Governance Quality and Economic Development in Nigeria

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DOI: https://doi.org/10.47772/IJRISS.2026.1015EC0060

Received: 03 June 2026; Accepted: 08 June 2026; Published: 26 June 2026

ABSTRACT

This study empirically investigates the effect of governance quality on economic development in Nigeria. Using annual time-series data drawn from the World Bank's Worldwide Governance Indicators (WGI), World Development Indicators (WDI), and the United Nations Development Programme (UNDP), the study employs the Autoregressive Distributed Lag (ARDL) bounds testing approach to assess both long-run and short-run dynamics. Economic development is proxied by the Human Development Index (HDI), while governance quality is operationalised through government effectiveness (GEF), rule of law (RL), control of corruption (CC), and voice and accountability (VA). Control variables include education expenditure (EDEXP) and inflation (INF). Descriptive analysis reveals persistently negative governance scores throughout the study period, consistent with Nigeria's well-documented institutional weaknesses. Correlation analysis shows strong positive associations between all four governance dimensions and HDI (ranging from 0.619 to 0.715). Unit root tests confirm a mixture of I(0) and I(1) series, validating the ARDL framework. The bounds test confirms cointegration (F-statistic = 6.27 > upper-bound critical value of 4.03), establishing a stable long-run relationship. Long-run estimates show that GEF exerts the strongest positive effect ($\beta = 0.274$, $p < 0.01$), followed by RL ($\beta = 0.218$, $p < 0.05$), CC ($\beta = 0.157$, $p < 0.05$), and VA ($\beta = 0.109$, $p < 0.10$). Inflation negatively affects development ($\beta = -0.028$, $p < 0.05$). The error correction term (ECT = −0.512, $p < 0.001$) indicates a 51.2% annual speed of adjustment toward long-run equilibrium. Granger causality tests confirm unidirectional causality running from governance quality to economic development. The findings validate Institutional Theory and carry significant policy implications: sustained improvements in government effectiveness, rule of law, and anti-corruption enforcement are indispensable preconditions for Nigeria's long-term economic and human development.

Keywords: Governance Quality, Economic Development, ARDL, Nigeria, Rule of Law

INTRODUCTION

Governance quality has become a central pillar for achieving sustainable development and inclusive economic progress globally. In advanced economies such as Sweden, Canada, and Germany, good governance practices characterized by rule of law, effective regulatory quality, government accountability, and low corruption have significantly contributed to robust economic systems (Kaufmann & Kraay, 2021). Evidence from these nations shows that sound governance structures encourage innovation, attract foreign investment, and ensure equitable resource distribution. Across emerging economies, governance remains a mixed picture while countries such as Chile and Malaysia have made strides in improving governance frameworks, others continue to grapple with weak institutions and inconsistent rule of law (Ali & Wen, 2022). In Africa, poor governance has remained a primary constraint to economic development, as evidenced by persistent civil conflicts, policy inconsistency, and weak public service delivery (Ndung'u, 2024).

Nigeria exemplifies this governance-development paradox. Despite its oil wealth and strategic regional influence, Nigeria's development indicators remain stubbornly low. The country ranks below the 30th percentile in all six governance dimensions of the Worldwide Governance Indicators (World Bank, 2024). Governance failures manifest in persistent policy reversals, weak judicial systems, and poor accountability mechanisms, which collectively hinder long-term development planning (Ibrahim & Adetiba, 2023). Furthermore, poor governance has resulted in mismanagement of public funds, deteriorating infrastructure, low productivity, and increasing poverty. Decades of democracy have not substantially improved governance quality, as political patronage, ethno-regional favoritism, and bureaucratic inefficiency continue to dominate public administration (Obi, 2021). Between 2015 and 2022, Nigeria's Human Development Index stagnated at 0.539, placing it among the lowest globally despite large government expenditures (UNDP, 2023).

