, policy somersault, and the general difficulties in doing business in Nigeria. The primary argument for SAP was to diversify the Nigerian economy. Unfortunately, over thirty years afterward, previous gains in agriculture and manufacturing were reversed due to the flexible exchange rate policy that came with SAP. The flourishing textile industry that has over 20 percent of Nigeria workforce under its employment before SAP was brought to comatose in less than 12 years after. Fishing firms (both indigenous and foreign-owned) were forced to close shops due to harsh operating environments, and so it was with other firms, from construction to foot-wears, some other foreign firms like Dunlop had to exit Nigeria entirely.

While existing firms are closing shops in their droves, challenges to new investors were becoming more daunting. The power sector was not doing any better; available megawatts (MW) of electricity generated had never exceeded 3,000MW as against 12,522MW installed capacity for a population of 150 million in 1998. Expansion and innovation for existing businesses became mission impossible; the costs of capital keep soaring high, and so was the cost of production. As a result, there was no room for competition in the Nigerian market. The few oligopolistic firms were struggling to survive. Manufacturing capacity utilization (MCU) for the manufacturing had averaged 24 percent between 1995 and 2015, while MCU for the entire Nigerian economy

averaged 54 percent from 1981 to date. The non-oil sector could do better under the right business climate. Therefore, the monetary authorities need to find an efficient foreign exchange policy-mix along the current spectrum of managed flexible foreign exchange rate regimes and very importantly, harmonize the exchange rate concession as Nigeria currently has over ten exchange rates for different government agencies and cronies to government functionaries. Also, there should be a level playing ground for all investments in Nigeria in accessing foreign exchange for raw materials. The current situation where the Dangote group enjoys foreign exchange concessions from the monetary authority, while other investments source foreign exchange through the general channel, and sometimes the black market is another form of disincentive and de-industrialization. This explains Dangote's monopoly in the Nigerian market. On the other hand, with functional petrochemical plants in place, the textile industry, polyethylene/polymer products, and other firms that depend on petrochemical by-products for raw materials will come back to profitable and competitive business. Therefore, boosting Nigeria's non-oil exports for sustainable economic growth is not insurmountable. Deliberate fiscal and monetary policy synchronization for a shift to export-based industrialization would lead to the needed diversification of Nigeria's export base.

Given the proliferation of literature on non-oil exports in the last decade with different conceptualization and methodologies, very few of the country-specific studies had attempted to investigate the relationship between non-oil exports and foreign exchange regime and its overall effects on the Nigerian economy. Consequently, the purpose of this study is to evaluate the effects of foreign exchange management regimes on non-oil export performance and its overall effects on the Nigerian economy since regime change comes with underlining policy objectives that affect the non-oil exports in different ways.

2. Literature Review

2.1 Conceptual Issues

The quality, volume, and diversity of a country's export baskets determine her macroeconomic wellness to a considerable extent (Okonkwo & Ojima, 2018). A highly diversified export base will mean gaining foreign exchange from diversified sources, and the economy need not be vulnerable to the volatility of world prices of any of her exports (Okonta, Mobosi, & Ugwu, 2020). Unfortunately, Nigeria has had to put herself in this quagmire of mono-economy. Her foreign exchange earnings are derived from one source, crude oil exports, yet over the years, the Nigerian government had paid little attention to diversifying her export base and incentivizing the non-oil sector (Okonkwo and Obidike, 2016). The susceptibility of the Nigerian economy to the volatility of world oil prices makes it eminent for Nigeria to diversify her export base, and more quickly pursue export-led growth strategy by feasibly providing the enabling environment for non-oil exports to thrive; incentivizing producers through macroeconomic policies. Abou-Strait (2005) argues that the export-led growth strategy provides incentives to manufacturers through numerous government policies to encourage exports at minimal costs.

Evidence from China, Singapore, Malaysia, South Korea, Indonesia, and Thailand has revealed that the export-led growth strategy is a sure way to go. These economies have witnessed rapid economic growth as compared to other developing countries that have instead adopted protectionism strategy (Dunn and Mutti, 2004). According to Opara (2010), promoting non-oil exports will bring multiple benefits to the Nigerian economy. It will not only reduce the nation's dependence on oil revenues but will lead to economic growth, stimulating the non-oil sector to

increase productivity, thus increasing output; and, in the process, increasing all factors of production including labor. Promoting the non-oil exports will not only increase the nation's GDP, but a veritable instrument for economic re-engineering of the economy, easing balance of payment pressure, increase per capita income through increased GDP, and employment creation; thus achieving some degree of macroeconomic stability.

