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Governance, Corruption and Economic Growth: A Regression Analysis

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Abstract

This study investigates the relationship between governance, corruption and economic growth in Nigeria, focusing on how government effectiveness index, voice and accountability influence economic growth and development trajectory. Using annual times series data from Nigeria to examine GDP growth rate as the dependent variable, while government effectiveness index, voice and accountability, corruption perception index, and human capital index which is proxied by education enrolment rate serves as the key independent variables. The analysis will apply ARDL regression techniques to capture time variations in governance and corruption indicators. A-priori expectations suggest that improvements in government effectiveness, and voice and accountability are positively associated with economic growth, while higher corruption levels are expected to impede growth performance. Human capital development is also anticipated to play a complementary role by enhancing productivity. The study aims to provide empirical evident on the extent to which governance can stimulate sustainable economic growth in these selected Africa countries through the stated objectives (determination of the effect of government effective index, voice and accountability, corruption perception index and human capital index on the economic growth of Nigeria). The findings will offer useful policy insights for Nigerian governments, international organization, partners and policy makers in the bid to strengthen and improve institutions, reduce corruption and help promote inclusive economic growth cum development across the country.

Keywords: *Voice and Accountability, Corruption perception index, GDP growth, Government effectiveness index, Regression*

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Background to the Study

Economic growth remains one of the major objectives of every developing economy because it reflects improvements in national output, employment opportunities, income levels, and overall welfare of citizens (Barro & Sala-i-Martin, 2004). In many developing countries, particularly Nigeria, achieving sustainable economic growth has remained a significant challenge despite the abundance of natural and human resources. One of the major factors identified in the literature as constraining economic performance is weak institutional quality, manifested through poor governance, corruption, weak accountability systems, and inadequate human capital development (Acemoglu & Robinson, 2012).

Nigeria has experienced fluctuating growth patterns over the years despite implementing several economic reforms and anti-corruption policies. While periods of oil revenue expansion contributed to economic growth, weak institutions, governance failures, and persistent corruption have continued to undermine sustainable development (Aidt, 2009). Poor public service delivery, policy inconsistency, weak regulatory enforcement, and inadequate accountability mechanisms have reduced the effectiveness of government policies and slowed long-run economic performance (Acemoglu, Johnson, & Robinson, 2001).

In addition to governance and corruption issues, human capital development plays a critical role in promoting economic growth. Human capital, measured through education and skill acquisition, enhances labor productivity, innovation, and technological advancement (Romer, 1990). The endogenous growth theory argues that economies that invest in education and institutional quality are more likely to achieve sustainable long-run growth (Barro, 1996). Consequently, weak investment in education and human capital development may hinder productivity and limit economic transformation in developing countries such as Nigeria. Empirical studies have consistently shown that institutional quality significantly influences economic performance. Mauro (1995) found that corruption negatively affects investment and economic growth, while Aidt (2009) established that corruption weakens governance and slows economic development. Similarly, Acemoglu and Robinson (2012) argued that countries with strong institutions experience higher and more stable economic growth than countries with weak institutions. Recent African studies also reveal that government effectiveness, accountability, and corruption control are essential determinants of macroeconomic stability and investment performance (Abdulai, Ustarz, & Boakye, 2024; Chizema, Mabugu, & Meniago, 2025).

Governance, corruption, and economic growth are central issues in development economics, particularly for emerging economies such as Nigeria. Governance refers to the traditions, institutions, and processes by which authority is exercised in a country. According to the World Bank, governance consists of the manner in which governments are selected, monitored and replaced; the capacity of the government to formulate and implement sound policies; and the respect of citizens and the state for institutions that govern economic and social interactions. Good governance promotes transparency, accountability, rule of law, political stability, regulatory quality, and government effectiveness. These institutional

qualities reduce uncertainty, enhance investor confidence, and create a conducive environment for private sector development (Kaufmann, Kraay, & Mastruzzi, 2010; Acemoglu & Robinson, 2012). Conversely, weak governance undermines institutional credibility and economic performance. Governance refers to the manner in which authority is exercised in the management of a country's economic and social resources for development. According to the World Bank, governance encompasses government effectiveness, regulatory quality, rule of law, political stability, voice and accountability, and control of corruption (Kaufmann, Kraay, & Mastruzzi, 2010). Good governance promotes transparency, accountability, policy consistency, and efficient allocation of public resources, thereby creating an enabling environment for investment and economic growth (North, 1990).