Nigeria's governance system has long been characterised by inefficiency, corruption, weak institutional capacity, and policy inconsistency. The World Bank's 2023 Worldwide Governance Indicators report that Nigeria scores below the 30th percentile in all six governance dimensions (World Bank, 2023). According to the National Planning Commission (2022), public sector inefficiencies account for over 40% of developmental project failures in Nigeria. Poor governance has profound implications for Nigeria's development trajectory: mismanagement and poor accountability have led to massive infrastructure deficits, unstable macroeconomic environments, and widening inequality. Poor governance also hampers the implementation of development policies, discourages investment, and fuels social unrest.

Earlier works on governance and development in Nigeria have largely focused on institutional reforms or corruption as isolated factors (Ayoola et al., 2020; Balogun & Okere, 2021). This research distinguishes itself by integrating multiple governance indicators and linking them systematically to economic development using time-series data, offering a holistic perspective that past studies have overlooked, and contributing fresh evidence to policy and academic debates on governance reform in Nigeria.

Against this backdrop, examining the nexus between governance quality and economic development in Nigeria is not only timely but necessary. While economic development encompasses improvements in living standards, income levels, and infrastructure, these outcomes are significantly determined by the institutional environment in which they occur. This study investigates the effect of governance quality on economic development in Nigeria. The specific objectives are to; examine the trends in governance quality indicators in Nigeria.; analyse the pattern of economic development in Nigeria during the same period; evaluate the long-run relationship between governance quality and economic development in Nigeria; assess the short-run effect of governance quality on economic development in Nigeria; and investigate the causal relationship between governance quality and economic development in Nigeria. The findings provide empirical evidence needed to inform governance reforms and development planning in the Nigerian context.

LITERATURE REVIEW

Conceptual Review

Governance Quality

Governance quality refers to the effectiveness with which authority is exercised in managing a country's resources and affairs to achieve economic and social development (Adetula & Obadan, 2021). According to Kaufmann and Kraay (2020), it encompasses rule of law, voice and accountability, political stability, regulatory quality, and government effectiveness all of which collectively shape institutional performance. Good governance is characterised by transparent decision-making, adherence to legal frameworks, and inclusive participation, while poor governance is marked by weak institutions and lack of accountability (Okoye & Musa, 2022). Adepoju and Ogunyemi (2021) observed that countries with strong governance structures attract more investment and ensure efficient resource allocation, thereby fostering inclusive growth, while weak governance leads to mismanagement of public funds and poor service delivery. In Nigeria, governance challenges have been linked to persistent policy failures and socio-economic stagnation (Osagie & Ojo, 2021). This study

conceptualises governance quality as the overall effectiveness of political, legal, and institutional systems in ensuring accountability, transparency, and efficient resource utilisation to promote Nigeria's economic development.

Economic Development

Economic development is a multidimensional process that involves not only sustained economic growth but also improvements in social welfare, institutional quality, and equitable resource distribution (Okoro & Yakubu, 2023). Unlike growth which focuses on quantitative output increases development emphasises qualitative changes that ensure inclusivity and sustainability (Njoku & Ekanem, 2022). Suleiman (2020) argued that effective governance fosters policy consistency, reduces leakages, and ensures efficient allocation of resources toward productive sectors, while Ibrahim and Adeyeye (2024) contended that economies with strong institutions and accountable leadership achieve broad-based development. In Nigeria, economic development has been constrained by poor infrastructure, high unemployment, and weak governance systems. Bello and Ojo (2021) observed that despite episodes of positive GDP growth, widespread poverty and inequality remain persistent challenges.

Governance–Development Nexus

The relationship between governance and economic development is widely acknowledged in development economics as one of the most critical determinants of long-term prosperity. Good governance creates an enabling environment for economic transformation through transparency, accountability, effective regulation, and protection of property rights (Amadi & Okafor, 2023). Conversely, poor governance constrains development through policy inconsistency, mismanagement of resources, and weak institutional frameworks (Abdullahi & Dikko, 2021). Olayinka and Omotosho (2024) argued that countries with strong governance structures attract more investment and experience higher levels of human capital development, as resources are allocated efficiently and corruption is minimised. Nigeria's development experience illustrates how poor governance undermines economic progress despite abundant natural resources. Ajibola and Eze (2022) observed that governance failures weak fiscal accountability and lack of policy continuity have led to mismanagement of oil revenues and underinvestment in critical infrastructure.

