



INSTITUTIONAL QUALITY AND ECONOMIC GROWTH IN NIGERIA

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ABSTRACT

The study investigates the impact of institutional quality on economic growth in Nigeria, covering the periods from 1990 to 2022. The data was analyzed using the auto-regressive distributed lag model technique. The results showed that human capital development as an integral part of institutional quality has really contributed significantly to the performance of the economy in the short run as well as in the long run. The estimated model met both conditions of cointegration, though its impact was felt lightly as revealed by the result that there was a long run relationship between the variables, and that economic growth adjusted to stability of 22%. The study recommended a concentration of more resources into research and development to boost human capital development to enhance institutional quality of the country and economic productivity.

KEYWORDS: *Human capital development; Institution Quality, Economic Growth*

1 INTRODUCTION

The importance of institutions for economic development and growth has long been understood and emphasized, for instance, Adam Smith and, more recently, David Landes (1998), and recognized in the 1993 Nobel Prize awarded to Douglass North. In the past few years, however, there has been a resurgence of interest in this subject, including research into the sources of institutional differences across countries, the channels through which institutions may affect economic performance, and the quantitative importance of these links. In the words of Utile, Ijirshar & Sem (2021) the quality of institutions in most developing economies has taken a central position in empirical discourse. Institutional quality entails the rule of law, individual rights, as well as high-quality government regulation and services. It is the extent to which a country's institutions facilitate international transactions, and provide for their security and predictability. Bruinshoofd (2016), it captures laws, individual rights and high quality government regulation and services and that it reinforces economic development. The importance of the quality of institutions in supporting investment and economic growth cannot be overemphasized. Hence institutional quality is critical in the economic development of an economy across the globe, it is a crucial factor in the country's wealth, besides other factors like socio-political stability, reducing political risk, and innovation (Uddin, Ahmad, Ismailov, Balbaa, Akhmedov, Khasanov, & Haq, 2023). This wealth and rationalization of its management also led to increasing economic development (Moudine, El Khattab, & Bettah, 2019). In order to foster economic growth and incentive productivity, it is essential for institutions to promote wealth-generating actions such as education acquisition, innovation, while discouraging wealth-destructive behaviors such as rent-seeking, theft, and corruption. As forwarded by Butkiewicz and Yanikkaya (2006), governmental institutions provide a framework to induce economic activities in an economy. Good institutions create an environment that promotes economic activity, inventiveness, growth, and development. Bad institutions typically result in economic stagnation. Two characteristics that epitomize most developed economies are democracy and maintenance of the rule of law. While related, these two institutional characteristics are not identical. Maintenance of the rule of law is not necessarily unique to democratic societies. However, these two institutional characteristics are highly correlated.

As a result, the quality of institutions is critical in ensuring the regulation and implementation of political, social, and economic activities across the globe, as well as proper monitoring. And that the contention on inclusive institutions are the deep determinants of economic growth remains unsatisfactory. Constantine (2017) develops an alternative



theoretical and empirical case that economic structures are the fundamental cause of economic performance. According to him, economic structures determine the rate of structural learning, which affect institutional performance, influence income distribution and establish the direction of political transitions, thereby, economic performance. The feedback loops among institutions, political power and economic structures, thus, markets on their own will not ensure growth-enhancing transformations. The workings of this framework are illustrated using a USA case study, and it exposes the structural origins of the financial crisis.

