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Analysis of Governance Transitions on Export Diversification and Economic Growth in Nigeria

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Abstract- ***Nigeria's economic development has historically been characterized by over-dependence on oil exports, rendering the economy highly vulnerable to external shocks such as global oil price fluctuations. Despite various policy interventions, the expected structural shift toward a more diversified export base has remained unsatisfactory. In view of the above, this paper investigates the governance transition of export diversification on economic growth in Nigeria. The study utilized annual time-series data covering the period from 1980 to 2023, incorporating key macroeconomic variables such as non-oil exports, foreign direct investment (FDI), trade openness, exchange rate, and GDP growth along with their dummies. Both dummy variable regression and paired sample t-test techniques were employed to assess changes across governance regimes. Findings revealed that export diversification exerted a more pronounced positive impact on economic growth during the post-democratic period, attributed to improved governance structures, economic liberalization policies, and increased investors' confidence. However, the influence of non-oil exports remained statistically insignificant, indicating structural weaknesses in Nigeria's export base. Diagnostic tests including the Breusch-Godfrey and Breusch-Pagan-Godfrey confirmed the reliability of the regression results. The study recommends policy actions focused on deepening non-oil sector reforms, enhancing value addition, and ensuring political stability to support long-term economic growth through diversification.***

I. INTRODUCTION

Export diversification has been identified as a vital driver of sustained economic growth particularly for emerging nations greatly dependent on a limited range of basic commodities (IMF, 2022). According to World Bank, (2023) Nigeria, has historically relied on crude oil exports, exposing the country to significant external shocks, price volatility, and economic instability. Though several policy changes have sought to broaden the export base particularly since the restoration to democratic government in 1999, the degree of effectiveness remains questionable. According to UNCTAD (2022), diversified export structure can stimulate growth by reducing vulnerability to commodity cycles, enhancing productivity, and encouraging broader industrialization which helps to drive growth. However, Nigeria's export sector remains concentrated, raising concerns about the effectiveness of economic reforms and democratic governance in fostering true structural transformation. Moreover, the transition to democracy was expected to introduce institutional stability, improved governance, and more effective economic management, creating a conducive environment for export diversification and long-term growth (Adeleye et al., 2021). Yet, empirical evidence suggests that the persistence of oil dependency and weak non-oil export performance continues to constrain economic resilience (Ogundipe & Apata, 2022). However, Badejo (2023 argue that due to Nigeria's long-standing reliance on oil exports, Nigeria's economy has become more susceptible to the shocks arising from global decline in oil prices.

Historically, Nigeria's shift from an agriculture-based economy, once its primary source of foreign exchange (Lawal, 2011) to a mono-product oil economy in the early 1970s has resulted in a narrow export base and heightened susceptibility to external shocks (Afolabi, Danladi, & Azeez, 2017). Given these challenges, there is a growing consensus among policymakers, economists, and scholars about the imperative of export diversification for Nigeria's long-term economic prosperity (Ayanwale & Adebiyi, 2019). Export diversification presents a viable strategy for addressing the structural vulnerabilities inherent in

Nigeria's oil-dependent economy and unlocking the potential of other sectors to drive growth and development (Okafor & Emecheta, 2021). By broadening the range of products and markets through which Nigeria earns foreign exchange, export diversification can enhance the resilience of the economy to external shocks, stimulate growth in non-oil sectors, and create employment opportunities for the burgeoning population (Ayodele & Odusami, 2022).

Export diversification has emerged as an essential strategy to lower export volatility, promote spillover effects, and promote sustainable economic growth because of this susceptibility, which has prompted policymakers to investigate alternate revenue streams (Kaplinsky & Messner, 2022; Abdou & Tounsi, 2023). Although ample evidence from international literature suggests that export diversification and economic growth are positively correlated (Krugman & Obstfeld, 2020; OECD, 2020), there is a paucity of empirical studies that explicitly examine this relationship within the Nigerian context, particularly focusing on the non-oil export share of total exports and trade openness, with a view to comparing export diversification between the pre-democratic and post-democratic eras. Moreover, existing research has largely centered on the descriptive analysis of non-oil exports in absolute terms rather than as a proportion of total exports (Esu & Udoh, 2017; Olaleye et al., 2016), leaving a significant knowledge gap. Specifically, little is known about how the non-oil export share evolved across political regimes and how diversification into industries beyond oil could enhance overall economic performance (UNCTAD, 2023).

This paper addresses these gaps by adopting a comprehensive methodological framework to examine both the short- and long-run effects of export diversification on economic growth in Nigeria, explicitly contrasting the pre-democratic era and post-democratic eras. Using annual data from 1980 to 2023 on Non-oil, export share of total export as export diversification index, trade openness and FDI, among others (IMF, 2019; World Bank, 2017), the study explores two central research questions: what is the effect of export diversification on Nigeria's economic growth between the pre-democratic and post-democratic eras? and what is the nature of the causal relationship between export diversification and economic growth across these periods? In testing the hypotheses that (i) increased export diversification significantly promotes economic growth, and (ii) export diversification was more pronounced during the pre-democratic era than the post-democratic era, the study aims to generate evidence-based recommendations to support the design of policies that foster a resilient, diversified, and sustainable Nigerian economy.

In light of these considerations, this study seeks to examine the relationship between export diversification and economic growth in Nigeria. Furthermore, by exploring the extent to which export diversification contributes to economic growth during the pre-democratic and post democratic dispensation in Nigeria. Additionally, the study will evaluate the significance of export diversification as a determinant of economic growth in Nigeria and assess the country's progress towards achieving sustainable development goals (Dauda & Olanipekun, 2022).

II. LITERATURE REVIEW

This section reviews the conceptual, theoretical, and empirical literature on export diversification and economic growth, and identifies gaps warranting further investigation.

2.1 Conceptual Framework: Governance

Different interpretations have shaped the usage of governance in the development literature, considering its diverse application (Bakare, 2014). At the rudimentary level, governance encompasses the rules, procedures, relationships and rules through which political and economic institutions are managed in a society by different actors while government represents the formal institutional structure and authoritative decision making in a modern state (see: Frischtak,1994; Cleaver and Franks, 2005).

However, the nature of development outcomes to be realized in a governance process or governance transition is determined by inter-related factors comprising the level of economic progress, robustness of networks, cooperation (partnership), equity, accountability, transparency, trust, alliances and

efficacy of law and order, among others in place by different institutions/actors (Bakare, 2014). The efficacy of these factors, to a large extent will determine the extent to which governance capabilities in a country respond to development problems affecting inflation, debt overhang, unemployment, poverty and inequality and corruption, among others (see: Kooiman and Vliet, 1993; Mandell, 1994; Kickert, *et al* 1997; Bardach, 1999; Kooiman, 2000; Stocker, 2000; Goss, 2001; Olowu, 2002; Hemmati, 2002; Agranoff ,2003; Keast, *et al,* 2007; Khan, 2007; Bakare, 2024).

Export Diversification

Export diversification is defined as the process by which a country broadens the range of goods and services it exports, thereby reducing dependence on a single commodity—in Nigeria's case, crude oil (Adegbie et al., 2023; Oyelami & Alege, 2018). It involves developing new economic sectors and accessing different markets to stabilize export earnings, stimulate productivity, and generate sustainable income streams (Owan et al., 2020; Udeh et al., 2021). In practice, successful diversification implies a strategic shift from a mono-product economy to one that leverages multiple sectors—such as agriculture, manufacturing, services, technology, and tourism—to mitigate the risks associated with volatile oil markets (UNCTAD, 2021).