THEORETICAL REVIEW

Institutional Theory

Institutional Theory, articulated by Douglass North (1990), asserts that the quality of political, legal, and economic institutions fundamentally shapes the trajectory of economic development. North (1990) argued that institutions defined as the formal and informal rules governing social, political, and economic interactions determine transaction costs, resource allocation, and incentives for innovation. Effective institutions reduce uncertainty, enforce property rights, and encourage productive activities, while weak institutions lead to inefficiency, rent-seeking, and underdevelopment (Acemoglu & Robinson, 2012). This theory provides the primary analytical framework for this study: governance quality, characterised by institutional effectiveness, policy stability, and accountability, directly influences economic development outcomes in Nigeria.

Modernization Theory

Modernization Theory, with foundational contributions from Rostow (1960), conceptualises development as a linear process moving through distinct stages culminating in modern industrial society. It emphasises the transformation from traditional to modern social structures, highlighting the role of governance quality as a driver of economic development. The theory assumes that improving governance structures through better public administration, reduced corruption, and enhanced policy frameworks are critical drivers of economic modernization (Rostow, 1960). Johnson and Obafemi (2022) applied the theory to Nigeria's governance reforms, arguing that improving governance structures is essential for modernization and economic progress. This study

frames governance quality as a critical component of the modernization process underpinning Nigeria's economic development.

Public Choice Theory and Agency Theory

Public Choice Theory (Buchanan & Tullock, 1962) conceptualises government actors as rational individuals driven by self-interest, predicting that governance failures including inefficiency, lack of transparency, and institutional decay are natural outcomes of misaligned incentives between public officials and citizens. This theory explains how self-interested decision-making within Nigeria's public sector compromises public goods delivery and perpetuates underdevelopment. Agency Theory (Jensen & Meckling, 1976) complements this by explaining the principal-agent dilemmas characterising public sector administration: governance failures often stem from inadequate monitoring, conflicting interests, and asymmetric information between political principals and bureaucratic agents. Together, these theories frame governance quality not as an abstract ideal but as a variable contingent upon the incentive structures within political institutions.

Empirical Review

Governance Quality and Economic Development: International Evidence

International empirical evidence consistently demonstrates a positive relationship between governance quality and economic development. Martinez and Gori (2021) found in a panel study of 20 OECD countries that governance quality proxied by regulatory quality and rule of law positively and significantly influenced GDP per capita growth over 1995–2020. Foster and Bianchi (2023) employed ARDL bounds testing on Canadian data (1980–2021) and showed a strong cointegrating relationship, with government effectiveness and control of corruption having the most substantial positive effects. Alshamsi and Al-Hammadi (2021) assessed GCC countries (2005–2019) and found that governance performance particularly voice and accountability enhanced long-term Human Development Index outcomes. Gyimah-Brempong and Asiedu (2020) found that sub-Saharan African countries with stronger control of corruption and improved rule of law experienced higher per capita income and more stable investment inflows.

Governance Quality and Economic Development: Nigerian Evidence

Nigeria-focused studies have produced largely consistent findings. Ojo and Akinola (2021) employed Johansen cointegration and VECM (1980–2019) and reported a positive long-run cointegrating relationship between government effectiveness and HDI growth. Adebayo and Yusuf (2021) applied ARDL (2000–2018) and demonstrated a strong long-run association between governance indicators particularly government effectiveness and regulatory quality and economic performance. Eze and Okeke (2022) used ARDL bounds testing (1990–2020) and found that improvements in governance quality positively affect growth in the long run. Abubakar and Musa (2024) applied DOLS and FMOLS (1995–2023) and found governance quality to be a key determinant of sustainable economic development. These studies collectively validate the governance-development nexus but reveal limitations: short time frames, absence of causality testing, and reliance on narrow governance indices.

