ECONOMIC FREEDOM AND ECONOMIC GROWTH IN NIGERIA

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Abstract

Nigeria has consistently pursued sustainable economic growth, aligning with the Sustainable Development Goals (SDGs), yet challenges such as regulatory inefficiencies and market distortions persist. Economic freedom, which includes trade openness, property rights, and investment policies, is considered a crucial driver of growth, but its precise impact in Nigeria remains unclear. This study investigated the effect of economic freedom on economic growth in Nigeria from 1980 to 2023. The Autoregressive Distributed Lag (ARDL) model and the frequency domain Granger causality test were employed for the analysis. The findings revealed that economic freedom had a negative and significant impact on economic growth in both the short run and long run, suggesting that increased economic freedom may have led to market inefficiencies, regulatory weaknesses, and unequal wealth distribution, which hindered overall economic performance. Furthermore, the causality test showed no evidence of a causal relationship between economic freedom and economic growth in Nigeria, indicating that neither variable drives the other. Based on these findings, the study recommended that policymakers focus on implementing balanced regulatory frameworks that promote economic freedom while ensuring effective market oversight, fair competition, and institutional stability to foster sustainable economic growth.

Keywords: Economic freedom, economic growth, foreign direct investment, secondary school enrollment

INTRODUCTION

Countries across the globe recognize economic growth as a foundational pillar for achieving development and improving living standards (Prabhakar, 2025; Adanma & Ogunbiyi, 2024). In alignment with this global aspiration, the United Nations Sustainable Development Goal 8 specifically calls for sustained, inclusive, and sustainable economic growth, along with productive employment and decent work for all. Central to realizing this goal is the creation of a conducive economic environment that supports enterprise, innovation, and investment (Islam, 2025). In Nigeria, economic growth has remained a critical focus of national development plans, and in response, the government has increasingly adopted policies aimed at enhancing economic freedom. This concept, rooted in reducing excessive government intervention and promoting market-driven resource allocation, is believed to stimulate entrepreneurial activity and improve overall economic performance (Okunlola & Ayetigbo, 2022; Okunlola & Akinlo, 2021).

Economic freedom refers to the ability of individuals and businesses to make economic decisions without excessive government restrictions, provided that these decisions respect the rule of law and property rights (de Haan & Sturm, 2024; Miller et al., 2022). It includes several dimensions, including business freedom, trade openness, property rights protection, financial market efficiency, regulatory effectiveness, and investment freedom (Hung et al., 2024). Countries with higher levels of economic freedom typically experience increased innovation, higher productivity, and greater capital inflows, all of which contribute to long-term economic expansion. In Nigeria, economic freedom has evolved over time, influenced by structural reforms, policy adjustments, and changing governance frameworks. Key policies, such as trade liberalization, financial sector deregulation, and business-friendly initiatives, have been implemented to create a more market-driven economy. However, challenges such as weak institutions, regulatory inefficiencies, and corruption continue to impact the country's overall economic freedom (Frances et al., 2023; Akanle & Shittu, 2022; Olubiyi et al., 2022).

Over the years, various policies have been implemented in Nigeria to stimulate economic growth, including trade liberalization, financial sector reforms, privatization, and deregulation. These policies aim to create a more market-driven economy, reduce government intervention, and encourage private sector participation. For instance, the Structural Adjustment Program (SAP) of the late 1980s sought to liberalize trade and promote a competitive market system. Additionally, the National Economic Empowerment and Development Strategy (NEEDS) and Vision 2020

focused on enhancing macroeconomic stability, improving governance, and fostering private-sector-led growth. These initiatives align with the principles of economic freedom, as they emphasize reduced government control, stronger property rights, and improved regulatory efficiency. However, despite these efforts, Nigeria's economic growth has remained volatile, raising concerns about whether greater economic freedom truly translates into sustained economic expansion (Shuaibu et al., 2021).

The relationship between economic freedom and economic growth remains inconclusive, as studies present conflicting views. Some researchers, such as Huynh (2024), Cervelló-Royo et al., (2023), and D'Agostino et al., (2023), argue that excessive economic freedom can hinder growth in developing nations due to weak institutions and regulatory failures. In contrast, Adam et al. (2024), Ahmed et al., (2023), and Tunçsiper (2023) suggest that economic freedom promotes growth by enhancing competition, innovation, and investment. Additionally, causality studies have yielded diverse outcomes, with some findings suggesting that economic freedom drives growth (Ciftci & Durusu-Ciftci, 2022; Majeed et al., 2021) while others indicate that economic growth leads to greater economic freedom (Huynh, 2024; de Soysa, 2022). This divergence in findings and ambiguity in the direction of causality creates a policy dilemma, making it difficult to determine the best economic strategy for sustained development. This study was justified as it examined the effect of economic freedom on economic growth and extended existing literature by analyzing the causal relationship using a frequency domain approach, which provided a more understanding perspective compared to the traditional time domain methods employed in most previous studies. Given Nigeria's commitment to the SDGs and the ongoing efforts to liberalize its economy, examining the effect of economic freedom on growth is not only timely but essential for informing policy decisions that align with both national and global development objectives.

Aside from the introduction, the rest of the paper is structured as follows: Section 2 presents the literature review, discussing theoretical and empirical perspectives on economic freedom and growth. Section 3 outlines the materials and methods, detailing the data sources, model specifications, and estimation techniques. Section 4 provides the empirical results, analyzing the findings and their implications. Finally, Section 5 offers the conclusion and recommendations, suggesting policy measures based on the study's results.

