

Can Economies Grow Without Credible Governance?

Uchenna Nnanna ANYANWU¹ and Nneamaka Ifeoma ILECHUKWU²

Email corresponding Author: un.anyanwu@unizik.edu.ng or ucanyanwu@gmail.com

Department of Economics, Nnamdi Azikiwe University, Awka Nigeria¹

Division of Social & Behavioral Science, Snow College, Ephraim, Utah USA²

ABSTRACT

The study investigated how credible governance could affect economic growth using data from Nigeria. . The study used time series data covering a period of 28 years (1996 - 2023) and employed the ARDL technique to empirically study the effect of political instability on economic growth in Nigeria. The data used for the analysis were sourced from World Bank Development Indicators. The findings from the study revealed that regulatory quality exerted a significant and positive effect on economic growth in Nigeria, in the short run. Also, government effectiveness positively impacted economic growth in the short, while rule of law has a negative effect on economic growth in Nigeria, in the short run. The findings highlight the importance of long-term policies that will continue to build institutional quality so as to maximize its positive effect on the economy.

Key words , Economic Growth, Rent seeking, Rule law, Political stability, good governance, Regulatory quality

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Introduction

Sustained expansion in productive capacity remains one of the central ambitions of modern economies because it underpins improvements in welfare, poverty reduction, and social stability. Standard growth frameworks attribute long-run performance to the accumulation of capital and labor, improvements in technology, and gains in human capital. More recent contributions place institutions and policy credibility at the center of the growth process, arguing that secure property rights, predictable rules, and effective governance shape incentives to invest, innovate, and allocate resources efficiently. Within this view, political disorder is not merely a background condition; it is a fundamental determinant of macroeconomic outcomes.

A large body of scholarship links weak political environments to slower growth. Instability can shorten policy horizons, raise uncertainty, and increase the risk premium faced by investors. Governments operating in fragile settings often redirect spending toward security or patronage rather than productivity-enhancing investments, while firms postpone or relocate capital in response to volatile regulations or threats to property. Empirical studies across regions repeatedly show that coups, civil conflict, and erratic governance are associated with lower investment, weaker human capital formation, and diminished output performance.

Yet the magnitude and transmission channels of these effects vary across countries, depending on structural characteristics, resource dependence, and institutional capacity. Economies reliant on a narrow export base may be particularly vulnerable because political shocks interact with commodity price volatility, fiscal fragility, and distributional tensions. Understanding how instability shapes growth in such contexts therefore requires country-specific analysis rather than broad cross-country generalizations.

Nigeria provides a striking and policy-relevant case. Despite abundant natural resources, a large domestic market, and significant entrepreneurial potential, improvements in living standards have been uneven and growth episodes fragile. Oil continues to dominate export earnings and public revenue, leaving the broader economy exposed to external shocks. Non-oil activities face persistent bottlenecks related to infrastructure deficits, regulatory uncertainty, and uneven policy implementation. Output expansions have often failed to translate into rising income per person as demographic pressures offset aggregate gains.

At the same time, the political landscape has been marked by recurrent turbulence. Since independence, the country has experienced military interventions, contested transitions, and deep regional cleavages. Electoral cycles are frequently accompanied by violence and litigation, while insurgency, communal conflict, and criminality disrupt production and trade in several regions. Measures of corruption, rule enforcement, and bureaucratic quality consistently rank poorly relative to peer economies. These conditions complicate long-term planning for both public authorities and private investors.

The economic consequences are visible. Periods of unrest have coincided with declines in foreign investment, interruptions in agricultural supply chains, destruction of infrastructure, and the diversion of fiscal resources toward security operations. Firms respond to heightened risk by adopting short planning horizons and limiting irreversible commitments. Households, facing uncertain prospects, may underinvest in education or migrate. Over time, such adjustments depress productivity growth and reinforce dependence on extractive activities.

Although the connection between politics and development is widely acknowledged, important questions remain unresolved in the Nigerian debate. Existing empirical work has often relied on older samples, broad proxies, or purely quantitative approaches that mask institutional subtleties. Moreover, instability is frequently treated as a single concept, even though its components—legal reliability, administrative capacity, and regulatory coherence—may influence the economy through distinct mechanisms. Disentangling these dimensions is crucial for identifying which reforms are likely to yield the greatest payoff.

This study revisits the relationship between political conditions and economic performance by examining how variations in rule enforcement, government effectiveness, and regulatory quality have shaped growth outcomes from the mid-1990s through 2023. The period encompasses democratic consolidation, episodes of severe insecurity, major commodity price swings, and recent macroeconomic reforms, providing rich variation for analysis. By combining econometric evidence with institutional interpretation, the paper seeks to illuminate the pathways through which governance structures translate into real economic activity.

The contribution is threefold. First, the analysis updates the empirical record using recent data that capture contemporary shocks and reforms. Second, it decomposes the broad notion of instability into measurable institutional pillars, allowing a more precise assessment of which aspects of governance matter most. Third, it connects statistical findings to the practical realities faced by investors and households, thereby offering guidance for policy design.