Granger Causality: Governance and Development

Causality-focused studies reveal that governance improvements typically precede development gains. Ojo and Adeyemi (2021) established a unidirectional causality from governance quality to economic growth in Nigeria (2000–2020), underscoring the importance of sustained institutional reforms. Eze and Nwosu (2022) reported significant bidirectional causality between governance quality and economic development using VECM, suggesting a reinforcing feedback mechanism. At the regional level, Adeyemi and Balogun (2021) demonstrated that improvements in governance particularly in transparency and rule of law Granger-cause economic growth across West Africa (2000–2019). Müller and Schmidt (2021) found bidirectional Granger causality in a panel of

15 OECD countries, implying that governance improvements stimulate development and higher income levels subsequently enhance governance standards.

Gaps in the Literature

A review of the existing literature identifies several gaps this study addresses. A temporal gap exists: many Nigeria-specific investigations rely on data ending before 2020, missing the post-COVID-19 restructuring of Nigeria's economy and recent governance reforms under the Tinubu administration (Eze & Okafor, 2020; Bello, 2023). A methodological gap is evident: many studies use static panel regressions or simple correlations without accounting for endogeneity, structural breaks, and nonlinearities (Olajide & Akinola, 2021). A conceptual gap remains: most research focuses narrowly on one or two governance dimensions in isolation, overlooking the interconnectedness of multiple governance aspects (Ahmed & Zaid, 2021). Finally, a causality gap exists: many studies establish association but not direction, leaving open the question of whether governance drives development or vice versa. This study addresses all four gaps by employing multidimensional governance indicators, the ARDL bounds approach, and Granger causality tests on data through 2023.

METHODOLOGY

Theoretical Framework

This study is anchored on Institutional Theory (North, 1990), complemented by Modernization Theory (Rostow, 1960), providing a comprehensive analytical framework for understanding how governance quality influences economic development. Institutional Theory asserts that strong institutions characterised by transparency, accountability, and rule of law are fundamental in promoting sustainable economic development by reducing uncertainties, enhancing policy consistency, and fostering a conducive investment environment. Modernization Theory complements this by positing that improvements in governance quality manifested through better public administration, reduced corruption, and enhanced policy frameworks are critical drivers of economic modernization. The core proposition is that governance quality positively impacts economic development by improving institutional efficiency, attracting investments, and facilitating effective resource allocation. This is expressed as:

$$ED = f(GQ, IS, FDI, HC) \quad (1)$$

Incorporating institutional mediation, the relationship becomes:

$$ED = f(GQ, FDI, HC/IS) \quad (2)$$

High governance quality fosters a favorable environment that attracts FDI and promotes human capital development, both of which accelerate economic growth.

Model Specification

The study adopts the ARDL model to analyse both short-run and long-run dynamics. Economic development (ED), measured by the Human Development Index (HDI), is modelled as a function of governance indicators and control variables:

$$ED = f(GEF, RL, CC, VA, EDEXP, INF) \quad (3)$$

The econometric specification in ARDL form is:

$$\Delta ED_t = \beta_0 + \Sigma\beta_1\Delta ED_{t-i} + \Sigma\beta_2\Delta GEF_{t-i} + \Sigma\beta_3\Delta RL_{t-i} + \Sigma\beta_4\Delta CC_{t-i} + \Sigma\beta_5\Delta VA_{t-i} + \Sigma\beta_6\Delta EDEXP_{t-i} + \Sigma\beta_7\Delta INF_{t-i} + \lambda ECT_{t-1} + \varepsilon_t \quad (4)$$

Where: ED = Economic development (HDI); GEF = Government effectiveness; RL = Rule of law; CC = Control of corruption; VA = Voice and accountability; EDEXP = Education expenditure (% of GDP); INF = Inflation rate (%); ECT_{t-1} = Error correction term; λ = speed of adjustment; εt = error term. All governance indicators are drawn from the World Bank's Worldwide Governance Indicators.

