IMPACT OF CORRUPTION ON ECONOMIC GROWTH: AN EMPIRICAL EVIDENCE FROM NIGERIA

Terseer Anthony MAKAR
Benue State University, Makurdi-Nigeria
makarson4real@gmail.com

Ayila NGUTSAV
Benue State University, Makurdi-Nigeria
ngutsavayila@gmail.com

Victor Ushahemba IJIRSHAR
Benue State University, Makurdi-Nigeria
vijirshar@bsum.edu.ng

Joyce Mbakosun AYAGA
Department of Economics & Development Studies, Federal University of Kashere, Gombe
sethdoose@gmail.com

Abstract: *This study examines the impact of corruption on economic growth in Nigeria from 1986 to 2019. The study used the Johansen cointegration test and vector error correction tests for the data analysis. The study shows that increases in the level of corrupt practices significantly inhibit economic growth in Nigeria in the long run but are insignificant in the short run at the 5% level of significance. The study further reveals that there is a weak transmission effect of corruption on economic growth in Nigeria through household consumption, foreign direct investment, domestic investment, government spending, export and import of goods and services in Nigeria. The study recommends that in fighting corruption, Nigeria requires good and virtuous leaders who are honest with integrity, discipline and trustworthiness, the creation of employment, and the upgrading of Nigeria police among others and that the Nigerian government should advance the use of anti-corruption agencies such as the Independent Corrupt Practices Commission to properly investigate corrupt practices and to apportion appropriate sanctions, strengthen its institutions, and intensify efforts to create more agencies beside the Economic and Financial Crimes Commission and Independent Corrupt Practices Commission to address cases of corrupt practices in the economy.*
Keywords: *Consumption, corruption, economic growth, government expenditure, investment.*
JEL Classification: D73, O47

Introduction

Corruption is a complex and multifaceted phenomenon with multiple causes and effects, as it takes on various forms and functions in different contexts. It ranges from the broad terms of "misuse of public power" and "moral decay" to strict legal definitions of corruption as an act of bribery involving a public servant and a transfer of tangible resources (Andvig, *et al.*, 2000). For simplification, it can be seen as the abuse of public office for private gain or the abuse of entrusted power (World Bank, 2012; Transparency International, 2013).

Corruption is a global problem, and no country of the world is totally free of its menacing grip (Chimakonam, 2011). It has been seen as a structural problem of political, economic, cultural and an individual's malaise (Akor, 2014). It has affected many countries all over the world, especially developing countries (Nageri, *et al.*, 2013). It is found not only in democratic and dictatorial societies but also in feudal, capitalist and socialist economies. Christian, Muslim, Hindu and Bhuddist cultures are equally bedeviled by corruption (Dike, 2005). Corruption exists in the public and private sectors, profit and nonprofit as well as charitable organizations. It subsists both in developing and developed nations but is predominant in developing countries; hence, it remains a symptom of a poorly functioning nation. Although corruption is a global issue, it is a recurring issue in the Nigerian discourse. It is a significant obstacle to businesses in Nigeria, as companies are very likely to encounter bribery and other corrupt practices.

Thus, corruption inhibits economic growth and affects business operations, employment and investments (Šumah, 2018). Not only does corruption affect economic development in terms of economic efficiency and growth, it also affects equitable distribution of resources across the population, increasing income inequalities with a much skewed income distribution, undermining the effectiveness of social welfare programmes, and weakening effective demand in an economy and ultimately resulting in lower levels of investment, trade flows, government effectiveness, and generally human development. This, in turn, may undermine long-term sustainable development, economic growth and equality (Transparency International, 2014). According to (Transparency International, 2014), corruption has a direct impact on economic growth and development and indirect effects on a country's economic performance by affecting many factors fueling economic growth, such as investment, taxation, composition and effectiveness of public expenditure. Also, (Ugur & Dasgupta, 2011) posit that corruption has indirect effects through transmission channels such as investment, human capital and public finance/expenditure.