LITERATURE REVIEW

Conceptual Review

The Heritage Foundation describes economic freedom as a state where individuals and businesses can produce, distribute, and consume goods and services with minimal government interference, except for necessary regulations that protect and uphold citizens' rights and liberties. According to their definition, The Economic Freedom Index is structured around four key dimensions, each comprising three specific components. The rule of law includes property rights, government integrity, and judicial effectiveness, reflecting the legal framework that upholds economic activity. Government Size incorporates government spending, tax burden, and fiscal health, indicating the extent of state intervention in the economy. Regulatory Efficiency consists of business freedom, labor freedom, and monetary freedom, measuring how conducive the regulatory environment is for economic participation and the open markets which includes trade freedom, investment freedom, and financial freedom, assessing the ease of cross-border economic activities and financial transactions (Hung *et al.,* 2024; Miller et al., 2022; Dialga & Vallée, 2021).

Economic growth is typically understood as the increase in a nation's capacity to produce goods and services, reflecting its ability to generate more output over time while excluding the effects of inflation (Gomado, 2025; Olawale & Obinna, 2023). According to Silvia et al., (2023) as well as Okpabi et al., (2021), this growth occurs when there is a rise in the production of goods and services for a certain period as compared with a previous one. It is generally measured in terms of GDP and is an indicator of the economic health of a country. This growth is often achieved through the accumulation of wealth, investment in human capital, and technological advancements (Almutairi, 2024).

Stylized Facts on Economic Growth and Economic Freedom in Nigeria

Figure 1 illustrates the fluctuating trends in economic growth and economic freedom in Nigeria from 1980 to 2023. The country experienced several periods of economic downturn, notably in the early 1980s, 1986, 1989, 1994, 1999, 2016, 2020, and recently in 2023. These downturns can largely be attributed to policy-related factors, such as the adoption of structural adjustment programs in the 1980s, which led to economic contraction, high inflation, and increased unemployment. Other contributing factors include political instability, the fall in oil prices, and inconsistent fiscal policies. For instance, the 1986 downturn occurred alongside Nigeria's adjustment to the World Bank and the IMF's austerity measures, which significantly affected public

spending and private investment. The 2020 recession was largely driven by the COVID-19 pandemic, which severely disrupted global trade and domestic production. Economic instability, external shocks, and a lack of comprehensive long-term policies have resulted in periods of stagnation and contraction, with a declining trend seen in 2023.

On the other hand, economic growth has seen an upward path during some periods, particularly in 1990 and 2002, marked by economic reforms and recovery efforts. The sharp upswing in these years can be attributed to efforts to stabilize the economy, such as the adoption of economic reforms and the liberalization of trade policies in the 1990s, which stimulated both domestic production and foreign investments. Similarly, the improvement in the country's economic freedom, which has generally risen over time, can be attributed to policy shifts towards market-driven economies, deregulation, and efforts to improve the ease of doing business. However, the slight downturn in 2008, corresponding with the global financial crisis, highlights the vulnerability of Nigeria's economy to external shocks. Since then, the country has witnessed both upswing and downswing trends in economic freedom, driven by factors such as fluctuating oil prices, institutional reforms, and the continuous struggle to balance the regulatory environment with economic liberalization.

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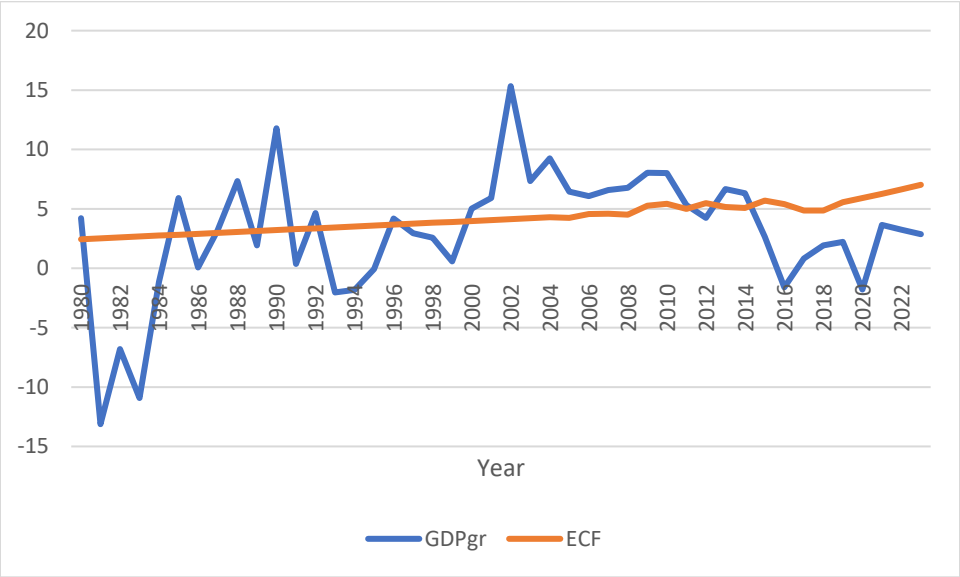

Figure 1: Trend of economic Growth and Economic Freedom in Nigeria, 1980 to 2023

Theoretical Review

This study is anchored on the Endogenous Growth Theory. The theory posits that economic growth is primarily driven by internal factors, such as technological advancements, human capital development, and innovation, rather than solely by external influences or diminishing returns to capital. In this framework, economic freedom plays a critical role in fostering an environment conducive to innovation, knowledge spillovers, and investment in human and physical capital, which are all key drivers of sustained economic growth.

The theory emphasizes that policies which improve economic freedom such as reducing barriers to trade, promoting competition, and strengthening property rights can lead to higher rates of innovation and accumulation of human capital. In turn, these factors contribute to continuous economic growth without necessarily facing diminishing returns. Unlike traditional growth theories such as the Solow exogenous growth model, which view technological progress as an external factor, the Endogenous Growth Theory asserts that policy decisions, such as ensuring economic freedom, can directly affect the rate of technological innovation and productivity improvements.

