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RESEARCH ARTICLE

Test of Good Governance in Nigeria using World Bank indicators

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Abstract
The concern for good governance and its role in development process has increased since 1980s. Nigeria has experienced uninterrupted democracy since 1999. This study carryout a test of good governance in Nigeria using the six indicators of good governance used by World Bank. Specifically, the study determine the effect of voice and accountability, political stability and absence of violence and terrorism, government effectiveness, regulatory quality, rule of law and control of corruption on economic development in Nigeria using per capita GDP as a proxy for economic development. Inflation rate and oil price were included in the model in order to produce a robust model. Annual data covering 1999 to 2022 were collected from World Bank website. Descriptive statistics were used to summarize data while Autoregressive Distributed Lag Model and Bound tests were used to estimate relationship. Findings revealed that the performance of governance in Nigeria in all the six indicators during the period of study was weak. This consequently affect per capita income negatively both in the short-run and long-run. It was concluded that governance has negative effect on economic development in Nigeria. It was recommended that the government should use worldwide indicators to conduct self-evaluation and carry out reforms that will help to improve governance in Nigeria for the purpose of achieving development or improving the wellbeing of Nigerians.

Keywords: Good governance; development; democracy; World Bank Indicators; inflation rate; oil price

Introduction

The origin of good governance can be traced to response to the weak governance in the African continent in 1980s. The World Bank Structural Adjustment Programme was unable to solve the economic challenges of the African countries. This made the World Bank to conclude that that a part from economic factors, political factors and most especially bad governance signified by high level of corruption, absence of transparency and respect for human right orchestrated by the authoritative political system practiced in these countries was responsible for the economic failure of Structural Adjustment Programme in the African countries (Muhammad & Rizwan, 2021).

Consequently, World Bank identified good governance as prerequisite for qualification for development finance by developing countries. Good governance and economic development have been associated. Hope (2022), sees good governance as the force that boosts democracy, strengthen rule of law and public accountability and supports state institutions, thereby creating viable environments that supports economic development. Similarly, Mushbahu (2021) opined that the implementation of good governance practices is vital for the successful accomplishment of development programs in Nigeria. Good governance as observed by (Bello, 2021) increases the economic welfare, while bad governance reduces the welfare of citizens through unfavourable or unfriendly policies and weak implementation of policies that are good. Judging from the experience of developed nations around the world, good governance is connected to democracy and democracy associated with rise in economic welfare. However, the economic performance and welfare of Nigerians have not improved as revealed by economic indices despite over twenty years of uninterrupted democracy. Available statistics indicate that unemployment rate increased from 13.9% in 1999 to 32% in 2022, poverty rate rose from 6.6% in 1999 to 28.9% in 2022. Inflation rate exhibited an upward trend rising from 6.6% in 1999 to 21.3% in 2022. The implication of these statistics is that the wellbeing of Nigerians has fallen over the years despite the huge amount of natural and human the country is endowed with **(**Samuel & Chekwube, 2021; Ibitomi et al., 2022**).** Since 1996, World Bank has developed six indicators used for measuring the performance of governments worldwide; the expectation is that strong governance performance, all things being equal, translates to development. These indicators include voice and accountability, government effectiveness, political stability and absence of violence and terrorism, regulatory quality, rule of law, control of corruption. The indicators are standardized data whose values range from -2.5 and 2.5. The mean of the data is zero. Positive values or values greater than zero indicate strong governance performance while negative values signify weak performance. These indicators have been used to empirically carry out tests of good governance of countries, especially in developing countries of the world (Al-Naser & Hamdan, 2021).

From the preceding, it can be deduced that good governance has been acknowledged as a prerequisite for economic development, especially in developing countries. Also, indicators have been developed for measuring good governance performance among countries. However, there is dearth of empirical studies on good governance and economic development in Nigeria, especially studies that utilized World Bank Governance Indicators or variables as independent variables. Moreover, the few available studies revealed mixed results, while some found positive relationship (Ogi, Eze & Ene, 2023); others (Richard, et. al. 2020) showed negative relationship between governance and economic performance. This implies that lack of consensus among these studies. Consequently, this study is in furtherance of inconclusive state of empirical studies on governance and economic performance in Nigeria. The focus of the study is to assess if there are significant relationships between WGIs, namely voice and accountability, political stability and absence of violence and terrorism, government effectiveness, regulatory quality, rule of law and control of corruption and economic development. The remaining part of the paper is organized as follows: Section two deals with literature review, section three presents the methodology of the study. Results and discussion of findings are presented in section four while section five draws conclusions based on findings and gives policy recommendations that will help to improve governance and economic development in Nigeria.