Scholars have long identified a number of channels through which corruption may affect economic growth (Mauro, 1995; Tanzi, 1997; Gupta, Davoodi & Alonso-Terme, 2002; Gyimah-Brempong, 2002). They have argued that corruption distorts incentives and market forces, leading to misallocation of resources; diverts talent and resources, including human resources, toward "lucrative" rent-seeking activities; acts as an inefficient tax on business, ultimately raising production costs and reducing the profitability of investments; decreases the productivity of investments by reducing the quality of resources; and creates inefficiencies, fuelling waste of resources and undermining the efficiency of public expenditure (Transparency International, 2014).

However, the level of economic growth is the priority of every nation. It occurs when a society becomes more productive and is able to produce more goods and services without misuse and misappropriation of resources. Nigerian macroeconomic performance over the last four decades can be described as being chequered (Lawal & Ijirshar, 2015). This is because an average annual GDP per capita growth of 2.81% was recorded between 1961 and 1970 and 2.11% between 1971 and 1980. While the country has remained one of the most corrupt countries, the rate of economic growth decreased drastically to -3.12% between 1981 and 1990 and -0.16% between 1991 and 2000, depicting negative growth for the economy. The growth, however, improved significantly between 2001 and 2010, leaving an average GDP per capita growth at 7.95% and 2.5% in 2011, which suddenly

declined to -0.4% in 2019. The GDP per capita growth further declined to -4.3% in 2020 (World Bank, 2022).

The consequences of these corrupt practices on economic growth in Nigeria are assumed to be scaring and tend to deteriorate the whole economic system. Several studies have revealed negative effects of corruption on the growth of an economy (Ngutsav, 2018; Asom & Ijirshar, 2017; Ajie & Gbenga, 2015; Nageri, *et al.*, 2013; Adewale, 2011). Even Adewale (2011) posits that although corruption is a universal phenomenon, its magnitude and effects are more severe and deep-seated in Nigeria. These seem to have trapped the pace of economic growth in Nigeria, as argued by several authors (Enofe, *et al.*, 2016; Ajie & Gbenga, 2015; Nageri, *et al.*, 2013; Hodge, *et al.*, 2009; Adewale, 2011; Adenike, 2013; Kyarem, 2015). In addition, Tolu and Ogunro (2012) argued that the futile attempt by the government to fight the cankerworm stems from the fact that the government itself is greatly infected with the virus and an average Nigeria is seen as corrupt in most parts of the world.

On the other hand, other scholars have counterargued that corruption is a beneficial grease that lubricates the engine of economic growth (Aidt, 2009; Leff, 1964; Huntington, 1968; Summers, 1977; Lui, 1985). Given the above controversies with the high incidence of corrupt practices and the staggering nature of economic growth in Nigeria, the empirical verification of the economic growth effects of corruption is an exercise whose need cannot be disputed.

Moreover, despite having the world's seventh largest reserve of crude oil coupled with other resources in Nigeria, poverty and underdevelopment still ravage the country with unstable economic growth. This can be seen from all indices of development over the years. The dwindling or staggering economic growth is witnessed with numerous economic challenges, such as heightened levels of poverty, unemployment, insecurity, and high inequality gaps, which have left the country in a fragile state. Given that the empirical evidence known to the researcher has not satisfied the researcher's assessment of the relationship between corruption and economic growth. This is because, as alluded to earlier, corruption has direct and indirect effects on economic growth. The basic motivation in this study is therefore to examine the direct impact of corruption on economic growth in Nigeria and the indirect effects of corruption on economic growth through the drivers of economic growth, such as household consumption, investment (foreign direct investment and domestic investment), government spending and trade flows, as posited by Keynes. Against this backdrop, this paper examines the relationship between corruption and economic growth in Nigeria from 1986 to 2019. This period covers the post-SAP era to 2019 while excluding the recent periods recorded economic recession due to the lookdown that orchestrated by the COVID-19 pandemic.

Literature Review

Theoretical Review

The theories reviewed in this study include principal-agent theory, moralist theory, revisionist theory, cultural and customary activity theory, Marxian theory of corruption, beneficial grease theory, rent seeking theory, Keynes general equilibrium theory, and policy-oriented theory of corruption.