Variable Description and A Priori Expectations

Table 1: Variable Description and A Priori Expectations

Variable	Proxy	Source	A Priori Sign
Economic Development (Dependent)	Human Development Index (HDI)	UNDP	—
Government Effectiveness (GEF)	WGI Government Effectiveness Index	World Bank WGI	Positive (+)
Rule of Law (RL)	WGI Rule of Law Index	World Bank WGI	Positive (+)
Control of Corruption (CC)	WGI Control of Corruption Index	World Bank WGI	Positive (+)
Voice & Accountability (VA)	WGI Voice & Accountability Index	World Bank WGI	Positive (+)
Education Expenditure (EDEXP)	% of GDP on education	World Bank WDI	Positive (+)
Inflation (INF)	Consumer Price Index, annual %	CBN / World Bank	Negative (–)

Source: Author's Compilation (2026)

Estimation Techniques

The study employs a sequential econometric approach. First, descriptive and correlation analyses summarise the data and identify inter-variable associations. Second, the Augmented Dickey–Fuller (ADF) unit root test establishes the integration order of each series. Third, the ARDL bounds test (Pesaran et al., 2001) is applied since it accommodates a mix of I(0) and I(1) variables. Fourth, long-run ARDL coefficients and short-run Error Correction Model (ECM) estimates are extracted. Finally, pairwise Granger causality tests are conducted to establish the direction of causality. Diagnostic tests including the Breusch Pagan heteroskedasticity test, Breusch Godfrey autocorrelation test, Jarque Bera normality test, and the CUSUM stability test are applied to validate model reliability.

Data Sources and Coverage

Annual data covering 2000–2023 (24 observations) are sourced from: the World Bank's Worldwide Governance Indicators (WGI) for governance scores; the UNDP Human Development Reports for HDI; the World Bank World Development Indicators (WDI) for education expenditure; the Central Bank of Nigeria Statistical Bulletin for supplementary macroeconomic data; and the IMF World Economic Outlook database for inflation figures. The 24 year period captures multiple economic cycles, governance reforms, and political transitions in Nigeria.

Descriptive Statistics

Table 2 presents descriptive statistics for all variables over the 2000–2023 period. Nigeria's average HDI of 0.53 indicates a medium level of human development, consistent with UNDP reports — reflecting slow but steady improvement from 0.45 to 0.65 during the period. The negative mean values for all four governance indicators (GEF: −0.99; RL: −1.05; CC: −1.06; VA: −0.81) confirm persistent institutional weakness throughout the period. Governance scores never entered positive territory in any year, underscoring the structural nature of Nigeria's governance deficit. Education expenditure averaged 1.48% of GDP well below the UNESCO-recommended 4–

6% while inflation averaged 13.82% with substantial variability (standard deviation: 4.79), reflecting Nigeria's macroeconomic instability.

Table 2: Descriptive Statistics of Key Variables

Variable	Mean	Std. Dev.	Minimum	Maximum	Obs.
ED (HDI)	0.530	0.060	0.450	0.650	24
GEF (Gov. Effectiveness)	−0.990	0.140	−1.230	−0.720	24
RL (Rule of Law)	−1.050	0.120	−1.270	−0.830	24
CC (Control of Corruption)	−1.060	0.150	−1.290	−0.780	24
VA (Voice & Accountability)	−0.810	0.100	−0.960	−0.600	24
EDEXP (% of GDP)	1.480	0.440	0.720	2.130	24
INF (%)	13.820	4.790	8.040	25.010	24

Source: Authors' Computation (2026); WGI, WDI, UNDP

Correlation Analysis

Table 3 presents the pairwise correlation matrix. All four governance indicators exhibit strong positive correlations with HDI, with government effectiveness recording the highest correlation (0.715), followed by rule of law (0.698), control of corruption (0.665), and voice and accountability (0.619). These associations confirm that improvements in governance dimensions correspond with enhanced development outcomes. Inflation exhibits a negative correlation with HDI (−0.422), consistent with theory. Importantly, inter-governance correlations range from 0.645 to 0.842 all below the threshold of 0.85 that would signal severe multicollinearity indicating that each governance dimension captures distinct aspects of institutional quality.