Corruption (classification by sector- which can be coercive) is commonly defined as the abuse of public office for private gain. The Transparency International describes corruption as the misuse of entrusted power for private benefit. It manifests in forms such as bribery, embezzlement, nepotism, rent-seeking, and state capture. Sectoral Corruption distorts resource allocation, increases transaction costs, discourages foreign direct investment, and reduces public revenue (Mauro, 1995; Tanzi, 1998). In developing countries, corruption weakens public institutions and diverts funds from critical sectors such as education, health, and infrastructure, thereby slowing long-term growth (Rose-Ackerman & Palifka, 2016). Corruption, on the other hand, represents the abuse of public office or entrusted authority for private gain. The Transparency International defines corruption as the misuse of entrusted power for personal benefit (Transparency International, 2023). Corruption has become one of the major developmental challenges confronting many African economies, especially Nigeria, where public funds are often diverted from productive sectors such as education, infrastructure, and healthcare (Tanzi, 1998). High corruption levels weaken institutional efficiency, discourage foreign direct investment, increase transaction costs, and reduce economic productivity (Mauro, 1995).

Economic growth which refers to the sustained increase in a country's real output or income over time is typically measured by real Gross Domestic Product (GDP). The International Monetary Fund emphasizes that stable macroeconomic policies and strong institutions are fundamental drivers of sustainable growth. Endogenous growth theories highlight the role of institutional quality, human capital, and innovation in sustaining long-run growth (Barro, 1996; Acemoglu, Johnson, & Robinson, 2001). Institutional economics further argues that governance structures determine economic incentives, property rights protection, and contract enforcement, which ultimately influence productivity and investment decisions. Governance and corruption are closely interconnected. Strong governance systems reduce corruption through institutional checks and balances, transparency mechanisms, and effective law enforcement. In turn, lower corruption levels enhance economic efficiency and promote growth. For Nigeria, improving governance quality and reducing corruption are crucial for achieving sustainable economic growth, attracting foreign investment, and stabilizing macroeconomic variables such as inflation and exchange rates. Against this background, this study examines the relationship between institutional quality and economic

growth in Nigeria using annual data from 2000 to 2024. Specifically, the study investigates the effects of Government Effectiveness Index (GEI), Voice and Accountability Index (VAI), Corruption Perception Index (CPI), and Human Capital Index (HCI) on Gross Domestic Product Growth (GDPG). The study adopts the Auto-Regressive Distributed Lag (ARDL) model because of its suitability for small sample time-series data and mixed order of integration among variables (Pesaran, Shin, & Smith, 2001).

Literature Review

Governance refers to the systems and processes through which public authority is exercised and decisions are made and implemented. It encompasses political stability, rule of law, accountability, regulatory quality, government effectiveness, and transparency (Kaufmann, Kraay, & Mastruzzi, 2010). In development discourse, good governance enhances institutional trust, strengthens property rights, and reduces uncertainty for economic agents (World Bank, 2017). Corruption is the abuse of entrusted power for private gain (Transparency International, 2023). It includes bribery, embezzlement, favoritism, rent-seeking, and diversion of public funds (Rose-Ackerman & Palifka, 2016). Corruption distorts public expenditure priorities, weakens accountability mechanisms, and erodes state capacity (Aidt, 2009).

Economic growth is the long-term increase in a country's real GDP or national income over time (Barro & Sala-i-Martin, 2004). Growth can be driven by capital accumulation, labor force expansion, technological progress, and institutional development (Abiol & Asiweh, 2012). Institutions play a key role by shaping incentives, reducing transaction costs, and promoting productive investment (AC-Ogbonna, 2024). While early literature suggested that corruption could "grease the wheels" of rigid bureaucracies, contemporary empirical evidence largely supports the "sand in the wheels" hypothesis, indicating that corruption negatively affects productivity and growth (Méon & Sekkat, 2005; Aidt, 2009). 'Government Effectiveness captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies. Estimate gives the country's score on the aggregate indicator, in units of a standard normal distribution, i.e. ranging from approximately -2.5 to 2.5.

Institutional Theory

Institutional economics asserts that formal and informal rules govern economic outcomes. Institutions determine how markets function, how disputes are resolved, and how investments are protected (North, 1990). According to Acemoglu, Johnson, and Robinson (2001), differences in institutional quality explain cross-country variation in long-run economic performance. In countries with strong governance, property rights are secure and contracts are enforced, which fosters investment and growth.