Principal-Agent theory: Corruption is viewed by the principal-agent theory. The theory of the principal-agent follows from the relationship between an agent and a principal. The principal is a task-giving person, and the agent is the person who receives and executes the task. The agents have to attempt to complete the task, which also involves some sacrifices. The problem that can happen is when asymmetric information is revealed to the principal and the agent. The sum is that the principal and the agent have distinct objective interests in the beginning (Becker & Stigler, 1974; Persson, Rothstein & Teorell 2013). In this study, the principal is often embodied as the public interest and the agents as people pursuing corrupt transactions. Corruption happens when, for the sake of his or her own self-interest, an agent misleads the principal's interests. This is possible due to the asymmetry of information that has emerged between the two elements.

Revisionist Theory: Revisionist theory suggests that corruption is inevitable in developing countries because it is part of precolonial societies' social norms, traditions and practices (Kyarem, 2015; Burns, 1960; Gordon & Scott, 1965). According to Bayley (1966), the man who is in a non-Western country is corrupt and not condemned at all by his own society; indeed, he may conform to a pattern of behavior his/her peers, family and friends since they strongly support and applaud it. Implicit in the revisionist postulations is the salient focus on both the unavoidable existence of the character of corruption at certain stages of development and the implied contributions of the practice to the process of modernization and development. This theory stressing the universality of corruption is firmly opposed by (Akinpelu, 1983; Nnoli, 1980), among many others (disregarding colonial backgrounds). They also show in these separate studies that individualistic and materialistic tendencies and corruption were not promoted by precolonial societies (Kyarem, 2015).

Beneficial Grease Theory: This theory is also called "virtuous bribery" by Wei (1998). Wei (1998) claimed that corruption can make positive contributions to an economy's economic and political growth. Scholars such as Merton (1958), Myrdal (1968), and Leff (1964) pioneered this theory. The premise of this theory is that corruption, especially bribes, often act as 'grease' when the wheels commence or when the bureaucratic bottlenecks in trade and industry constitute a stumbling block to efficiency. To Wei (1998) corruption can be like grease, speeding up the wheels of commerce, and if corruption does slow down economic growth, East Asia must be an exception because while the region seems corrupt, it is able to attract lots of foreign investment and generate growth. More so, Mydall (1968) and Leff (1964) averred that corruption, especially when it serves as a deliberate weapon against administrative delay (which attracts more bribes) and thus a lubricant to a stagnant economy, can make positive contributions to the growth of an economy. Liu (1985) agreed with this point of view that corruption minimizes the average time cost of waiting for public sector services to materialize, albeit typically very late. Among many economists, the theory of grease has generated moral bitterness. To Hindricks, *et al.*, (1998), in only exceptional instances when bad regulations and financial harassment are considered exogenous, the grease theory is true. However, grease theory was strongly opposed by Kaufman (1998) on empirical grounds. In their theoretical postulations, Mauro (1995), Knack and Keefer (1996), and Rose-Ackerman (1996) all show that development is moral and ethical, and corruption is immoral and unethical and that there is no morality in immorality, so corruption as a norm cannot result in development. However, this may be seen as more inclined and dogmatic to ethical grounds than economic benefits that may be obtained from the act.

Rent Seeking Theory: The theory of rent seeking claims that too much government interference in economic activities generates opportunities for rent-seeking. According to Klitgaard (1988), unethical rent-seeking practices arise when a public official has a monopoly on products or services and decides who gets what, when and how much the beneficiary gets. To Obuah (2010) public officials' rent-seeking activities harm creative activities and thus slow down a country's technological growth. Shleifer and Vishny (1993) also claim that rent-seeking practices can much more seriously hamper growth than production. The concept of rent-seeking was developed in 1967 (Tullock, 1967), while Krueger (1974) coined the expression rent-seeking in 1974. The word "rent" here does not refer to a lease payment but stems instead from the division of income into profit, wage, and rent. The term's origin refers to the acquisition of control over land or other natural resources. Rent-seeking is an attempt to obtain economic rent by manipulating the social or political environment in which economic activities take place, rather than manipulating the social or political environment in which economic activities take place, that is, the portion of income paid to a production factor in excess of what is necessary to keep it employed in its current use by manipulating the social or political environment in which economic activities occur, rather than by creating new wealth. Rent-seeking means gaining uncompensated value without making any contribution to production from others.