Institutional quality is one of the most important factors in enhancing the economic development of a country. Globally, the most crucial goal of any government to enhance economic growth is to endorse people's living standards (Ngo & Nguyen, 2020). The differences in institutions globally results a significant variation in productivity and growth, capital accumulation, education attainment, and so account for wealth disparities. Rodrik, Subramanian, and Trebbi (2004) discovered that the rule of law influenced economic growth (EG) favorably. Similarly, found that private property rights institutions primarily drive long-run EG, investment, and financial development. These studies proposed that institutions primarily predict long-run EG across countries. The existing literature largely points to a favorable relationship between institutions and economic growth. However, institutions do not have the same influence on economic growth across various countries. The beneficial impact of institutions is determined by several elements, such as the individual's perception of the institutions and the social norms and community rules of a certain group of persons. Institutions with comparable traits can have wildly disparate outcomes among groups, regions, and countries. Bernabe (2017) examined Asian countries for sustainable economic development goals, and they revealed economic development concerns through the legal and IQ. In contrast, North (2000) showed that growing human investment, rising markets, and improving technology add to productivity. A social institution creates incentives that affect political and economic activities and grounds for economic development. Viable institutions foster social cohesion and macroeconomic stability, thereby increase investment and growth (Easterly, Ritzen & Woolcock, 2006). Evidence suggests that countries with strong institutions encourage a strong legal framework for efficient fund mobilization and allocation, resulting in a less risky business environment (Abubakar, 2020; Law & Azamn-Saini, 2008). Other studies have also emphasized the importance of strong institutional quality in ensuring long-term growth and development (Thorbecke, 2013; Iheonu, Ihedimma, & Onwuanaku, 2017; Parks, Buntaine & Buch, 2017).

Given Nigeria's declining institutional quality, the country's economic growth has become highly unstable. Also, while there is widespread agreement that the quality of institutions and economic growth are inextricably related, the relevant economic literature is divided on the exact nature of this relationship (Bruinshoofd, 2016; Utile et al, 2023). Hitherto, this study is set to examine the effect of institutional quality on economic growth in Nigeria.

2. REVIEW LITERATURE

Modern empirical research on the sources of economic growth has long been reliant on the neoclassical growth model of Solow (1956, 1957), which accounts for the growth in per capita income as largely the product of exogenous factors such as the rates of physical investment and depreciation, the growth of the workforce, and technology. Efforts have been made to incorporate some elements of human capital, such as educational attainment and skill levels, but economic growth accounts have long shown that those improvements in human capital contribute a modest amount (Mincer, 1958; Schultz, 1961; and Becker, 1964). In fact, Lucas (2015) suggested that a near- consensus had emerged among leading growth theorists that human capital, as conventionally measured, could not come close to eliminating the gap between output and orthodox measures of its inputs, hence, the need to assign a large role to exogenous technical progress.

The primary impediments to Latin American and African countries in achieving economic growth are uncertainty and manipulation, white space in the judicial system, corruption, bribery, tax evasion, ill-defined property rights, and the presence of inefficient institutions such as non-growth enhancing policies as illconceived arrangements that cause nations to be unattractive to investors (Luiz, 2009; Fosu, Betes & Hoeffler, 2006, Balamoline, 2005; Birdsall 2007; Charnock, 2009). For instance, Asian economies have achieved economic development due to the quality of institutions, but African nations, such as Nigeria and most others, are plagued by high unemployment and poverty. To this effect, governments have shifted attention or focus more on advancing the quality of institutions as that of



developed countries (Rodrik, 2008). Generally, despite the attention in enhancing the quality of institutions in developing countries and Nigeria inclusive, there is yet a consensus on whether these improvements are effective (Andrews, 2013).

Accordingly, countries with weak institutions find it difficult to evolve rapidly enough to enjoy economic growth and development (Abubakar, 2020). This is justified as institutions are seen as part of a country's productive capability frontier. Nigeria has witnessed worsening quality of institutions over time. The indices for rule of law, government effectiveness, control of corruption, regulatory quality, voice and accountability, and political stability have been trending negative throughout the 21st century (World Bank, 2021). This has characterized most of the developing economies alike.

In order to enhance the quality of institutions in Nigeria, the government established the Corrupt Practices Investigation Bureau, the Code of Conduct Bureau, and Public Complaints Commission. Further attempts were made by instituting institutions that can ensure prudence and accountability in resource utilization in both public and private sectors towards sustainable economic growth. Some of these institutions include Economic and Financial Crimes Commission (EFCC), the Independent Corrupt Practices Commission (ICPC), the Nigerian Financial Intelligence Unit (NFIU), Fiscal Responsibility Commission (FRC), among others. Given the level of institutional deficiencies noted above and the negative trending pattern over time, it has become imperative to investigate the impact of institutional quality on economic growth in Nigeria, particularly those charged with ensuring efficient management of scarce resources that are still operating at a low ebb due to a lack of political will or weak legal backing. Available literature has shown that institutions are viewed as a basic requirement for economic success and long-term progress and that institutional quality consists of a broad range of factors, some of which are hard to measure (Bruinshoofd, 2016). However, the World Bank constructed institutional quality index from six World Bank Governance Indicators.