Non-Oil Imports

Non-oil imports refer to goods and services that a country brings in from other nations, excluding oil and petroleum-related products. These imports cover a wide range of goods, including machinery, electronics, vehicles, pharmaceuticals, textiles, and agricultural produce. Countries, especially those rich in natural resources like oil, often have a high dependency on non-oil imports to meet domestic demand for goods not produced locally (World Bank, 2023). This is vital for sustaining industries that require advanced technology or specialized equipment. Non-oil imports also help improve the standard of living by providing consumers with access to a broader range of products. For instance, in Nigeria, despite being a major oil-producing country, there is heavy importation of items like food products, machinery, chemicals, and vehicles (CBN, 2022). These non-oil imports are crucial for the functioning of several sectors like agriculture, manufacturing, healthcare, and services. However, a high dependency on imports can lead to trade imbalances, currency devaluation, and pressure on foreign reserves if exports, particularly non-oil exports, do not equally grow. Governments often attempt to regulate non-oil imports through tariffs, quotas, or encouraging local production as a means to strengthen the economy.

Non-oil Export Share of Total Exports

The nonoil export share of total exports is a critical economic indicator that measures the proportion of a country's export earnings that come from sectors other than oil and petroleum. This ratio reflects the level of diversification within an economy and can indicate economic health and resilience (UNCTAD, 2022). A high nonoil export share suggests that a country is not overly reliant on a single commodity and is therefore better insulated from global oil price shocks. Conversely, a low share highlights vulnerabilities, as revenues would fluctuate based on the unpredictable oil markets.

Taking Nigeria as an example, efforts have been made to boost nonoil exports such as agricultural products (cocoa, sesame seeds, ginger) and solid minerals (NEPC, 2021). However, the success has been mixed, with oil still dominating export revenues. If, for example, nonoil exports account for only 15% of total exports, it means the economy remains heavily dependent on oil. A higher nonoil export share would signify progress towards economic diversification and stability, attracting foreign investment and promoting sustainable development.

Oil Exports

Oil exports form the backbone of many economies, particularly in countries that are rich in petroleum resources. These exports include crude oil, refined petroleum products, and related goods sold to international markets. The revenue generated from oil exports is often a significant source of national income, government budgets, and foreign exchange reserves (IMF, 2022). However, this dependency comes with risks, as fluctuations in global oil prices can lead to economic instability, inflation, and even political unrest when revenues fall sharply.

Countries like Saudi Arabia, Venezuela, and Nigeria illustrate the importance—and danger—of heavy reliance on oil exports. For example, when oil prices peaked between 2008 and 2014, these nations experienced economic booms. However, the 2014 crash and the pandemic-induced demand slump in 2020 led to major fiscal crises, budget deficits, and currency devaluations (EIA, 2021). Nigeria, where oil accounts for about 80% of export earnings, has particularly struggled to cushion its economy against these external shocks.

Trade Openness and Economic Growth

Trade openness refers to the extent to which a country engages in international trade relative to its economic size (measured by GDP). It is often calculated as the sum of exports and imports divided by GDP. Trade openness is believed to facilitate economic growth by enabling countries to access larger markets, advanced technologies, and foreign investment (World Trade Organization, 2022). Open economies can efficiently allocate resources according to comparative advantages, resulting in increased productivity and higher incomes.

Several successful economies, such as Singapore, South Korea, and Vietnam, have demonstrated how embracing trade openness can fuel rapid development and transformation (Rodrik, 2018). These nations actively integrated into global supply chains, invested heavily in education and infrastructure, and created export-driven industries. On the other hand, excessive openness without strong domestic policies can expose economies to external shocks, as seen during the global financial crises when trade volumes collapsed, affecting many open economies deeply.

Economic Growth

Economic growth is the long-term rise in the real Gross Domestic Product (GDP). It is a measure of the capacity of a nation to increase its productive potential by improving its technology, human capital as well as institutional effectiveness (World Bank, 2022; Todaro & Smith, 2018). Sustainable economic growth is defined by both quantitative and qualitative measures of growth, which include technological advancement, effective resource distribution, and fair distribution of income (Stiglitz, 2022; Yahaya and Yusuf, 2019). This growth is impaired by structural inefficiencies and excessive dependence on oil exports in the context of Nigeria highlighting the necessity of diversification.

Growth is achieved when the productive potential of an economy increases and thus allows an economy to produce more and earn more income, improve living standards, and offer more jobs (Mankiw, 2020). Technological innovation, capital investment, human capital development and infrastructure enhancement are some of the major drivers of economic growth. Growth in developing countries is necessary to alleviate poverty, establish fiscal space to implement social programs and improve the standard of living. In the absence of growth, governments are challenged to fund education, healthcare, infrastructure, and social protection of programs.

2.2. Stylized Facts

Exports Diversification in the Pre-Democratic Dispensation

Prior to the advent of democratic rule, most nations particularly in Africa were governed by military rule or dictatorial leaders who ran the export industries with little accountability and participation. Exports during these times were mainly raw materials and primary commodities such as crude oil, cocoa, minerals and timber (Adewuyi, 2006). The export revenues were also misappropriated, diverted by the ruling elites or invested in unproductive sectors and this led to minimal economic growth despite the huge natural resources reserves.

Table 2.1: Export Diversification during Pre-democratic Era in Nigeria

Year	Non-Oil Imports (N Million)	Non-Oil Exports (% of Total Exports)	Oil Exports (N Million)	Trade Openness (% of GDP)
1981	12,719.80	3.10%	342.80	0.13%
1985	7,010.80	4.24%	497.10	0.11%
1990	39,644.80	2.96%	3,259.60	0.72%

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1995	599,301.80	2.42%	23,096.10	7.55%
1998	661,564.50	4.53%	34,070.20	6.63%

Source: CBN Statistical Bulletin, 2026

A good example of this trend is Nigeria. Under military rule prior to 1999, crude oil comprised of the vast majority of exports whereas other sectors such as agriculture and manufacturing were not attended to (Sala-i-Martin and Subramanian, 2013). The lack of accountability, corruption, and mismanagement ensured that oil revenues did not translate into the mass benefits to the economy. Export policies tended to be responsive, whereby they concentrated on maximizing short-term returns rather than developing sustainable industries and encouraging value addition in the nation.

Table 2.1 shows that non-oil imports rose drastically between 1981 and 1998 by ₦12,719.80 million to 661,564.50 million respectively which means increased reliance on imported goods. In the meantime, non-oil exports were a minor portion of the total exports with a range of 2.42-4.53, which indicates that the country continues to be dependent on oil income. The oil export increased with significant levels between 1981 and 1998 with the oil export increasing by 342.80 million to 34,070.20 million, which highlights the dominance of oil in Nigerian external trade. The openness to trade, calculated as a ratio between trade to GDP, also increased with time as in the year 1981 it was 0.13% and in 1998 it was 6.63%, indicating that there was a gradual incorporation in the world economy. The data, however, shows a low diversification of exports in this period with most foreign exchange earnings still being generated through crude oil and the economy was exposed to external shocks in the global oil market.

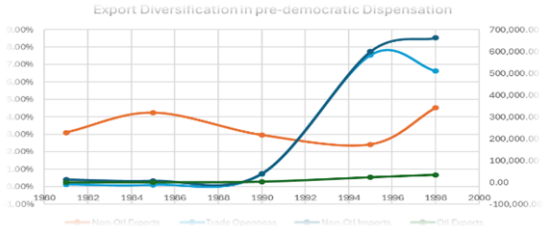

Figure 2.1: Exports diversification in pre-democratic dispensation

Exports Diversification During Post-Democratic Era

With the transition to democratic rule, a significant change was observed in terms of more deliberate and inclusive economic policies aimed at diversifying exports and stabilizing national economies. Democratic governance led to greater transparency, more public accountability and more strategic forward-looking economic planning (World Bank, 2022). Governments began instituting programs to promote nonoil industries, like agriculture, manufacturing, and solid minerals, and saw the risks of depending on one commodity.