Mathematically, the model is expressed as:

$$Y_t = A_t K_t^{\alpha} L^{1-\alpha} \quad 1$$

Equation 1 represents the Cobb-Douglas production function, which shows that output (Y_t) at time t is produced using capital (K_t) and labor (L_t), with total factor productivity (A_t) capturing technological progress, and α representing the output elasticity of capital (with $0 < \alpha < 1$). In the context of endogenous growth, technological progress A_t is assumed to be a function of the stock of knowledge or human capital in the economy. The relationship between A_t and economic freedom can be captured through the model

$$A_t = \beta_0 + \beta_1 E_t \quad 2$$

Where A_t is the level of technological progress at time *t*. E_t represents the degree of economic freedom at time β_0 is a constant term and β_1 represents the coefficient that measures the impact of economic freedom on technological progress.

The Cobb-Douglas production function is theoretically relevant because it provides a fundamental framework for understanding how inputs capital and labor combine to produce output within an economy, while also incorporating the role of technology through total factor productivity. This model captures the concept of returns to scale and input substitutability, allowing economists to analyze how changes in capital accumulation, labor force, or technological progress impact

economic growth. Its widespread use in growth theory and empirical studies makes it a critical tool for examining the determinants of economic performance, policy effects, and long-term development patterns, thereby offering a solid theoretical foundation for studies investigating the drivers of economic growth.

Empirical Review

Omojuyigbe et al., (2024) investigated the impact of property rights protection on economic growth in Nigeria, using an institutional economics perspective. The study analyzed real GDP, property rights protection, and investment freedom from 1995 to 2021, employing both the unrestricted vector autoregressive (UVAR) along with the Johansen Cointegration test. The results indicated that long run relationship exist among the variables, however, while the lagged value of GDP had a positive relationship with RGDP, both property rights protection and investment freedom negatively impacted RGDP and were insignificant.

Huynh (2024) assessed the effect of economic freedom on income inequality across 35 Asian economies for the period spanning 2000 to 2018, employing the Kuznets curve as the analytical framework. His findings indicated that, in the short run, economic freedom was associated with an increase in income inequality, suggesting that initial market liberalization and policy reforms may have disproportionately benefited certain segments of the population, leading to a widening gap between the rich and the poor. However, in the long run, the study concluded that economic freedom contributed to a reduction in income inequality.

Yang et al., (2023) examined the role of economic freedom and inclusive growth in financial development, focusing on seventy-two less financially developed countries. They analysed annual for data for the period 2009 to 2017. The GMM estimator and panel-corrected standard errors (PCSE) linear regression was employed to analyse the data. Their findings showed that economic freedom and inclusive growth significantly contribute to financial development.

Musamba et al., (2022) investigated the influence of value-added components of gross domestic product on economic freedom in sub-Saharan Africa during the period 1995 to 2019. The Fixed Effects and the Generalised Method of Moments estimators was used to analyse the data. The findings suggested that indicate that both value-added growth components of industry and service sectors positively and significantly influences economic freedom. The effect was however negative with respect to value-added from agriculture sector

Sekunmade (2021) examined the impact of foreign direct investment and economic freedom on economic growth in Nigeria from 1995 to 2018. The study analyzed the collected data using the Vector Autoregressive (VAR) estimation technique alongside the Granger causality test. The findings revealed that the combined effect of foreign direct investment and economic freedom had a negative and insignificant impact on economic growth in Nigeria. Additionally, the study identified a unidirectional causality running from economic growth to both economic freedom and foreign direct investment during the period and no feedback.

Materials and Method

Data requirement and Source

The study employed time series data on Nigeria for the period covering 1980 to 2023. The data used GDP growth (annual %), economic freedom index, school enrolment, secondary (% gross), inflation, consumer prices (annual %), and foreign direct investment net inflow (% GDP). The data are sourced from the World Development Indicators.

Model Specification

To investigate the effect of economic freedom on economic growth in Nigeria, the functional form of the model takes the form

$$GDPgr_t = (ECF_t, FDI_t, SSE_t, INF_t) \quad 3$$

Where:

$GDPgr_t = G$rowth rate of GDP at time t

$ECF_t =$ Economic freedom index

$FDI_t =$ Foreign Direct Investment (% of GDP)

$INF_t =$ Inflation Rate

$SSE_t =$ Secondary School Enrollment

Equation 3 is specified in its mathematical form as

$$GDPgr_t = \beta_0 + \beta_1 ECF_t + \beta_2 FDI_t + \beta_3 SSE_t + \beta_4 INF_t + \varepsilon_t \quad 4$$

Where β_0 is constant, $\beta_1 - \beta_4$ = Coefficient of the independent variables and ε_t is the error term. Although the primary objective of this paper is to examine the effect of economic freedom on economic growth in Nigeria, foreign direct investment (FDI), secondary school enrollment (SSE), and inflation (INF) are included as control variables, as they are widely recognized in the literature as key determinants of economic growth. Equation 4 is respecified in its logarithmic form to address non-linearity, minimize heteroscedasticity, and enhance the interpretability of the

coefficients. This is because applying the natural logarithm to the variables enables the estimation of elasticities, and also allows the coefficients to be interpreted as percentage changes in the dependent variable resulting from a one-percent change in the independent variables. The equation therefore takes the form:

$$lnGDPgr_t = \beta_0 + \beta_1 lnECF_t + \beta_2 lnFDI_t + \beta_3 lnSSE_t + \beta_4 lnINF_t + \varepsilon_t \quad 5$$

Where: β_0 is the constant term, $\beta_1 - \beta_4$ are the coefficients of the independent variables, indicating their elasticities, and ε_t is the error term. On apriori, we expect $\beta_1 > 0$, as greater economic freedom is likely to enhance economic growth. $\beta_2 > 0$, as increased FDI inflows can stimulate growth through capital formation and technology transfer. $\beta_3 > 0$, as higher education levels contribute to a more skilled workforce, fostering economic growth and $\beta_4 < 0$, as high inflation can distort investment decisions and reduce purchasing power, negatively affecting growth.