Empirically, in 2011, Dias and Tebaldi, contributed to the debate on the relationship between human capital, institutions, and economic growth. They develop a theoretical model that asserts that institutions set the pace for human and physical capital accumulations thus generating a self-perpetuating accumulation mechanism. Using a cross-country panel data from 1965 to 2005 to test some of the model's propositions and finds that structural institutions affect long-term economic performance while political institutions are uncorrelated with productivity and long-term economic growth. The empirical estimates also show that growth of physical and human capital - instead of levels - determines long-run economic growth. Lahouij (2017) uses pooled cross-country times series for the time span 2002-2014 to investigate the impacts of governance and other growth determinants on economic growth of low-income, lower-middle income, and upper-middle income economies. The study discovered that governance is highly positively associated with economic development in developing countries regardless of level of income. More so, accountability, government effectiveness, regulatory quality, and rule of law are highly positively correlated with economic growth of Upper Middle-Income Economies.

Radzeviča and Bulderberga (2018) used the system Generalized Method of Moments to analyze the impact of institutional drivers on economic growth in a panel of 113 nations from 2006 to 2016. The study discovered that institutional quality has a significant positive impact on economic growth. Other panel studies include, Hassan, Meyer and Kot (2019) who investigated the role of institutional quality in the oil wealth-economic growth nexus for 35 oil-exporting developing countries from 1984 to 2016 using panel Autoregressive Distributed Lag (ARDL) with a dynamic fixed effect estimator. The study found a contingent effect of oil wealth on economic growth and that institutional quality mitigate the negative effect of oil wealth on economic growth in the long run, while it enhances the positive effect of oil wealth on economic growth in the short-run. Bon (2019) also investigated the role of institutional quality on the public investment-growth relationship using a balanced panel data of 52 provinces in Vietnam from 2005 to 2014 through the estimation method of difference panel Generalized Method of Moments (GMM). The study found that public investment and institutional quality significantly promote economic growth and development.



In the year 2020, Ologbenla empirically investigates the impacts of institutional quality and human capital on the industrial sector growth of the ECOWAS, using a quantitative panel data analysis. Findings from the analysis show that both human capital and institutional quality in the ECOWAS have not supported industrial growth significantly. However, the result shows that macroeconomic variables such as inflation rate and exchange rate have the largest effect on the growth of the industrial sector of ECOWAS. In 2023, Bayraktar, Ozyilmaz, Toprak, Olgun, & Isik looked at the relationship between economic growth and financial development with reference to the effect of financial development on growth, whether there is institutional quality or not, has also been investigated. In addition, which financial development indicator is more effective for growth has been examined. Six institutional quality indicators and seven financial development indicators were used. According to the Dumitrescu–Hurlin causality test results, there is a causality relationship between all financial development indicators and growth. According to the estimation results, financial development indicators have a positive effect on growth in the presence of institutional quality. However, if institutionalization is not included in the model, the effect of financial development indicators on economic growth is statistically insignificant. In another development, Uddin et al (2023) examines the relationship between IQ and economic development, as measured by the human development index (HDI), in 70 developing countries between 2002 and 2018. To achieve the above mention objective, various econometric techniques were employed, including CIPS unit root, Westerlund (2007) co-integration, and Cross-sectional Augmented Autoregressive Distributed Lag, and robustness analysis conducted using Fully Modified Ordinary Least Square, Dynamic Ordinary Least Square, Augmented Mean Grouped, Impulse Response Function, and Variance Decomposition Analysis panel estimators. The study found that IQ and globalization have a positive, while inflation, unemployment, and corruption have a negative impact on HDI. The estimates from the Impulse Response Function show that IQ positively influences HDI from 2019 to 2028. Additionally, the Variance Decomposition Analysis reported that around 38% of the variations in HDI can be attributed to changes in IQ. To improve IQ, transparency must be prioritized as it is the foundation of IQ enhancement. Similarly, measures must be taken to combat corruption, and strong administrative intervention is required to advance economic development.