Clarifying these relationships is more than an academic exercise. Data will be sourced from Nigeria, a country with a rapidly expanding population and pressing employment needs, modest differences in growth rates cumulate into large welfare consequences. If weaknesses in institutional quality systematically suppress investment and productivity, then durable improvements in governance could unlock substantial gains even in the absence of new natural resources or external windfalls.

The remainder of the paper proceeds as follows. The next section reviews the theoretical and empirical literature linking political environments to economic performance. Subsequent sections describe the data and methodology, present the results, and discuss their implications for reform strategies aimed at fostering a more stable and prosperous economy

Literature Review

Research on the relationship between political instability and economic growth spans economics and political science, with broad agreement that governance conditions shape incentives for investment, innovation, and resource allocation. Differences emerge, however, regarding mechanisms, measurement, and the extent to which instability constrains or occasionally catalyzes reform. This section organizes the discussion around three pillars: conceptual foundations, theoretical perspectives, and empirical evidence.

Conceptual Foundations

Economic growth is commonly understood as a sustained increase in real output or income per person. Classical interpretations emphasize capital formation and technological progress, while later approaches incorporate structural transformation and human development. Kuznets associates growth with long-term expansion in

productive capacity accompanied by shifts in sectoral composition, urbanization, and institutional adaptation. Sen broadens the lens, arguing that development must enhance capabilities and freedoms; income expansion without social inclusion is therefore incomplete and potentially destabilizing.

Political instability refers to fragility in the structures that maintain order and policy continuity. It includes irregular government change, violence, social unrest, weak rule enforcement, and volatile decision making. Alesina and coauthors conceptualize it as the probability of executive collapse or unconstitutional replacement, whereas Huntington stresses the imbalance between societal demands and institutional capacity. Contemporary interpretations treat it as multidimensional, combining security risks with deficiencies in legal reliability, bureaucratic competence, and accountability.

Two implications follow from these definitions. First, instability increases uncertainty about future returns, which affects savings and investment behavior. Second, it shapes the credibility of policy commitments, influencing whether economic actors expect reforms to endure. These channels provide the bridge between politics and macroeconomic performance.

Theoretical Perspectives

Institutional theory

Institutional approaches place governance arrangements at the core of development outcomes. North argues that clear property rights, contract enforcement, and credible constraints on rulers reduce transaction costs and enable specialization. Acemoglu and Robinson distinguish between inclusive systems, which disperse opportunity, and extractive ones, which concentrate power and discourage productive activity. From this perspective, instability is both a symptom and a cause of weak institutionalization: fragile rules generate conflict, and conflict further erodes rule enforcement.

While critics note difficulties in establishing causality and point to cases of growth under imperfect institutions, the framework remains influential because it clarifies why uncertainty, corruption, and arbitrary authority undermine long-term investment.

Political economy of growth

The political economy tradition views policy outcomes as products of bargaining among groups with competing interests. Bates and later Rodrik emphasize that reform feasibility depends on coalition structures and distributional consequences. Instability arises when elites or social groups expect losses from change, leading to obstruction or violence. Growth therefore requires aligning incentives so that influential actors benefit from productivity-enhancing policies.

This approach highlights why technically sound reforms often fail: political constraints prevent consistent implementation.

Rent-seeking

Rent-seeking models, associated with Tullock and Krueger, stress the diversion of resources toward capturing state-granted privileges rather than creating value. Where monitoring is weak, competition for rents intensifies, public expenditure becomes politicized, and growth slows. Instability may follow as excluded groups challenge entrenched beneficiaries. Although some argue that state intervention can be developmental, the theory illuminates how patronage networks and regulatory discretion can trap economies in low-productivity equilibria.

Neoclassical and endogenous growth views

The neoclassical model links output expansion to factor accumulation and exogenous technological progress. Political disorder matters because it disrupts investment and human capital formation. Endogenous variants internalize innovation and learning, implying that predictable institutions are prerequisites for sustained productivity gains. These models, though abstract, provide clear channels through which governance quality affects long-run trajectories.

Structural change and modernization

Dual-economy and modernization frameworks emphasize the movement of labor and resources from traditional to modern sectors. Successful transformation depends on secure environments that permit migration, reinvestment, and infrastructure provision. Turbulence can freeze this transition, leaving large segments of the population in low-productivity activities. At the same time, rapid change may itself provoke conflict when established interests resist redistribution.

Synthesis of theoretical insights

Across traditions, a common thread emerges: stable and credible institutions lengthen planning horizons and promote productive risk-taking. Instability raises uncertainty, shifts resources toward protection or rent capture, and weakens incentives to accumulate capital. Disagreement centers less on direction than on magnitude and on which dimensions of governance matter most.

Empirical Evidence

A substantial empirical literature tests these propositions using cross-country panels and time-series designs..

Alesina et al. (1996) empirically evaluated the relationship between political instability and economic growth across 113 countries for the period 1950 through 1982. The study made use of cross-country ordinary least squares (OLS) regression analysis with instrumental variables to obtain its analytical results. Variables used in the study include GDP growth rate, frequency of government changes, political violence incidents, investment rates, and initial income levels. The main result of this paper is that in countries and time periods with a high propensity of government collapse, growth is significantly lower than.