Estimation Techniques

This paper employs the Autoregressive Distributed Lag (ARDL) model, as proposed by Pesaran et al. (2001). The ARDL approach is well-suited for analyzing time series data with variables integrated at different orders, specifically I(0) and I(1). Additionally, it helps to address endogeneity concerns, thereby enhancing the reliability of the parameter estimates. The ARDL representation of Equation 3 is specified as follows:

$$\Delta lnGDPgr_t = \beta_0 +$$
$$\sum_{i=1}^{p} \beta_1 \Delta lnGDPgr_{t-i} + \sum_{i=1}^{p} \beta_2 \Delta lnECF_{t-i} + \sum_{i=1}^{p} \beta_3 \Delta lnFDI_{t-i} + \sum_{i=1}^{p} \beta_4 \Delta lnSSE_{t-i} + \sum_{i=1}^{p} \beta_5 \Delta lnINF_t +$$
$$\lambda_1 lnGDPgr_{t-1} + \lambda_2 lnECF_{t-1} + \lambda_3 FDI_{t-1} + \lambda_4 lnSSE_{t-1} + \lambda_5 lnINF_{t-1} + \varepsilon_t \quad 4$$

Where: Δ denotes first difference, capturing short-run dynamics; β_0 is the constant term, $\beta_1 - \beta_5$ represent the short-run coefficients, $\lambda_1 - \lambda_5$ represent the long-run coefficients and p is the optimal lag length and ε_t is the error term.

To determine the direction of causality between economic freedom (ECF) and economic growth (GDPgr) in Nigeria, the Breitung-Candelon-Granger (BCG) causality test was employed. This test is particularly useful as it extends the traditional Granger causality approach by analyzing causality across different frequencies, allowing for the distinction between short-run, medium-run, and long-run causal relationships. This is important because economic relationships may not be constant over time and policies influencing economic freedom may have immediate, delayed, or persistent effects on growth, and vice versa.

The BCG causality test is specified as follows:

$$GDPgr_t = \sum_{i=1}^{p} \alpha_i GDPgr_{t-i} + \sum_{i=1}^{p} \beta_i ECF_{t-1} + \varepsilon_t \quad 5$$

$$ECF_t = \sum_{i=1}^{p} \gamma_i ECF_{t-i} + \sum_{i=1}^{p} \delta_i GDPgr_{t-1} + \eta_t \quad 6$$

Where: p represents the optimal lag length. α_i, β_i, γ_i and δ_i are the coefficients to be estimated and ε_t and η_t are the error terms.

RESULTS

Table 1 presents the descriptive statistics for all the variables used in the study. The GDP Growth Rate (GDPGR) recorded a mean value of 3.069%, with a standard deviation of 5.197%, indicating significant fluctuations in economic performance. The maximum growth rate of 15.329% reflects periods of strong economic expansion, while the minimum value of -13.128% suggests times of economic contraction. This variability shows the cyclical nature of Nigeria's economy, influenced by domestic policies, global economic conditions, and structural challenges.

The economic freedom had an average score of 4.216, with a standard deviation of 1.177, showing moderate variations in the degree of economic freedom over the years. The minimum and maximum value recorded was 2.437 and 7.023 which indicated that some period faced restrictive economic policies while regulatory improvement are recorded in some periods.

Foreign Direct Investment (FDI), measured as a percentage of GDP, had a mean value of 1.167%, with a standard deviation of 1.001%, signifying notable variations in foreign investment inflows. The maximum FDI inflow of 4.282% highlights periods of strong investor confidence, whereas the minimum value of -1.151% indicates episodes of net capital outflows, likely due to economic uncertainty or unfavorable investment conditions. These shifts suggest the sensitivity of FDI to macroeconomic stability and policy changes in Nigeria.

Secondary School Enrollment (SSE), expressed as a percentage of eligible students enrolled, had a mean value of 31.776%, with a standard deviation of 11.336%, indicating substantial differences in access to secondary education over time. The maximum enrollment rate of 54.883% signifies improvements in educational participation, while the minimum value of 13.338% reflects periods of severe educational constraints.

Inflation Rate (INFR), measured as an annual percentage, had a mean value of 18.873%, with a standard deviation of 16.149%, reflecting considerable volatility in price levels over time. The

highest inflation rate in the country over the period used was 72.836% which suggested that the country faced extreme economic instability in some periods and currency depreciation, while the lowest rate recorded in the country was 5.388%.

Table 1: Descriptive Statistics

	GDPGR	ECF	FDI	SSE	INFR
Mean	3.069	4.216	1.167	31.776	18.873
Median	3.449	4.093	0.961	29.809	12.942
Maximum	15.329	7.023	4.282	54.883	72.836
Minimum	-13.128	2.437	-1.151	13.338	5.388
Std. Dev.	5.197	1.177	1.001	11.336	16.149
Observations	44	44	44	44	44

Source: Researcher, 2025

Correlation

Figure 1 presents the correlation graph for the variables used in the study, illustrating the relationships between economic freedom, foreign direct investment, secondary school enrollment, inflation, and economic growth in Nigeria. The results indicate a positive and significant correlation between economic freedom and GDP growth ($r = 0.400$, $\rho < 0.05$), suggesting that greater economic freedom is associated with higher economic growth. Similarly, foreign direct investment (FDI) and GDP growth ($r = 0.280$), as well as secondary school enrollment (SSE) and GDP growth ($r = 0.292$), exhibit positive correlations, implying that increased investment inflows and higher school enrollment contribute to economic expansion. Conversely, inflation (INF) and GDP growth show a negative correlation ($r = -0.195$), indicating that rising inflation is linked to lower economic growth in Nigeria.