3. METHODOLOGY

3.1 Theoretical Model

The empirical model for this study is based on the theoretical model suggested by Solow (1956) growth model, and Mankiw et al (1992) with modifications. Similarly, the endogenous growth model purported by Lucas (1988) indicates that investment in human capital, innovation, and knowledge is a significant contributor to economic growth. The basic neoclassical production function can be written as:

$$Y = f(K, L) \tag{1}$$

Here, Y denotes the level of output, K is the capital formation and L is the labour force. Human capital is also considered to be the major determinant of economic growth in endogenous growth theories advanced by Romer (1986, 1990) and Lucas (1988) and it is the key extension of the neoclassical model. Human capital (H) is incorporated into the fundamental neoclassical production function, and the model becomes:

$$Y = f(K, L, H) \tag{2}$$

Standard aggregate function can be modified as suggested by Feder (1983), Grossman and Helpman (1990) and Ram (1996). Thus, introducing the institutional quality, the model can be specified as:

$$Y = f(K, L, H, IQ) \tag{3}$$

The study decomposed capital into domestic investment and foreign direct investment, while labour force for labour. Given that human capital development leads to effective labour force, the study considered labour force as a proxy for Labour (L) and human capital (H). The model can be defined as follows:

$$EG = f(IQ, LF, HCEXP, EDUEXP) \tag{4}$$

Where; EG = economic growth LF = Labour force, IQ = Institutional quality, HCEXP = health care expenditure EDUEXP = education expenditure

The econometric form of the model is specified as:

$$EG_t = \beta_0 + \beta_1 LF_t + \beta_2 IQ_t + \beta_3 HCEXP_t + \beta_4 EDUEXP_t + U_t \tag{5}$$

Where; U = error term t = time frame β_0 = intercept parameter β_1 - β_3 = slope parameters or coefficients of the respective independent variables



3.2 Data and Method of Analysis

This work makes use of the time series econometric methods in estimating the relationship between the variables specified in the model above. The estimation procedure begins with a test of stationarity using Augmented Dickey Fuller (ADF) unit root test and from the results of the unit root tests, econometric techniques such as Autoregressive Distributed Lag (ARDL) bounds test method of analysis was applied. Due to the nature of the study, times series data from 1990 to 2022 were used, sourced from the Central Bank of Nigeria (CBN) Statistical Bulletin 2022 edition, World Bank Development Indicator for Nigeria.

ARDL Bounds cointegration test concentrated on the determination of long run and short run coefficients of the variables under study. This model was developed by Pesaran & Shin (1999) and Pesaran et al. (2001) with the aim of examination of the long run relationship and short run dynamic interactions among the variables under study. The ARDL required no integration of the same order among the variables for the model to be applied in any investigation. Therefore, it can be applied when the underlying variables are integrated of order zero (I(0)) and order one (I(1)) or fractionally integrated. The technique of the ARDL model ensures unbiased estimation results of the long run model, Harris & Sollis, 2003 cited in Pahlavani, Wilson and Worthington, 2005". It is a single equation model as stated in equation 7.1 below to investigate the existence of long run relationship between economic diversification, oil revenue and economic growth in Nigeria.

$$EG_t = \alpha_1 \Delta EG_{t-1} + \alpha_2 \Delta LF_{t-1} + \alpha_3 \Delta IQ_{t-1} + \alpha_4 \Delta EDUEXP_{t-1} + \alpha_5 \Delta HCCEXP_{t-1} + \beta_1 LF_{t-1} + \beta_2 IQ_{t-1} + \beta_3 EDUEXP_{t-1} + \beta_4 HCCEXP_{t-1} + \mu t$$