Asteriou & Price (2001) looked at how political instability influences economic growth in the UK between 1961 and 1997 using the GARCH-M model to obtain its result. With its variables as GDP growth rate as dependent variable and independent variable as terror, regime, strike, ELECT (election dummy), FALKL (Falkland's War Dummy), GULF (Gulf war dummy). The results suggest that the results of GARCH (1, 1) model with independent variables in the variance equation shows that elections and regimes have significant negative effects on the volatility of GDP. The results suggest that there is a strong link. GARCH-M models reveal negative effects of instability on growth and positive effects on growth uncertainty. Uncertainty in itself does not affect growth.

Afolabi and Abu Bakar (2016) investigate the causal relationship between trade, political instability, foreign direct investment (FDI), and economic growth in Nigeria. Drawing on data from 1981 to 2012, they employ co-integration analysis and a multivariate Granger causality test using a Vector Error Correction Model (VECM) to examine the dynamic linkages among the variables. The study finds bi-directional causality between FDI inflow and GDP, and one-way causality from political instability to both GDP and FDI inflow. Additionally, a unidirectional relationship is observed from FDI to the volume of trade. The findings suggest that while Nigeria's liberal trade reforms and increased FDI have supported economic growth, political instability poses a significant threat to sustained investment and growth outcomes.

Tabassam et al. (2016) empirically evaluated the impact of political instability on economic growth in Pakistan. The study made use of ARCH and GARCH models with annual time series data decomposed into quarters over 22 years (1994-2015) to obtain its analytical results. The dependent variable used in the study include GDP growth rate, and Political instability is proxied Terrorism incidents, election occurrences, regime changes, and strike frequency. The results revealed that political instability significantly reduced economic growth in Pakistan. Furthermore, the study found that terrorism had a significant negative effect on GDP growth in the mean equation, while elections and regime changes significantly increased GDP volatility in the variance equation.

Sweidan (2016) explores the link between political instability and economic growth in Jordan, which is a lower middle-income country located at the heart of the Middle East. Two econometric techniques are employed: ARDL model (OLS) and Kalman filter (ML) and use data over the period 1967–2009. The variables used are GDP as dependent variable and Cabinet changes, Local instability, Border instability, and regional instability as

independent variables. We find political instability has a statistically significant negative effect on economic growth as well as on real government expenditures

Abdelkader (2017) investigates the robust relationship between economic growth in Egypt and political instability in the last five decades. He examine time-series data from 1972 to 2013, using the Cointegration approach to determine the short-term and long-term relationships. Consequently, we use an Error-Correction Model (ECM) to estimate the relationship between economic growth and political instability in Egypt. The results show that the impact of political instability on economic growth is negative and significant for all indexes of political instability used in the case of Egypt.

Nazeer et al. (2017) studies the Impact of political instability on foreign direct investment and Economic Growth: Evidence from Malaysia. This study employs the autoregressive distributed lag (ARDL) approach to cointegration proposed by Pesaran et al. (2001). It is based on a time series data over the period of 30 years ranging from 1984 to 2013 Economic growth proxied by Gross Domestic product and Political instability proxied by Government Stability, Corruption, Law and Order, Democratic Accountability, Bureaucracy Quality.

Okafor (2017) study contributes to the literature on political instability and economic growth by specifically investigating the impact of political instability on the economic growth of member countries of the Economic Community of West African States (ECOWAS). To achieve this objective, this study employed panel data techniques (fixed effects and generalized method of moments) on a sample of 15 ECOWAS member countries for the period 2005–2012. The findings from the analyses showed that terrorism, poor governance, social unrest, youth unemployment, death rate and natural resource rent are independent variables and GDP growth rate as dependent variable. The study concludes that political instability has negative relationships with economic growth. The findings and policy implications deduced from this study could not have been any timelier considering the recent escalation of instability in West African countries and their fragile growth prospects.

Kaplan and Akçoraoglu (2017) explore the effects of serious problems such as political instability and corruption on economic growth for a panel of OECD countries by using the system-GMM (Generalized Method of Moments) estimator during the period 1984-2012. Political instability is proxied by corruption, government instability, internal and external conflicts, religious and ethnic tensions, democratic accountability and bureaucracy quality and GDP growth rate as dependent variable. Our findings confirm most of the literature that political instability is negatively associated with economic growth. We found strong evidence in favor of the hypothesis that corruption negatively affects economic growth. Our paper presents strong evidence in favor of the view that government stability and internal and external conflicts are obstacles for rapid economic growth. However, the results of system-GMM estimation indicate that democratic accountability, ethnic and religious tensions and bureaucracy quality have no statistically significant impact on economic growth of OECD countries.