Literature Review

Conceptual Review

According to World Bank (2020), Governance is the procedure through which institutional decisions are made and exercised in a country. Similarly, Alaaraj (2015) views good governance as a political and institutional system that

promotes openness, accountability and public participation. Adeboyega and Arikewuyo (2020) describe good governance through outcomes. In this regard, they view good governance is related to the capacity of the government to deliver accurately public goods such as education, water, health, security, among others demanded by the citizens. Lin (2014) defined good governance as strong capacity in the form of adequate economic power and strong political structure and provision of public services for promoting industrial and economic growth.
The components of Good Governance have been grouped into six indicators. World Bank (2021) describes the indicators as voice and accountability, political stability and absence of violence, government effectiveness, and regulatory quality, rule of law and control of corruption as indices used for measuring the performance of government worldwide and testing good governance.

Voice and Accountability and Political stability and absence of violence and terrorism

The first two indicators cover the process of selection, monitoring and replacement of governments. Voice and Accountability being the first criterion any government must meet to be referred to as good governance refers to the degree of participation of the citizens in electing the people who govern them. It also captures freedom of expression, association and freedom of the press (Ibitomi & Micah, 2021). The second indicator, political stability and absence of terrorism estimate the tendency of disruptions in the government through means that are not legal/constitutional or through violence which includes terrorism (Hasan & Hassan, 2021).

Government effectiveness and Regulatory quality

The effectiveness of government determines the level of the quality of policies formulated and implemented by the government and how credible government commitments towards its policies are (Hasan & Hassan, 2021). Regulatory quality on the other hand, captures the capacity of the government in terms of improvements experienced by both public and private sectors as a result of the policies and regulations of the government. Kaufmann, Daniel in Kraay, Aart (2012) argued that good governance leads to economic development due to promotion of quality regulatory environment that that efficiently and effectively stimulates both the public and private sectors of the economy.

Rule of law and control of corruption

The last two indicators of good governance relate to the respect of citizens and the state in terms of the institutions that guides economic and social interactions in the country. Rule of law defines the indicator that measures the extent to which the citizens are aware and accept the rules and regulations of the country, the law enforcement agencies (police), courts and its connected associates. Commenting on the importance of rule of law in an economy, Burgess (2012) opined that a country that is governed by the rule of law experiences stability that definitely stimulates investment and establishment of enterprises by domestic and foreign investors due to the fact that they feel protected by fair implementation of laws by the judiciary system existing in a country(Awad et al., 2021).
The United Nations defines corruption as acquisition of private gains through misuse or abuse of power. Transparency International gives a more clear definition of corruption as the abuse of entrusted power for obtaining private gain (CLEEN Foundation, 2010). Furthermore, Ogundiya (2019) gave a broad scope of corruption which covers behavious that include embezzlement, bribery, fraud, conflict of Interests, rigging of elections, misappropriation, and conversion of public funds for personal gains, extortion, and manipulation of procurement processes, favouritism, among others.

Corruption has been recognized as one of the major factors that limits economic growth in many countries. In view of this, Kaufmann (2019) contend that good governance involves the implementation of appropriate measures to curb or minimize corruption in order to achieve economic growth. Xu (2019) also shares similar view about control of corruption and economic growth. According to him, good governance involves controlling of corruption through effective control of the country's resources in order to promote economic growth. He stated further that failure to control corruption leads to waste of resources, inefficiency in the management of government revenue and reduction in economic growth.

Economic Development

Bolarinwa (2013) citing Mabogunje (1980) sees development as a dynamic process that involves quantitative growth and qualitative change, and must finally result in improvement in material welfare of the people. Emmanuel (2005) and Ibitomi, et al., (2022) advances besides increase in standard of living which involves increase in consumption, improved health, education and, development also means equal opportunities, political freedoom and civil liberties. UNDP definition of development centres on people and therefore uses three indicators which are longevity, knowledge and standard of living, collectively known as Human Development Index to measure development. In quantitative terms, development is measured using GNP per capita/GDP per capita which is measures of per capita income. This measure determines the capacity of a country to increase its output at a rate that is greater than the rate at which the population growing (Muo, 2006).

Theoretical review

There is lack of consensus among available theories regarding the relationship between governance and wellbeing of the citizen. The conflict school maintains that democracy or governance creates consumption forces, instigates conflicts in distribution and discourages accumulation of capital. Consequently, democracy hampers growth process in developing economies. However, empirical findings, in general have failed to provide empirical support to conflict school argument (Przeworskiet, 2000). The next school which is also known as Compatibility theoreticians postulate due to the presence of both fundamental human and political rights, democracy or governance creates the appropriate social environment that favours the development of the economy. Consequently, governance influences growth positively (Richard, 2020). The number three school is known as the Skeptical School. This school opines that there is no relationship between governance and economic development. Their claim as stated by Knack (2013) is due to inconsistences that characterize old as well as new growth theories, which fail to provide theoretical explanation regarding variables that describe development in a good number of countries.