The Nigeria governments have made some feasible efforts in the past to promote the non-oil export share of the country's overall export basket, even though these efforts have not yielded the desired outcomes. Some of these efforts of governments in promoting the non-oil exports include the following; the Nigeria Export Promotion Council (NEPC) established in 1976 to develop ideas, suggestions, and design strategies to advance Nigeria non-oil exports; Export Processing Zone (EPZ) in 1991; Export incentives and miscellaneous Decree of 1986 which provided for the establishment of (i) Export development fund, (ii) export expansion grant fund, and (iii) Export adjustment scheme fund. This decree was promulgated to create institutions and programs geared towards advancing non-oil exports in Nigeria.

Exchange Rate Regimes in Nigeria

Fixed Exchange Rate Policy: Nigeria adopted the fixed exchange rate policy throughout the 26 years between independence and the introduction of the structural adjustment program (SAP) in 1986. The exchange rate between the Nigerian pound and the British pound was fixed at 1:1 until 1973 when the Nigerian currency was changed to the naira, the initial exchange rate was fixed at N2.00 to £1:00. Thereafter, the naira progressively appreciated against the currencies of its trading partners. The aim was to enable the country to source imports cheaply to fund development projects. The naira continued to appreciate till 1984 when the naira exchange rate was almost N1:00 to £1:00.

Flexible Exchange rate Policy: The introduction of SAP in 1986 brought about a major change in Nigeria's exchange rate policy. The exchange rate of the naira was to be determined by the forces of demand and supply. The foreign currency domiciliary account scheme was introduced. Under this scheme, exporters would retain 100 percent of their export earnings in foreign currency accounts domiciled with banks in Nigeria. The commodity boards were also abolished in 1986 to make non-oil exports more competitive (Akpakan, 1994). By March 1992, the government completely deregulated the foreign exchange market and adjusted the official exchange rate to match the black market rate. The government by so doing saw the black market exchange rate as a fair indicator of the real value of the naira. Thus the government allowed the exchange rate to float in response to changes in demand and supply.

Managed Floating Exchange Rate Policy: Barely less than two years after the government switched over to full deregulated exchange rate policy (free-floating exchange rate) in 1992, the flexible exchange rate policy was scrapped in December 1993 by the General Abacha's government in response to the outcry of Nigerians over the extreme devaluation of the naira resulting from the flexible exchange rate policy. The managed flexible exchange rate policy was introduced. The idea of the managed flexible exchange rate system was to allow the forces of demand and supply to determine the long term levels of exchange rate objective. The managed floating system is a spectrum, combining elements of the two extremes of fixed and flexible

exchange rate approaches. Nigeria had since December 1993 adopted this approach of the managed floating exchange rate policy while varying the degree of combinations along the spectrum over time, since it is a matter of combinations of elements of the two extremes since no theory prescribed combinations that should qualify as managed floating exchange rate system.

Exchange Rate Regimes and the non-oil Exports in Nigeria

The regime of the fixed exchange rate which lasted from independence from 1960 to 1986 saw the naira progressively appreciated against the British pound and the American Dollar. Successive Nigerian governments through these 26 years of the fixed exchange rate regime had sought to source cheap imports to fund development projects. This resulted to the momentous infrastructure and national assets scattered in all regions of the country with exception of the Southeast, all three refineries, in Warri, Port-Harcourt, and Kaduna, and Hydropower plant, Ajaokuta shell plant, Itakpe iron-ore plant, Delta steel company-Warri, metal and tools company-Oshogbo, research institutes located in different parts of the country, to mention but a few were all achieved within this period. These infrastructure and national assets were to facilitate the import-substitution strategy goals of the government, being long term goals for diversification of the Nigerian economy, import independence, and non-oil export growth.

The appreciation of the naira made foreign goods and services cheap to Nigerians and Nigerian goods and services expensive to foreigners. The result was an astronomical rise in imports and a drastic decline in Nigerian exports except in the case of crude oil for which demand was inelastic. The country became heavily import-dependent in both production and consumption goods.

The immediate consequence was the depletion of Nigerians foreign reserves, as the government had to draw from the external reserves to settle the huge import bills.

