AN ASSESSMENT OF CONTROL OF CORRUPTION AS A DRIVER OF ECONOMIC GROWTH IN NIGERIA

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Abstract: This research investigated the influence of control of corruption on the economic growth of Nigeria spanning from 1996 to 2022. The Autoregressive Regressive Distributed Lagged Model was employed for data analysis. The study found that control of corruption has weak positive influence on economic growth in Nigeria in the long run but a strong negative influence on economic growth in the short-run. The dual nature of the influence of corruption control on economic growth in Nigeria—weakly positive in the long run and strongly negative in the short run—can be rationalized by considering the gradual nature of institutional change. The study recommends the empowering of anti-corruption agencies like the Independent Corrupt Practices Commission (ICPC) and enforcing strict sanctions to influence cultural and moral change, while creating additional agencies, promoting transparent leaders, and fostering public discourse.
Keywords: Consumption, corruption, economic growth, government expenditure, investment
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Introduction

Corruption manifest in various forms and functions across different contexts. It spans from the overarching concepts of "misuse of public power" and "moral decay" to precise legal

definitions, such as bribery involving a public servant and the transfer of tangible resources (Andvig et al., 2000). For simplification, it can be perceived as the exploitation of public office for private gain or the misuse of entrusted power (World Bank, 2012; Transparency International, 2013). A global predicament, corruption's pervasive influence extends across all countries, with no nation entirely immune to its grasp (Chimakonam, 2011). Recognized as a structural issue rooted in political, economic, cultural, and individual malaise (Akor, 2014), its impact resonates worldwide, particularly affecting developing countries (Nageri et al., 2013). Not confined to specific political or economic systems, corruption infiltrates democratic and dictatorial societies, as well as feudal, capitalist, and socialist economies. Moreover, it permeates various cultures, including Christian, Muslim, Hindu, and Buddhist traditions (Dike, 2005). The presence of corruption is evident in both public and private sectors, spanning profit and nonprofit entities, as well as charitable organizations. While it prevails in both developing and developed nations, its prevalence is notably higher in developing countries, marking it as a symptom of a poorly functioning nation.

Despite its global nature, corruption remains a recurrent issue in the Nigerian discourse, posing a significant obstacle to businesses encountering bribery and corrupt practices. Consequently, corruption hampers economic growth, impacting business operations, employment, and investments (Šumah, 2018). Beyond hindering economic development in terms of efficiency and growth, corruption contributes to the unequal distribution of resources, escalating income disparities, undermining social welfare programs, and diminishing effective demand within an economy. These repercussions culminate in reduced levels of investment, trade flows, government effectiveness, and overall human development, potentially impeding long-term sustainable development (Transparency International, 2014).

Several channels through which corruption influences economic growth have been identified by scholars (Mauro, 1995; Tanzi, 1997; Gupta et al., 2002; Gyimah-Brempong, 2002). These channels include the distortion of incentives and market forces, misallocation of resources, diversion of talent toward rent-seeking activities, inefficient taxation on businesses, decreased investment profitability, and diminished productivity of investments, leading to inefficiencies and resource waste (Transparency International, 2014). Despite being a priority for every nation, economic growth in Nigeria has faced challenges, particularly in relation to corruption. Over the last four decades, Nigeria's macroeconomic performance has been inconsistent, marked by periods of negative growth and economic decline. Corruption has been identified as a significant factor contributing to this economic instability, with negative effects on the country's growth (Makar, et al, 2022; Ngutsav, 2018; Asom & Ijirshar, 2017; Ajie & Gbenga, 2015; Nageri et al., 2013; Adewale, 2011).

The consequences of corruption on Nigeria's economic growth are deemed alarming, impacting the entire economic system and perpetuating challenges such as poverty, unemployment, insecurity, and high inequality gaps. Despite arguments that corruption may grease the wheels of economic growth (Aidt, 2009; Leff, 1964; Huntington, 1968; Summers, 1977; Lui, 1985), the need for empirical verification of the economic growth effects of corruption in Nigeria is undeniable. Considering the empirical evidence gaps and the lingering economic challenges faced by Nigeria, this study examines how control of corruption drives economic growth in Nigeria from 1996 to 2022. The significance of the study lies in understanding of the role of corruption in the economic trajectory, offering

valuable insights for policymakers, researchers, and stakeholders engaged in efforts to foster sustainable development in Nigeria.

Literature review

Theoretical Review

This study used several theories, each shedding light on different facets of corruption and its impact on economic growth. The theories under scrutiny encompass principal-agent theory, revisionist theory, beneficial grease theory, rent-seeking theory, and policy-oriented theory. The Principal-agent theory explicates corruption through the lens of the relationship between a principal, assigning tasks, and an agent, tasked with execution. Asymmetric information poses a challenge when the agent misguides the principal's interests for personal gain, creating a breeding ground for corruption (Becker & Stigler, 1974; Persson et al., 2013). The revisionist theory contends that corruption is intrinsic to developing countries, ingrained in social norms, traditions, and practices. This perspective emphasizes the inevitability of corruption during certain developmental stages and its potential contributions to modernization (Kyarem, 2015; Bayley, 1966).