Solow growth model states that the long run growth or output of an economy is determined by the utilization of capital, labour and knowledge. The functional form of the model is illustrated in equation 1 below:

$$Y(t) = f\,(K\,(t), A(t)\,L(t) \quad \ldots\ldots\ldots\ldots \quad (1)$$

Y represents output, K denotes capital, L is effective labour, A stands for knowledge while t represents time. A and L are placed in the model in a multiplicative way (Romer, 1996). Governance as an organization responsible for the management of the economy enters the model the policies formulated and implemented targeted towards increasing economic growth and standard of living of the populace. This means that proper implementation of public policies all things being equal, will lead to increase in output through its influence on capital and the effective labour factors (Richard, et al, 2020).

Empirical review

Empirical studies across countries revealed in general that good governance have positive effect on economic development.

Ogili, Eze and Ene (2023) examined good governance and socio-economic development in Enugu State, Nigeria. Specifically, the study investigated the effect of good governance on poverty reduction. Descriptive survey design was adopted and data was collected through a structured questionnaire. Z-test was used to test hypothesis. Results showed that good governance significantly affect poverty reduction. Richard, et al. (2020) carried out an empirical investigation on the impact of governance on economic wellbeing in Nigeria. Economic wellbeing was measured by per capita GDP growth. Quarterly time series data covering 1996 to 2018 and autoregressive distributed lag model (ARDL) bounds test method of estimation was adopted. Findings revealed that the impact of governance on economic well-being both in the short-run and long-run were negative and significant.

Recuero and Gonzales (2019) in their study found that institutional quality was positively related to economic development. The study also revealed that the direction of causality can change depending on the type of variables that signifying institutional quality. Although economic development depends on legal institutional quality, Improvement in institutional quality is also a key to economic development. The findings of this study is similar to Similarly, Habbyrimana and Dushimayezu (2018) utilized determined the relationship between governance and economic growth in Rwanda using correlational technique. Findings showed that governance have positive relationship with economic growth. Bayar (2016) and Lahouij (2017) who found a positive relationship between good governance and economic development.

Hypotheses of the Study

H_{01}: Voice and accountability has no significant effect on economic development in Nigeria.

H02: Political stability and absence of violence and terrorism on economic development in Nigeria;

H03 : There is no significant relationship between government effectiveness and economic development in Nigeria.

H04 : There is no significant relationship between regulatory quality and economic development in Nigeria.

H05 : Rule of law has no significant effect on economic development in Nigeria.

H06 : Control of corruption has no significant effect on economic development in Nigeria.

Methodology

This study adopted expo-facto research design. Expo-factor research design finds out factors that are related to particular occurrence, condition, event or behaviuor through analysis of past or already existing data (Kothari & Gerg, 2014). Due to availability of time series data on governance measured by World Governance and data on economic development measured by per capita income, expo-facto design was adopted. The design was also adopted because according to Lammers and Badia (2005) expo-facto design does not permit the manipulation of the independent variable by the researcher.

Secondary source of data was utilized in this study. Specifically, annual data covering 1999 to 2022 were collected from World Bank official website. WGI data are in two forms which are standardized normal scores and percentile measures. WGI are standardized normal data ranging from -2.5 and 2.5. The mean of the data is zero. Positive

values or values greater than zero indicate strong governance performance while negative values signify weak performance. The magnitude of the index measures the degree of strength or weakness of governance. For instance, the closer the index is to -2.5, the weaker the governance and a value close to 2.5 indicate very strong governance. Publication of WGIs commenced in 1996 but the values for 1997, 1999 and 2001 are not available. The percentile measure on the other hand ranges from 0 to 100.

The independent variables of the study are the six World Bank Indicators used to measure the measure good governance namely voice and accountability, government effectiveness, political stability and absence of violence and terrorism, regulatory quality, rule of law, control of corruption. The indicators were developed by two World Bank researchers Daniel Kaufmann and Aart Kraay in 1999. The main purpose of the data was for international comparison and evaluation of general trend over time (World Bank, 2023). These indicators have been used in to measure the quality of governance of countries and to predict economic growth, development or welfare. Some of these studies include (Recuero &Gonzales, 2019; Richard, 2020; Senturk & Ali, 2022).

The dependent variable economic development was proxy by real per capita income. The choice of real capita income was based on the fact that it is one of the most common measure of economic development as indicated by previous empirical studies (Siyakiya, 2017; Glerghina, 2019, Richard et al., 2020; Senturk & Ali, 2022).

Since economic development does not only depend on political factors but also on economic factors, macroeconomic factors were included in the model of the study as control variables. In order to minimize the error term in the model due to omission of variables, inflation rate and price of oil were included as control variables in the study. A variable is controlled when is effect on the dependent variable is kept constant. Control variables are variables incorporated in multivariate analysis to detect spurious relationship. It is important to examine whether the relationship between dependent and independent variables continues after the effects of other variables affecting the dependent variables have been removed (McChendon, 2002). The inclusion of inflation rate and oil price was based on the fact that literature review indicated that they were significant determinants of per capita income in Nigeria (Oranefo, 2022).