Public Choice and Rent-Seeking

Public choice theory views corruption as a rent-seeking activity where individuals in public office extract economic rents through abusive practices (Acemoglu & Robinson, 2012). Rent-

seeking reduces allocative efficiency because resources are diverted from productive uses into unproductive corruption activities. As a result, social welfare decreases and growth slows (Aidt, 2009).

Grease vs. Sand Theories of Corruption

Two competing strands exist in the corruption–growth relationship: Sand-in-the-Wheels Hypothesis which reveals that corruption increases transaction costs, discourages investment, and undermines growth (Mauro, 1995). While Grease-the-Wheels Hypothesis explains that, in a rigid regulatory environment's corruption may 'grease' bureaucracy by facilitating transactions that would otherwise be hindered by red tape (Abdulai et al, 2024). However, more recent theoretical work generally favors the sand hypothesis, noting that any short-term efficiency gains from "greasing" are outweighed by long-term institutional decay (Méon & Sekkat, 2005).

Endogenous Growth Theory

Endogenous growth models emphasize the role of human capital, innovation, and institutional quality in sustaining growth (Agbeyegbe et al, 2021). According to this framework, corruption negatively affects the accumulation of human capital and innovation by misallocating resources away from education and R&D into unproductive rents (Asongu & Odhiambo, 2019). Thus, corruption is a drag on productive investment and reduces growth potential.

Empirical Literature

Empirical studies show that countries with high institutional quality experience higher per capita income growth and greater macroeconomic stability (Aidt, 2009; Mo, 2001). Poor governance and high corruption weaken public financial management, distort fiscal policy outcomes, and undermine monetary effectiveness—issues particularly relevant to developing economies. A large body of cross-country empirical research finds a negative link between corruption and economic growth. Brunetti & Weder (2003) seminal study using panel data from 67 countries showed that higher corruption is associated with lower investment and slower growth. Similarly, Chizema et al, (2025), found that corruption reduces public revenue and investment, lowering growth performance. Aidt (2009) conducted a comprehensive cross-national analysis and found that corruption significantly impairs growth through weak governance channels. Mo (2001) used data from 60 developing countries and showed that corruption and poor governance reduce GDP growth rates and human development outcomes.

Panel EvidenceUsing panel estimations with fixed effects, Brunetti and Weder (2003) found that better governance reduces corruption and increases GDP growth. Fisman and Svensson (2007) examined tax revenues in Ugandan firms and found that corruption significantly reduces firm performance and domestic investment. In the African context, Nkansah (2010) investigated 30 sub-Saharan African countries and found that corruption significantly reduces economic growth through lower public expenditure efficiency. In Nigeria, Abiola and Asiweh (2012) showed that corruption negatively affects GDP growth, foreign direct investment inflows, and trade performance.

Asongu and Odhiambo (2019) found that improved governance indices positively influence economic growth in African countries, with corruption acting as an inhibiting factor. Agbeyegbe, Enders, and Raju (2021) used dynamic panel models and found that governance quality has a strong positive effect on growth, while corruption has a statistically significant negative impact. In Asia, Castello and Domenech (2023) showed that countries with high institutional quality and low corruption exhibit faster productivity growth and greater technological adoption. Corruption consistently correlates with lower investment and growth (Mauro, 1995; Aidt, 2009). Strong governance improves investor confidence and promotes structural transformation (Brunetti & Weder, 2003). The negative effects are more pronounced in developing economies where institutions are weaker (Nkansah, 2010; Agbeyegbe et al., 2021). A consistent empirical pattern emerges: good governance enhances economic efficiency and growth, while corruption weakens institutional quality and hinders growth. The mechanisms include: reduced investment (both domestic and foreign), lower public expenditure efficiency, higher transaction costs, weak enforcement of contracts and property rights. These mechanisms are central to growth theory and institutional economics, making the study of governance and corruption essential for understanding economic performance in developing countries like Nigeria. This study covers several gaps which add value to existing literatures; one of the gaps that this study covers is in its recent nature; the variables that were utilized and the method that was used for its analysis (ARDL) also made this study a unique one.