The international monetary fund (IMF) specifically advised the Nigerian government to devalue the naira. While the debate was on, General Babangida took over power in 1985 and adopted the IMF counsel. In September 1986, SAP was implemented and its main distinguishing feature was the deregulation of activities, and so, the second-tier foreign exchange market (SFEM) was established and Nigeria moved to the flexible exchange rate regime in the instance of the introduction of SAP. The naira was immediately devalued from 0.89 kobo per dollar in 1985 to ₦2 per dollar in 1986 and so continued the free-fall of the naira year after year and by 1993 when the free-floating exchange rate system was scribed naira has depreciated to ₦22 per dollar. See table 1 below.

Table 1: Naira Exchange Rates

Year	US Dollar ₦/$	Pound Sterling ₦/£
1981	0.61	1.25
1982	0.67	1.17
1986	2.02	2.56
1987	4.02	6.59
1991	9.91	17.50
1992	17.30	27.87
1997	21.89	35.77
2000	100.80	149.54

2004	133.50	244.52
2009	147.40	230.65
2014	156.98	258.58
2015	192.30	294.12
2021	410.43	566.04

Source: CBN Statistical Bulletin, (2021)

On the instance of the devaluation of the naira in 1986, inflation rate jumped into double digits, from 1 percent in 1985 to 13 percent in 1986 and continued to soar higher on a free fall to 61.2 percent in 1988 and 61.26 percent in 1993 when the free-floating exchange rate regime was abolished, see table 2 below.

Table 2: Inflation Rate

Year	**Inflation Rate**
1985	1.00
1986	13.00
1988	61.20
1993	61.26
2000	6.90
2004	15.00
2009	11.50
2014	8.2
2015	8.6
2021	15.63

Source: CBN Statistical Bulletin, (1995 & 2021)

The cardinal objective of the deregulation of Nigeria's exchange rate policy was to reduce dependency on imports as was the case before the introduction of the flexible exchange rate in 1986. Unfortunately, Nigeria imports had continued to soar higher under the flexible exchange rate policy. Imports as a percentage of GDP rose from 7 percent in 1984 to 14.7 percent in 1987, then to 27.9 percent in 1990 and 23.9 percent in 1993 before the free-floating exchange rate policy was scribed (CBN, 2018).

The implications of the flexible exchange rate for the Nigerian non-oil sector were rather catastrophic. The vestiges of the foundation for long-term sustainable export growth were rendered impotent and were the first victim of SAP. The so-called deregulation program of SAP saw most national assets accrued from the proceeds of the fixed exchange rate policy in the 26 years of independence either privatized or commercialized and the then slogan was 'government is incompetent in running businesses'. Dubious government official capitalized on this false narrative to run down most government enterprises, for example; the Nigerian Airways, National Fertilizer Company of Nigeria (NAFCON) to mention but a few which hitherto had been solvent before the introduction of SAP. The Nigerian GDP had grown from $54.81 billion in 1986 to $446.54 billion

in 2019, yet successive Nigerian governments had been unable to either improve or maintain existing power infrastructure in the country. The last functional power infrastructure in Nigeria was the thermal station commission by President Shehu Shagari in 1982, with a population of 80 million in 1983 Nigeria is today struggling to maintain 3000 MW for a population of an estimated 200 million. The consequence is that the entire country is in darkness, the road network is in comatose, the housing deficit keeps rising by the year, and costs of doing business continue to rise to make local products uncompetitive, and so moribund industries littered all over the country resulting to the army of unemployed youth which keeps increasing in their number by the year.
Nigeria's import dependency before the flexible exchange rate policy was introduced was attributed to the over-valuation of the naira by the apostles of SAP. But data had shown that the situation became worst and got escalated during the flexible exchange rate regime. Even before the devaluation of the naira in 1986, the marketing boards were abolished to allow farmers earn a premium from their exports, when in fact the marketing boards at the time provided the needed research and development (R&D), extension services, high yield seedlings, pests control to farmers at no costs, and even discover new markets for their products. The result was the consequential drastic reduction in the exports of these agricultural products that makeup Nigeria traditional export baskets before SAP.