The first stage in regression analysis involves specification of model involves expressing the relationship between dependent variable and independent variables using mathematical equations (Gujarati, 2006). Multiple regression model was formulated for the study. The model of Senturk and Ali (2022) was adopted in the study with little modification. They regressed economic development (Per capita income) as a linear function of quality governance (Six World Bank Indicators of Good Governance), inflation rate. In this study, economic development (measured by per capita income) is modeled as a function of six Worldwide Governance indicators of World Bank, inflation rate and oil price.

The econometric model of the study is stated as:

$$PI_t=\beta 0+\beta_1 VAC_t+\beta_2 GE_t+\beta_3 PSAVT_t+\beta_4 RQ_t+\beta_5 RL_t+\beta_6 COC_t+\beta_7 INFR_t+\beta_8 OILP_t+\varepsilon i_t$$

Where:

PI = Per capita income (a measure of economic development), VAC = Voice and accountability,
GE = Government effectiveness, RQ= Regulatory quality, RL = Rule of law,
PSAVT =Political stability and absence of violence and terrorism, COC = Control of corruption,
OILP = Oil price (Measured by annual average price of Nigeria oil in dollars, per barrel in the world market), INFR = Inflation rate
εi_t = Error term that captures other determinants of economic development that were omitted in the model.
$\beta 0$ and β_1 - β_8 are regression parameters to be estimated.

$\beta 0$ = Intercept of the regression model
β_1 - β_8 = are regression parameters that measure the effects of the independent variables on the dependent variable.

Based on economic theory, good governance is expected to positively affect economic development. Therefore, the parameters β_1 - $\beta_6 > 0$. Similarly, rise in price of oil in the world market is expected to influenced per capita income of the country positively, hence, $\beta_8 > 0$ while increase in inflation rate is expected to lead to a decrease in per capita income. Therefore, $\beta_1 < 0$.
Both descriptive statistics and econometric techniques of estimating relationships were adopted in the study. The descriptive statistics utilized in the study included mean, mode, median, minimum value, maximum value, standard deviation, coefficient of skewness and kurtosis.
The econometric technique adopted were Autoregressive Distributed Lag Model (ARDL) and bounds test developed by Pesaran, Shin and Smith (2001) of measuring short-run and long-run relationship among economic variables. The choice of the technique was a result of the fact that the variables were a mixture of integration of order zero (I(0)) and integration of order one (I(1)).
Diagnostic tests carried on the residuals obtained from the estimated model in order to determine whether the assumptions of least square regression have been met. Specifically, Jarque-Bera test was used to test the normality of the residuals, Breusch –Pagan Godfrey tests determine the absence of heteroskedascity in the model while Breusch – Godfrey Serial correlation LM test was used to check the absence of serial correlation in the model. Moreover, CUSUM test was used to test the stability of the regression estimates.

Results

Data Presentation and Analysis

Table 1 presents the data on the dependent and independent variables of the study. Specifically, the data relate to Nigeria's Per capital GDP (PCGDP), World Bank indicators of governance, inflation rate and oil price (OILP).

Descriptive Statistic

The data were summarized through descriptive measures namely the mean, median, maximum, minimum, standard deviation , skewness and coefficient of kurtosis presented in table 2.
The mean of all the governance indicators are negative, indicating that weak governance during the period 1999 to 2022 in Nigeria. However, worst performance is experience in terms of political stability and absence of violence and terrorism (-1.898). This is followed by control of corruption (-1.155), rule of law (-1.102) and government effectiveness (-1.041). Governance in voice and accountability and regulatory quality are relatively higher with mean scores (-0.618) and (-0.900) respectively. Average per capita income, inflation rate and average oil price were ($1909.41), 17.6% and $58.02 per barrel.
The standard deviations of governance indicators (0.162, 0.187, 0.089, 0.162, 0.201 and 0.146) and inflation rate (3.117) are low indicating that the variables were stable during the period of study while the standard deviations ($763.542) and ($26.07) indicate that per capita income and oil price were characterized by fluctuations from 1999 to 2022. The coefficients of skewness (0.381, 0.528, 0.684 and 0.304) show that voice and accountability, political stability and absence of violence and terrorism, inflation rate and oil price are positively skewed, implying that their values are concentrated at left of their mean values while per capita income, government effectiveness, regulatory quality, rule of law and control of corruption are negatively skewed revealed by the coefficients of skewness (-0.398, -0.408, -0.682 and -0.792) respectively. This indicates that their values are concentrated at the right of their

mean values. The coefficient of kurtosis (3.485) shows that regulatory quality has a high peaked distribution since coefficient of kurtosis is greater than 3.0 while the coefficient of kurtosis (3.014) has a moderate peak (mesokurtic). The other variables have flat peak distributions (platykurtic) since their coefficients of kurtosis are less than 3.0.