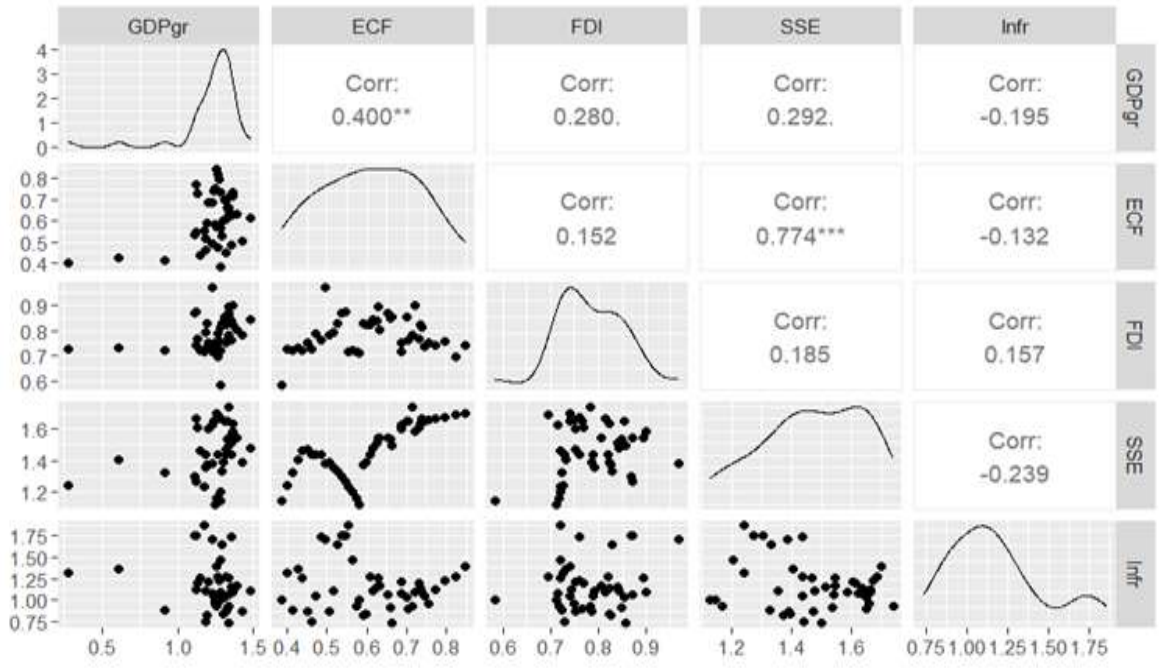

Figure 1: Correlation Graph

Unit Root Test

Table 3 presents the results of the unit root test conducted to examine the stationarity properties of all the variables used in the study. Testing for stationarity is crucial, as failing to do so may result in spurious regression. To ensure reliable results, both the Phillips-Perron (PP) and Augmented Dickey-Fuller (ADF) tests were employed. The findings reveal that GDP growth rate (GDPGR), foreign direct investment (FDI), and inflation rate (INF) were stationary at level I(0), while economic freedom (EF) and secondary school enrollment (SSE) became stationary only after first differencing, indicating integration at I(1). Since the variables are a combination of I(0) and I(1) and none were integrated at a higher order, this justifies the application of the Autoregressive Distributed Lag (ARDL) model, which is suitable for analyzing long-run relationships in the presence of mixed integration levels.

Table 3: Unit Root Test

	Phillip Perron			ADF		
	Level	First Diff	Order of Int	Level	First Diff	Order of Int
GDPgr	-4.471***		I(0)	-4.364		I(0)
	(0.000)			(0.012)		
EF	-0.140	-6.879***	I(1)	-1.316	-4.495	I(1)
	(0.938)	(0.000)		(0.611)	(0.001)	
FDI	-4.344***		I(0)	-4.343		I(0)
	(0.001)			(0.001)		
SSE	-1.755	-5.571	I(1)	-1.599	-5.573	I(1)
	(0.397)	(0.000)		(0.474)	(0.000)	
INF	-3.488**		I(0)	-3.624		I(0)
	(0.013)			(0.009)		

Cointegration Test

The Bound Test was conducted to examine the existence of a long-run relationship among the variables, and the results were presented in Table 4. According to the test criteria, an F-statistic below the lower bound (I(0)) indicated no long-run relationship, a value between the lower and upper bounds suggested an inconclusive result, while an F-statistic exceeding the upper bound confirmed the presence of a long-run relationship. The test result showed an F-statistic of 5.599***, which was higher than all critical values at the 10%, 5%, 2.5%, and 1% significance levels. This confirmed the existence of a long-run relationship among the variables, implying that economic freedom, foreign direct investment, secondary school enrollment, and inflation had persistent and long-term effects on economic growth in Nigeria.

Table 4: Bound Test

Significance	I(0) Bound	I(1) Bound	F-Statistics
10%	2.45	3.52	5.999***
5%	2.86	4.01	
2.50%	3.25	4.49	
1%	3.74	5.06	

Source: Author, 2025

Short-Run and Long Run Effect

Table 5 presented the short-run and long-run effects of economic freedom on economic growth, along with other control variables. The findings revealed an inverse relationship between

D(GDPGR(-1)) and GDP growth in the short run. Specifically, a 1% increase in D(GDPGR(-1)) led to a 0.224% reduction in GDP growth, with the result being statistically significant (ρ<0.05). This finding could imply that past economic performance was unsustainable and that the economy might have been experiencing growth driven by temporary factors that were not sustainable over the long run.

The first difference of economic freedom D(ECF) impacted negatively on economic growth in the short-run but was insignificant with (ρ<0.05). Specifically, holding all other factors constant, a 1% increase in D(ECF) will lead to a fall in economic growth by 0.192%. This result is suggests that, in the short run, economic freedom does not have a significant impact on GDP growth in Nigeria. The absence of a significant relationship could be due to delays in the structural adjustments required for economic freedom to influence growth or the inability of the regulatory environment to fully leverage the benefits of economic freedom in the short run.