Here μ = Error term (white noise) while other variables remain as earlier define. α_i is the short run coefficient, Δ is difference operator, Σ is summation sign, $t-i$ shows the variable is lagged i period, $t-1$ represents one period lagged variable while β_i indicates the long run coefficient. The error correction model representation of ARDL for the estimation of the short run relationships is specified as:

$$\Delta EG_t = \alpha_1 \Delta EG_{t-1} + \alpha_2 \Delta LF_{t-1} + \alpha_3 \Delta IQ_{t-1} + \alpha_4 \Delta EDUEXP_{t-1} + \alpha_5 \Delta HCCEXP_{t-1} + \gamma ECT_{t-1} + U_t$$

Where, γ represents the speed of adjustment, U_t is white noise error term while ECT is the residual obtained from the long run ARDL model estimation. A negative and significant ECT_{t-1} coefficient γ implies that any short-term disequilibrium between the dependent and independent variables will converge back to the long-run equilibrium relationship. This study implements the ARDL bounds cointegration analysis using E-views 9.

4. RESULTS AND DISCUSSION

Table 1: Unit root test results

Variables	ADF Statistics	CV 5%	1 st Diff. ADF	5% CV	O of I
IQ	-0.6343	-2.9411	-4.6910	-2.9434	I(1)
GEXPEDU	-1.6897	-2.9718	-7.5877	-2.9718	I(1)
GEXPHLTH	-1.6378	-2.9718	-9.4262	-2.9718	I(1)
GDP	-0.9770	-2.9718	-3.0928	-2.9763	I(1)
LLF	-1.5695	-2.9862	-3.4878	-2.9862	I(1)

Source: Computation by the author

The level unit root result show that all the computed ADF statistics are less than their corresponding 5% critical values, hence, not stationary and have unit root problem. However, the first difference of all the variables shows that their ADF statistics are greater than their corresponding 5% critical values, hence, stationary. The variable data integrated in order on I(1). For this reason, we can easily apply the ARDL to estimate the short- and long-term effects of human capital development on economic growth as shown in the table below, which display the bound test result on the existence of long-term relationship between human capital development and economic growth.

**Table 2: Bound Test Result**

Null Hypothesis: No long-run relationships exist		
Test Statistic	Value	k
F-statistic	6.35	4
Significance	I0 Bound	I1 Bound
5%	2.86	4.01

Source: Author's Computation

In this scenario the bound test result shows that the computed f-statistics of 6.35 is higher than the I0(2.86) but less than the I1 (4.01) bound of 5 percent critical level. In other word the computed f-statistics falls in the rejection region, and as such the test is conclusive on the existence of long run relationship between the variables as established by Pesaran et al (2001). Thus, we reject the null hypothesis of no long run relationship and conclude that there is long run relationship between institutional quality and economic growth. This decision meets the necessary condition of cointegration analysis (stability) and we proceed with the estimation of the long run and cointegration equation, to further examine if the model meet the sufficient condition of stability. The cointegration and long run estimated equations are shown in table 3 below.

Table 3: Cointegration and Long run Result

Dependent variable		LGDP		
Model selected		ARDL(1, 1, 1, 0, 0)		
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LGEXPEDU)	-0.043921	0.023265	-1.887846	0.0729
D(LGEXPHLT)	0.045978	0.026040	1.765647	0.0920
D(LLABFORCE)	0.240148	0.253521	0.947253	0.3543
D(LIQ)	0.043805	0.048404	0.904990	0.3757
CointEq(-1)	-0.220932	0.068060	-3.246116	0.0039
Long Run Coefficients				
LGEXPEDU	-0.334633	0.180054	-1.858519	0.0772
LGEXPHLT	0.410755	0.237597	1.728790	0.0985
LLABFORCE	1.086979	0.929218	1.169778	0.2552
LIQ	0.198274	0.177710	1.115714	0.2771
C	-11.607543	16.628698	-0.698043	0.4928

Source: Author's Computation

The estimated short run equation shows the degree of responsiveness of economic growth to institutional quality and human capital development in Nigeria, with none of the selected variables is statistically significant at 5% level. More so, the result reveals an inverse relationship between government expenditure on education and economic growth, not surprising as the budgetary allocation to the sectors continue to dwindle each year. On the other hand, Health expenditure and institutional quality and labour force has a positive impact on the economic growth. Statistically the components of human capital development are significant at 10 percent level, which is not very encouraging. The coefficient of adjust has the right sign (-0.2209) and also significant with a p-value of 0.0039, hence, satisfying the second order condition of cointegration among the variables, meaning that human capital development has both short- and long-term effects on economic growth in Nigeria. It then shows that national out or economic growth proxy by GDP is expected to adjust to stability from the errors of instability generated by the components of human capital development and institution by 22.1 percent within a period.