Table 2.2: Export Diversification During Post-democratic Era in Nigeria

Year	Non-Oil Imports (N Million)	Non-Oil Exports (% of Total Exports)	Oil Exports (N Million)	Trade Openness (% of GDP)
2000	764,204.70	1.28%	1,920,900.40	10.99%
2005	2,003,557.39	1.46%	7,140,578.92	24.68%
2010	5,857,515.83	5.92%	11,300,522.12	35.08%
2015	8,588,563.80	7.47%	8,184,480.52	29.32%
2020	17,802,181.88	12.33%	11,058,151.84	45.76%
2023	19,411,531.48	10.33%	32,502,384.29	89.83%

Source: CBN Statistical Bulletin, 2026

The democracy administrations in Nigeria that followed after 1999 presented such policies as the Export Expansion Grant (EEG), the activities of the Nigerian Export Promotion Council (NEPC), and other agricultural promotion programs (NEPC, 2021). These initiatives have resulted in slow growth of the

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export of products such as cocoa, sesame seeds, leather products and aluminum. But the problems such as poor infrastructure, inconsistency in policies and international competition have slowed down the rate of diversification. However, there has been a constant consciousness and trend towards the creation of a more robustly diversified export base.

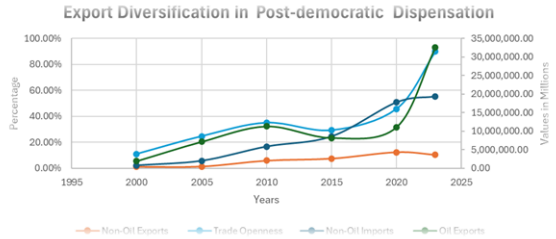

Figure 2.2: Exports diversification During post-democratic dispensation

Evidence from Table 2.2 shows that non-oil imports increased significantly during this time, with the level rising to ₦764.2 billion in 2000 up to ₦19.4 trillion in 2023, due to increased demand of foreign products caused by industrialization and growth in consumer base. Non-oil export share of total exports was, however, not that high, rising to 10.33% in 2023, which means that the progress in the effort to diversify exports was not that significant. Although oil exports fluctuated over the years, there was a drastic increase in oil exports, which were ₦1.92 trillion in the year 2000 to ₦32.5 trillion in the year 2023, reaffirming the fact that Nigeria highly depends on oil as its primary export commodity. In the meantime, the trade openness, calculated as the percentage of total trade (imports and exports) to GDP, increased significantly as in 2000, 10.99 percent; in 2023, it is simply impressive, as 89.83 percent. Although trade openness has increased and non-oil exports have been growing, the statistics suggest that the economic structure of Nigeria is still highly oil-reliant, which highlights the importance of more powerful and sustained measures to make sure that the country attains true export diversification and economic stability.

According to economic theories such as Solow Growth Model, technological advancements and capital per worker growth are essential in the long-term growth. The modern theories, including endogenous growth models, maintain that investments in research and development (R&D), education and good governance institutions are fundamental in ensuring a sustained growth (Romer, 1990). In the case of such a country as Nigeria, where unstable changes in oil prices have traditionally damaged the stable economic development, stable economic growth requires structural changes that should focus on non-oil diversification, industrial capacity investments, and the easiness of doing business (World Bank, 2022).

2.3. Theoretical and Empirical Review

The theoretical literature of export diversification and economic growth is a multifaceted, which relies on a number of classic and modern theories which explain how a diversified export base can enhance a long-term economic growth.

Endogenous Growth Theory

Endogenous Growth Theory, as articulated by Romer (1986) and Lucas (1988), assumes that the main sources of economic growth in the long run are investments in human capital, innovation, and knowledge accumulation. Romer (1986) thinks that the technological change is an endogenous result of economic activity, and that increasing returns may occur when there is interaction of spillovers of knowledge. Within this context, diversification in exports can be regarded as the driver of innovations since the interaction with the global markets leads to the emergence of competitive forces and the willingness of firms to implement new technologies and enhance their productivity. Lucas (1988) also focuses on the importance of human capital in the economic growth process and argues that diversified export activities can increase skills development and learning as a result of which, labor productivity can be increased. In the case of developing economies such as Nigeria, export diversification beyond oil will help mitigate risks to commodity price shocks and foster a vicious circle of investment in education and technological advancement.

Resource Curse Theory

The theory of Resource Curse which has been greatly debated by Sachs and Warner (1995) argues that economies that largely rely on one natural resource tend to grow at a low rate given the numerous distortions. The argument is that excessive

dependence on resources earnings, including oil, may result in institutional frailty, corruption, and neglect of other sectors. Olojede and Michael (2020) extend this to Nigeria, and they observe that the emphasis on crude oil has displaced investments in agriculture, manufacturing and services. This excessive reliance not only gives rise to an unstable stream of revenue but also smothers structural change. Export diversification on the other hand provides an avenue to escape this cycle, diversifying the economy, promoting investments across other sectors, as well as alleviating the negative impact of resource dependence.

Dutch Disease Theory

First developed by Corden and Neary (1982) the Dutch Disease Theory describes the impact of a dominant export industry on the real exchange rate in terms of appreciation and the resulting less competitiveness of other industries in the global market. This theory suggests that when a country has a massive inflow of foreign currency through exportation of oil, it will result in a rise of the domestic currency, and, as a consequence, increase the price of other export goods. As has been demonstrated by Akinlolu and Nejo (2020), in Nigeria, this phenomenon has impacted negatively on non-oil industries, which have led to the decrease in manufacturing and agriculture. Diversifying the export basket helps a country to counter the Dutch Disease effect, enabling a more balanced industrial growth that will result in long-lasting growth.

Resource Endowment Theory

Resource Endowment Theory is based on the concepts of absolute advantage (Smith, 1776) and comparative advantage (Ricardo, 1817) which are rooted in classical economics. According to this theory, nations are supposed to be specialised in producing goods that have a natural advantage in producing or have a low-cost advantage. Igbesere (2013) goes further to say that diversification in exports allows the countries to harness their endowments of heterogeneous resources to utmost potential. Nigeria is a nation with significant oil resources, but with high agricultural, mineral, and human capital potential, as well. Nigeria can use diversified export portfolio to take advantage of its comparative advantages in different sectors and increase productivity and more stable economic growth.

Institutional Theory

The institutional Theory, developed by North (1990) and then extended by Rodrik (1999) highlights the central position of institutional quality in determining the economic outcomes. North (1990) asserts that institutions, including legal systems, regulation, and systems of government, play a crucial role to dictate the efficiency of economic transactions and the distribution of resources. Rodrik (1999) points out that strong institutions could help in diversifying exports through lowering transaction costs, securing property rights, as well as creating a predictable business environment. Weak institutional capacity has been cited as a significant obstacle to diversification in Nigeria (Ibrahim & Adebayo, 2021). Enhancing institutions, thus, is not merely needed to facilitate the effort to diversify but to make sure that the gains of a more diversified export base are transferable to inclusive economic development in the long run. The theories above are complementary theories, underpinning the study.

2.4 Empirical Studies

A considerable body of empirical research has examined the relationship between export diversification and economic growth across different contexts. For instance, Ali et al. (2022) employed a Vector Autoregressive (VAR) model to investigate Sudan's oil-dependent economy, finding that oil rents have a contemporaneously negative effect on export diversification, which in turn undermines long-term growth stability. In contrast, Gnangnon (2021) used a two-step system Generalized Method of Moments (GMM) to demonstrate that in developing countries, services export diversification significantly enhances economic growth, especially coupled with increased trade openness.