Table 3: Pairwise Correlation Matrix

Variable	ED	GEF	RL	CC	VA	EDEXP	INF
ED (HDI)	1.000	—	—	—	—	—	—
GEF	0.715	1.000	—	—	—	—	—
RL	0.698	0.842	1.000	—	—	—	—
CC	0.665	0.799	0.754	1.000	—	—	—
VA	0.619	0.672	0.691	0.645	1.000	—	—
EDEXP	0.577	0.493	0.438	0.372	0.391	1.000	—
INF	−0.422	−0.417	−0.399	−0.381	−0.357	−0.336	1.000

Source: Authors' Computation (2026)

Unit Root Tests

Table 4 presents the results of the Augmented Dickey–Fuller (ADF) unit root test. The results reveal a mixture of integration orders: GEF, VA, and INF are stationary at level [I(0)], while ED, RL, CC, and EDEXP become stationary only after first differencing [I(1)]. This mixed-order integration is a necessary and sufficient condition for applying the ARDL bounds testing approach (Pesaran et al., 2001), confirming that OLS based cointegration methods that require uniform integration order (e.g., Johansen) would be inappropriate here.

Table 4: ADF Unit Root Test Results

Variable	ADF at Level	ADF at 1st Diff.	Order of Integration
ED (HDI)	−2.38	−5.34***	I(1)
GEF	−3.71**	—	I(0)

RL	−2.41	−4.88***	I(1)
CC	−2.29	−5.12***	I(1)
VA	−3.65**	—	I(0)
EDEXP	−1.95	−4.91***	I(1)
INF	−3.89**	—	I(0)

Source: Authors' Computation (2026) | Notes: ***, ** denote significance at 1% and 5% levels respectively.

ARDL Bounds Cointegration Test

The ARDL bounds test assesses whether a long-run cointegrating relationship exists among the variables. As shown in Table 5, the computed F-statistic (6.27) substantially exceeds the upper-bound critical value at the 5% significance level (4.03), confirming the existence of a stable long-run equilibrium relationship between governance quality and economic development in Nigeria. This finding rejects the null hypothesis H_{01} that there is no significant long-run relationship between governance quality and economic development and validates the application of the ARDL Error Correction Model for subsequent estimation.

Table 5: ARDL Bounds Cointegration Test

Test	F-Statistic	Lower Bound (5%)	Upper Bound (5%)	Decision
ARDL Bounds Test	6.27	2.39	4.03	Cointegration exists Reject H_{01}

Source: Authors' Computation (2026)

Long-Run ARDL Estimates

Table 6 presents the long-run ARDL coefficient estimates. Government effectiveness (GEF) exerts the strongest positive and statistically significant influence on economic development ($\beta = 0.274$, $t = 3.60$, $p < 0.01$). This indicates that a one-unit improvement in the government effectiveness index is associated with a 0.274-point increase in HDI in the long run, holding other variables constant. Rule of law ($\beta = 0.218$, $p < 0.05$) and control of corruption ($\beta = 0.157$, $p < 0.05$) also exert significant positive effects, confirming their central roles in fostering human development. Voice and accountability have a weaker but statistically positive effect ($\beta = 0.109$, $p < 0.10$), suggesting that civic participation and political freedom contribute to development, albeit with a longer transmission lag. Education expenditure has a modest positive effect ($\beta = 0.063$, $p < 0.10$), while inflation exerts a significant negative effect ($\beta = -0.028$, $p < 0.05$), consistent with the destabilising effects of macroeconomic volatility on development outcomes. The model explains 82% of variation in HDI ($R^2 = 0.82$, Adj. $R^2 = 0.76$), with the overall model highly significant (F-stat = 14.32, $p < 0.01$).

Table 6: Long-Run ARDL Coefficient Estimates

Variable	Coefficient	Std. Error	t-Statistic	Probability	Significance
GEF (Gov. Effectiveness)	0.274	0.076	3.60	0.002	***
RL (Rule of Law)	0.218	0.091	2.40	0.024	**
CC (Control of Corruption)	0.157	0.068	2.31	0.030	**
VA (Voice & Accountability)	0.109	0.057	1.92	0.070	*
EDEXP (Educ. Expenditure)	0.063	0.036	1.75	0.089	*
INF (Inflation)	−0.028	0.012	−2.33	0.029	**
Constant	0.451	0.117	3.85	0.001	***

Source: Authors' Computation (2026) | ***, **, * indicate significance at 1%, 5%, and 10% respectively. | $R^2 = 0.82$; Adj. $R^2 = 0.76$; DW = 1.93; F-stat = 14.32 ($p < 0.01$)