The short run effect of FDI on economic growth does not conform with a priori expectation. From the findings, foreign direct investment (FDI) has a significant negative effect on GDP growth in the short run. Specifically, a 1% increase in FDI results in a 0.922% reduction in GDP growth, suggesting that while foreign investment may bring in capital, it might not have contributed positively to economic growth in the immediate term. This could be due to the poor quality of investments or ineffective channels through which FDI impacts the economy.

The lagged first difference of Foreign Direct Investment (FDI) in the short run was inversely related to GDP growth in Nigeria. The result however does not conform with theoretical a priori expectation. Specifically, holding all other factors constant, a 1% increase in the lagged value of FDI reduces economic growth by 0.482%. The result was statistically insignificant at the 5% level. This implies that the lagged effects of FDI are not significant in influencing current GDP growth in the short run, reinforcing the notion that FDI may take time to have a meaningful impact in the country.

The short-run effect of secondary school enrollment on economic growth in Nigeria was positive but not statistically significant. Specifically, a 1% increase in secondary school enrollment led to a 0.090% increase in economic growth. This aligns with theoretical expectations, as higher enrollment in secondary education is expected to enhance human capital development, improve workforce productivity, and contribute to long-term economic expansion. However, the lack of statistical significance $\rho > 0.05$. suggests that in the short run, other factors such as the quality of

education, skill mismatches, or structural economic constraints may have limited the immediate impact of increased enrollment on growth

The short-run effect of inflation D(INFR) on economic growth was negative, aligning with a priori expectations. This indicates that in the short run, rising inflation adversely impacts GDP growth, likely due to economic instability, increased production costs, and reduced consumer purchasing power, which in turn weakens investment and productivity. The coefficient suggests that a 1-percentage-point increase in inflation reduces economic growth by 0.216%, which highlights the contractionary impact of inflationary pressures on Nigeria's economy. However, the lagged effect of inflation D(INFR(-1)) showed a positive relationship with economic growth, implying that past inflationary trends may have contributed to higher nominal growth rates, possibly due to adaptive expectations or inflation-driven revenue expansion in certain sectors.

The coefficient for CointEq(-1) was -0.312 with $\rho<0.05$, indicating a statistically significant speed of adjustment. This implies that approximately 31.2% of any short-run disequilibrium in economic growth was corrected each period, guiding the economy back toward its long-run equilibrium. The negative sign confirms that deviations from equilibrium were gradually reduced over time, reinforcing the notion that Nigeria's economy exhibited a tendency to stabilize and align with its long-term growth path.

In the long run, the results indicated that economic freedom had a negative impact on economic growth in Nigeria, contrary to theoretical expectations. Specifically, a 1% increase in economic freedom led to a 0.616% decline in economic growth, and the result was statistically significant at $\rho < 0.05$. This unexpected outcome could be attributed to weak institutional frameworks, poor regulatory enforcement, and structural inefficiencies that hinder the benefits of economic freedom. The result aligns with the findings of Odusote and Bello (2024), Umotong (2023), Huynh (2024), and Cervelló-Royo et al. (2023), who argued that in Nigeria, greater economic freedom may have contributed to market distortions, unchecked monopolistic practices, and regulatory loopholes that primarily benefited a select few while hindering broader economic development.

Foreign direct investment (FDI) had a negative but statistically insignificant impact on economic growth in Nigeria. The coefficient of -0.291 suggests that a 1% increase in FDI reduced economic growth by 0.291%, but the effect was not significant ($\rho > 0.05$). This result may be due to the dominance of resource-seeking rather than efficiency-seeking FDI in Nigeria, where foreign investments are primarily concentrated in the extractive sector rather than in industries that

promote long-term growth. Additionally, weak institutional frameworks, corruption, and policy uncertainties may have limited the expected positive spillover effects of FDI on productivity and innovation, leading to its neutral or even adverse impact on growth. The result are in line with findings by (Olorogun et al, 2021; Sare et al, 2025)

Conversely, secondary school enrollment (SSE) had a positive and significant effect on economic growth in the long run. The coefficient of 0.288 implies that a 1% increase in SSE led to a 0.288% rise in GDP growth, with statistical significance with $\rho < 0.05$. This finding aligns with economic theories that emphasize human capital development as a critical driver of growth. Increased school enrollment enhances labor productivity, fosters innovation, and equips the workforce with the necessary skills for economic transformation. The positive impact suggests that investments in education yield long-term benefits by improving the quality of human capital, which ultimately enhances economic performance. The study supported the outcome by Almutairi, (2024); Ziberi et al, 2022)

Inflation exerted a negative and significant impact on economic growth in the long run. The coefficient of -0.733 indicates that a 1%-point increase in inflation reduced GDP growth by 0.733%, with $\rho < 0.05$, confirming statistical significance. This result suggests that persistent inflationary pressures erode purchasing power, increase production costs, and create economic uncertainty, all of which dampen investment and productivity. In Nigeria, high inflation has been driven by structural bottlenecks, exchange rate volatility, and fiscal imbalances, which have constrained long-term growth. The study supported the findings by Joseph *et al* (2025); Chukwuka and Chukunalu (2025).

Table 5: Short-Run and Long -Run Results

Short-Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GDPGR(-1))	-0.224	0.094	-2.393	0.023
D(ECF)	-0.192	0.234	-0.820	0.418
D(FDI)	-0.922	0.354	-2.607	0.014
D(FDI(-1))	-0.482	0.313	-1.543	0.133
D(SSE)	0.090	0.178	0.505	0.617
D(INFR)	-0.216	0.067	-3.239	0.003
D(INFR(-1))	0.302	0.094	3.218	0.003
CointEq(-1)	-0.312	0.134	-2.330	0.027
Long Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
ECF	-0.616	0.234	-2.634	0.014
FDI	-0.291	1.263	-0.230	0.820
SSE	0.288	0.105	2.743	0.012
INFR	-0.733	0.318	-2.305	0.036
C	3.193	1.790	1.784	0.084

Source: Author, 2025

Causality Test

The direction of causality between economic freedom and economic growth was examined using the frequency domain causality test proposed by Breitung and Candelon (2006). The results revealed no evidence of causality running in either direction between the two variables in Nigeria. This implies that economic freedom does not inherently drive economic growth in the country, nor does economic growth necessarily lead to greater economic freedom. The absence of causality suggests that while economic freedom may positively influence growth in both the short and long run, other underlying structural factors such as institutional quality, governance effectiveness, and macroeconomic stability likely play a more decisive role in determining Nigeria's economic trajectory. The economic implication of this finding is that policies focused solely on liberalization and market openness may yield limited results if not complemented by comprehensive institutional and structural reforms. Therefore, for economic freedom to translate into meaningful and sustained growth, it must be part of a broader, well-coordinated policy framework that addresses the foundational challenges of the economy.