In Nigeria, several studies have focused on the impact of non-oil exports on growth. Esu and Udonwa (2015) and Olayiwola and Okodua (2015) provided descriptive analyses that underscore the need for diversification beyond crude oil, though their work often lacks robust causal inference. Duhu (2022) applied an Autoregressive Distributed Lag (ARDL) model and found that while export diversification has a positive impact on economic growth, the effect is statistically insignificant in both the short and long run—an outcome attributed to Nigeria's low

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diversification level. Conversely, Oyegun and Inakhuagbo (2022) utilized a Vector Error Correction Model (VECM) to reveal a positive and significant long-run relationship between export diversification and economic growth, thereby affirming its role as a key growth driver. Additional studies by Adegbie et al. (2023) and Adekunle (2020) further support the positive link between economic diversification and sustainable growth by emphasizing that a broader mix of export products not only stabilizes foreign exchange earnings but also stimulates domestic industrialization and increases employment. Moreover, research by Owan et al. (2020) using Ordinary Least Squares (OLS) highlights the critical role of non-oil GDP and non-oil exports in promoting growth, suggesting that policy efforts should be directed toward bolstering these sectors.

Collectively, these empirical findings, despite methodological variations, converge on the notion that export diversification across sectors such as agriculture, manufacturing, services, and emerging industries plays a crucial role in enhancing economic resilience and growth. However, the evidence remains mixed regarding the magnitude and significance of the effect in Nigeria, indicating that further research is needed to account for regional disparities, structural heterogeneity, and sectoral linkages.

A notable gap in the existing literature is the paucity of empirical studies that explicitly examine this relationship within the Nigerian context, particularly focusing on the non-oil export share of total exports and trade openness, with a view to comparing export diversification between the pre-democratic and post-democratic eras. Moreover, existing research has largely centered on the descriptive analysis of non-oil exports in absolute terms rather than as a proportion of total exports (Esu & Udoh, 2017; Olaleye et al., 2016), leaving a significant knowledge gap. Specifically, little is known about how the non-oil export share evolved across political regimes and how diversification into industries beyond oil could enhance overall economic performance (UNCTAD, 2023).

III. METHODOLOGY

This study employs a quantitative research design using an ex-post facto approach to analyze the relationship between export diversification and economic growth in Nigeria. The ex-post facto design is appropriate because it relies on historical data to assess the impact of export diversification variables without any active manipulation. The study period, spanning from 1980 to 2023, was selected to capture Nigeria's evolving economic landscape under different policy regimes and global market shifts. The period is divided into two sub-periods based on Nigeria's governance transformation, with 1999 serving as the base year because it marked the year Nigeria returned to unbroken democratic administration. This approach enables a comparative analysis of export performance in the pre-democratic era (1980–1998) and the post-democratic era (2000–2023).

The analysis is based entirely on secondary data sourced from World Development Indicators (WDI) and the Central Bank of Nigeria (CBN) statistical bulletins ensuring the validity and reliability of the findings. The dependent variable, economic growth, is measured by the Gross Domestic Product Growth Rate (GDPGR). Export diversification is measured by non-oil export share of total export (NOXS) and Trade Openness (TOP) and Foreign Direct Investment (FDI). Additionally, the exchange rate (EXR) is incorporated as a control variable to account for external economic fluctuations. Dummy variable was used to estimate the parameters to unveil the export diversification on the economy growth of Nigeria DURING the pre-democratic and post-democratic era in Nigeria. These variables have been widely adopted by researchers in studying government expenditure and economic development (Krugman & Wells, 2020; Yakubu & Idris, 2023).

3.1 Model Specification

The baseline model specifies an ARDL model. The mixed integration informed the adoption of ARDL because of its usefulness in handling I (0) and I(1) series. The empirical model is thus specified as follows.

$$\mathrm{GDPgr}_t = \beta_0 + \beta_1 \mathrm{GDPgr}_{t-i} + \beta_2 \mathrm{TOP}_{t-i} + \beta_3 NOXS_{t-i} + \beta_4 \mathrm{EXR}_{t-i} + \beta_5 \mathrm{FDI}_{t-i} + \mu_t \quad \text{eqn 1}$$

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In Equation 1, GDPgr represents economic growth and is modeled as a function of several key export diversification, trade and investment factors, including Trade Openness (TOP), Non-oil export share of total export (NOXS), Exchange rate (EXR), Foreign Direct Investment (FDI). μ_t is the error term, which accounts for unobserved factors that may influence economic growth but are not explicitly included in the model. t, is the time while *i* is the lag. The β_0, α_1, β_1 to β_5 are the constant term and the coefficients respectively.

The study further expresses equation 1 to include explanatory dummies to account for the export diversification during the pre-democratic and post democratic eras. Thus;

$$\begin{aligned}\mathrm{GDPgr}_t = \beta_0 + \beta_1 \mathrm{GDPgr}_{t-i} + \beta_2 \mathrm{TOP}_{t-i} \\ + \beta_3 NOXS_{t-i} \\ + \beta_4 \mathrm{EXR}_{t-i} + \beta_5 \mathrm{FDI}_{t-i} + \gamma_1 \mathrm{DEXP}_{t-i} + \gamma_2 \mathrm{DEXP} * \\ NOXS_{t-i} + \mu_t \quad \text{eq2}\end{aligned}$$

Equation 2 models Nigeria's economic growth rate ($GDPgr_t$) as a function of export diversification indicators. The baseline explanatory variables include previous level of growth ($GDPgr_{t-i}$), trade openness (TOP_t), non-oil exports as a share of total exports ($NOXS_t$), exchange rate (EXR_t), and foreign direct investment inflows (FDI_t), each capturing important macroeconomic influences. Additionally, the model introduces a structural break through a dummy variable ($DEXP_t$) that distinguishes between Non-oil export in the pre-democratic and post-democratic eras. To capture whether the effect of non-oil export share ($NOXS_t$) on economic growth changes across political regimes, an interaction term ($DEXP_t$*$NOXS_t$) is included to capture whether the impact of export diversification on growth is different during the post-democratic era compared to the pre-democratic era.

To further examine the differences is the effect of other explanatory variables that capture export diversification, the final model is thus formulated below;

$$\begin{aligned}\mathrm{GDPgr}_t = \mathrm{GDPgr}_t = \beta_0 + \beta_1 \mathrm{GDPgr}_{t-i} + \beta_2 \mathrm{TOP}_{t-i} \\ + \beta_3 NOXS_{t-i} + \beta_4 \mathrm{EXR}_{t-i} + \beta_5 \mathrm{FDI}_{t-i} + \gamma_1 \mathrm{DEXP}_{t-i} \\ + \gamma_2 \mathrm{DEXP} * NOXS_{t-i} + \\ \gamma_3 \mathrm{DEXP} * TOP_{t-i} + \gamma_4 \mathrm{DEXP} * FDI_{t-i} + \gamma_5 \mathrm{DEXP} * \\ EXR_{t-i} + \mu_t \quad \text{eq3}\end{aligned}$$

Equation 3 model economic growth (GDPgr) as a function of other export diversification variables along with their interaction terms. In furtherance of equation 2, the interaction terms $DEXP*TOP_{t-i}$, $DEXP*FDI_{t-i}$, and $DEXP*EXR_{t-i}$ allow the effects of trade openness (TOP_t), foreign direct investment (FDI_t), and exchange rate (EXR_t) to differ between the two periods. Specifically, they test whether and how the influence of these variables on the dependent outcome shifts after in the democratic transitions. The coefficients γ_1, γ_2, γ_3, γ_4 and γ_5 specifically measure the direct shift in the growth level due to democratization and the differential impact of non-oil exports on growth after democratization, respectively. The error term μ_t accounts for other random factors not captured by the model.