Table 1: Distribution of Nigeria's GDP per capita, World Bank Indicators of governance , inflation rate and oil price from 2000 to 2022

Year	Per capita GDP ($)	VA	PSAVT	GE	RQ	RL	COC	INFR (%)	OILP ($)
2000	565.3	-0.48	-1.46	-0.97	-0.88	-1.16	-1.32	17.98	18.07
2002	733.5	-0.63	-1.63	-1.02	-1.18	-1.5	-1.5	24.85	24.23
2003	786.8	-0.66	-1.64	-0.92	-1.23	-1.51	-1.42	20.71	24.93
2004	992.7	-0.8	-1.75	-0.94	-1.29	-1.44	-1.38	19.18	28.9
2005	1250.4	-0.87	-1.67	-0.9	-0.79	-1.35	-1.18	17.95	37.73
2006	1652.2	-0.62	-2.03	-0.97	-0.95	-1.08	-1.13	17.26	53.39
2007	1876.4	-0.76	-2.01	-1.04	-0.89	-1.06	-1.07	16.94	64.29
2008	2270.8	-0.74	-1.86	-1	-0.82	-1.04	-0.9	15.14	71.12
2009	1883.9	-0.85	-1.99	-1.2	-0.76	-1.16	-1.04	18.99	96.99
2010	2280.1	-0.78	-2.21	-1.17	-0.74	-1.16	-1.05	17.59	61.76
2011	2504.9	-0.71	-1.96	-1.11	-0.7	-1.18	-1.19	16.02	79.04
2012	2728	-0.7	-2.04	-1	-0.72	-1.14	-1.18	16.79	104.01
2013	2976.8	-0.69	-2.09	-1	-0.68	-1.12	-1.23	16.72	105.01
2014	3201	-0.59	-2.13	-1.19	-0.84	-1.06	-1.28	16.55	96.24
2015	2679.6	-0.37	-1.93	-0.97	-0.87	-0.97	-1.07	16.85	50.75
2016	2145	-0.32	-1.88	-1.09	-0.93	-1.03	-1.02	16.87	42.81
2017	2204	-0.34	-2	-1.02	-0.9	-0.87	-1.08	17.56	52.81
2018	2033	-0.43	-2.1	-1.1	-0.86	-0.9	-1.06	19.33	68.35
2019	2230	-0.43	-1.92	-1.18	-0.93	-0.92	-1.08	15.53	61.41
2020	2075	-0.58	-1.87	-1.12	-1.01	-0.83	-1.08	12.32	41.26
2021	2204	-0.64	-1.78	-1	-0.93	-0.86	-1.07	11.55	69.07
2022	2429.6	-0.6	-1.8	-1	-0.9	-0.9	-1.1	21.34	97.1

Source: World Bank, 2022

Table 3 shows the unit root test conducted on the variables. With the exception of political stability and absence of violence and terrorism which is stationary at level, all other variables are stationary at first difference. This indicate that they are integrated of order one (I(1)). Since the variables are a mixture of integration at level and first difference, Bound cointegration test developed by Pesaran et al (2001) became the appropriate test to be employed. However, before embarking on cointegration test, the appropriate ARDL model was selected through Akaike information criteria (AIC).

Table 2 : Descriptive Statistics

	GDPPC	VA	PSAVT	GE	RQ	RL	COC	INFR	OILP
Mean	1909.41	-0.618	-1.898	-1.041	-0.900	-1.102	-1.155	17.6	58.02
Median	2110	-0.635	-1.925	-1.010	-0.885	-1.070	-1.090	17.1	57.4
Maximum	3201	-0.320	-1.460	-0.900	-0.680	-0.830	-0.900	24.9	105.0
Minimum	565.3	-0.870	-2.210	-1.200	-1.290	-1.510	-1.500	11.5	18.07
Std. Dev	763.542	0.162	0.187	0.089	0.162	0.201	0.146	3.117	26.77
Skewness	-0.398	0.381	0.528	-0.408	-0.986	-0.682	-0.792	0.684	0.304
Kurtosis	0.749	2.145	2.710	2.036	3.485	2.629	3.014	1.758	0.840
Observations	22	22	22	22	22	22	22	22	22

Source: Eviews 9.0 output, 2023

Table 3 : Augmented Dickey Fuller unit root

Variables	**ADF –Statistic**	**5% ADF Critical value**	**Probability value**	**Order of integration**
GDPPC	-3.462798	-3.040391	0.0221	I(1)
VA	-5.253917	-3.040391	0.0006	I(1)
PSAVT	-3.123107	-3.029970	0.0418	I(0)
GE	-6.684709	-3.040391	0.0000	I(1)
RQ	5.278974	-3.040391	0.0006	I(1)
ROL	-5.136722	-3.040391	0.0007	I(1)
COC	-4.252281	-3.040391	0.0045	I(1)
INFR	-4.369887	-3.040391	0.0035	I(1)
OILP	-3.927955	-3.040391	0.0087	I(1)

Source : Eviews 9.0 output, 2023

Cointegration test

Table 4: Bounds test output
Null hypothesis: There is no long run relationship among the dependent variable and independent variables

Null Hypothesis: No long-run relationships exist		
Test Statistic	Value	K
F-statistic	9.377284	8
Critical Value Bounds		
Significance	I0 Bound	I1 Bound
10%	1.95	3.06
5%	2.22	3.39
2.5%	2.48	3.7
1%	2.79	4.1

The F-statistic (9.377) as shown in table 4 is greater than the upper critical bound (3.39) at 5% level of significance. This reveals long run relationship exists among the variables.