Keynes General Equilibrium Theory: The theory was developed by (Keynes, 1936). According to Keynes (1936), national income is determined by government, foreign trade, individuals, businesses and trusts. Keynes categorized the different sources of income into four sectors: the household sector, business sector, government sector, and foreign sector (Nitisha, 2019). Prior to the four-sector model, the two-sector model of the economy involves households and businesses only, while the three-sector model represents household businesses and the government. On the other hand, the four-sector model contains expenditure by households, investment by businesses, spending by the government, and transactions from the foreign sector, as noted earlier. According to Keynes (1986), equilibrium employment (income) is determined by the level of aggregate demand (AD) in the economy, given the level of aggregate supply (AS). The concept of Aggregate Demand (AD), as argued by (Keynes, 1936), refers to the total demand for goods and services in an economy. AD is related to the total expenditure flow in an economy in a given period. It is symbolically expressed as:

$$Y = C + I + G + (X - M) \qquad\qquad\qquad\qquad\qquad\qquad (1)$$

Y is national income, C is consumption demand by households, I is investment demand, G is government expenditure, and (X – M) is net income from abroad. This theory explains the determinants of national income or economic growth. However, the growth of an economy is often not exogenously determined but depends on other factors from which corruption is one of them. It may either grease the wheels or sand the wheels of economic growth.

Therefore, this study is anchored on the theories of corruption and the Keynesian theory of economic growth. Regarding corruption theories, corruption can either grease the wheels or sand the economic growth wheels. This may hurt the economy directly or affect the drivers of economic growth, as highlighted in the Keynesian model.

Empirical Review

There are several panel studies on corruption and economic growth. Using 185 countries from 2005 to 2015, Hoinaru, *et al.* (2020) explored the manner in which corruption and the shadow economy affect economic and sustainable growth. The study discovered a negative relationship between corruption and the shadow economy on the one hand and economic and sustainable growth on the other, using pooled OLS, fixed-effects and random-effects (GLS). To account for the dynamic effects of corruption, Sharma and Mitra (2019) assessed the impact of corruption control and regulation quality on growth across countries from 1996 to 2015. The study used dynamic panel data models to account for the endogeneity problem. The study found that there is more support for 'sand the wheels' theory at the aggregate level as well as for lower- and lower-middle-income countries.

Also, Tidiane (2019) also studied the relationship between corruption, public spending and economic growth in the countries of the Economic and Monetary Union of West Africa (WAEMU) between 2001 and 2014. The Panel Vector Auto Regressive (VAR) model was used. The study found that corruption lowers public expenditure ratios and has a negative effect on economic growth in WAEMU countries. Also, Gründler and Potrafke (2019) also examined the nexus between corruption and economic growth covering 2012 to 2018 for 175 countries. Using fixed effect and random effect regression models, the study found that the cumulative long-run effect of corruption on growth is that real per capita GDP decreased. Improving on the methodology,

Also, Saha and Sen (2019) also examined the role of political institutions in mediating the corruption–growth relationship using panel data of 100 hundred countries covering 1984 to 2016. The two-stage least square technique and dynamic panel-system-GMM methods were utilized to account for ethnic tensions and lagged variables. The study found that the corruption–growth relationship differs by the type of political institution, and the growth-enhancing effect of corruption is more likely in autocracies than in democracies. Also, Vieira (2018) also evaluated the impact of corruption on economic growth using unbalanced panel data with 2907 observations from 174 countries and 23 years between 1995 and 2017. The study estimated using bootstrapping that the impact of corruption on growth is negative and that the hypothesis "greasing the wheels" is not supported in the data. Thach, *et al.* (2017) studied the effect of corruption on economic growth by using data from 19 Asian countries from 2004 to 2015 with DGMM data processing techniques and quantile regression while evaluating the impact of corruption on Asian countries' economic growth. The study found that corruption is an obstacle to these Asian countries' economic development.

The effect of corruption on economic growth in developing countries is assessed by Fraj and Lachhab (2015) using panel data for 26 developing countries covering the period 1996 to 2013. For data analysis, fixed and random effects were employed. The study found that corruption has a detrimental effect on human capital accumulation, which threatens developing countries' economic growth. Also, Bounoua and Matallah (2014) also investigated the impact of corruption on economic growth in Algeria from 1995 to 2011. The Johansen cointegration test and vector error correction model (VECM) were employed, and the findings indicated that both 'freedom from corruption' and 'control of corruption' have long-term positive effects on enhancing economic growth in Algeria. They used control for corruption for the measure of corruption. The causal relationship between economic growth and corruption was examined by Wright and Craigwell (2013) in 42 developing countries using linear and nonlinear panel methods over the period 1998

to 2009. The study found that corruption appears to Granger cause economic growth. Also, Amin, *et al.* (2013) also examined the relationship between corruption and economic growth in Pakistan from 1985 to 2010. Using a multiple regression technique, the study found that corruption has a negative impact on per capita income in Pakistan.