Impact of exchange rate fluctuations on non-oil exports

The impact of exchange rate fluctuations on non-oil exports is a crucial factor to consider in understanding the relationship between exchange rate management and economic growth in Nigeria. A study by Olufemi (2014) found that fluctuations in the exchange rate can significantly affect the competitiveness and profitability of non-oil exports. When the local currency depreciates, it becomes cheaper for foreign buyers to purchase goods from Nigeria, leading to an increase in non-oil exports. However, if the exchange rate is volatile or unstable, it can create uncertainties for exporters and hinder their ability to plan and make investment decisions (Olufemi, 2014). Thus, effective exchange rate management becomes imperative for stimulating non-oil exports and ensuring sustainable economic growth in Nigeria.
Non-oil exports play a significant role in promoting economic growth in Nigeria. According to Akpokodje (2013), diversifying the export base allows the country to reduce its dependency on oil revenue, which is highly volatile and prone to fluctuations. This, in turn, contributes to greater stability and resilience within the economy. Additionally, non-oil exports provide opportunities for employment and income generation, particularly in the agricultural and manufacturing sectors (Ekpo & Umoh, 2012). By focusing on non-oil exports, Nigeria can achieve a more sustainable and balanced economic growth trajectory, reducing vulnerability to oil price shocks and promoting long-term development.

Relationship between non-oil exports, exchange rate management, and economic growth

There is empirical evidence suggesting a positive relationship between non-oil exports, exchange rate management, and economic growth in Nigeria. According to Ogunleye and Momodu (2013), non-oil exports have the potential to diversify the Nigerian economy and reduce its dependence on oil revenue. Additionally, a stable exchange rate is essential for promoting non-oil exports and attracting foreign direct investment (FDI), as argued by Odedokun (2016). This relationship is further supported by studies conducted by Salisu et al. (2014) and Odusola (2013), which found

that exchange rate misalignment negatively affects the growth of non-oil exports. Therefore, it is crucial for Nigeria to implement effective exchange rate management and policies that foster the growth of non-oil exports in order to achieve sustainable economic growth.

2.2 Theoretical Review

The comparative advantage theory of David Ricardo (1817) offers the needed theoretical explanations to the relationships between exports and economic growth, as the theory indicates that mutually beneficial trade exists for countries with no absolute advantage over their trading partners. However, the thrust of this study is the investigation of the abysmal performance of the non-oil exports in Nigeria in the face of huge foreign exchange earnings from the oil sector. One would have thought that these immense foreign exchange inflows would have been used to develop the non-booming tradable sector of the Nigerian economy. This study will therefore x-ray the demand and supply hypothesis of the effects of foreign exchange inflows from a booming tradable sector (oil sector) on the non-booming tradable sector (non-oil sector) in Nigeria.

The Demand Side Hypothesis

Huge foreign exchange inflows from national resources exportation can lead to the appreciation of the real exchange rate whether a country's exchange rate is fixed or not. A fixed exchange rate regime means that converting the foreign exchange earnings into local currency will mean an increase in domestic money supply, causing a hike in domestic prices. But should the rate exchange rate free-floating, then the conversion of foreign currencies into the local currency will necessitate the appreciation of the domestic currency. In either situation, the real exchange rate of the domestic currency will appreciate, thus reducing the competitiveness and even profitability of the non-booming tradable exports such as manufacturing and agriculture. Thus causing further decline in the exports of manufacturing and agriculture, as a result, increased demand for manufactures and agricultural products is met through importation. This phenomenon implies that the decline in agriculture and manufacture makes the economy more dependent on natural resource exports which of course are highly volatile.

The Supply-side Hypothesis

The supply-side hypothesis suggests that foreign exchange inflows will not lead to the appreciation of the real exchange rate when spent on export commodities, capital goods, and infrastructure (Berg et al, 2008). Thus the import of capital goods will permit the acceleration of domestic investment, making exports more competitive, leading to export expansion and growth. Foreign exchange inflows from natural resource exports that finance productive investment especially in the tradable sector of agriculture and manufacturing are capable of eliminating the supply side constraints associated with the developing countries.

2.3 Empirical Studies

Pertinent literatures were reviewed and findings showed conflicting results as Hafsat, Usman, Badaw & Kamal (2020), Aladejare & Saidi (2014) and Kromtit, Kanadi, Ndangra & Lado (2017) showed a positive and significant relationship between non-oil exports and economic growth. While Ogunjimi, Aderinto and Ogunro (2015) found a negative relationship between non-oil exports and economic growth. See details below:

Hafsat, Usman, Badaw and Kamal (2020) empirically investigated the impact of non-oil export on economic growth in Nigeria using annual time series. The Auto-regressive distributive lag (ARDL) analytical method was used in the investigation. The study's conclusion showed that Nigeria's economic growth and non-oil exports are positively and significantly correlated.