The long run equation affirms that in the long run the impact of human capital development is significant at 10 percent level which still straddle on the policy of poor funding of research development of the health and educational sectors of the economy. More so, the institutional framework in the sector is poorly administered by the political class which ridicule the overall benefit of the economy. This finding is in agreement with the study of Anyanwu, Adam, Obi, & Yelwa (2015); Ologbenla (2020), and Popoola, Alege, Gershon, & Asaleye (2019). institutional effectiveness is a big challenge in the Nigerian system as trade union now parley with politicians at their workers welfare.



In order to examine the result estimated we carryout some post estimation analysis which comprises of the serial correlation test and normality test, as explain below

Table 4: Serial correlation test

F-statistic	1.182343	Prob. F(2,24)	0.3281
Obs*R-squared	3.209779	Prob. Chi-Square(2)	0.2009

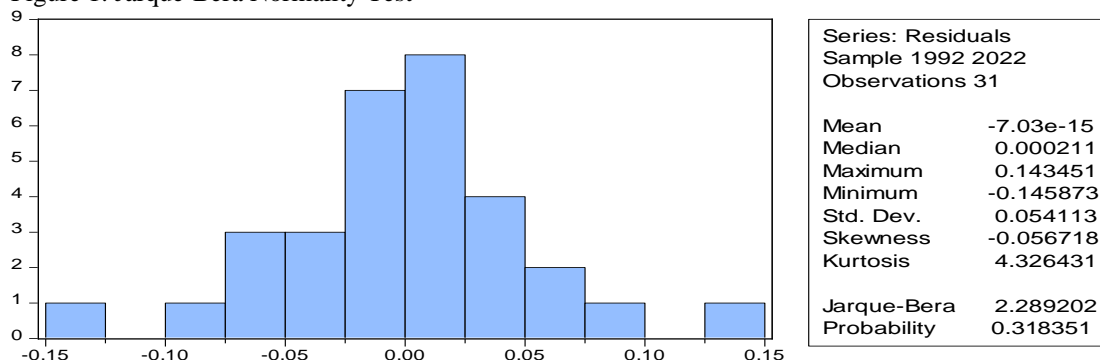
Source: Author's Computation

The table above shows the result of the serial correlation test of the model residual. From the insignificance status of the computed f-statistics and chi-square, we conclude that there is no serial correlation and multicollinearity. And this result validated the null hypothesis that the regression line is efficient and consistent.

Normality and Stability Test

The test shows that the error is usually compared in the period under review and is scattered relative to the middle one and that the distribution of items is asymmetrical. The Jarque-Bera normality test with a value of 2.2892 and a probability value of 0.31835 indicates the validation of the null hypothesis that residual is normally distributed as specified in figure 4.1 below.

Figure 1: Jarque-Bera Normality Test



Source: Author's plot

CONCLUSION AND RECOMMENDATIONS

From the above analysis we discovered that the performance of the economy to some level depends on the level of human capital development state of the economy with respect to investment in education and health, and the institutional dynamism of the human development. That the number of persons enrolled into the education system, the institutional mechanism of government and trade unions in enhancing the welfare if the ordinary worker in the Nigerian state has a vital role in enhance productivity in the economy. The role of government in developing human capital in the country has not significantly improve the economic growth of the economy as reveals by the estimated equation, however, the existence of long run relationship was established on the premise that economic growth is expected to adjust to equilibrium from the wrong policies of government towards human capital development by 22 per cent. More so, the estimated model represents the true nature of the economy as it relates with human capital development with a good fit and generally significant. Hence, it then important for government to devote more resources into research and development.

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