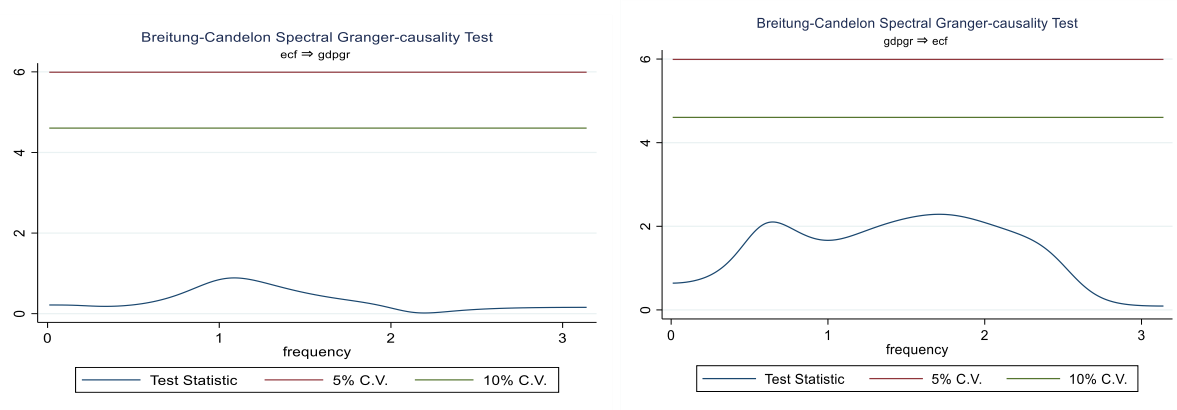

Figure 2: Causality Graph

CONCLUSION

This study examined the effect of economic freedom on economic growth in Nigeria from 1990 to 2023. The findings revealed that economic freedom exerted a significant negative impact on economic growth in both the short run and long run. This suggests that while liberalization policies may have been introduced to promote growth, their implementation may have led to unintended consequences such as market distortions, weak regulatory enforcement, and monopolistic tendencies that ultimately hindered inclusive and sustainable development. Furthermore, foreign direct investment (FDI) and inflation were also found to have a negative long-run effect on growth, indicating that FDI inflows may not have been effectively channeled into productive sectors due to challenges such as poor investment policies, corruption, and infrastructural deficits. In contrast, secondary school enrollment exhibited a positive and significant long-run impact on economic growth, highlighting the critical importance of human capital development in fostering economic advancement. Additionally, the causality analysis showed no directional relationship between economic freedom and economic growth, suggesting that neither variable significantly influenced the other within the Nigerian context during the period under review**.**

RECOMMENDATION

In light of the findings, it is recommended that policymakers reevaluate the structure of economic freedom by adopting a balanced approach that promotes openness while ensuring robust regulatory oversight to prevent market failures and monopolistic practices. There should be concerted efforts to reform the investment climate by enhancing the ease of doing business, curbing corruption, and ensuring that FDI is directed toward productive sectors. At the same time, the government must

invest in expanding access to and improving the quality of secondary education to build a skilled and competitive workforce. Additionally, maintaining macroeconomic stability through stringent monetary policies to control inflation is essential. A holistic policy framework that integrates regulatory efficiency, institutional quality, human capital development, and investor confidence will be key to achieving inclusive and sustainable economic growth in Nigeria.

References

Adam, B. M., Sarpong-Kumankoma, E., & Fiador, V. (2024). Economic freedom, corruption and bank stability: evidence from sub-Saharan Africa. *Journal of Financial Crime*, *31*(4), 781-794.

Adanma, U. M., & Ogunbiyi, E. O. (2024). A comparative review of global environmental policies for promoting sustainable development and economic growth. *International Journal of Applied Research in Social Sciences*, *6*(5), 954-977.

Ahmed, S., Mushtaq, M., Fahlevi, M., Aljuaid, M., & Saniuk, S. (2023). Decomposed and composed effects of economic freedom on economic growth in south Asia. *Heliyon*, *9*(2).

Akanle, O., & Shittu, O. S. (2022). The unending development question of Nigeria. *The European Journal of Development Research*, *34*(1), 321-342.

Almutairi, N. T. (2024). Does investment in human capital via education stimulate economic growth in an oil-rich country? A case study of Saudi Arabia. *Journal of the Knowledge Economy*, *15*(1), 2933-2955.

Breitung, J., & Candelon, B. (2006). Testing for short-and long-run causality: A frequency-domain approach. *Journal of econometrics*, *132*(2), 363-378.

Cervelló-Royo, R., Devece, C., & Blanco-González Tejero, C. (2023). Economic freedom influences economic growth and unemployment: an analysis of the Eurozone. *Economic research-Ekonomska istraživanja*, *36*(2). 2175007.

Chukwuka, M. F., & Chukunalu, M. (2025). Tradeoff between Inflation and Unemployment: Implications on the Growth of the Nigerian Economy. International Journal of Multidisciplinary Research and Growth Evaluation 6(1), 375-386.

Ciftci, C., & Durusu-Ciftci, D. (2022). Economic freedom, foreign direct investment, and economic growth: The role of sub-components of freedom. *The Journal of International Trade & Economic Development*, *31*(2), 233-254.