IV. EMPIRICAL FINDING

4.1 Descriptive Statistics

The descriptive statistics in table 4.1 reflect important shifts between Nigeria's pre- and post-democratic eras (with 1999 as the transition point). GDP growth (GDPGR) averaged 3.15% overall, but the relatively low mean and negative minimum (-13.13%) suggest that growth was more volatile and often negative during the pre-democratic era, characterized by military rule and policy instability. Post-1999, growth improved with more consistent positive trends, reflecting the benefits of democratic governance, although the large standard deviation (5.22%) still points to lingering volatility. Also, Trade openness, representing the ratio of exports and imports to GDP, averaged 20.22%, with a median of 10.74%. The high standard deviation and broad range suggest significant variability in trade activities. Notably, during the late 1990s, trade openness decreased from 75% to 55% of GDP, reflecting economic challenges during the military regime. Following the transition to democracy in 1999, policies aimed at liberalizing trade led to increased trade activities and higher openness ratios

The Exchange Rate (EXR) mean of 119.5 (Naira per USD), reflects a major devaluation trend post-1999. Pre-1999, Nigeria operated under more rigid or semi-official exchange rates. The wide range (minimum 0.54, maximum 425.97) and strong skewness (1.00) reveal severe exchange rate instability, especially after moving toward a more flexible exchange regime. This

implies that post-democracy, while democratization boosted foreign engagement, it also exposed the currency to significant fluctuations, potentially affecting trade and investment decisions. Furthermore, Foreign Direct Investment (FDI) as a percentage of GDP averaged about 1.17%, showing moderate attractiveness to foreign investors. However, FDI's minimum value (-1.15%) and considerable standard deviation (1.00) suggest that before democratization, political instability deterred foreign investment, while post-1999 reforms, privatizations, and oil sector liberalization attracted more inflows though not consistently.

Non-Oil Export Share (NOXS) averaged just 5.2% of total exports, indicating an alarmingly low figure highlighting persistent oil dependence across both eras. Although the maximum reached 16.1%, indicating some improvements during democratic periods, the generally low median (4.3%) and skewed distribution (1.16) show that despite democratization, diversification efforts remained limited. This reflects Nigeria's struggle to grow non-oil sectors even under better governance structures.

The dummy variable (DEXP) has a mean of 0.545, indicating that the event or condition represented by the dummy occurs in roughly 54.5% of the observations. DEXP*EXR, representing the interaction between the dummy and the exchange rate, has a high variability with a mean of 113.13 and a wide range from 0 to 425.98, suggesting significant fluctuations in exchange rate conditions during the period. DEXP*FDI, capturing the interaction with foreign direct investment, shows a moderate mean value of 0.742, although it ranges from slightly negative to nearly 3%, pointing to some periods of minimal or even negative foreign investment inflows. The variable DEXP*NOXS (non-oil exports as a percentage of total exports) has a relatively low mean of 0.035, indicating that non-oil exports constitute a small fraction of total exports in most periods. Meanwhile, DEXP*TOP (trade openness as a percentage of GDP) exhibits a considerable mean value of 19.14, with notable variability across observations.

Table 4.1: Descriptive Statistics

	GDPGR	TOP	EXR	FDI	NOXS	DEXP	DEXP*EXR	DEXP*FDI	DEXP*NOXS	DEXP*TOP
Mean	3.1503	20.2186	119.5217	1.1673	0.0520	0.5454	113.1333	0.7418	0.0353	19.1373
Median	3.9215	10.7433	114.8990	0.9614	0.0438	1.0000	114.8990	0.3348	0.0148	10.7433
Maximum	15.3291	89.8357	425.9792	4.2820	0.1610	1.0000	425.9792	2.9002	0.1610	89.8357
Minimum	-13.1278	0.0849	0.5467	-1.1508	0.0127	0.0000	0.000000	-0.0391	0.0000	0.0000
Std. Dev.	5.2221	21.8405	125.4134	1.0008	0.0345	0.5036	130.2727	0.9153	0.0435	22.6522
Skewness	-0.8914	1.15184	1.0035	0.6308	1.1667	-0.1825	0.9526	0.8965	1.0592	1.0935
Kurtosis	4.9301	3.9399	3.0316	3.7989	4.0283	1.0333	2.8798	2.4628	3.2075	3.6896
Jarque-Bera	12.6575	11.3491	7.3870	4.0883	11.9215	7.3353	6.6822	6.4241	8.3063	9.6408
Probability	0.0017	0.0034	0.0248	0.1294	0.0025	0.0255	0.0353	0.0402	0.0157	0.0080

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Obs	44	44	44	44	44	44	44	44	44	44

Source: Authors Computation, 2026

To mitigate the non-normality of the variables, subsequent estimations were transformed in their natural logarithmic form.

4.2 Correlation Analysis

The correlation result in Table 4.2 reveals important dynamics between Nigeria's macroeconomic variables before and after the 1999 democratic transition. GDPGR shows a moderate positive correlation with Trade Openness (TOP) (0.487), implying that greater openness to international trade after democratization likely supported economic expansion. A weaker positive correlation exists between GDPGR and Exchange Rate (EXR) (0.250) and Foreign Direct Investment (FDI) (0.281), suggesting that while exchange rate movements and foreign capital inflows contributed to growth, their effects were less direct. The very low correlation between GDPGR and Non-Oil Exports (NOXS) (0.093) signals that the diversification away from oil exports remained limited despite democratic governance.

Furthermore, the positive correlation between GDPGR and DEXP (0.360) suggests that exports became more positively aligned with growth following democratization, possibly due to enhanced trade policies and improved external relations. Similarly, the moderate correlation between GDPGR and DEXP*FDI (0.323) indicates that foreign direct investment had a more pronounced growth-enhancing effect under democratic institutions, reflecting increased investor confidence and better regulatory frameworks. However, the relatively weaker correlation between GDPGR and DEXP*EXR (0.237) implies that exchange rate reforms post-1999, while impactful, did not strongly reinforce growth, possibly due to persisting volatility or structural imbalances in the economy.

Furthermore, the correlation between GDPGR and DEXP*NOXS (0.219) underscores the limited impact of non-oil export expansion on economic growth in the post-democratic period. Despite efforts to diversify Nigeria's export base, the gains from non-oil exports remained subdued, indicating that democratic governance alone was insufficient to overcome long-standing structural weaknesses in the export sector. The positive link between GDPGR and DEXP*TOP (0.263) reflects the role of trade openness in supporting economic performance, albeit moderately, suggesting that liberalized trade policies post-1999 contributed to GDP growth. Collectively, these findings imply that democratization enhanced the effectiveness of trade and investment policies on growth, while more targeted reforms are needed to unlock the full potential of non-oil exports and exchange rate mechanisms.

Overall, the results imply that although post-democratic reforms improved growth prospects mainly through trade openness and investment inflows, structural weaknesses in export diversification continued to constrain broader-based economic growth.

Table 4.2: Correlation Matrix

	LGDPGR	LTOP	EXR	LFDI	LNOXS	DEXP	DEXP * EXR	DEXP * FDI	DEXP * NOXS	DEXP * TOP
LGDPGR	1.0000									
LTOP	0.4870	1.0000								
EXR	0.2497	0.7794	1.0000							
LFDI	0.2806	0.2896	0.0594	1.0000						

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LNOXS	0.0928	0.2855	0.6239	-0.1403	1.0000					
DEXP	0.3597	0.8389	0.7766	0.3595	0.3491	1.0000				
DEXP*EXR	0.2373	0.7585	0.9935	0.0550	0.6450	0.8019	1.0000			
DEXP*FDI	0.3232	0.5600	0.2593	0.5890	-0.0953	0.7484	0.2903	1.0000		
DEXP*NOXS	0.2194	0.7234	0.9238	0.0303	0.7675	0.7498	0.9301	0.2502	1.0000	
DEXP*TOP	0.2631	0.7643	0.9308	0.0942	0.6428	0.7801	0.9384	0.3350	0.9032	1.0000

Source: Authors Computation, 2026

4.3: Stationarity Test

The study adopted the Augmented Dickey-Fuller (ADF) innovative breakpoint unit root test to address possible structural breaks in the time series data, as these could influence the stationarity of the variables being analysed. The ADF innovative breakpoint test helps identify structural breaks, leading to a stronger analysis of the underlying data. From the result in table 6.3, GDPGR and FDI are stationary at levels I (0)) with significant breakpoints while LTOP, LEXR, and LNOXS are non-stationary at levels and only become stationary after first difference between (I(1)), with breakpoints identified as well.