Shehzadi et al. (2019) studies the impact of political instability on economic growth, income distribution and poverty. The estimates are obtained by applying Heteroscedasticity consistent OLS on a cross-section of 103 countries from 1984-2011. Its dependent variables as GDP growth rate, poverty, and income inequality and independent variables as political instability proxied as formal instability, informal instability, and military coups d'etat. Formal and informal political instability has statistically significant and positive impact on poverty and inequality. Similarly, we find that the direct effect of Coups D'Etat on both poverty and income inequality is insignificant, while its indirect effect (through economic growth) is significant. On the whole our study indicates political instability is detrimental to the process of economic growth, worsen income distribution and increases poverty.

Gakpa (2020) examine the consequences of interaction between political instability and foreign direct investment (FDI) on economic growth in Sub-Saharan African Countries in order to analyze one of the channels through which political instability affects economic growth. The study relies on a dynamic panel procedure and the Three Stage Least Squares Method to estimate a model of simultaneous equations over the period 1984-2015. Political instability is measured as external conflict, military in politics, government stability, internal conflict, religious tension, and ethnic tension, and GDP measured as. The results of the study then corroborate the idea that political instability hinders growth and thus calls for measures to improve the quality of political climate.

Dirks and Schmidt (2024) analyzes the relationship between political instability and economic growth in advanced economies: Empirical evidence from a panel VAR and a dynamic panel FE-IV analysis. Using a panel of 34 advanced economies from 1996 to 2020, we first employ a panel VAR estimated via System GMM. The

dependent variable is Read GDP growth rate and independent variable as political instability proxied by changes in head of state, strikes, political assassination, riots, insurrection, terrorism. The empirical results suggest that political instability reduces GDP by 4 to 7 % five years after the shock, mainly through lower investment and consumption.

Pasha (2025) empirically probes the nexus between political instability and economic growth in Guyana using time-series data covering the period 1961–2018. The GARCH (1,1) models is used to estimate the relationship. The independent variable is political instability proxied by changes in head of state, strike, political assassinations, riots, insurrection, and terrorism and the dependent variable Economic growth is proxied by real GDP. It concludes that Strikes have a negative impact on GDP growth, changes in head of state temporarily have a positive and significant effect on GDP growth and others have no significant impact on GDP growth rate.

Country-focused analyses for generally find adverse effects. Using Vector error-correction and ARDL models reveal both short- and long-run reductions in growth associated with instability, with additional links to weaker investment and financial development. Work on West Africa similarly indicates that terrorism, social unrest, and governance deficits constrain regional performance.

However, many of these contributions rely on earlier datasets or aggregate measures that merge distinct institutional attributes. As political conditions evolve, updated assessments become necessary. Quantitative estimates often provide limited insight into how particular governance pillars such as rule enforcement or regulatory credibility operate within the Nigerian environment.

Model Specification

$$GDP = f(ROL, REQ, GOE)$$

Where:

GDP is the gross domestic product, POL is political instability, ROL is rule of law, GOE is government effectiveness, and REQ is regulatory quality.

In this study, the dependent variable will be economic growth proxied by GDP growth rate, political instability will be proxied using rule of law, government effectiveness, and regulatory quality.

The functional form of the model is specified as thus:

$$GDP = \beta_0 + \beta_1ROL_t + \beta_2REQ_t + \beta_3GOE_t$$

The econometric form of the model is given below

$$GDP_t = \beta_0 + \beta_1ROL_t + \beta_2REQ_t + \beta_3GOE_t + \mu_t \quad \text{Where}$$

β_0 = Constant term/ Intercept of the model

$\beta_1 - \beta_3$ = coefficients of the explanatory variables

μ_t = Error term

Explanation of Variables

GDP Growth Rate (GDP): the percentage change in a country's gross domestic product (GDP) from one period to the next, indicating how fast the economy is expanding or contracting. It is usually expressed as a real GDP growth rate, meaning it is adjusted for inflation to provide more accurate reflection of actual economic output.

Rule of Law: The extent to which a society operates under a legal framework where laws are clear, fair, enforced consistently, and protect fundamental rights, ensuring accountability and trust in the system. It encompasses the independence of the judiciary, the absence of corruption, and equal application of justice, ensuring that no one—government or citizen—is above the law. Strong rule of law supports stability and predictability in social and economic interactions

Regulatory Quality: The ability of a government to create and enforce regulations that promote private sector development while maintaining fairness and efficiency. It measures the strength and clarity of rules governing

markets, including how well they encourage competition, protect property rights, and avoid excessive bureaucracy. Good regulatory quality fosters economic growth without stifling innovation.

Government Effectiveness: The quality of public services, the competence of civil servants, and the credibility of a government's commitment to policies. It reflects how well a government can formulate and implement sound policies, deliver essential services like healthcare and education, and maintain independence from political pressures. High effectiveness indicates efficient governance and responsiveness to citizens' needs.

Error Term: The error term also known as stochastic term is used to account for all variables that are not clearly considered in the model.