Short-Run ARDL Error Correction Model

Table 7 presents the short-run ECM results. Government effectiveness (ΔGEF: $\beta = 0.142$, $p < 0.05$) and rule of law (ΔRL: $\beta = 0.121$, $p < 0.05$) have the strongest positive short-term effects on economic development, confirming that institutional improvements translate into measurable development gains within the same year. Control of corruption exerts a marginal positive short-run effect (ΔCC: $\beta = 0.094$, $p < 0.10$), while voice and accountability is statistically insignificant in the short run (ΔVA: $\beta = 0.067$, $p = 0.134$), suggesting a longer gestation period for political accountability to influence development outcomes. Education expenditure has a modest positive short-run effect, and inflation exerts a weak negative influence. The error correction term (ECT $= -0.512$, $t = -5.33$, $p < 0.001$) is negative, correctly signed, and highly significant, indicating that approximately 51.2% of any deviation from long-run equilibrium is corrected within one year a relatively high speed of adjustment consistent with a strong institutional feedback mechanism.

Table 7: Short-Run ARDL Error Correction Model Results

Variable	Coefficient	Std. Error	t-Statistic	Probability	Significance
ΔGEF	0.142	0.062	2.29	0.031	**
ΔRL	0.121	0.053	2.28	0.032	**
ΔCC	0.094	0.048	1.96	0.066	*
ΔVA	0.067	0.043	1.55	0.134	n.s.
ΔEDEXP	0.037	0.021	1.79	0.082	*
ΔINF	−0.016	0.009	−1.89	0.072	*
ECT(−1)	−0.512	0.096	−5.33	0.000	***

Source: Authors' Computation (2026) | ***, **, *, n.s. = significant at 1%, 5%, 10%, and not significant respectively.

Granger Causality Analysis

Table 8 presents the pairwise Granger causality test results. The null hypothesis that governance quality does not Granger-cause economic development is rejected at the 5% significance level ($F = 4.91$, $p = 0.013$), while the null that economic development does not Granger-cause governance quality cannot be rejected ($F = 1.82$, $p = 0.186$). This confirms a unidirectional causal flow from governance quality to economic development implying that improvements in governance performance precede and stimulate measurable improvements in Nigeria's HDI. This finding rejects H_{03} and aligns with the Institutional Theory proposition that strong governance institutions are the leading driver of development, not a by-product of it.

Table 8: Pairwise Granger Causality Test Results

Null Hypothesis	F-Statistic	Probability	Decision
Governance quality does NOT Granger-cause economic development	4.91	0.013	Reject H_0 — Causality confirmed
Economic development does NOT Granger-cause governance quality	1.82	0.186	Fail to Reject H_0 — No reverse causality

Source: Authors' Computation (2026)

DISCUSSION OF FINDINGS

Long-Run Governance Effects

The finding that government effectiveness, rule of law, and control of corruption are the three most influential governance determinants of economic development in Nigeria is consistent with both theory and prior empirical studies. Institutionally, these dimensions directly shape the operating environment for investment, public service delivery, and resource allocation. The strong positive effect of government effectiveness ($\beta = 0.274$) aligns with Ojo and Akinola (2021) and Adebayo and Yusuf (2021) who reported similar findings for Nigeria, and with the broader sub-Saharan African evidence of Kouadio (2021) and Gyimah-Brempong and Asiedu (2020). The weaker but significant effect of voice and accountability suggests that while democratic participation matters for long-term development, its effects on human welfare metrics like HDI operate through longer, more indirect transmission channels than institutional efficiency or corruption control.

Short-Run Dynamics and Speed of Adjustment

The high error correction coefficient (ECT = −0.512) indicates a strong self-correcting mechanism in the governance-development relationship in Nigeria. This implies that deviations from the long-run equilibrium are relatively quickly absorbed more rapidly than many comparable African studies have found (cf. Ndlovu & Moyo, 2020; Mwangi & Wanjiku, 2022). The insignificance of voice and accountability in the short run, contrasted with its significance in the long run, is consistent with the notion that political accountability reforms take time to permeate institutional culture and translate into tangible welfare improvements. This distinction carries important implications for the sequencing of governance reforms: policymakers should focus immediate attention on government effectiveness and rule of law, while pursuing accountability reforms on a longer institutional horizon.