Short run and Long run regression output

The short run and long run coefficients of voice and accountability (-167.59) and (-117.48) show that voice and accountability has negative effects both in the short run and long-run on per capita income. The estimates are significant at 5% level of significance indicated by their probabilities (0.0185) and (0.044) respectively which are less than 0.05. Consequently, the null hypothesis that voice and accountability has no significant effect on economic development was rejected.

Political stability and absence of violence and terrorism on the other hand has negative effect on per capital income in the short-run indicated by coefficient (-102.33) and probability (0.0178). However, in the long-run, the effect is positive shown by coefficient (25.95) and probability (0.0269). Since the probabilities of the coefficients are less than 0.05, the null hypothesis that Political stability and absence of violence and terrorism has no significant effect on economic development was rejected.

Government effectiveness has negative effects on per capita income both in the short-run and in the long-run shown by coefficients (-72.25) and (-12.85). Their probabilities (0.0495) and (0.0297) are less than 0.05, indicating that the estimates are significant at 5%. This led to the rejection of the hypothesis that there is no significant relationship between Government effectiveness and economic development.

Moreover, the coefficients of regulatory quality in the short-run and long-run(57.52) and (-29.659) reveal that regulatory quality has positive effect on per capita income in the short-run and negative effect in the long-run. However, the probabilities (0.9413) and (0.0391) indicate that the short-run coefficient is insignificant while the long-run estimate is significant at 5% level of significant. As a result of these, we reject the null hypothesis that there is no significant relationship between regulatory quality and economic development.

Furthermore, rule of law has significant negative effect on per capita income shown by the coefficient (-19.059) and probability (0.0069) while the effect in the long-run is positive and significant shown by coefficient (188.647) and probability (0.0282). Consequently, the null hypothesis that there is no significant relationship between rule of law and development was rejected.

Table 5 : Dependent Variable: GDPPC
Method: ARDL
Selected Model: ARDL(2, 1, 1, 1, 1, 1, 1, 1, 1)

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
GDPPC(-1)	0.291293	0.271896	1.071339	0.0481
GDPPC(-2)	1.186266	0.436178	2.719684	0.0243
VAC	-167.5968	97.1862	-1.724492	0.0185
VAC(-1)	-117.4869	51.78578	-2.268709	0.0443
PSAVT	25.94806	6.66720	3.891896	0.0269
PSAVT(-1)	-102.3326	18.81948	-5.437589	0.0178
GE	-72.24697	14.19923	-5.088090	0.0495
GE(-1)	-12.85343	4.11023	-3.127180	0.0297
RQ	-29.65941	10.09385	-2.938364	0.0391
RQ(-1)	57.52354	31.97700	1.798903	0.9413
ROL	188.6477	81.00123	2.328949	0.0282
ROL(-1)	-19.05632	8.42011	-2.263191	0.0069
COC	9.459448	2.63888	3.584645	0.0933
COC(-1)	-113.0114	21.51887	-5.251734	0.0392
INFR	-26.76535	13.63983	1.962294	0.0221
INFR(-1)	-137.8569	62.23608	1.676355	0.0424
OILP	3.544502	1.833688	0.733291	0.0272
OILP(-1)	-16.80612	7.29686	-1.632160	0.0799
C	5398.446	2092.200	2.580272	0.0354
R-squared	0.698972	Mean dependent var		2035.405
Adjusted R-squared	0.680474	S.D. dependent var		678.0795
F-statistic	54.00234	Durbin-Watson stat		2.181641
Prob(F-statistic)	0.106731			

Source: Authors' computation from the ARDL model

Also, control of corruption has significant negative effect positive on per capita income in the short-run shown by coefficient (-113.01) and probability (0.039 < 0.05) while the effect in the long-run though positive shown by coefficient (9.459) is not significant since the probability (0.093) is greater than 0.05. Consequently, the null hypothesis that there is no significant relationship with control of corruption was rejected.

In addition, inflation rate has significant negative effects on per capita income both in the short-run and long-run revealed by the coefficients (-26.76, probability 0.02 < 0.05) and (-137.85, probability 0.04 < 0.05). Oil price in the world market has no significant effect on per capita income in the short-run shown by coefficient (-16.80) and probability (0.079) while the effect in the long-run is positive and statistically significant at 5% shown by coefficient (3.544) and p-value (0.02 < 0.05).