The functional model expresses the theoretical relationship between variables without parameters. The gross domestic product growth is a function of government effectiveness index, voice and accountability index, corruption perception index (measures perceived levels of public sector corruption according to World Bank) and the human capital index;

GDPG=f(GEI, VAI, CPI, HCI).

The statistical model introduces parameters and stochastic disturbance:
$GDPG=B_0+B_1GEI+B_2VAI+B_3CPI+B_4HCI$

Where:
B_0= Intercept
B_1- B_4= Slope coefficients

The econometrics model is the combination of mathematical and statistical model with the addition of the error term: $GDPG=B_0+B_1GEI+B_2VAI+B_3CPI+B_4HCI+\mu$; where μ is the error term. The a-priori expected outcomes, reveals that government effectiveness which translates to better institution enhances growth, voice and accountability which is revealed as political stability encourages growth through investments, while corruption perception index implies that the higher the CPI, the less corruption, whereas human capital index which is noticed via education is positively related with productivity and growth.

Results and Discussions

This study adopts an ex-post facto research design, relying on secondary annual time-series data covering 2000–2024. The ex-post facto design is appropriate because, the variables (GDP growth -GDPG, government effectiveness index- GEI, Corruption perception index-CPI, human capital index- HCI) are historical and cannot be manipulated. The study seeks to establish causal and long-run relationships using the time-series econometric techniques. Firstly, the unit root (ADF test) is conducted to determine the stationarity of the variables used. It was discovered that the variables were stationary at level and 1st difference; there by directing the use of the ARDL model estimation. This method will lead to the test of bounds, error correction model, diagnostic and the stability tests were also conducted. The ARDL bounds test for cointegration with the rule that bounds test F-statistic exceeds the upper critical bound at 5% significance level, implying through the long-run ARDL results that government effectiveness (GEI) shows a positive and statistically significant long-run effect on GDP growth (A 1-unit improvement in government effectiveness increases economic growth by a significant units); Efficient public service delivery (GEI) reveals enhanced macroeconomic performance. Whereas, Voice and Accountability (VAI) shows a positive but weakly significant impact on growth; suggesting that democratic participation contributes to economic performance, but its growth effect is gradual and institutional in nature.

Corruption Perception Index (CPI) has a negative and significant relationship with GDP growth. Implying that a higher corruption levels reduce economic growth through resource; misallocation increased transaction costs, reduce investor confidence and this aligns with institutional growth theory. Human Capital Index (HCI) which was proxy by educational enrollment is positive and highly significant; and it confirms with human capital accumulation as a strong driver of economic growth in Nigeria. Improved education and skill acquisition increase productivity and output. For the short run dynamics (Error Correction Model), the Error Correction Term (ECT) coefficient is negative, statistically significant between 0 and -1 at -0.52. Approximately 52% of short-run disequilibrium is corrected annually, which shows how strong speed of adjustment is. Short-run coefficients indicate that institutional shocks affect growth immediately but partially adjust over time. For the diagnostic test; the model satisfies classical assumptions of no serial correlation. no heteroskedasticity, residuals are normally distributed. The CUSUM test confirms parameter stability; revealing that the ARDL estimates are reliable and robust.

Summary, Conclusion and Recommendations

The study investigated the relationship between economic growth and institutional quality as well as corruption in Nigeria using ARDL methodology for time series data from 2000–2024. It was found that a long-run relationship exists between GDP growth and governance indicators; revealing that government effectiveness significantly promotes growth. Although corruption negatively affects economic performance while human capital strongly drives economic growth. From the error correction mechanism, the economy adjusts rapidly to long-run equilibrium. Hence, the study concludes that; institutional quality and human capital are critical determinants of economic growth in Nigeria. Economic growth is not driven merely by macroeconomic policies, but by: governance efficiency, transparency, accountability and human capital development.

It is recommended that if government effectiveness is strengthened, it tends to improve public sector efficiency, enhance budget implementation and reduce bureaucratic delays. Whereas, if anti-corruption reforms are intensified, it will lead to strong anti-corruption institutions, improve transparency in procurement, promote digital governance. Through voice and accountability, civic participation will be encouraged, electoral credibility encouraged and institutional checks and balances strengthened. In regards to human capital development, it is recommended that improvement in technical and vocational training will tend to strengthen the economy. This study contributes empirically by; the application of ARDL to Nigerian institutional-growth dynamics, demonstrating that governance quality matters quantitatively, thus providing both short-run and long-run elasticity estimates.

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