Aladejare & Saidi (2014) empirically investigated the determinants of non-oil exports and economic growth in Nigeria employing annual time series data from 1970 to 2012.The study adopted the auto regressive distributive lag(ARDL)analytical. The result revealed that non-oil export has positive and significant effect on economic growth in both the long and short run in Nigeria.

Kromtit, Kanadi, Ndangra & Lado (2017) examined the contribution of non oil export to economic growth in Nigeria using annual time series data from 1985 to 2015. The auto-regressive distributed lag (ARDL) analytical method was used in the investigation. The results of the ARDL regression showed a strong and positive correlation between Nigeria's economic growth and non-oil exports.

Ogunjimi, Aderinto and Ogunro (2015) analyzed the relationship between non-oil sector and economic growth in Nigeria. To demonstrate the long-term link between the variables, the Johansen cointegration test was conducted, and the Augmented Dickey Fuller and Phillips Peron tests were used as unit root tests. Both the Error Correction Model (ECM) and the analytical technique of ordinary least squares were used. The study's conclusions showed that trade openness has a positive and statistically significant association with economic growth in Nigeria, while non-oil exports are statistically significant but negatively correlated.

Aladejare & Saidi (2014) investigated the determinants of non-oil export and economic growth in Nigeria. The study looked at how the non-oil sector as a whole and its factors affected economic growth. The ARDL bound test approach was utilized by the researchers to investigate the short- and long-term impacts of non-oil export and its factors on Nigeria's economic growth. The findings showed that non-oil exports had a major impact on economic growth over the long and short terms.

Kenny (2019) studied exchange rate management and economic growth in Nigeria using annual time series data from 1981 to 2015. The fully modified ordinary least square (FMOLS) estimation method was used in the investigation. The study's conclusions showed that Nigeria's economic growth is significantly hampered by exchange rates.

Using the Autoregressive Distributive Lag (ARDL) model, Shaikh and Hongbing (2015) investigated the effects of exchange rate volatility on trade flows for China, Pakistan, and India. Their findings showed that exchange rate fluctuation has a detrimental short- and long-term effect on exports for both India and Pakistan. In the short term, the data for China similarly showed a negative association, but have a positive relationship in the long run.

3. Research Methods

Nature and Sources of Data

This study employed secondary data sourced from statistical bulletins (various issues) of the Central Bank of Nigeria (CBN) and also from the National Bureau of Statistics (NBS) publications. The data series sourced and used in this study include; economic growth rate (RGDP), non-oil exports (NOX), and foreign exchange rate (EXR) for periods 1981 to 2021.

Method of Data Analysis

This study employed the ordinary least square regression technique in the analysis of the secondary data obtained from the Central Bank of Nigeria statistical bulletin. Various econometric and statistical measures were employed in the analysis of the data. These include the t-ratio the coefficient of determination (R^2), the adjusted coefficient of determination ($R\text{-}^2$), f- ratio and DW statistics. The t-ratio is used to test the significance of the estimates, while the coefficient of determination (R^2) is used to measure the explained variation. The adjusted coefficient of determination ($R\text{-}^2$) is also used to measure the explained variation of the dependent variable taking into cognizance the degree of freedom. The f-ratio is used to test the significance of the coefficient of determination (R^2). The Durbin Watson statistic is used to test the presence or absence of autocorrelation in the random variable.

Model Specification

The study adopted the time-series econometric procedure to determine the impact of non-oil exports on Nigeria's economic growth. The study specifically employed the ordinary least squared (OLS) analytical technique in analyzing the data of this study, but been that the unit root test revealed mixed order of integration (I(0) & I(1)) made ARDL bound test procedure most appropriate for the study. The model of this study was specified to include; Real Gross Domestic Product (RGDP) as a proxy for economic growth, non-oil exports (NOX), and foreign exchange rate (EXR) as a proxy for foreign exchange management in Nigeria. Where RGDP was expressed as a function of NOX and EXR. Expressed in functional form as:

RGDP = f(NOX, EXR)……………….…………………….…………(1)

Equation (1) was re-written in the explicit form as:

$RGDP = \alpha_0 + \alpha_1 NOX + \alpha_2 EXR + \mu$ ……………………...………..(2)

Where, α_0 is the intercept while α_1 and α_2 are the slopes of the equation. μ is the stochastic term

The conditional ARDL model was estimated thus:

$$RGDP = \beta + \sum_{i=0}^{q} \beta_1 RGDP_{i=0} + \sum_{i=0}^{q} \beta_2 NOX_{i=0} + \sum_{i=0}^{q} \beta_3 EXR_{i=0} + \mu \text{ ……(3)}$$

Where q is the optimal lag length to be decided by AIC, while β_1 -β_3 are the long run parameters.