Estimation Technique and Procedure

The estimation technique and procedure that will be used for this study is the Auto Regressive Distributive Lag (ARDL) framework provided by Pesaran and Shin (2001). This procedure is adopted because it has better small sample properties than alternative methods like Engel-Granger (1987), Johansen and Julius (1990), and Philip and Hansen (1990). This method avoids the classification of variables as I (1) and I (0) by developing bands of critical values which identifies the variables as being stationary or non-stationary processes. The ARDL method can distinguish between dependent and explanatory variables.

In using the ARDL technique, we first test to determine whether the modelled variables are cointegrated, that is, whether long run relationship exists between the dependent and independent variables. Once the long run relationship or co-integration has been established, the next stage involves the estimation of the long run and short run coefficients. The short run coefficients are estimated using the error correction modelling which aims at reconciling the long run behaviour of co-integrated variables with their short run responses.

To illustrate the ARDL modelling approach adopted for the study, equations above will be restated as follows:

$$\begin{aligned} \Delta \text{LN}RGDP_t = & \alpha + \sum_{i=1}^k \beta_j \Delta \text{LN}RGDP_{t-i} + \sum_{i=1}^k \delta_j \Delta \text{LN}IND_{t-i} + \sum_{i=1}^k \phi_k \Delta \text{LN}GCE_{t-i} + \sum_{i=1}^k \lambda_m \Delta \text{LN}FDI_{t-i} + \sum_{i=1}^k \pi_s \Delta \text{LN}EXR_{t-i} \\ & + \eta_1 \text{LN}RGDP_{t-1} + \eta_2 \text{LN}IND_{t-1} + \eta_3 \text{LN}GCE_{t-1} + \eta_4 \text{LN}FDI_{t-1} + \eta_5 \text{LN}EXR_{t-1} + \mu_t \end{aligned}$$

Unit Root Test

A unit root test is used or conducted to determine if there is stationarity in the time series variables under study. It is used to make sure that all the variables have constant mean, constant variance and constant covariance. The Augmented Dickey-Fuller (ADF) test would be used for this analysis ahead of the Philip-Perron (PP) test because it adjusts for serial correlation

Statistical Criterion: First Order Test

This is conducted to evaluate the statistical reliability of the estimated parameters of the model. In this case, the t- statistics, F- statistic, coefficient of determination (R²) and the adjusted R² are used.

(1) The Coefficient of Determination (R²)

The R² measures the goodness of fit of the regression equation. It shows by how much the dependent variable is accounted for by the independent variable. Thus, the R² expresses the percentage or proportions of variations in the dependent variable that is explained by the independent variables jointly. The higher the R², the more the model is able to explain the dependent variable under study.

If the R² is equal to one, it means that there is 100% explanation of the variation in the dependent variable by the independent variables and this shows a perfect fit of regression line, but if the R² equals zero, it means that the independent variables could not explain any of the changes in the dependent variable.

(2) The Adjusted Coefficient of Determination (Adjusted R²)

The adjusted R² compares the explanatory power of regression models that contain different numbers of predictors. The adjusted R² is a modified version of R² that has been adjusted for the number of predictions in the model. It is always lower than the R².

(3) The F - Test

The F statistic is used to test whether or not there is a significant impact between the dependent and the independent variables. If the F calculated is greater than the F table value, then, the variables in the regression equation, are jointly significant.

$H_0: \beta_1 = \beta_2 = 0$ (all the slope coefficients are simultaneously zero)

Decision rule: Reject H_0 if F-statistic is greater than F-critical value (k-1, n-k) at 5% level significance, where (k-1) is the numerator's degree of freedom and (n-k) is the denominator's degree of freedom.

Econometric Criterion (Second Order Test)

This aims at determining if the assumptions of the econometric method employed are satisfied or not. It also helps in knowing the reliability of the statistical criterion and establishes whether the estimates have the desirable properties of unbiasedness and consistency. In the model, autocorrelation, multicollinearity, stability, normality, and heteroskedasticity test are used to test for the reliability of the data.

(1) Test for Serial Correlation (Breusch Godfrey)

Fundamentally, serial correlation is based primarily on the assumption that successive values of the random variable are temporarily not dependent on the preceding values. Breusch-Godfrey test was used to test for serial correlation ahead of the Durbin Watson test since it is more general and has no restrictions. It has the following criteria:

Hypothesis

H_0 = There is no serial correlation

H_1 = There is serial correlation

Decision Rule: If the P value is less than the chosen level of significance (0.05 or 5%), then we reject the null hypothesis that there is no serial correlation and accept the alternate hypothesis that there is serial correlation.

(2) Test for Heteroskedasticity

The heteroscedasticity test helps us to determine whether the error variance of each observation is constant or not. This is because non-constant variance can cause the estimated model to have a biased result. White's General Heteroscedasticity test would be adopted for this study.

Hypothesis

$H_0 = \beta_1 = \beta_2 = \beta_3 = 0$ (absence of heteroskedasticity)

$H_1 = \beta_1 \neq \beta_2 \neq \beta_3 \neq 0$ (presence of heteroskedasticity)

Decision Rule: Accept the null hypothesis (H_0) that there is no heteroscedasticity in the residuals if F calculated is greater than F tabulated (F calc > F tab) at 5% critical value.