Diagnostic tests for the model

Serial autocorrelation test

Table 6: Correlogram-Q-Statistic

Q-statistic probabilities adjusted for 2 dynamic regressors

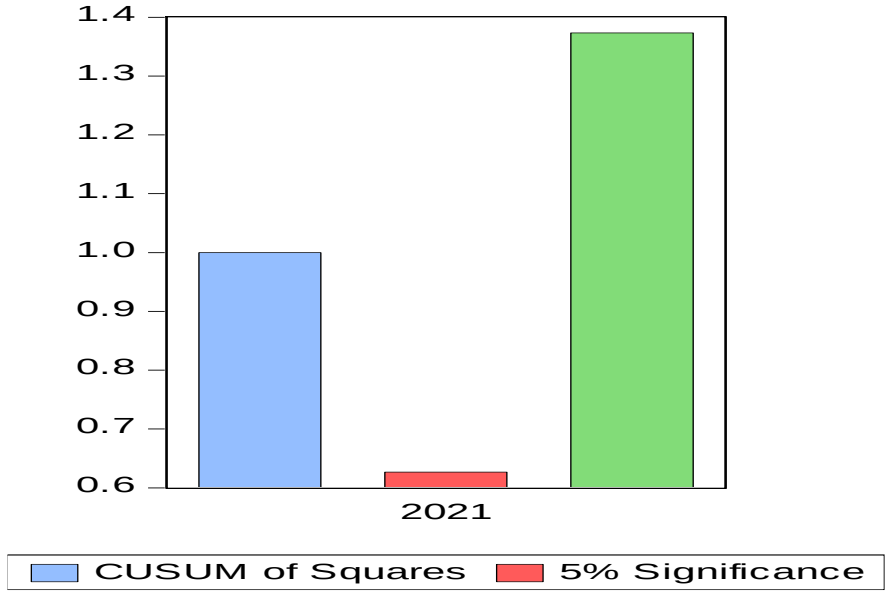
Autocorrelation	Partial Correlation		AC	PAC	Q-Stat	Prob*
***| . |	***| . |	1	-0.416	-0.416	3.9992	0.046
. *| . |	***| . |	2	-0.183	-0.430	4.8203	0.090
. |* . |	. *| . |	3	0.203	-0.126	5.8819	0.118
. | . |	. | . |	4	0.053	0.060	5.9598	0.202
.**| . |	.**| . |	5	-0.279	-0.211	8.2382	0.144
. | . |	***| . |	6	-0.030	-0.384	8.2665	0.219
. |* . |	.**| . |	7	0.209	-0.247	9.7460	0.203
. | . |	. | . |	8	0.037	0.051	9.7960	0.280
. | . |	. |**. |	9	-0.046	0.265	9.8814	0.360
. *| . |	.**| . |	10	-0.167	-0.212	11.113	0.349
. |**. |	. | . |	11	0.331	-0.012	16.459	0.125
.**| . |	. | . |	12	-0.207	-0.054	18.817	0.093

*Probabilities may not be valid for this equation specification.

The probability of all the estimated Q-Statistics as shown in table 6 are greater than 0.05, indicating that none of the statistics was significant at 5% level of significant. Consequently, the null hypothesis of absence of serial correlation in the model was not rejected. In other words, the model is free of serial correlation.

Stability test

Figure 1: Recursive Estimates – CUSUM Test



The CUSUM stability test output is presented in figure 1. The CUSUM statistic denoted by the blue rectangular bar is higher than the critical value indicated by the red rectangular bar. This shows that the estimated SUSUM stability statistics is significant at 5% level of significance. The implication is that coefficients of the estimated model are stable during the period 1999 to 2022.

Normality and Heteroskedasticity tests

Table 7: Jarque-Bera Normality test and Breusch-Pagan-Godfrey Heteroskedasticity test

Test	Statistic	Probability
Jarque-Bera Normality test	Jarque-Bera 1.5187	0.4680
Breusch-Pagan-Godfrey Heteroskedasticity test	Obs*R-squared 15.9315	0.5973

Source: Authors' computation from the ARDL model

The probability of Jarque- Bera statistic of the model (0.4680) is greater than 0.05, indicating that the statistic is not significant at 5% level of significant. This means that residuals of the model follow normal distribution. Similarly, the probability of Obs*R-squared statistic (0.5973) is greater than 0.05. This indicates that the statistic is not significant at 5%. This indicates the absence of heteroskedacity in the model. In other words, the model is free of heteroskedascity.

Discussion of findings

Having confirmed the validity of the estimated model which results in its acceptance, the summary and discussion of findings are as follows:

The average value of WGI for voice and accountability indicates weak governance. The regression output shows that voice and accountability have significant negative effect on per capita income in Nigeria. This indicates that weak participation of the citizen in electing who govern them and poor state of freedom of press have resulted in decrease in per capita income and economic development.