Contrary to the earlier views stated above, the beneficial grease theory, also termed "virtuous bribery," posits that corruption can positively contribute to economic and political growth. It views corruption, particularly bribes, as a lubricant overcoming bureaucratic obstacles to efficiency, potentially speeding up economic wheels (Wei, 1998; Merton, 1958; Myrdal, 1968; Leff, 1964). But the rent-seeking theory argues that excessive government interference fosters opportunities for rent-seeking, where public officials with monopolies on products or services exploit their positions. Rent-seeking hampers creative activities, slowing technological growth and potentially impeding overall economic development (Klitgaard, 1988; Shleifer & Vishny, 1993; Tullock, 1967; Krueger, 1974). In a bid to control corruption, the policy-oriented theory emphasizes the role of policies in shaping corruption levels and their subsequent impact on economic growth. The theory states that effective policies are seen as crucial in mitigating corruption's negative effects and fostering sustainable economic development. By leveraging these theories, the study aims to unravel the dynamics of corruption in Nigeria from 1996 to 2022. Through empirical analysis, it seeks to contribute to the understanding of how corruption, influenced by diverse theories, shapes the economic trajectory of the nation. This investigation is pivotal for policymakers, researchers, and stakeholders striving to devise effective strategies for promoting sustainable economic development in Nigeria.

Empirical Review

Several panel studies have examined relationship between corruption and economic growth. Hoinaru et al. (2020) explored this nexus across 185 countries from 2005 to 2015, revealing a negative association between corruption, the shadow economy, and economic/sustainable growth. Sharma and Mitra (2019) extended the analysis from 1996 to 2015, employing dynamic panel data models to address endogeneity concerns and supporting the 'sand the wheels' theory, especially for lower-income countries. Tidiane (2019) focused on the Economic and Monetary Union of West Africa (WAEMU) countries between 2001 and 2014, employing the Panel Vector Auto Regressive (VAR) model, uncovering that corruption reduces public expenditure ratios, negatively impacting economic growth in WAEMU nations.

Gründler and Potrafke (2019) broadened the scope from 2012 to 2018, assessing corruption's cumulative long-run effect on growth across 175 countries. Their study, utilizing fixed and random effect regression models, highlighted a substantial decrease in real per capita GDP due to corruption. Saha and Sen (2019) assessed the role of political institutions in mediating the corruption-growth relationship from 1984 to 2016 across 100 countries. Employing two-stage least square and dynamic panel-system-GMM methods, they found varying corruption-growth dynamics based on political institutions, with corruption potentially enhancing growth more in autocracies than democracies. Vieira (2018) utilized unbalanced panel data spanning 174 countries and 23 years (1995 to 2017), employing bootstrapping techniques to estimate the negative impact of corruption on growth. Thach, Duong, and Oanh (2017) focused on Asian countries from 2004 to 2015, utilizing DGMM data processing and quantile regression. Their findings indicated corruption as a hindrance to economic development in these Asian nations.

Fraj and Lachhab (2015) directed attention to developing countries, analyzing panel data for 26 nations from 1996 to 2013. Their study, utilizing fixed and random effects, underscored corruption's detrimental effect on human capital accumulation, posing a threat to economic growth. Bounoua and Matallah (2014) explored corruption's impact on economic growth in Algeria from 1995 to 2011, employing the Johansen cointegration test and VECM. Their findings highlighted the positive long-term effects of both 'freedom from corruption' and 'control of corruption' on enhancing economic growth in Algeria. Wright and Craigwell (2013) examined the causal relationship between economic growth and corruption in 42 developing countries from 1998 to 2009. Their use of linear and nonlinear panel methods revealed corruption's Granger-causing effect on economic growth. Amin, Ahmed, and Zaman (2013) scrutinized the relationship between corruption and economic growth in Pakistan from 1985 to 2010. Their multiple regression analysis demonstrated a negative impact of corruption on per capita income in Pakistan.

Alfada (2019) applied a nonlinear approach to measure corruption's impact on economic growth in Indonesia from 2004 to 2015, using the instrumental variable two-stage least squares estimator. The study revealed a growth-deteriorating effect of corruption, especially in provinces with corruption levels exceeding a certain threshold. Dwiputri, Pradiptyo, and Arsyad (2019) investigated corruption's impact on growth in Asian countries from 2000 to 2015, finding that corruption could reduce the share of capital in GDP, particularly in countries with weak institutional systems.

Contrary to some scholars, Cabaravdic and Nilsson (2017) supported corruption as a potential greaser for economic growth. Their linear panel data regression model in Southern Europe indicated a positive effect of corruption on the real GDP per capita of 14 countries. Nyagwui (2017) explored the causal relationship between corruption and economic growth in 28 developing countries from 2002 to 2016, finding a positive correlation between corruption and economic growth, while the rule of law exhibited a negative correlation. Bai, Jayachandran, Malesky, and Olken (2013) empirically tested the relationship between growth and corruption in Vietnam, using cross-industry heterogeneity in growth rates. Their findings suggested that firm growth led to a decrease in bribe extraction, hinting at a positive feedback loop between economic growth and good institutions.

Turning attention to Nigeria, Ngutsav (2018) investigated the effects of corruption and government spending on economic development using annual data from 1981 to 2015.

Their analysis, employing the vector error correction technique, revealed a negative impact of corruption on economic growth. Asom and Ijirshar (2017) focused on Nigeria from 1999 to 2015, using ordinary least squares to analyze the effect of corruption on economic growth and cultural values. Their study indicated a negative influence of corruption on Nigeria's economic growth. Enofe, Oriaifoh, Akolo, and Oriaifoh (2016) discussed corruption and economic growth in Nigeria, drawing from both public and private sectors. Using nonparametric statistical methodology on a sample of 100 participants, the study revealed pervasive corruption in the Nigerian economy.

Hjertstedt and Cetina (2016) compared corruption's outcomes on economic growth in Sub-Saharan Africa and Southeast Asia from 1996 to 2015. Through the lens of principal-agent theory, their findings suggested that corruption has no direct effect on economic growth, with socioeconomic indicators playing a crucial role. Shuaib, Ekeria, and Ogedengbe (2016) investigated the effect of corruption on the growth of the Nigerian economy using time series data from 1960 to 2012. Their cointegration analysis and error correction mechanism indicated an inverse relationship between bribery and economic growth. Nageri, Umar, and Abdul (2013) analyzed corruption's impact on economic growth in Nigeria from 1996 to 2012, employing ordinary least squares and finding a major adverse effect of corruption.