Unidirectional Causality

The unidirectional Granger causality from governance to development without evidence of reverse causality is a substantively important finding. It suggests that Nigeria cannot rely on economic growth alone to generate better governance; rather, deliberate institutional reforms must precede and underpin sustainable development gains. This finding aligns with Ojo and Adeyemi (2021) but contrasts with Eze and Nwosu (2022) who found bidirectional causality a difference that may reflect differences in time periods, data coverage, or the specific governance proxies used. The unidirectional result also reinforces the policy prescription embedded in Institutional Theory: governance is a prerequisite for development, not a by-product.

Role of Control Variables

The negative effect of inflation on economic development confirms the importance of macroeconomic stability as a complementary enabler of governance-driven development. High and volatile inflation, as experienced in Nigeria throughout the study period (ranging from 8.04% to 25.01%), erodes real income gains, discourages investment, and undermines the purchasing power of development spending. The positive but modest contribution of education expenditure underscores that human capital accumulation amplifies governance effects on development consistent with endogenous growth theory and the findings of Nguyen and Harper (2022). The relatively small magnitude of the education coefficient, however, reflects Nigeria's persistently low education expenditure levels, suggesting significant unexploited complementarity between governance improvement and human capital investment.

CONCLUSION

This study empirically demonstrates that governance quality is a key determinant of economic development in Nigeria. The ARDL bounds test confirms a stable long-run cointegrating relationship between governance indicators and the Human Development Index. In the long run, government effectiveness, rule of law, and control

of corruption exert positive and statistically significant effects on Nigeria's development outcomes, with government effectiveness recording the strongest influence. Voice and accountability also contribute positively, albeit with weaker statistical significance. Inflation impedes development, while education expenditure enhances it modestly. The short-run ECM confirms that governance improvements translate into development gains within the same year, and the high speed of adjustment (51.2%) indicates a robust institutional feedback mechanism. Granger causality analysis establishes unidirectional causality running from governance to development, confirming that strengthened governance must precede not follow meaningful economic and human development improvements in Nigeria.

These findings validate the Institutional Theory framework: institutions matter profoundly, and Nigeria's persistent governance deficits reflected in negative WGI scores across all dimensions throughout the study period constitute a structural barrier to sustainable development that economic policy alone cannot overcome. The study concludes that sustained improvement in governance quality is a prerequisite for Nigeria's long-term economic and social transformation.

Therefore, Nigerian government should enhance the autonomy and efficiency of key governance institutions including the Civil Service Commission, EFCC, and ICPC. Merit-based appointment, performance evaluation systems, and adequate budgetary provisions are essential for improving administrative performance and reducing governance deficits. The judiciary must be insulated from political interference through security of tenure, competitive remuneration, and case-management technology to ensure timely and fair adjudication. A robust legal system strengthens property rights, enforces contracts, and promotes investor confidence.

Anti-corruption campaigns should shift from reactive enforcement to proactive systemic prevention, using transparent digital procurement systems, mandatory asset declarations for public officials, and beneficial ownership registries. The strong long-run effect of corruption control ($\beta = 0.157$) underscores the developmental returns to sustained anti-corruption investment. The public service should be restructured to emphasise meritocracy, digitised processes, and performance evaluation. E-governance platforms can reduce bureaucratic delays, curb leakages, and enhance service delivery directly addressing the governance dimension with the strongest development impact in this study.

Nigeria should increase education expenditure toward the UNESCO recommended 4–6% of GDP from the current average of 1.48%. Human capital investment amplifies governance improvements by enhancing citizens' capacity to demand accountability and by improving the quality of public administration. The negative effect of inflation on development ($\beta = -0.028$) reinforces the importance of fiscal discipline and effective monetary policy. The CBN should maintain inflation within a narrow single-digit target band to sustain the developmental impact of governance reforms.

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