Studies on corruption and economic growth from outside countries are as follows. In trying to establish the threshold, Alfada (2019) used a nonlinear approach to measure the impact of corruption on economic growth in Indonesia from 2004 to 2015 using the instrumental variable two-stage least squares (2SLS) estimator. The study found that for provinces with corruption levels below the threshold, the impact of corruption suggests a growth-deteriorating effect, and the destructive effect of corruption appears greater for provinces with corruption levels above the threshold and that most provinces are struggling with corruption problems, even if they have succeeded in retaining their corruption levels. Furthermore, the study shows that some provinces, such as Riau and West Java, have significant corruption issues and have been in a high-corruption category, while some provinces, such as Lampung and North Sulawesi, are able to reduce their levels of corruption and switch to a low-corruption group. To examine the impact of corruption on growth, Dwiputri, *et al.* (2019) used ordinary least squares (OLS) and two-stage least squares (TSLS) methods with an instrumental variable. The analysis uses panel data from countries in Asia from 2000 to 2015 and finds that corruption could reduce the share of capital in the gross domestic product (GDP) as well as decrease capital growth, especially in countries with weak institutional systems.

Contrary to other scholars, Cabaravdic and Nilsson (2017) support the idea of corruption as a greaser for economic growth. In their study of the effect of corruption on economic growth in Southern Europe, using a linear panel data regression model with robust standard errors with fixed effects, they observed that corruption has a positive effect on the real gross domestic product per capita of 14 countries in the Southern European and the Balkan regions. Similarly, Nyagwui (2017) also examined the causal relationship between corruption and economic growth in 28 developing countries using panel data with fixed effects to control for unobservable heterogeneity over the period 2002 to 2016. The study found that corruption has a positive correlation with economic growth, while the rule of law has a negative correlation with economic growth.

To empirically test whether growth leads to lower corruption, Bai, *et al.* (2013) used cross-industry heterogeneity in growth rates within Vietnam. The study used survey data collected between 2006 and 2010 from over 13,000 Vietnamese firms and a strategy of instrumental variables focused on business growth in other provinces. The study findings showed that firm growth actually causes a decrease in bribe extraction. The study suggested that as poor countries grow, corruption could subside on its own, and they demonstrated one type of positive feedback between economic growth and good institutions. This justifies the endogeneity that exists between corruption and economic growth. Again, (Bai, *et al.*, 2017) again assessed whether firm growth reduces corruption using data from over 10,000 Vietnamese firms. The study employed instrumental variables based on growth in a firm's industry in other provinces within Vietnam and in China. The study found that firm growth reduces bribes as a share of revenues.

There are some time series studies on Nigeria. For instance, using annual data between 1981 and 2015, Ngutsav (2018) investigated the effects of corruption and government spending on economic development, as well as the pass-through effect of corruption on

economic growth through government spending in Nigeria. The study made use of the vector error correction technique for the analysis. The study found that corruption has a negative impact on economic growth. Analyzing the effect of corruption on economic growth and cultural values in Nigeria from 1999 to 2015, Asom and Ijirshar (2017) situated the need for value reorientation. The study utilized ordinary least squares for the analysis and found a negative effect of corruption on the economic growth of Nigeria. Corruption and economic growth in Nigeria have been discussed by Enofe, *et al.* (2016). Basically, the study centered on the impact of corruption on Nigeria's economic growth. From the public and private sectors, a sample of 100 participants was chosen. The hypotheses were tested using nonparametric statistical methodology. The outcome shows that the Nigerian economy has been pervaded by corruption and has eaten deep into the fabric of society. This research is not typical since the methodology used was nonparametric, with elements of subjectivity in obtaining the necessary data. The study has also not examined the indirect effects of corruption on economic growth in Nigeria.