Ajie and Gbenga (2015) explored the relationship between corruption and economic growth in Nigeria from 1996 to 2013, revealing a negative association between economic growth and the degree of corruption. Nwankwo (2014) used Granger causality and ordinary least squares to investigate corruption's significant negative impact on economic growth in Nigeria from 1997 to 2010. Rotimi et al. (2013) investigated the correlation between corruption and economic growth in Nigeria spanning from 1994 to 2005. Utilizing the ordinary least squares (OLS) method, the study aimed to discern the connection between corruption and the growth of the economy. Employing the Granger causality method, the research sought to gauge the causal relationship between corruption and the gross domestic product (GDP). The findings indicated that corruption hampers and adversely affects economic growth.

Methodology

Model Specification

This research is grounded in various corruption theories, including principal-agent theory, moralist theory, revisionist theory, cultural and customary activity theory, Marxian theory of corruption, beneficial grease theory, and rent-seeking theory, along with the four-sector Keynesian model. Thus, adopting the model by Makar, et al (2023), the model is stated as:

$$RGDPC = f(CP, HHC, DIV, FDI, GSP, TB) \quad (1)$$

RGDPC= real Gross Domestic Product per Capita, CP= Control of Corruption, HHC= Household consumption, GSP= Government spending, LTB= Trade Balance, FDI= Foreign Direct Investment, and DIV= Domestic Capital investment. Converting the above equation to a probabilistic mathematical form and applying a semi-transformation by taking natural logarithm (ln), we have

$$lnRGDP = \beta_0 + \beta_1 CP + \beta_2 lnHHC + \beta_3 lnDIV + \beta_4 lnFDI + \beta_5 lnGSP + \beta_6 lnTB + \mu_t \quad (2)$$

where: β_0 is the intercept, $\beta_1 - \beta_6$ are the parameters to be estimated, μ_t is the error term, and ln represents the natural logarithm.

Data and Variable Description

This research utilized secondary data from 1996 to 2022 for the pertinent variables. Data on Economic growth data (represented by real GDP per capita) were obtained from world development indicators of the World Bank. Real GDP per capita is measured as a naira value of the economic output of a country per person, adjusted for inflation. A higher real GDP per capita generally suggests a higher standard of living, and overall economic performance. Control for corruption measures perceptions of the extent to which public power is exercised for private gain. It is an index that ranges from -2.5 to +2.5 with a positive value (closer to +2.5) suggesting a perception that corruption is well controlled and vice versa. Data on control of corruption were sourced from World Governance indicators of the World Bank. Household consumption is measured as the naira value of total expenditures made by households on goods and services to satisfy their needs and wants, indicating the overall demand for goods and services within the Nigerian economy. Data on household consumption were obtained from the World Development Indicators of the World Bank. Foreign direct investment represents the naira value of net investment made by foreign entities (individuals, corporate bodies, or government) into the Nigerian economy. Data on foreign direct investment were also sourced from World Development Indicators of the World Bank. Domestic capital investment is a measure of the naira value of investment made on capital projects, businesses, or initiatives that contribute to the development and growth of the domestic (Nigeria) economy. Data on domestic capital investment were sourced from World Development Indicators of the World Bank. Government spending is the total expenditure made by the Nigerian government at to fund public goods and services, implement policies, and carry out governmental functions. Data on government spending were obtained were obtained from World Bank Statistics. Trade balance is an indicator that measures the difference between Nigerian exports and imports of goods and services. A higher trade balance (trade surplus) suggests that Nigeria is successful in selling more goods and services to other nations than it is buying, indicating competitiveness and efficiency in production and vice versa. Data on trade balance were obtained were obtained from Central Bank of Nigeria Statistical Bulletin.

Method of Data Analysis

This study employed econometric techniques for data analysis. The Augmented Dickey Fuller (ADF) test was conducted to examine the stationary properties of the data set. The Bound test was used to verify the long-run relationship among the study variables whereas the ARDL model was used to estimate for the long run and short-run coefficients of the variables. The adoption of ARDL technique is due to its flexible nature and the fact that it can be used either when variables are stationary at first difference or there is mixed order of integration. To mitigate the risk of spurious estimates, the study employed the Jarque-Bera test to assess whether the data sets, estimates, and residuals align well with a normal

distribution. The ARDL residuals serial correlation LM test was utilized to identify potential evidence of serial correlation at d-lag. Additionally, the ARDL residuals normality test gauged the normal distribution of the residuals, and the ARDL residuals heteroscedasticity tests scrutinized the presence or absence of heteroscedasticity in the model.

Results and discussion

Descriptive Statistics

The descriptive statistics extracted from Table 1, encompassing data spanning the years 1996 to 2022, provide insights into various economic indicators used in the study. Real gross domestic product per capita (representing economic growth), control of corruption, household consumption, domestic investment, foreign direct investment, government spending, and trade balance exhibit average values of approximately ₦49,265.56 billion, -1.178, ₦32,295.62 billion, ₦9,038.14 billion, ₦579.2 billion, ₦5,653.15 billion, and ₦1,589.12 billion, respectively. Notably, the control of corruption manifests an average negative value of -1.178, signaling weak institutional control over corruption in Nigeria during the specified period.