D'Agostino, E., De Benedetto, M. A., & Sobbrio, G. (2023). Does the economic freedom hinder the underground economy? Evidence from a cross-country analysis. *Economia Politica*, *40*(1), 319-341.

de Haan, J., & Sturm, J. E. (2024). The impact of economic freedom on economic growth. *Handbook of Research on Economic Freedom*, 189-207.

de Soysa, I. (2022). Economic freedom vs. egalitarianism: An empirical test of weak & strong sustainability, 1970–2017. *Kyklos*, *75*(2), 236-268.

Dialga, I., & Vallée, T. (2021). The index of economic freedom: Methodological matters. *Studies in Economics and Finance*, *38*(3), 529-561.

Frances, M., Ogbo, A., & Tanimu, A. (2023). Effect of Structural Constraints, Weak Institutional and Technical Capacities on the Rate of Globalization in a Developing Economy (Nigeria Inclusive). *Int. J. Innov. Sci. Res. Technol.*, *8*(1), 2281-2287.

Gomado, K. M. (2025). Impact of uncertainty on economic growth: The role of pro-market institutions in developing countries. *Kyklos*, *78*(1), 3-44.

Hung, N. T., Oanh, T. T. K., & Trang, C. T. T. (2024). The impact of economic freedom on economic growth in countries with high and low regulatory quality—lessons for Viet Nam. *Humanities and Social Sciences Communications*, *11*(1), 1-15.

Huynh, C. M. (2024). Economic freedom, economic development and income inequality in Asia: an analysis from the Kuznets curve perspective. *Journal of the Asia Pacific Economy*, *29*(2), 443-462.

Islam, H. (2025). Nexus of economic, social, and environmental factors on sustainable development goals: The moderating role of technological advancement and green innovation. *Innovation and Green Development*, *4*(1), 100183.

Joseph, T., Obikaonu, P., Alase, G., Lamidi, S., & Ridwan, D. (2025). Assessing the Short-and Long-Term Impact of Inflation Targeting Framework in Nigeria. *Applied Journal of Economics, Management and Social Sciences*, *6*(1), 11-23.

Majeed, M. T., Yu, Z., Maqbool, A., Genie, M., Ullah, S., & Ahmad, W. (2021). The trade-off between economic growth and environmental quality: does economic freedom asymmetric matter for Pakistan?. *Environmental Science and Pollution Research*, *28*, 41912-41921.

Miller, T., Kim, A. B., & Roberts, J. M. (2022). Economic freedom. *The Heritage Foundation*, 490.

Musamba, Z. M., Wu, J., Hongo, D. O., & Abban, O. J. (2022), *Journal of Economics, Finance and Management Studies, 5*(1), *188-204.*

Odusote, A., & Bello, B. (2024). The Matrixes of Bad Governance, Corruption and Insecurity in Nigeria. *Journal of African Interdisciplinary Studies*, *8*(1), 21-45.

Okunlola, O. C., & Akinlo, A. E. (2021). Does economic freedom enhance quality of life in Africa?. *International Review of Economics*, *68*(3), 357-387.

Okunlola, O. C., & Ayetigbo, O. A. (2022). Economic freedom and human development in ECOWAS: does political-institutional strength play a role?. *Journal of the Knowledge Economy*, *13*(3), 1751-1785.

Olorogun, L. A., Salami, M. A., & Bekun, F. V. (2022). Revisiting the Nexus between FDI, financial development and economic growth: Empirical evidence from Nigeria. *Journal of Public Affairs*, *22*(3), e2561.

Olubiyi, I. A., Emerole, U. A., & Adetula, A. F. (2022). Contemporary challenges to intellectual property rights in developing countries: looking beyond the laws (Nigeria as a case study). *IIC-International Review of Intellectual Property and Competition Law*, *53*(1), 5-30.

Omojuyigbe, S. T., Kwanashie, M., Ihuoma, A., & Olushola, T. S. (2024). Property rights protection and economic growth in Nigeria: An institution economic perspective. African Journal of Economics and Sustainable Development 7(1), 73-88.

Prabhakar, A. (2025). A Sustainable and Inclusive Economic Development: A Global Imperative: A Global Imperative. *Journal of Recycling Economy & Sustainability Policy*, *4*(1), 1-16.

Sare, Y. A., Amoah, J. O., & Bawuah, B. (2025). Assessing the impact of international trade and FDI in driving economic development in West Africa: the role of urbanization. *SN Business & Economics*, *5*(1), 1-30..

Sekunmade, J. O. (2021). FDI, economic freedom and economic growth of Nigeria. *Open Journal of Management Science (ISSN: 2734-2107)*, *2*(2), 01-16.

Shuaibu, M., Yusufu, M., Abdullahi, S. I., Shehu, K. K., & Adamu, M. B. (2021). What explains economic growth in Nigeria in the last three decades?—A dynamic modelling approach. *East African Scholars Multidiscip Bull*, *4*, 75-84.

Tunçsiper, Ç. (2023). The Effect of Economic Freedom and Human Development on Economic Growth: Panel Data Analysis for G7 Countries. *Journal of Recycling Economy & Sustainability Policy*, *2*(1), 28-33.

Umotong, I. (2023). The Hypocrisy of Value and the Fight Against Corruption. *GNOSI: An Interdisciplinary Journal of Human Theory and Praxis*, *6*(2), 138-151.

Yang, Z., Vitenu-Sackey, P. A., Hao, L., & Tao, Y. (2023). Economic freedom, inclusive growth, and financial development: A heterogeneous panel analysis of developing countries. *Plos one*, *18*(7), e0288346-e0288346.

Ziberi, B. F., Rexha, D., Ibraimi, X., & Avdiaj, B. (2022). Empirical analysis of the impact of education on economic growth. *Economies*, *10*(4), 89.