The short-run dynamic coefficients was estimated using error correction model (ECM) of ARDL expressed in equation 4 below:

$$\Delta RGDP = \beta + \sum_{i=0}^{q} \beta_1 \Delta RGDP_{i=0} + \sum_{i=0}^{q} \beta_2 \Delta NOX_{i=0} + \sum_{i=0}^{q} \beta_3 \Delta EXR_{i=0} + \delta ECM_{i=0} + \mu \text{ ……………………..(4)}$$

4.3 Stationarity Test

In order to determine the order of integration of the variables under study, the Augmented Dickey Fuller (ADF) and Phillip-Perron (PP) test statistics was employed in this study. The ADF result revealed that RGDP and Non-oil exports are integrated at levels (that is, I(0) variables), while exchange rate management (EXR) is integrated at first difference (that is, I(1). However, the PP result for Non-oil exports (NOX) and exchange rate management (EXR) revealed that they are integrated at order one (meaning they are I(1) variables while RGDP was integrated at level. Based on the mixed order of integration the ARDL estimation technique became most appropriate.

Table 3: Stationarity Test

Unit Root Tests					Unit Root Tests			
Date: 11/22/23 Time: 15:11					Date: 11/22/23 Time: 15:11			
Sample: 1981 2021					Sample: 1981 2021			
Test Type: ADF					Test Type: PP			
	Level	First	Remark			Level	First	Remark
RGDP	-5.74108	-9.2907	I(0)		RGDP	-5.74108	-16.024	I(0)
NOX	5.26343	-0.803	I(0)		NOX	-0.67846	-5.4861	I(1)
EXR	0.01732	-4.9785	I(1)		EXR	0.01633	-4.8521	I(1)
1% level	-4.20500	-4.2119			1% level	-4.20500	-4.2119	
5% level	-3.52661	-3.5298			5% level	-3.52661	-3.5298	

Source: Author's own computation

4.5 Long-run Estimate

The findings displayed in Table 5 below demonstrated that non-oil exports have a negative and significant on Nigeria's RGDP in the long run, and that foreign exchange rate similarly has a negative and significant impact on the country's economic growth rate in the long run.

Table 5: ARDL Long Run Estimates

ARDL Long Run Form
Dependent Variable: D(RGDP)
Selected Model: ARDL(1, 0, 1)
Case 2: Restricted Constant and No Trend
Date: 11/22/23 Time: 15:44
Sample: 1981 2021
Included observations: 40

Conditional Error Correction Regression

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.061905	0.865961	3.535845	0.0012
RGDP(-1)	-0.732093	0.116497	-6.284204	0.0000
NOX	-3.41E-07	2.81E-07	-1.213732	0.0330
EXR(-1)	0.017042	0.012959	1.315133	0.1970
D(EXR)	-0.056627	0.029645	-1.910145	0.0443

Source: Author's own computation

4.6 Bounds Test

The bounds test results as shown in table 6 indicated that the F-statistic of 10.4 is greater than the lower and upper bounds at 5 percent level of significance; hence the variables in the model are co-integrated at the long run.

Table 6: Bounds Test

F-Bounds Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Signif.	I(0)	I(1)
			Asymptotic: n=1000	
F-statistic	10.40607	10%	2.63	3.35
k	2	5%	3.1	3.87
		2.5%	3.55	4.38
		1%	4.13	5

Source: Author's own computation

4.7 ARDL Error Correction Regression

Table 7 indicated that foreign exchange rate has a negative and significant impact on RGDP in Nigeria. The error correction term, equation CointEq(-1) was significant and negative further indicating a long run relationship among the variables under study. It also indicated that 73 percent speed of adjustment, that is, 73 percent deviation from equilibrium will be corrected annually.
The coefficient of determination, R^2, indicated that 74 percent variation in RGDP is explained by the regressors in the model, leaving 26 percent unexplained due to chance. The parsimonious regression results also showed the Durbin-Watson statistic of 2.1 indicated the absence of autocorrelation in the model.