Table 1 Descriptive Statistics of Variable

	GDPC (₦'T)	CP	HHC (₦'B)	DIV (₦'B)	FDI (₦'B)	GSP (₦'B)	TB (₦'B)
Mean	49265.56	-1.178397	32295.62	9038.135	579.1990	5653.146	1589.123
Median	50042.36	-1.160613	35323.70	8996.914	654.0788	3452.991	1007.651
Maximum	74639.47	-0.900949	52453.03	11445.86	1360.308	24431.21	5822.589
Minimum	22568.87	-1.502068	12871.47	6860.444	-79.56968	337.2176	-7905.599
Std. Dev.	18749.75	0.136475	11855.73	1220.319	441.7774	6581.404	3118.788
Skewness	-0.125774	-0.628794	-0.279890	0.114961	0.124284	1.590257	-1.014720
Kurtosis	1.455858	3.101285	1.983130	1.984162	1.845735	4.380667	4.348233
Jarque-Bera	2.753606	1.790761	1.515799	1.220390	1.568378	13.52464	6.678400
Probability	0.252384	0.408452	0.468650	0.543245	0.456490	0.001157	0.035465
Observations	27	27	27	27	27	27	27

Source: Extractions from E-views Output. Note: ₦'B =Billions Naira

The corresponding minimum values for these variables occurred in various years: ₦22,568.87 billion in 1996 for real gross domestic product, -1.502 in 2002 for control of corruption, ₦12,871.47 billion in 1999 for household consumption expenditure, ₦6,860.44 billion in 2001 for domestic investment, ₦-79.57 billion in 2022 for foreign direct investment, ₦337.22 billion for government spending in 1996, and ₦-7,905.6 billion in 2020 for trade balance. Further examination reveals that the real GDP per capita peaked at ₦74,639.47 billion in 2022, attributed to significant growth in key sectors such as technology, banking and finance, manufacturing, and energy.

Additionally, the control of corruption index reached its highest negative value of -0.9 in 2008, indicating a notable prevalence of corruption throughout the study period, as evidenced by consistently negative values in the dataset. An analysis of the data suggests a negatively skewed distribution for real gross domestic product per capita, control of

corruption, household consumption, and trade balance, indicating a propensity toward smaller values. Conversely, domestic investment, foreign direct investment, and government spending exhibit positively skewed distributions, leaning towards larger values. Kurtosis values, describing the shape of the distribution, generally fall below 3, suggesting a platykurtic (flat) shape for most variables, except for control of corruption government spending, and trade balance. The result of kurtosis for control of corruption exhibit mesokurtic (approximately normal), while the result of kurtosis for government spending and trade balance exhibit leptokurtic (peaked) shape. The Jarque-Bera statistics, employed to assess normality, reveal that real Gross Domestic Product per capita, control of corruption, household consumption, domestic investment, foreign direct investment, and government spending are normally distributed, as their probability values exceed 0.05 (5%). In contrast, government spending and trade balance deviate from normal distribution, with a probability value falling below 0.05.

Result of Unit Root Test

It is sacrosanct to test for the existence of unit roots in the variables and establish their order of integration. The results of the Augmented Dickey-Fuller and Phillips-Perron tests for all the time series variables used in the estimation are presented in the Table 2 and Table 3 respectively.

Table 2: Result of the ADF unit root test

Variables	At level	First Difference	1%Critical Level	5%Critical Level	10%Critical Level	Order of Integration
lnRGDP	-1.750545	-6.865547***	-3.724070	-2.986225	-2.632604	I(1)
CP	-1.617912	-4.305023***	-3.724070	-2.986225	-2.632604	I(1)
lnHHC	-1.218415	-6.379148***	-3.724070	-2.986225	-2.632604	I(1)
lnDIV	-2.773576*	-9.327003***	-3.737853	-2.991878	-2.635542	I(1)
lnFDI	-2.143339	-5.920693***	-3.724070	-2.986225	-2.632604	I(1)
lnGSP	-0.422870	-7.240257***	-3.724070	-2.986225	-2.632604	I(1)
lnTB	-2.258474	-3.867497**	-3.724070	-2.986225	-2.632604	I(1)

Source: Extractions from E-views 10 Output

Table 3: Result of the Phillips-Perron unit root test

Variables	At level	First Difference	1%Critical Level	5%Critical Level	10%Critical Level	Order of Integration
lnRGDP	-1.576266	-4.339606***	-3.724070	-2.986225	-2.632604	I(1)
CP	-1.896750	-4.305023***	-3.724070	-2.986225	-2.632604	I(1)
lnHHC	-1.218415	-6.379148***	-3.724070	-2.986225	-2.632604	I(1)
lnDIV	-3.021627**	-13.35523***	-3.724070	-2.986225	-2.632604	I(0)

lnFDI	1.171926	-5.410806***	-3.724070	-2.986225	-2.632604	I(1)
lnGSP	-0.541054	-7.186317***	-3.724070	-2.986225	-2.632604	I(1)
lnTB	-0.596879	-3.421635**	-3.724070	-2.986225	-2.632604	I(1)