The result also shows that DEXP and DEXPTOP are stationary at levels, I(0), indicating that the impact of exports and trade openness following democratization were stable and did not exhibit persistent trends over time. In contrast, DEXPEXR, DEXPFDI, and DEXPNOXS are non-stationary at levels but became stationary after first differencing, I(1), suggesting that the influence of democratization through the exchange rate, FDI, and non-oil exports evolved more dynamically and were affected by underlying trends or shocks over the study period. These findings imply that while democratization had an immediate and stable influence on some economic channels, others required adjustments over time before their effects on economic growth stabilized.

Table 4.3 Augmented Dickey-Fuller Innovative Breakpoint Unit Root Test result

Variables	Levels		First Differenced		Remarks
	ADF Statistics	P-Value	ADF Statistics	P-Value	
GDPGR	-15.40818	< 0.01	-18.44408	< 0.01	I (0)
TOP	-3.730633	0.2670	-8.476825	< 0.01	I (1)
EXR	-3.780875	0.2444	-8.197943	< 0.01	I (1)
FDI	-4.468737	0.0470	-10.57676	< 0.01	I (0)
NOXS	-3.638964	0.3122	-8.338071	< 0.01	I (1)
DEXP	-2.590008	< 0.01	-6.497863	< 0.01	I (0)
DEXPEXR	-1.434810	> 0.99	-6.232054	< 0.01	I (1)
DEXPFDI	-2.959050	0.7086	-10.98291	< 0.01	I (1)
DEXPNOXS	-3.240825	0.5412	-14.76672	< 0.01	I (1)
DEXPTOP	-4.947430	0.0101	-6.806240	< 0.01	I (0)

Authors' Computation, 2026

4.4 Lag length determination

The VAR lag length criteria were used to determine the appropriate lag length for the analysis. The study employed the Akaike Information Criterion (AIC) for lag selection. to determine the optimal lag length, and lag length 3 was selected for the estimation.

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Table 4.4: VAR Lag Order Selection Criteria

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-137.6917	NA	0.000725	6.960573	7.169545	7.036669
1	13.11471	257.4744	1.580006*	0.823673	2.077506*	1.280250*
2	38.93217	37.78165*	1.610006	0.783797	3.082491	1.620854
3	64.12901	30.72785	1.860006	0.774195*	4.117750	1.991733

Source: Authors computation, 2026.

4.5 Cointegration Test

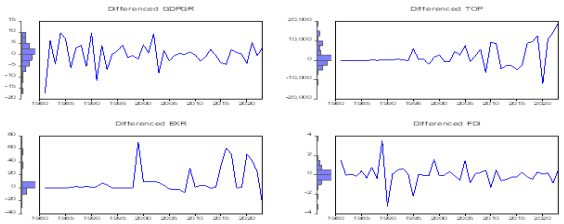
Following the findings above that the variables of interest are I(0) and I (1) series, it therefore suggests test for co-integration among these variables since they contain unit root. The study employs the ARDL Bounds test. The result of the test is presented in table 4.5.

Table 4.5: ARDL F Bounds Cointegration Test Result

	Test Statistic		Value			
	F-statistic		42.774031			
	10%		5%		1%	
Sample Size	I (0)	I (1)	I (0)	I (1)	I (0)	I (1)
	F-Statistic					
35	2.387	3.671	2.864	4.324	4.016	5.797
40	2.353	3.599	2.797	4.211	3.800	5.643
Asymptotic	2.120	3.230	2.450	3.610	3.150	4.430

* I (0) and I (1) are respectively the stationary and non-stationary bounds.

The results presented in Table 4.5 indicate that the ARDL bounds test yields an F-statistic of 11.686927. This value significantly exceeds the 1% upper bound critical value of 6.370 for a sample size of 35. Since the test statistic surpasses both the lower and upper bounds at the 1% significance level, we reject the null hypothesis of no cointegration. This confirms the existence of a long run cointegrating relationship among the variables, implying that they move together over time despite short-term fluctuations.



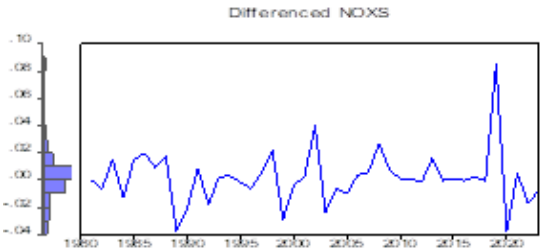


Figure 1 showing series plots of capital expenditure and economic development indicators

4.6 Autoregressive Distributed Lag (ARDL) Approach

To determine whether export diversification indicators significantly influence economic growth in Nigeria while accounting for differences between the pre-democratic and post-democratic dispensations. A dummy variable approach was adopted within the Autoregressive Distributed Lag (ARDL) framework. This allowed for the estimation of short-run effects, as well as the differential impact of these factors across political regimes.

From the finding in Table 4.6, the ARDL results suggest that the responsiveness of Nigeria's economic

growth (LGDPGR) to key macroeconomic and diversification variables differs notably across political regimes. During the pre-democratic (military) era, the economic structure was characterized by less openness, limited diversification, and centralized control, which may explain why policy shocks—like those from FDI and exchange rate movements—produced less systematic and more volatile growth outcomes. In contrast, the post-democratic dispensation (from 1999 onward), marked by increased openness and reform-led diversification, and appears to show more consistent relationships between diversification and growth.

The error correction term (ECT = -0.0057, $p < 0.01$) is statistically significant, confirming the existence of a long-run relationship between the variables. However, the extremely slow speed of adjustment (about 0.57% per year) implies that any disequilibrium caused by short-run shocks is corrected gradually reflecting persistent structural rigidities that may have lingered across both regimes.

The explanatory power of the model is high, with an R-squared value of 0.847, meaning approximately 85% of the variations in economic growth are explained by the model. The adjusted R-squared (0.708) confirms the robustness of the model even after adjusting for degrees of freedom. The F-statistic of 6.11 ($p < 0.01$) indicates that the model is statistically significant overall. Additionally, the Durbin-Watson statistic (1.996) is very close to 2, suggesting no serious autocorrelation in the residuals, a good sign of model reliability. However, export diversification through FDI (DEXPFDI) exerts a strong, positive, and statistically significant impact on growth (e.g., $\beta = 3.84$, $p < 0.01$) in the post-democratic era, suggesting that the democratic dispensation better leveraged foreign investments to enhance export variety and economic performance. This effect was largely absent or underutilized during the military rule. Meanwhile, the exchange rate (LEXR) shows mixed effects: large negative short-run impacts during sudden adjustments (e.g., $\beta = -11.57$, $p = 0.0001$) are evident, particularly during the SAP era under military regimes. But positive lagged impacts ($\beta = 9.19$, $p = 0.0014$) may reflect better exchange rate management in the post-democracy period. Similarly, the negative effects of trade openness (LTOP) at lag levels ($\beta = -9.67$ and -10.48, both $p < 0.01$) suggest that while Nigeria embraced liberalization in the democratic era, the economy remains vulnerable to external shocks, underscoring the need for balanced openness supported by domestic capacity development.

The positive role of export diversification (DEXP) and diversified FDI inflows (DEXPFDI) in boosting growth is more pronounced under democracy, indicating that democratic governance facilitated structural reforms and institutions that enabled diversification to yield tangible growth benefits.

Table-4.6: ARDL Estimates: Dep. Variable: GDPgr.