Table 7: ARDL Error Correction Model

ARDL Error Correction Regression
Dependent Variable: D(RGDP)
Selected Model: ARDL(1, 0, 1)
Case 2: Restricted Constant and No Trend
Date: 11/22/23 Time: 15:46
Sample: 1981 2021
Included observations: 40

ECM Regression
Case 2: Restricted Constant and No Trend

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(EXR)	-0.056627	0.023439	-2.415969	0.0210
CointEq(-1)	-0.732093	0.108902	-6.722504	0.0000

R-squared	0.742300	Mean dependent var	0.413250
Adjusted R-squared	0.730255	S.D. dependent var	4.516442
S.E. of regression	3.095475	Akaike info criterion	5.146467
Sum squared resid	364.1147	Schwarz criterion	5.230911

Log likelihood	-100.9293	Hannan-Quinn criter.	5.176999
Durbin-Watson stat	2.103184		

Source: Author's own computation

4.8 Post-Estimation Tests Results

To ensure that the model employed did not suffer from the problems of serial correlation, heteroscedasticity, and the error terms not normally distributed the relevant tests were conducted on the estimated results and the results shown in table 8 below.

Table 8: Post Diagnostic Test Results

	Test Statistic	Chi-Statistic X2	Probability
1.	Serial Correlation (*)	1.040203	0.3647
2.	Heteroskedasticity (**)	1.459210	0.2355
3.	Normality test (***)	J-B (0.941732)	0.624461

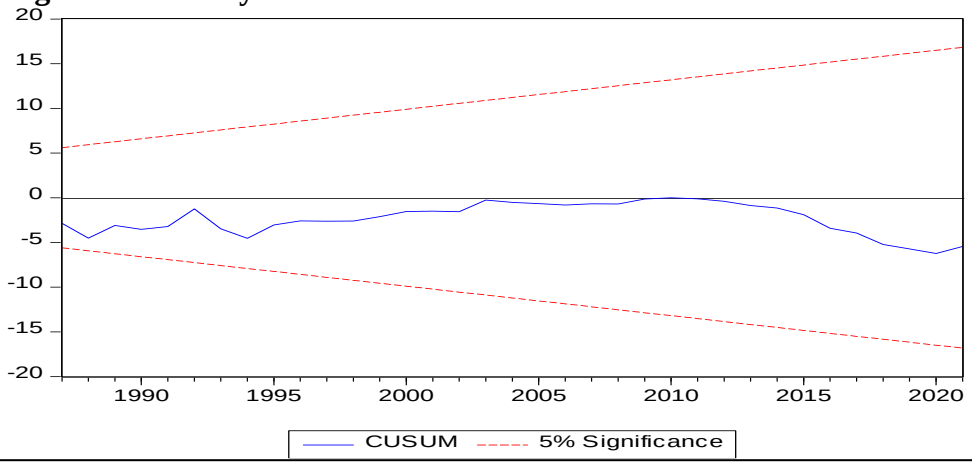
Note: where (*), (**) and (***) describes Breusch-Godfrey LM test for serial correlation, Breusch-Pagan Godfrey heteroscedasticity test and Jarque-Bera Normality test respectively.

The results from table 8 indicated that Breusch-Godfrey LM test for serial correlation indicated F-statistic value of 1.04023and a corresponding probability of 0.3647 which is greater than the acceptable 0.05 critical level, hence the null hypothesis of no serial correlation cannot be rejected. The Breusch-Pagan-Godfrey heteroscedasticity test also revealed that the null hypothesis of homoskedasticity cannot be rejected since the probability (0.2355) of the F-statistic (1.459210) is greater than five percent. The Jacque-Bera statistic (0.941732) also indicated a probability (0.624461) which greater than 0.05 critical level, indicating that the null hypothesis of a normal distribution cannot be rejected; hence we conclude that the residuals of the data series are normally distributed.

4.10Stability test

Using the plots of the cumulative sum of recursive residual (CUSUM) to determine parameter constancy, the CUSUM graph stayed within the 5 percent critical line, indicating that the model is dynamically stable and useful for policymaking.

Figure 1: Stability Test Result



Source: Author's own computation

Conclusion

The study findings demonstrated that non-oil exports and foreign exchange rate have negative and significant on Nigeria's RGDP in the long run, while foreign exchange rate has a negative and significant impact on the country's economic growth rate in the short run. While this findings collaborated Ogunjimi, Aderinto and Ogunro (2015) that non-oil exports has negative and significant on Nigeria's economic growth, the findings contrast Hafsat, Usman, Badaw & Kamal (2020), Aladejare & Saidi (2014) and Kromtit, Kanadi, Ndangra & Lado (2017) which showed positive and significant relationship between non-oil exports and economic growth.