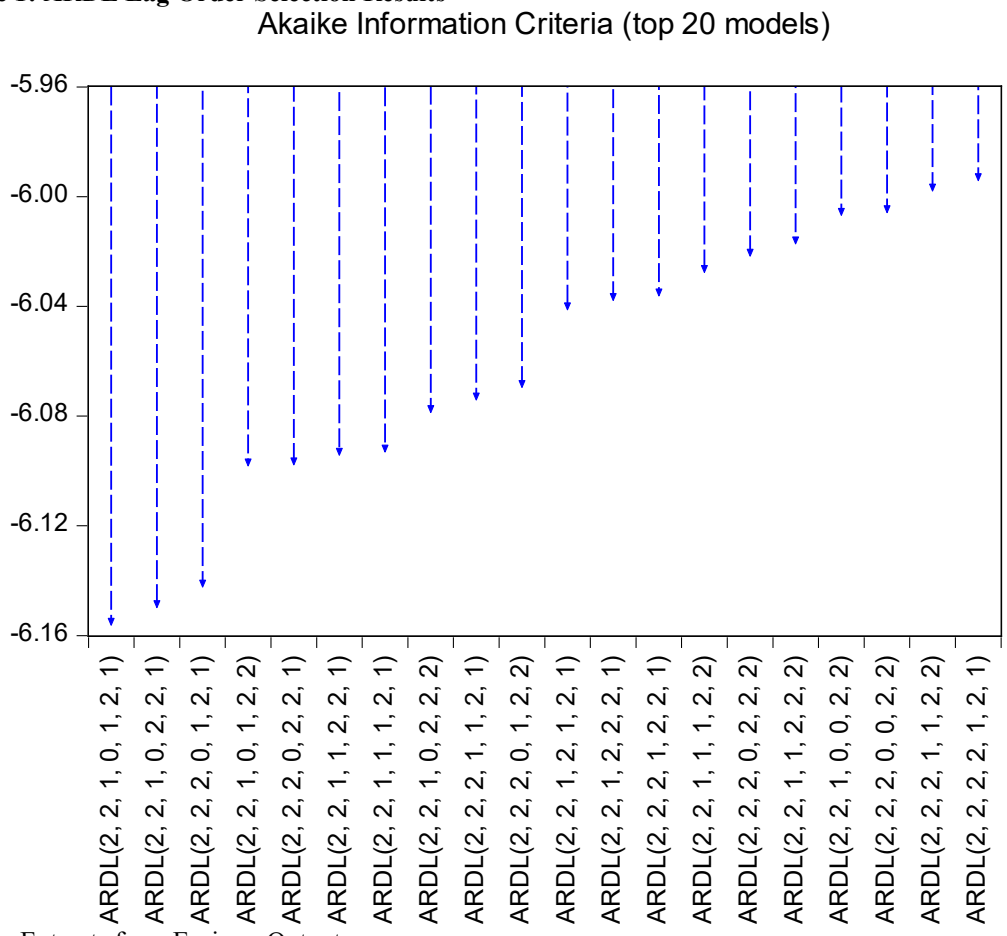
Source: Extractions from E-views 10 Output

The unit root results in Table 2 and Table 3 reveal that all the series are stationary at first difference because the ADF statistics at first difference are greater than their corresponding critical values at 5% level. The result of the Phillips-Perron test shows that only domestic investment that is stationary at level. All other variables were integrated after first difference. This implies that although the series have a unit root problem at level, there is no evidence of a unit root problem at first difference. Therefore, the study employs the ARDL bounds test for the determination of long-run relationship.

Optimal Lag selection criteria

This study adopted the Akaike Information Criterion (AIC) in order to select the optimal lag order for the series. The results are presented in a graphical form in Figure 1.

Figure 1: ARDL Lag Order Selection Results



Source: Extracts from E-views Output

Result from Figure 1 reveals that the maximum lag length is one (1), and the optimal lag length identified is ARDL (2, 2, 1, 0, 1, 2, 1). This determination is based on the least Akaike Information Criterion (AIC) compared to the other top 20 models. Consequently, the model was estimated using lag of one (2) for optimal performance and to ensure an adequate representation of the data.

ARDL Bounds Test Results

Cointegration helps identify whether there is a long-run relationship between two or more non-stationary time series variables. In situations where individual variables are non-stationary (that is, they have a unit root at level), it might be misleading to analyze their relationships directly. In addition, when non-stationary time series variables are regressed against each other, there is a risk of encountering spurious regression results. Co-integration testing helps mitigate this risk by identifying whether the apparent relationship is genuine or if it is merely a statistical artifact arising from the non-stationarity of the variables. The study utilized the ARDL bounds test to determine the possibility of co-integration among the variables. Result of the ARDL Bounds test is presented in Table 4.

Table 3: ARDL Long-Run Bound Test

	Asymptotic: n=1000		Actual Sample (Finite Sample)	
	Lower Bound I(0)	Upper Bound I(1)	Lower Bound I(0)	Upper Bound I(1)
F-Stat. =15.66	10% =1.99	10% =2.94	10% =2.33	10% =3.515
	5%= 2.27	5% = 3.28	5%= 2.79	5% = 4.15
	1%= 2.88	1% = 3.99	1%= 3.98	1% = 5.69

Source: Extracts from E-views 10 Output

The results presented in Table 4 suggest the presence of a long-run relationship among the variables included in the model. This conclusion is drawn from the F-statistic value of 9.66 being greater than the Pesaran Upper Bounds critical values of 3.61 for the actual sample size at 5% level of significance. Therefore, there is no indication that the variables are drifting apart in the long term, implying that they are co-integrated. The establishment of a co-integrating relationship is crucial for understanding the stability and long-run associations between the variables under consideration.

Impact of Corruption on Economic Growth in Nigeria

The ARDL long run and short-run tests are essential tools in econometrics for providing a detail understanding of the relationships between variables over different time horizons. They help capture both the stable, long-term equilibrium and the short-term adjustments that contribute to a more. This study examines the long run and short-run direct impact of control of corruption on economic growth in Nigeria using the ARDL methodology. After confirming the existence of a long-run relationship among the variables, the ARDL model was employed to estimate the long-run coefficients. The outcomes of this estimation are detailed as presented in Table 5.