Similarly, there is weak governance performance in terms of political stability, absence of violence and terrorism indicated by the mean score. The relationship between political stability, absence of violence and terrorism is negative in the short-run and positive in the long-run. The implies that government efforts towards prevention and control of violence and terrorism reduces per capita income in the short-run but increases it in the long-run. This also means that efforts towards controlling violence and terrorism by the government have not been sustainable.

Government effectiveness during the period of study is weak indicated by mean score (-1.041). The regression output reveals that government effectiveness has negative effect on per capita income both in the short-run and in the long-run. These show that the capacity of different regimes of governance over the years to formulate sound policies has been weak and when sound policies are formulated, they are usually poorly implemented. Also, the quality of public service and regulation of public and private sectors has slow down economic growth and development instead of promoting it.

Moreover, the performance of governance in terms of regulatory quality is weak shown by the mean score (-0.900). Regression output shows that regulatory quality has no significant effect on per capita income in the short-run

but has significant negative effect in the long-run. This means that government regulations have not been favourable to private and public sectors of the economy, hence the decrease in per capita income.

The mean value of WGI for Nigeria from 1999 to 2022 is -1.102. This value shows that governance in Nigeria is weak in terms of fair application of laws and respect of fundamental human rights. The effect on economic development is negative in the short-run but positive in the long-run. This means that by and large, the rule of law in Nigeria in Nigeria has promoted development notwithstanding the shortcomings in its application in the short-run. Furthermore, the mean score -2.34 reveals that government performance towards control of corruption is weak. This negatively affect the economic development in the short-run and has no significant has insignificant effect in the long-run. This means that failure of the government in Nigeria to effectively combat corruption in all forms significantly hampered economic development. The findings of this study are supported by

Conclusion

This study carried out a test of good governance in Nigeria using World Bank Indicators of Good Governance using data spanning from 1999 to 2021. It was revealed that governance (Voice and accountability, Political stability and absence of terrorism, Government effectiveness, Regulatory quality, Rule of law and Control of corruption) and economic development had significant negative relationship. This means that governance in Nigeria during the period of study reduced the wellbeing of Nigerians significantly. The study showed that among the six governance variables, voice and accountability and control of corruption had the highest effect on economic development. These were followed by political stability and government effectiveness while regulatory quality and rule of law had the least effects on economic wellbeing.

The findings of this study have both theoretical and practical implications. Theoretically, it has shown that the nature of governance in a particular country can be tested through its impact on economic development. This means that the economic performance of a country depends among other factors on political factors, which includes governance. Practically, this study provides the Government at all levels, public officers and even the citizens with a scale that can be used to measure the performance of governance. The findings also implied that for Nigeria to reverse the decline in economic development being experienced by the country as revealed by economic development indices, there is the need for strengthening the government and institutions in the country.

This study is limited to 1999 to 2022. However, the relationship between two time series data is dynamic. This there is the possibility for the relationship between governance indicators and economic development in Nigeria to change in the future. Consequently, future related studies should focus on using more recent data. Also, this study is only limited to Nigeria. For comparison of findings, similar study should be replicated in other developing countries. Moreover, using panel data helps to produce superior estimates than when only time series are used. Future studies can test good governance using data that cut across countries over time.

Based on the conclusion of this study, the following recommendations have been suggested:

i) The first priority of the government in promoting good governance in Nigeria should be the promotion of political stability and ensuring absence of violence and terrorism that the country is currently facing. This can be done through adoption of peaceful approaches in resolving all forms of peaceful agitations from different sections of the country and fighting all forms of violence and terrorist actions towards disrupting democracy in the country.

ii) The next priority should be the fighting all forms of corruption that has eaten deep into all fabrics of Nigeria political, economic and social life. This can be done through public enlightenment of the citizens on the consequences of corruption via anti-corruption crusade, enactment of corruption laws prosecutions of offers. Moreover, anti-corruption and law enforcement agencies should be reformed and empowered.

iii) This should be followed by entrenching the rule of law in the country. This requires reforms in the judiciary and law enforcement agencies, especially the police and time-to time review of rules and regulations in order to so to foster justice, peace and protection of fundamental human rights.

iv) Urgent reforms tailored towards improving government effectiveness are also needed. Improvements should be made in terms of the quality of government policies, public services, civil service, guaranteeing the independence of civil service from political forces and promoting credibility in terms of government commitment towards implementation of policies. Moreover, in order to ensure that public policies are implemented adequately, the legislative arm of government should improve their oversight functions.

v) This priority should be followed by urgent reforms aimed at improving the quality of regulation in the country. This can be achieved through adequate implementation of policies meant to improve the efficiency of the public and private sectors of the economy.

vi) There is also the need to increase citizen's voice and government should be made more accountable to the people. This can be achieved through promotion of freedom of the press and association in the country.

vii) Good governance also requires effective and efficient utilization of the country resources through diversifying the economy. This will reduce the over-reliance of the economy on revenue from crude oil that has made the country to be susceptible to fluctuations that characterized prices of oil in the world market.

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