The findings that foreign exchange rate has a negative and significant impact on the country's economic growth rate in the short run and long run was supported by Kenny (2019), and Shaikh & Hongbing (2015).

Recommendations

1. Implement and promote policies that aggressively encourage economic diversification away from a disproportionate reliance on oil.
2. Create and carry out targeted export promotion initiatives to increase non-oil exports.
3. Adopt a flexible exchange rate strategy that guarantees stability while allowing for modifications in response to market forces.
4. Adopt prudent foreign exchange reserve management to mitigate the effects of fluctuating oil prices.

REFERENCES

Abou-Stait, F. (2005). "Are Exports the Engine of Economic Growth? An Application of Cointegration and Causality Analysis for Egypt, 1977-2003". *African Development Bank, Economic Research Working Paper. No 76* .

Akpakpan E.B. (1994) *How to save the naira and Nigeria*, Belpot (Nig.) Co., Abak

Aladejare S.A., & Saidi A. (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. ISSN:2161-8216.

Asteriou D., Masatci K. & Pilbeam K. (2016) "Exchange rate volatility and international trade: International evidence from the MINT countries."*Economics Modeling* 58: 133-140.

Central Bank of Nigeria. (2018). Statistical Bulletin. *Golden Jubilee Edition, December 2018* .

Hafsat M. M., Usman U.U., Badaw M.M., & Kamal M.F. (2020). "Impact of non-oil export on economic growth in Nigeria."*IOSR Journal of Economics and Finance, 11* (1), 1-7.

Harb, N. (2008). "Oil Exports, Non-Oil GDP and Investment in the GCC Countries."*Munich Personal Repec Archive (MPRA) Paper.No. 15576.Online at http://mpra.ub.uni-muenchen.de/15576/* .

Iyoha, M. A. & Oriakhi, D. (2002). "Explaining African Economic Growth Performance: The Case of Nigeria."*A Revised Interim Report on Nigerian Case Study prepared for the African Economic Research Consortium*.

Kenny V.S. (2019). "Exchange Rate Management and Economic Growth: An FMOLS Approach." *Munich Personal Repec Archive (MPRA) Paper.No. 15576.Online at http://mpra.ub.uni-muenchen.de/93125/* .

Kromtit M.J., Kanadi C., Ndangra D.P. & Lado S. (2017). "Contribution of Non Oil Exports to Economic Growth in Nigeria (1985-2015)."*International Journal of Economics and Finance,* 9(4).

Nwosa, P. I., & Ogunlowore, A. J. (2013). "Has oil revenue enhanced non-oil export in Nigeria: A co- integration approach."*journal of Economics and Development Studies, 1* (3), 41.

Obinwata I.B., Owuru J.E., & Farayibi A.O. (2016). "Exchange Rate Trends and Export Performance in Nigeria: A Descriptive Approach."*SSRN: https://ssrn.com/abstract=2883548* .

Ogbonna, I. C.. Uwajumogu, N. R., Chijioke, G. & Agu, S. V. (2013). "Economic Globalization: Its Impact on the Growth of Non-Oil Supply in Nigeria."*Journal of Economics and Sustainable Development,* 4(7), 66-74.

Ogunjimi O., Aderinto E., & Ogunro T. (2015). "An Empirical Analysis on the Relationship between Non-Oil Exports and Economic Growth in Nigeria."*International Journal of Academic Research in Business and Social Sciences,* 5(12).

Okonkwo O.N. & Obidike C. P. (2016). "Small and Medium Scale Enterprises Financing In Nigeria: Problems and Prospects."*International Journal of Innovative Social Sciences & Humanities Research,* 4(1), 77-86.

Okonkwo O.N. (2019). "External Debt Management and the Performance of Selected Macroeconomic Variables in Nigeria."*University of Port Harcourt Journal of Management, 4* (3).

Okonta, P. O., Mobosi, I. A., & Ugwu, P. N. (2020). Trade liberalization, export dependence and diversification of exports in Nigeria. Journal of Economics and Allied Research, 4(1), 33–44. Retrieved from https://jearecons.com/index.php/jearecons/article/view/56

Shaikh S.A. &Hangbing O. (2015) "Exchange rate volatility and trade flows: Evidence from

China, Pakistan and India."*International Journal of Economics and Finance* 7: 121-127.

Utomi Pat. (2004). "The Curse of Oil."*A Paper delivered for Heinrich Böll Foundation Oil-Conference by Lagos Business School.*