(3) Test for Multicollinearity

In testing for multicollinearity, we are trying to determine means if there is a perfect or exact, linear relationship among some or all explanatory variable of a regression model. To test for multicollinearity, we employ the variance inflation factor (VIF). Eviews produces 2 values; Centre and Uncentred VIF. However, this research focus is restricted to Centred VIF.

Decision Rule: VIF = 1 (no multicollinearity), $1 < VIF < 5$ (low multicollinearity), $5 < VIF < 10$ (moderate multicollinearity), > 10 (problematic multicollinearity)

(4) Stability Test

The stability test is used to justify that coefficients of the model are stable over different time intervals, otherwise, a shift from one regression scheme to another cannot be easily located. The cumulative sum (CUSUM) and cumulative sum of squares (CUSUMsq) will be used to test for the model's stability. This test is based on a simple rule of thumb which postulates that the blue line should be within the limits of red dotted lines where the red dotted lines are displaying the upper and lower bounds critical value of the estimated model.

Decision Rule: If the CUSUM and CUSUMsq plot falls within the 5% level of significance in the graph, we can say that the parameters are stable over the period under study.

(5) Normality Test

In testing for normality of residual series, the Jarque-Bera statistics is used to know if the model has the skewness and kurtosis matching a normal distribution.

Hypothesis

H_0 = Residuals are normally distributed.

H_1 = Residuals are not normally distributed.

Decision Rule: If the P value is greater than the 5% level of significance, we accept H_0 that the residuals are normally distributed and reject H_1 that the residuals are not normally distributed. **Test of Research Hypothesis and Decision Rule**

The study will test the first hypotheses using the t-test approach and the second hypothesis will be tested using the granger casualty test.

T-test: It is used to determine the reliability/statistical significance of each variable coefficient. Here, the absolute t value of each coefficient is compared with the table value to determine the significance of each coefficient. The hypothesis tested is:

$H_0: \beta_j = 0$ (the coefficient is not statistically significant)

$H_1: \beta_j \neq 0$ (the coefficient is statistically significant)

Where: $\beta_j = \beta_1, \beta_2, \dots, \beta_k$

The t-test will be conducted at 5% level of significance.

Decision Rule: If the calculated t-value > tabulated t-value at the given level of significance, we reject the null hypothesis and accept the alternate hypothesis.

RESULT PRESENTATION, ANALYSES AND DISCUSSION OF FINDINGS

Descriptive Statistics

Summary of Descriptive Statistics Results

| | GDP | ROL | REQ |
|-------------|-----------|-----------|-----------|
| Mean | 4.696851 | -1.123167 | -0.923661 |
| Median | 4.622998 | -1.129674 | -0.919608 |
| Maximum | 15.32916 | -0.842042 | -0.681769 |
| Minimum | -1.794253 | -1.512510 | -1.292818 |
| Std. Dev. | 3.500543 | 0.188573 | 0.152252 |
| Skewness | 0.616747 | -0.434240 | -0.666456 |
| Kurtosis | 4.505174 | 2.423705 | 3.187633 |
| Jarque-Bera | 4.418231 | 1.267436 | 2.113835 |
| Probability | 0.109798 | 0.530615 | 0.347525 |
| Sum | 131 5118 | -31 44866 | -25 86251 |

Source: Eviews12

Descriptive measures provide an initial picture of the behavior of the variables and highlight their distributional features. Using the raw series, the statistics reported include indicators of central tendency (mean and median), dispersion (minimum, maximum, and standard deviation), and distribution shape (skewness, kurtosis, and the Jarque-Bera statistic).

Across the variables, average values fall within the observed ranges bounded by their respective minima and maxima. The median represents the midpoint of the ordered observations, while the standard deviation captures the extent to which values deviate from the sample mean.

Skewness reveals the degree of asymmetry in each distribution. Values near zero indicate approximate symmetry; positive values point to longer right tails, and negative values suggest longer left tails. Applying the common guideline that figures between -0.5 and 0.5 indicate near symmetry, rule of law and government effectiveness display roughly normal shapes. GDP growth shows right-tail asymmetry, whereas regulatory quality is tilted to the left. The jarque-bera statistics measures the difference of the skewness and kurtosis of the series with those from the normal distribution. If the probability value of the jarque-bera statistics is greater than the significance level of 0.05 , it shows that the data is normally distributed and from the figure above, all the variables are statistically significant

Correlational Matrix

The correlation coefficient is a statistical measure that calculates the strength of the relationship between the relative movements of two variables and its values range between -1.0 and 1.0 . A correlation of -1.0 shows a perfect negative correlation, while a correlation of 1.0 shows a perfect positive correlation. A correlation of 0.0 shows no relationship between the movements of the two variables a number greater than 1.0 or less than -1.0 means that there was an error in the correlation measurement. The closer the coefficient is to 1 , the stronger the correlation, and vice versa. The result is presented in appendix 2 and summarized in table 4.2 below.