Table 5: Long Run Estimates

Variables	Coefficient
CP	0.0449

	(0.0857)
lnHHC	1.154*** (0.0769)
lnDIV	0.0938 (0.0891)
lnFDI	0.0548*** (0.0135)
lnGSP	0.203*** (0.0494)
lnTB	0.0391** (0.014)

Standard Errors in parenthesis ***p< 0.01,** $p < 0.05$,* $p < 0.1$

The estimated coefficient of control of corruption is positive (0.0449) but not statistically significant at 5% level of significance. This explains that the weak governance control mechanism exerts a weak influence on driving economic growth in Nigeria. The weak governance control mechanism poses serious challenges in enforcing anti-corruption measures, leading to potential economic inefficiencies, misallocation of resources, and a higher risk of corrupt adverse effect on economic growth in the long-run. The weak positive influence in the long run may be attributed to the time lag involved in the impact of anti-corruption measures. Effective control of corruption is a gradual process that takes time to permeate throughout the economic system. Over the long term, as corruption is curbed and institutions strengthen, it is expected to create a positive environment for economic growth. The weak positive coefficient suggests that weak control of corruption is associated with resource misallocation and inefficient institutions. The justification is that the resources meant for public projects may be diverted for personal gain, leading to the neglect of critical infrastructure and public services. This means that corruption can act as a barrier to economic growth by impeding efficient resource allocation, distorting market dynamics, and deterring investments.

The estimated coefficient of household consumption (HHC) is positive (1.154). It is theoretically plausible. The coefficient is also statistically significant at the 5% level of significance. This implies that a one percentage change (increase) in household consumption significantly leads to a 0.367% increase in economic growth in Nigeria in the long run, and vice versa, ceteris paribus. The coefficient of domestic investment (DIV) is also positive (0.0938) and theoretically plausible and statistically insignificant at the 5% level of significance. This implies that a one percentage change (increase) in domestic investment would weakly lead to increases in economic growth, and vice versa, ceteris paribus. Thus, domestic investment has a weak positive influence on economic growth in Nigeria in the long run. The weak effect of domestic investment on growth in implies that the invested capital is not being utilized optimally or that the productivity of capital is not as high as it could be.

Moreover, the estimated coefficient of foreign direct investment has a positive sign (0.0548). The coefficient is also statistically significant at 5% level of significance. This implies that a one percentage change (increase) in foreign direct investment significantly accounts for 0.0548% of the changes (increase) in economic growth in Nigeria in the long run. This has conformed to the theoretical underpinnings of the relationship between foreign direct investment and economic growth in less developed countries. The estimated

coefficient of government spending is positive and statistically significant at 5% level of significance. By magnitude and sign, it implies that a one percentage change (increase) in government spending leads to an approximately 0.203% increase in economic growth in Nigeria in the long run and vice versa, ceteris paribus.
The estimated coefficient of trade balance is also theoretically plausible and statistically significant at the 5% level of significance. This implies that a percentage change (increase) in exports leads to 0.0391% increases in economic growth in Nigeria in the long run and vice versa, ceteris paribus. The error correction mechanism is used to correct or eliminate the discrepancy that occurs in the short run toward the long run. The estimated coefficient of the error-correction variable gives the percentage of the discrepancy that can be eliminated in the next time period. The speed of adjustment revealed the coefficient of 22.77% towards long-run equilibrium. The estimated coefficients of the explanatory variables in the error correction model measure the short-run relationship. The results are summarized in Table 6.

Table 6: Error Correction Model (ECM) Estimates

Variables	Coefficient
D(lnRGDP(-1))	-0.297*** (0.0742)
D(CP)	-0.099*** (0.0192)
D(CP(-1))	-0.143** (0.0189)
D(lnHHC)	0.143*** (0.0119)
D(lnFDI)	0.00436 (0.00258)
D(lnGSP)	0.00818 (0.00674)
D(lnGSP(-1))	0.0539*** (0.00702)
D(lnTB)	-0.000807 (0.00118)
CointEq(-1)*	-0.2277** (0.0153)

R2 = 0.9708 $\overline{R}^2$ = 0.9563 Standard Errors in parenthesis ***p< 0.01,** $p < 0.05$,* $p < 0.1$
Source: Extracts from E-views Output

The findings presented in Table 6 show that the control of corruption has a significant negative impact on economic growth in short-term in Nigeria. This suggests that in the immediate term, efforts to control corruption do not yield immediate positive effects on the country's economic growth. The strong negative influence in the short run can be explained by the immediate disruptions and adjustments that occur when anti-corruption measures are implemented. Short-term adverse effects may include disruptions to established corrupt practices, potential resistance to change, and uncertainties in the business environment, leading to a temporary negative impact on economic growth. On the other hand, the results demonstrate that household consumption exerts a positive and significant influence on economic growth in Nigeria in the short-run. This implies that increased spending by households on consumption activities contributes positively to economic growth in the

short run. The positive impact of household consumption on economic growth can be attributed to its role in boosting sales and revenue for companies. Higher household spending creates a conducive environment for business growth, investment, and innovation. Similarly, government spending is identified as another significant driver of economic growth in the short run in Nigeria. The infusion of funds by the government into various sectors positively influences economic activity in the short run.

However, the result reveals that foreign direct investment (FDI) has a positive but weak effect on short-term economic growth in Nigeria. The weakness of this effect raises concerns about the quality of foreign investment in the country. This suggests that, in the immediate term, the inflow of foreign investment is not directed towards sectors that make substantial contributions to productivity, technology transfer, and job creation. Consequently, the overall impact on economic growth is limited.

The estimated coefficient of error correction term is negative and it has a low magnitude of 0.2277%. Its magnitude indicates that in case of any deviation, the long run equilibrium is adjusted slowly where about 22.77% of the disequilibrium maybe removed each period (that is each year). This shows that the speed of adjustment that economic growth would converge towards long-run equilibrium in case of any initial disequilibrium at the rate of 22.77%. It is also glaring from the coefficient of multiple determinations (R2) has a good fit as the independent variables were found to jointly explain 97.08% of the movement in the dependent variable with the adjusted R-squared of 95.63%.