Variable	Coefficients	Prob.
Short run Estimates		
ECM(-1)*	-0.005673	0.0000
D(LGDPGR(-1))	-0.675378	0.0000
D(LEXR)	-11.57176	0.0001
D(LEXR(-1))	-3.376761	0.3481
D(LEXR (-2))	9.194946	0.0014
D(LTOP)	1.473211	0.4116
D(LTOP (-1))	-9.668487	0.0001
D(LTOP (-2))	-10.47704	0.0000
D(LFDI)	1.231892	0.2027
D(LFDI (-1))	-5.569799	0.0001
D(LFDI (-2))	-5.958693	0.0000
D(LNOXS)	-1.549009	0.2468
D(LNOXS (-1))	-3.444061	0.0141
D(LNOXS (-2))	1.791336	0.1655
D(DEXP)	6.473122	0.0126
D(DEXPEXR)	-0.035068	0.0069
D(DEXPFDI)	1.648563	0.0088
D(DEXPFDI (-1))	3.841465	0.0000
D(DEXPFDI (-2))	2.766278	0.0000
C	15.34942	0.0000
Long Run Estimates		
LEXR (-1)	-4.161234	0.7086
LTOP (-1)	1.551132	0.7936
LFDI (-1)	-2.817655	0.5890
LNOXS (-1)	-5.803916	0.5999
DEXP (-1)	5.408155	0.4717
DEXPEXR (-1)	16.34417	0.8721
DEXPNOXS	0.033632	0.7876
DEXPFDI (-1)	-4.161234	0.7086
R-squared	0.846746	
Adjusted R-squared	0.708089	
F-statistic	6.106728	

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Prob(F-statistic)	0.000067
Durbin-Watson stat	1.996333

Source: Authors computation, 2026

The long run result indicates that none of the independent variables are statistically insignificant at the 5% . This indicates that over the long run, these variables do not have a meaningful or stable impact on Nigeria's economic growth (proxied by LGDPGR), regardless of whether the country was under military or democratic rule. This implies that structural weaknesses, policy inconsistencies, and possibly weak institutions may have undermined the long-term impact of economic drivers like export diversification and FDI, especially under both regimes. This suggests that while democratic governance may offer better policy environments, the lack of sustained and effective implementation has muted the long-run benefits of these economic variables on growth. The economy appears to respond more significantly in the short run than in the long run during both eras.

4.7: Difference in Difference (DiD) Approach

Difference in Difference (DiD) approach was also used to examine the data. This technique calculates the effect of export diversification on an economic growth by comparing the average change over time in the dependent variable for a "treatment group" compared to the average change over time in a "control group. In this study, the regime era was categorized into two periods: Pre-democratic era (1980–1998), representing the military administration period and post-democratic era (2000–2023), representing the democratic government period. For each regime period, mean values of export diversification and economic growth were computed and compared. This enabled the study to estimate the extent to which democratic governance has influenced Nigeria's export diversification and economic growth.

Table 4.7a: Exports Diversification Descriptive Statistics

Variable	Dispensation	Mean	N	Std. Deviation
GDP Growth	Pre-Democratic	0.6958	19	6.01377
	Post-Democratic	5.7738	19	3.63935
Trade Openness	Pre-Democratic	2.0752	19	3.08473
	Post-Democratic	25.5012	19	10.94400
Exchange Rate	Pre-Democratic	9.9344	19	9.34222
	Post-Democratic	151.0728	19	51.68845
Foreign Direct Investment	Pre-Democratic	0.8959	19	1.17023
	Post-Democratic	1.6785	19	0.67469
Non-Oil Export	Pre-Democratic	0.0378	19	0.01882
	Post-Democratic	0.0458	19	0.02445

The descriptive statistics in Table 4.7a reveal notable differences in macroeconomic indicators between the pre- and post-democratic dispensations in Nigeria. The mean GDP growth rate increased significantly from 0.70% during the military era to 5.77% under democratic rule, indicating improved economic performance in the post-democratic period. Trade openness also expanded substantially, rising from a mean of 2.08 to 25.50, suggesting greater integration into the global economy under democratic governance. Similarly, the exchange rate depreciated from an average of ₦9.93/$ to ₦151.07/$, reflecting major exchange rate reforms and liberalization efforts. Foreign direct investment increased from 0.90% to 1.68%, signaling enhanced investor confidence in the democratic era. Lastly, non-oil exports grew modestly from 0.038 to 0.046, indicating a slight improvement in export diversification. Collectively, these figures suggest that the democratic dispensation ushered in more favourable macroeconomic outcomes compared to the military regime.

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Table 4.7b: Difference in Pre and post Democratic Dispensation Export Diversification

	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval		t	df	Sig. (2-tailed)
				Lower	Upper			
Pre-Post GDPgr	-5.078	7.854	1.802	-8.863	-1.293	-2.818	18	0.011
Pre-Post TOP	-23.426	10.088	2.314	-28.288	-18.564	-10.122	18	0.000
Pre-Post Exr	-141.138	45.283	10.389	-162.964	-119.312	-13.586	18	0.000
Pre-Post FDI	-0.783	1.191	0.273	-1.356	-0.209	-2.865	18	0.010
Pre-Post Non-Oil Export	-0.008	0.037	0.009	-0.026	0.010	-0.947	18	0.356

The results presented in Table 4.7b provide a statistical comparison of export diversification-related indicators between the pre- and post-democratic dispensations in Nigeria. The paired samples t-test indicates that there are significant differences in most of the variables assessed. GDP growth shows a statistically significant increase in the democratic era, with a mean difference of -5.078 (t = -2.818, p = 0.011), implying that GDP growth was significantly higher after the transition to democracy. Trade openness also shows a highly significant increase, with a mean difference of -23.426 (t = -10.122, p = 0.000), underscoring Nigeria's greater participation in global trade in the post-democratic period. Similarly, the exchange rate experienced a substantial and statistically significant shift (mean difference = -141.138, t = -13.586, p = 0.000), likely due to exchange rate liberalization policies adopted after democratization.

Foreign direct investment (FDI) also increased significantly in the post-democratic era, with a mean difference of -0.783 (t = -2.865, p = 0.010), reflecting improved investor confidence and perhaps more favorable investment policies. However, the difference in non-oil exports between the two dispensations is not statistically significant (mean difference = -0.008, t = -0.947, p = 0.356), indicating that while other economic indicators improved significantly under democracy, export diversification—measured through non-oil exports—did not change substantially. This suggests that despite economic progress, Nigeria may still be grappling with structural challenges in reducing overdependence on oil exports.

4.8 Post Estimate Test

To determine the suitability of the estimated model and to be sure of its overall significance and stability, a post-estimation evaluation was conducted. The autocorrelation, Heteroskedasticity and Normality tests were evaluated. The results are presented in table 4.8a&b and figure 1.

Table 4.8: Diagnostic Tests

Test	Statistic	Value	df	Prob.
Serial Correlation (Breusch-Godfrey LM Test)	F-statistic	1.3993	(2, 30)	0.2624
	Obs*R-squared	3.6691	(2)	0.1597
Heteroskedasticity (Breusch-Pagan-Godfrey Test)	F-statistic	1.3453	(27, 13)	0.2926
	Obs*R-squared	30.1936	(27)	0.3055

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Scaled explained SS	3.9255	(27)	1.0000

The diagnostic tests presented in Table 4.8 assess the validity of the regression model with respect to serial correlation and heteroskedasticity. The Breusch-Godfrey Serial Correlation LM test shows an F-statistic of 1.3993 with a p-value of 0.2624 and an ObsR-squared statistic of 3.6691 with a p-value of 0.1597. Since both p-values are greater than 0.05, we fail to reject the null hypothesis, indicating the absence of serial correlation in the residuals up to two lags. Similarly, the Breusch-Pagan-Godfrey test for heteroskedasticity reports an F-statistic of 1.3453 (p = 0.2926) and an ObsR-squared statistic of 30.1936 (p = 0.3055), both of which are not statistically significant at the 5% level. This suggests that the residuals are homoskedastic. Overall, the diagnostic results imply that the model is free from serial correlation and heteroskedasticity, making the estimated coefficients reliable for inference.