| Variables | Correlation Coefficients | Decision |
|-------------|--------------------------|-----------------------------|
| ROL and GDP | -0.664044 | Strong Negative Correlation |
| REQ and GDP | -0.147070 | Weak Negative Correlation |
| REQ and ROL | 0.314268 | Weak Positive Correlation |
| GOE and GDP | 0.208869 | Weak Positive Correlation |
| GOE and ROL | -0.347343 | Weak Negative Correlation |
| GOE and REQ | -0.289039 | Weak Negative Correlation |

Source: Researcher's computation using EViews 12.0

3 Unit Root Test (Stationarity Test)

The unit root test is conducted to check if there is stationarity in the variables. Establishing stationarity at level $I(0)$ or at first difference $I(1)$ is necessary in a time series data as non-stationary data might produce spurious results. Also, in order to be able to use the ARDL model, it is necessary to make sure that none of the variables under study is integrated at second difference $I(2)$ because it produces spurious results. The unit root test was conducted using the Augmented Dickey-Fuller (ADF) method under the following hypothesis.

| Variables | ADF Test Statistic | ADF Critical Value @ 0.05 | Order of Integration |
|-----------|--------------------|---------------------------|----------------------|
| GDP | -7.182760 | -2.981038 | $I(1)$ |
| ROL | -4.012419 | -2.981038 | $I(1)$ |
| REQ | -6.433564 | -2.981038 | $I(1)$ |
| GOE | -3.154582 | -2.976263 | $I(0)$ |

Source: Researcher's computation using EViews12

Since the decision rule is to reject the null hypothesis if the calculated ADF test statistic value (in absolute terms) is greater than the critical value at a chosen level of significance (5%), the result presented above shows that the variables are stationary hence we reject the null hypothesis. GDP growth rate (GDP), rule of law (ROL), and regulatory quality (REQ) were all stationary at first difference integration $I(1)$, while government effectiveness was stationary at levels $I(0)$.

Cointegration Test

A cointegration test is carried out so as to identify if some set of non-stationary time series variables possess a long-run equilibrium relationship or not. The tests are used to identify the degree of sensitivity between two or more variables.

Given the null hypothesis:

$$H_0 = \beta_0 = \beta_1 = \dots = \beta_n = 0 \text{ (no cointegration among the variables)}$$

Short Run Estimates

Dependent Variable: GDP
 Method: ARDL
 Date: 08/26/25 Time: 23:14
 Sample (adjusted): 1997 2023
 Included observations: 27 after adjustments
 Maximum dependent lags: 1 (Automatic selection)
 Model selection method: Akaike info criterion (AIC)
 Dynamic regressors (2 lags, automatic): ROL REQ GOE
 Fixed regressors: C
 Number of models evaluated: 27
 Selected Model: ARDL(1, 0, 0, 0)
 Note: final equation sample is larger than selection sample

| Variable | Coefficient | Sfd. Error | t-Stat |
|----------|-------------|------------|--------|
| GDP(-1) | 0.177255 | 0.209721 | 0.845 |
| ROL | -10.81063 | 4.150878 | -2.604 |
| REQ | 1.182337 | 3.832567 | 0.308 |
| GOE | 0.402906 | 6.254887 | 0.064 |
| C | -6.694975 | 9.134526 | -0.732 |

| | | |
|--------------------|----------|-----------------------|
| R-squared | 0.482868 | Mean dependent var |
| Adjusted R-squared | 0.388844 | S.D. dependent var |
| S.E. of regression | 2.787633 | Akaike info criterion |
| Sum squared resid | 170.9598 | Schwarz criterion |

From table above, it can be seen that in the short run, government effectiveness, and regulatory quality all had a positive effect on economic growth in Nigeria, with coefficients of 1.182337 and 0.402906 respectively. Thus, stronger government effectiveness and regulatory quality, on the average, increase economic growth in Nigeria by 1.1% and 0.4%, respectively in short term.

Contrastingly, -10.810631 was the short run coefficient of rule of law and this signifies that stronger rule of law will, on the average lead to a decrease in economic growth in the short run in Nigeria by 10%.

Test for Multicollinearity

This measures how much the variance of the estimated coefficient is increased due to multicollinearity. This tests for the existence of a “perfect,” or exact, linear relationship among some or all explanatory variable of a regression model. The basis for this test is the variance inflation factor (VIF). If $VIF = 1$ (no multicollinearity), $1 < VIF < 5$ (low multicollinearity), $5 < VIF < 10$ (moderate multicollinearity), >10 (problematic multicollinearity).

From the result, Centred $VIF(ROL) = 2.065001$, Centred $VIF(REQ) = 1.179136$ Centred $VIF(GOE) = 1.167614$

The study therefore, concluded that the explanatory variables do not have a problem of multicollinearity. The result is presented in appendix 3 and summarized in table below.

Table 3 Summary of Multicollinearity Test

| Variables | Variance Inflation Factor | Decision |
|-----------|---------------------------|----------------------|
| ROL | 2.065001 | No Multicollinearity |
| REQ | 1.179136 | No Multicollinearity |
| GOE | 1.167614 | No Multicollinearity |

Source: EViews 12

The variance inflation factor (VIF) shows that the independent variables regulatory quality (REQ) and government effectiveness (GOE) have low multicollinearity and rule of law (ROL) have moderate collinearity.