Diagnostics Tests Results

To assess the robustness of the ARDL model estimates, various diagnostic tests were performed in this study. These tests encompass the Ramsey RESET test, Breusch-Godfrey heteroskedasticity test, LM Serial Correlation test, Residual Normality Test, and CUSUM plot stability tests. The findings from these tests, with the exception of the CUSUM and CUSUM of square (illustrated in Figures 2 and 3), are summarized in Table 7.

Table7: Diagnostic Test Results

Test	Statistic	Probability
Ramsey Reset Test	0.071733	0.7956
Residual normality	0.329741	0.848
Breusch-Godfrey Serial Correlation LM Test	1.243879	0.3450
Breusch-Godfrey heteroskedasticity	0.985417	0.5297

Source: Extracts from E-views Output

Based on the information presented in Table 7, the test statistic utilized to assess serial correlation, along with its associated probability value, suggests that there is insufficient evidence to reject the null hypothesis. This implies that there is no serial correlation present in the model. Similarly, the test statistic for heteroscedasticity fails to provide enough evidence to reject the null hypothesis, indicating the absence of heteroscedasticity. Furthermore, the results of the residual normality test indicate that the residuals adhere to the classical assumptions of Ordinary Least Squares, suggesting that they are likely to yield unbiased results. This conclusion is supported by the probability value (0.512803) of the normality test, which exceeds the 5% threshold.

In addition to the previously discussed diagnostic tests, the stability of the model is further examined through the implementation of the CUSUM and CUSUM of squares stability tests. The result of these tests are illustrated in figures 2 and 3, respectively.