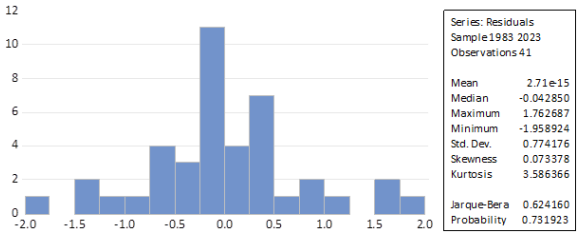

Figure 1: Normality Test Results

The results of the Jarque-Bera normality test indicate that the null hypothesis of normally distributed residuals cannot be rejected, since the test statistic is 0.624160 and the p-value is 0.7731923, which is well above the 0.05 significance level. This suggests that the residuals in the model are normally distributed.

4.8 Discussion of Findings

The study examined government expenditures and economic development in Nigeria: moderating the role of inflation rate. The study applied pre-estimation checks to ensure reliability of the result. The parameters estimate and the estimated regression were also done to meet the assumptions of ARDL and Difference in Difference tests. The model was found to be statistically to be stable with a joint significance of the explanatory variables.

The transition from military to democratic rule in Nigeria in 1999 marked a turning point in the country's macroeconomic landscape. This shift is statistically validated by the results of both the dummy variable regression and the paired sample t-tests. GDP growth, for instance, showed a significant improvement in the post-democratic period (mean increased from 0.70% to 5.77%. This growth surge is primarily due to democratic governance fostering policy stability, increased public investment, and better engagement with global financial institutions. Democratic governments tend to promote accountability and participatory economic planning, which are critical for sustainable growth. Okonkwo and Chukwu (2019) affirm that the post-1999 democratic governance led to improved macroeconomic management and fiscal responsibility in Nigeria. The implication of this improvement in GDP growth is substantial, indicating stronger domestic production, job creation, and improved standards of living under democracy, although challenges remain in terms of equitable distribution and inclusive development.

Trade openness (TOP) increased significantly post-democracy, from a mean of 2.08% to 25.50%. This is attributed to the liberalization of trade policies, the removal of import/export restrictions, and Nigeria's increasing participation in global trade under democratic administrations. The Structural Adjustment Program initiated in the late 1980s was more rigorously implemented under democratic regimes, supported by external bodies like the WTO and IMF. Asaolu, Adebayo, and Durodola (2018) note that post-1999 reforms such as the Economic Growth and Recovery Plan (ERGP) encouraged market openness and export-oriented strategies. The implication is that democracy enhanced Nigeria's integration into the global economy, improving access to international markets and facilitating capital inflows. However, while trade volume expanded, the quality and diversification of exports remained problematic, as the economy continued to rely heavily on oil.

Exchange rate changes also show a dramatic increase, with the mean jumping from ₦9.93 (pre-democracy)

to ₦151.07 (post-democracy), a statistically significant shift. This reflects the move toward a more flexible, market-determined exchange rate regime in the democratic era, driven by liberalization and forex market reforms. While the high depreciation of the naira implies greater currency volatility, it also makes Nigerian exports relatively cheaper and more competitive abroad, potentially aiding export diversification. However, it raises the cost of imports and contributes to inflation. Aroweshegbe, Ibrahim, and Abiola (2017) argue that democratic rule improved transparency in monetary policy, yet the effect of exchange rate instability still poses challenges for macroeconomic planning and industrial growth. The implication here is a mixed one: although democracy brought currency liberalization, without adequate controls and export base development, the devaluation mainly worsens inflation and debt service burdens.

Foreign Direct Investment (FDI) also improved significantly in the democratic era (mean rose from 0.90 to 1.68. This increase is a result of investor confidence in Nigeria's democratic stability, better legal and regulatory frameworks, and the privatization of key sectors like telecoms and banking. Democratic governance is generally associated with property rights protection, contract enforcement, and a predictable investment climate—all of which encourage FDI. Adegbite and Shittu (2017) and Ofoegbu and Oliver (2016) found that investor confidence in Nigeria improved significantly post-1999 due to democratic reforms and improved fiscal governance. The implication of increased FDI is improved technology transfer, employment generation, and enhanced productivity. However, challenges remain regarding the quality of FDI, as much of it still targets the oil and extractive sectors rather than manufacturing or agro-industry.

On the contrary, non-oil exports (NOXS) showed no significant increase post-democracy (mean moved marginally from 0.038 to 0.046. Despite broader trade openness and investment inflows, Nigeria's export diversification remains narrow. This stagnation is due to structural weaknesses like inadequate infrastructure, poor access to finance, policy inconsistency, and over-reliance on oil. Odioemelam (2018) and Madugba, Ekwe, and Kalu (2015) stress that Nigeria has struggled to expand its non-oil sectors due to weak institutions, low productivity, and lack of support for local industries. Even under democratic regimes, policy implementation has often been slow or poorly monitored. The implication is that while macro-level indicators improved post-democracy, the structural transformation of the economy has not kept pace, limiting the potential of democratic dividends to translate into long-term, inclusive development.

In a nutshell, the findings reveal that democratic governance in Nigeria has positively impacted GDP growth, trade openness, exchange rate liberalization, and FDI inflows. However, the lack of significant progress in non-oil export diversification suggests that democracy alone is insufficient without deliberate, sector-specific strategies to develop local industries and enhance productive capacity. Therefore, for Nigeria to fully leverage democratic gains, there must be a focus on building competitive non-oil sectors through investment in infrastructure, skills development, and industrial policy reforms.

V. CONCLUSION

In conclusion, this study has explored the impact of Nigeria’s governance transition on key macroeconomic indicators, specifically focusing on export diversification and its main determinants. The analysis of both the dummy variable approach and paired sample t-test reveals significant improvements in GDP growth, trade openness, exchange rates, and foreign direct investment post-democratization. These findings suggest that democracy in Nigeria has facilitated better economic management, enhanced foreign investment, and greater trade liberalization, supporting the notion that democratic regimes foster macroeconomic stability and growth.

However, the study also highlights a notable exception regarding non-oil exports, which did not exhibit significant improvement under democratic governance. Despite increased macroeconomic performance, non-oil export diversification remains a challenge due to systemic structural weaknesses, policy constraints, and underdeveloped infrastructure. This finding underscores the importance of targeted policy interventions aimed at diversifying Nigeria’s export base, which will require more than just political

change. Sustainable progress in non-oil export growth will demand comprehensive industrial policies, improved competitiveness, and better support for sectors outside the oil industry.

Overall, the study provides valuable insights into the relationship between democratic governance and economic performance in Nigeria. While democratization has clearly led to positive macroeconomic outcomes, its benefits have not been fully realized in the diversification of exports. Future research should focus on identifying specific policy levers and reforms that can drive non-oil export growth and reduce the country's over-reliance on oil revenues. The findings also have important implications for policymakers and stakeholders aiming to leverage democratic institutions to foster broader economic development and sustainable growth.

VI. POLICY RECOMMENDATIONS

Based on the findings, the following recommendations are germane to effective repositioning of the export base of Nigeria for sustainable economic performance: Despite improvements in overall macroeconomic indicators, the lack of significant progress in non-oil exports highlights the need for targeted policies to diversify Nigeria's export base. Policymakers should prioritize infrastructure development, export-oriented industries, and reduce the over-reliance on the oil sector. The substantial increase in trade openness post-democratization suggests that continued efforts to liberalize trade and improve market access are critical. Nigeria should seek to further integrate into regional and global markets through trade agreements, fostering competition and innovation.

The positive shift in FDI post-democracy demonstrates the importance of creating a favorable investment climate. Policymakers should focus on improving the ease of doing business, ensuring political stability, and enhancing investor protections to sustain and increase foreign investment flows. The improvements in GDP growth and exchange rates post-democracy emphasize the role of consistent economic reforms. Nigeria should continue its commitment to sound fiscal and monetary policies, with a focus on reducing inflation and enhancing macroeconomic stability.

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