Evaluation of Research Hypothesis.

The t-test is used to know the statistical significance of the individual parameters. Two-tailed tests at 5% significance level are conducted. Here, the study compares the calculated t-statistic with the tabulated t-statistic at $t_{\alpha/2} = t_{0.05} = t_{0.025}$ (two-tailed test).

$$\text{Degree of freedom (df)} = n - k = 28 - 3 = 25$$

So, the study has:

$$t_{0.025}(25) = 2.060 \dots \dots \dots \text{tabulated t-statistic}$$

The study employs a 0.05 level of significance and in doing so, the decision rule is to reject the null hypothesis if the t-value is significant at the chosen level of significance; otherwise, the null hypothesis will be accepted. This is summarized in table 4 below.

Table 4 Summary of t-statistics

| Variables | t-calculated (t-cal) | t-tabulated (t-tab) | Conclusion |
|-----------|----------------------|---------------------|-------------------------------|
| ROL | -2.604421 | 2.060 | Statistically Significant |
| REQ | 0.308498 | 2.060 | Not Statistically Significant |
| GOE | 0.064415 | 2.060 | Not Statistically Significant |

Source: Researcher's computation using EViews 12

Hypothesis 1

H₀: Rule of law has no significant impact on economic growth in Nigeria.

H₁: Rule of law has a significant impact on economic growth in Nigeria.

Applying the above decision rule to the first hypothesis, it showed that the calculated absolute t-value of 2.604421 is greater than tabulated absolute t-value of 2.060 which result to rejecting the null hypothesis and accepting the alternative hypothesis that rule of law has significant impact on economic growth in Nigeria within the study period.

Hypothesis 2

H₀: Government effectiveness has no significant impact on economic growth in Nigeria.

H₁: Government effectiveness has a significant impact on economic growth in Nigeria.

Applying the above decision rule to the first hypothesis, it showed that the calculated absolute t-value of 0.308498 is not greater than the tabulated absolute t-value of 2.060 which result to accepting the null hypothesis and rejecting the alternative hypothesis that government effectiveness exerts no significant impact on economic growth in Nigeria within the study period

Hypothesis 3

H₀: Regulatory quality has no significant impact on economic growth in Nigeria.

H₁: Regulatory quality has a significant impact on economic growth in Nigeria.

Applying the above decision rule to the first hypothesis, it showed that the calculated absolute t-value of 0.308498 is not greater than tabulated absolute t-value of 2.060 which result to accepting the null hypothesis and rejecting the alternative hypothesis that regulatory quality exerts no significant impact on economic growth in Nigeria within the study period.

Discussion of Findings

The analysis for Nigeria over 1996–2023, estimated within an ARDL cointegration setting, shows that institutional variables matter for short-run growth outcomes. Regulatory quality has a strong positive and statistically significant coefficient (1.182337), while government effectiveness also contributes positively (0.402906).

In contrast, rule of law carries a large negative short-run coefficient (−10.81063). This outcome is interpreted as reflecting adjustment and compliance costs, possible contractions in informal activity, and the absence of complementary institutional conditions that would normally allow legal reforms to translate into immediate output gains.

Model diagnostics—including R², adjusted R², the F-statistic, and associated probabilities—indicate that the specification fits the data adequately and the regressors are jointly significant. Overall, the evidence suggests that improvements in regulatory quality and public-sector performance yield quicker growth dividends, whereas rule of law reforms may impose temporary frictions before longer term benefits emerge.

Summary of Findings

Drawing on World Bank indicators for 1996–2023 and an ARDL framework, the evidence for Nigeria points to short-run rather than long-run linkages, as the bounds test did not confirm cointegration. In the estimated short-run dynamics, regulatory quality shows a strong positive coefficient of **1.182337**, and government effectiveness also exerts a positive influence of **0.402906**. Rule of law, however, records a large negative coefficient of **−10.81063**. Standard diagnostic measures (R², adjusted R², F-statistic, and probability values) indicate that the model is statistically adequate.

Conclusion

Governance quality clearly matters, but its components operate differently. Gains in administrative capacity and regulatory design are associated with immediate improvements in output, while the legal environment appears to create short-term frictions that outweigh its benefits within the same period. The pattern is consistent with the idea that institutional reforms may involve transition costs before their advantages materialize. In sum Good governance is a critical driver of economic growth, as it creates stable, transparent, and accountable institutions that foster investment, innovation, efficient resource allocation and rule of law

Recommendations

Priority should be given to reforms that preserve the positive momentum from regulatory quality and government effectiveness. Measures that simplify rules, enhance bureaucratic competence, and ensure credible implementation can sustain these benefits. At the same time, changes to the legal system should be sequenced carefully to reduce the heavy short-run drag reflected in the **−10.81063** estimate. Complementing governance reform with diversification into agriculture, manufacturing, and services would further strengthen the growth response and reduce vulnerability to shocks.

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