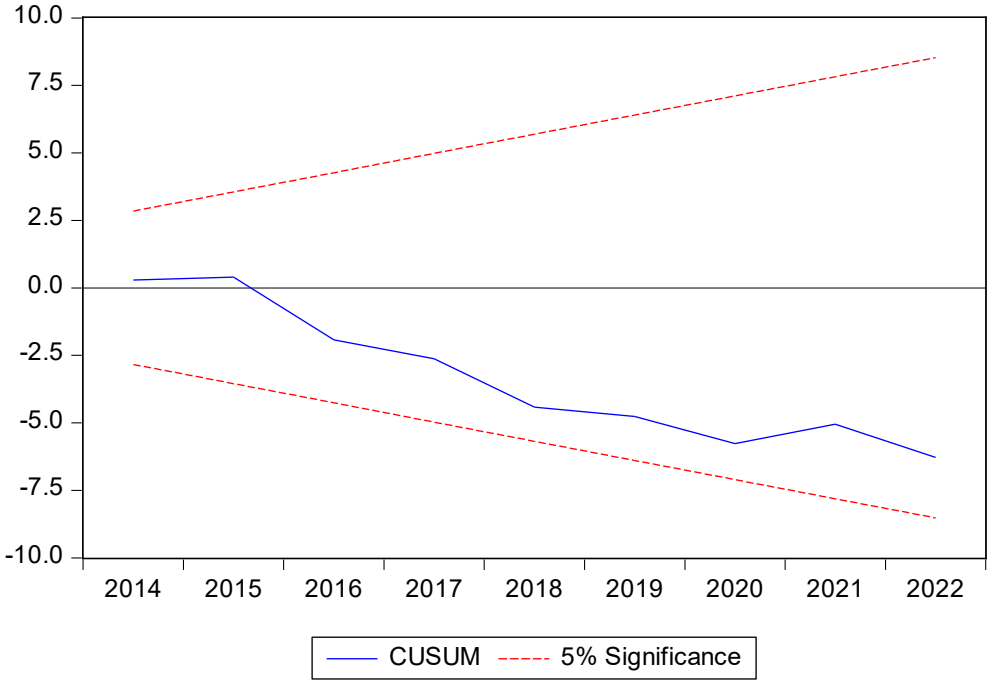


Figure 2: CUSUM Test Result

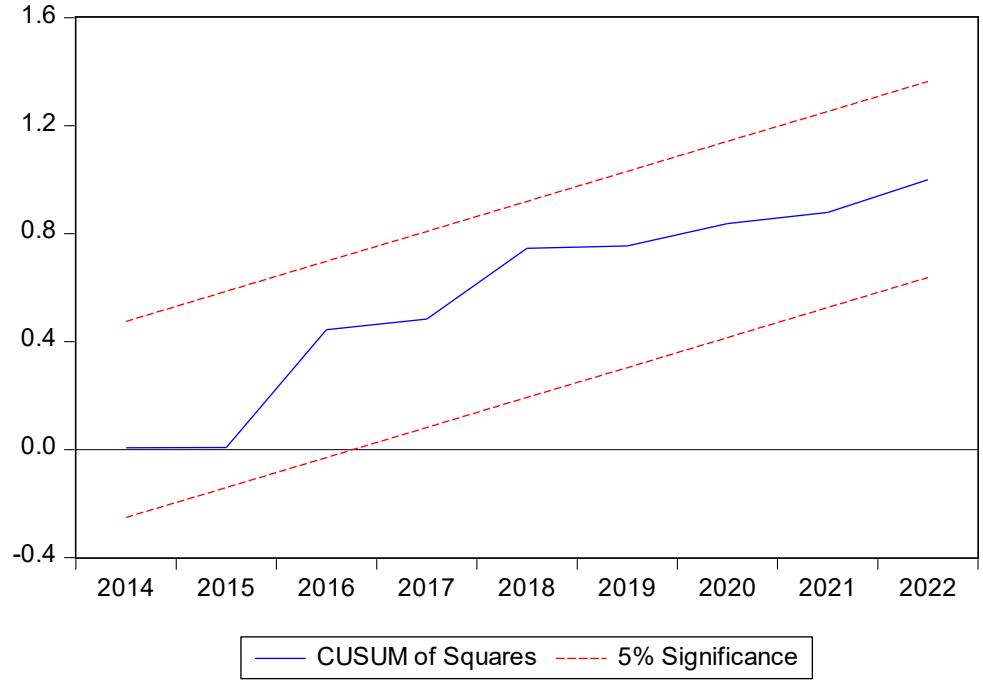


Figure 3: CUSUM of Squares Test Result

The results from both figures 2 and 3 unambiguously show that the model is stable, as the sum of the residuals remains within the boundary defined by the dotted lines. This suggests

that the outcomes of this study are reliable and can be considered for the policymaking process.

Conclusion and policy recommendations

The study concludes in the long run, there is a positive but significant effect of control of corruption and economic growth in Nigeria implying that the control of corruption mechanism in Nigeria are weak in yielding strong positive influence on economic growth. This implies that higher prevalence of corruption and weak governance mechanisms pose serious challenges in enforcing anti-corruption measures, leading to potential economic inefficiencies, misallocation of resources, and a higher risk of corrupt leaving weak effect of control of corruption on economic growth in the long-run and a negative effect in the short-run. Therefore, the study concludes that as corruption control measures become ingrained in the system in the long-run, they may contribute to improved governance, increased investor confidence, and a more efficient allocation of resources. These factors collectively create an environment conducive to sustained economic growth. However, during the initial stages of implementing anti-corruption measures, there might be resistance from vested interests, bureaucratic challenges, and disruptions to established practices. These initial hurdles could lead to a strong negative influence on economic growth in the short run. The study also infers that household consumption and government spending drives economic growth in Nigeria. This alluded to the multiplier effect of spending in driving economic growth. Based on the study findings, the following recommendations were made:

Given that adverse effects of corruption in Nigeria, the study recommends the strengthened and empowerment of the ant-corruption agencies to carry out the fight against the endemic corrupt practices in Nigeria. For instance, the Independent Corrupt Practices Commission (ICPC) should properly investigate corrupt practices and to apportion appropriate sanctions. This could positively influence the cultural reorientation and moral character thereby providing redemption for national consciousness, patriotism and manifestation of civilized acts by the citizens. This would help curtail the adverse of corruption and it could lead to the strong positive benefits of controlling corruption in the country.

Consequent upon the above suggestion, the Nigerian government should improve in indicting public office holders that have found guilty of corrupt practices. This requires good and virtuous leaders who are honest with integrity, discipline and trustworthy, and the restructuring of Nigerian police force. This can be done by selecting credible leaders through transparent ways and holding the leaders accountable to the populace. This can also be achieved by reforming the Elections Committees that monitors campaign expenditures, developing a strong monitoring mechanism, and imposing stronger penalties. More so, reforming the selection process for the heads of the supreme judiciary positions by establishing an independent body of judges, ensuring total independence of the judiciary and excluding the intervention of the Executive Power from any step of this process. The Nation‘s effort at curbing corruption may, at best, remain an illusion if the selection process is not improved. Hence, effective fight against corruption in Nigeria requires a good and exemplary leadership with a strong will to fight corruption and with such high level of ethical and moral standards to be able to motivate and influence the citizens to voluntarily follow in the fight against corruption.

The Nigerian government need to strengthen her institutions. Institutions are at the heart of every nation. Creating institutions that can sustain the economy. This should cut across all spheres. More so, the Nigerian government should also make laws that govern the activities within and outside to close avenues to avert the outflow of looted funds. This can be done by collaborations with the foreign partners to restrict the number of accounts outside the country.

The study also recommends that the Nigerian government should intensify efforts to create more agencies beside EFCC and ICPC to address cases of corrupt practices in the economy, encourage leaders that display transparency, honesty, probity, accountability, purposefulness and commitment to good ideals of the society before followers will be convinced of the ingenuity of such crusade, ensure corruption as a theme needs to be discourse on debate by government representatives at federal, State and local levels. This will create the awareness that corrupt practices are against norms, culture and social value of the society. Putting all these together will dissuade corruption and boost economic growth to increase influx of foreign investors.

More so, the weak effect of foreign direct investment in the short run suggest the need to evaluate the quality and sectoral distribution of foreign direct investment to ensure alignment with productivity, technology transfer, and job creation goals and to implement policies to attract high-quality foreign investments that contribute significantly to economic development.

The study also suggests modalities for western countries to close rooms that accommodate stolen funds from developing countries. In most instances, funds kept in these countries are concealed under codes and not names which make them untraceable in the event of the depositors' death. There should be re-orientation process in education system in Nigeria that would lead to redemption or retrieval and salvaging or restoring of the country's national character and image. This would cause mindset reorientation from the educational system in Nigeria. The educational sector should instill in the youth, the standard and acceptable morals. Therefore, re-structuring of the education process itself would ensure character development and transformation, skill acquisition and even entrepreneurship along with job creation. The three arms of government in Nigeria need to have unity of purpose in the fight against corruption. There should be a healthy conspiracy by the executive, legislature and the judiciary in tackling corruption head on. This can be done through collaborative efforts. Parents should endeavour to fulfill their parental roles, goals, values and manners that would influence the children's moral and social behaviour positively. These can be done through teaching and training of their children/wards and adequate monitoring and guidance of their behavioural patterns at home and developing in them, self-control in absence of external authority.

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