In trying to subject the effect of corruption to different regions based on the level of development, Hjertstedt and Cetina (2016) examined how corruption can have different outcomes on economic growth in Sub-Saharan Africa and Southeast Asia, where corruption has different economic outcomes. The countries in the study are Botswana, Nigeria, Kenya, South Africa, South Korea, Thailand, Vietnam and Indonesia. The study used data on corruption indexes, annual growth in GDP, and socioeconomic indicators such as political stability and Rule of Law from 1996 to 2015. The results were analyzed through principal-agent theory, and the study findings showed that corruption has no direct effect on economic growth, but socioeconomic indicators have an important role in explaining the different outcomes of corruption. This study, however, did not trace the indirect effect of corruption on economic growth in the selected region. Moreover, the sample of the countries used may suffer from fallacy of composition in terms of generalization of the findings.

Using time series data from 1960 to 2012, Shuaib, *et al.* (2016) investigate the effect of corruption on the growth of the Nigerian economy. The study used cointegration analysis to assess the time series data from Nigeria and used an error correction mechanism to evaluate the long-run relationship between the examined variables. The study found that bribery has an inverse relationship with economic growth. The study, however, examines only the direct effect of corruption on economic growth in Nigeria, neglecting the indirect effects that may be prominent. Using annual data spanning 1996 to 2012, Nageri, *et al.* (2013) investigated the effect of corruption on economic growth in Nigeria using ordinary least squares (OLS). The study found that corruption has a major adverse impact on economic growth and development.

For the period from 1996 to 2013, Ajie and Gbenga (2015) investigated the effect of corruption on economic growth in Nigeria. The outcome of the regression analysis revealed that Nigeria has a negative relationship between economic growth and the degree of corruption. Using Granger causality and the ordinary least squares technique, Nwankwo (2014) empirically investigated the effect of corruption on the growth of the Nigerian economy from 1997 to 2010. The study revealed that the level of corruption has a significant negative impact on economic growth in Nigeria. In a similar finding, Mathew, *et al.* (2013) studied corruption and economic growth in Nigeria from 1994 to 2005 using the ordinary least squares (OLS) technique. The findings showed that corruption hurts

economic growth. The crowding out effects of corruption and its destabilizing implications on the economic growth of Nigeria from 1986 to 2009 was examined by Bakare (2011) using a parsimonious error correction mechanism. The study found that there is a negative relationship between corruption and output growth in Nigeria. Also, Rano and Akanni (2009) investigated the impact of corruption on economic growth in Nigeria from 1986 to 2007 using the traditional ordinary least squares (OLS) technique. The study found that corruption exerts a negative effect on economic growth.

Another study by Adenike (2013) empirically investigated the impact of corruption on economic growth in Nigeria from 1980 to 2009 using the ordinary least squares technique. The study showed that corruption per worker exerts a negative influence on output per worker directly and indirectly on foreign private investment, expenditure on education and capital expenditure per worker. Hodge, Shankar, Rao and Duhs (2009) explicitly modeled the transmission channels through which corruption indirectly affects growth. The results suggested that corruption hinders growth through its adverse effects on investment in physical capital, human capital, and political instability.

In a closely related study, Sunkanmi and Isola (2014) examined the causality between corruption and economic growth in Nigeria from 1990 to 2010. The Johansen cointegration test, Granger causality test and ordinary least squares methods were used. Five models were identified; the first four models examined the relationship between corruption and different determinants of economic growth, while the last model examined the relationship between economic growth and corruption. The result showed that there was no substantial correlation between corruption and the determinants of economic growth (openness of the economy and globalization, government spending, foreign direct investment, gross capital formation) and that there was a positive link between corruption and economic growth. This reinforces current claims that a country's level of corruption is a relevant determinant of the level of economic growth. However, in terms of time and the methodology used, the analysis lacks sufficient coverage because OLS can lead to biased and inaccurate estimates in situations where a single equation is applied to the variables that suffer from endogeneity problems.

The opposite finding in Nigeria was drawn by Onakoya and Folorunsho (2015), who assessed the effect of corruption on Nigeria's economic growth from 1983 to 2012. Johansen cointegration and vector error correction model (VECM) tests found that Nigeria has a significant positive and long-term correlation between corruption and economic growth.

Methodology

Empirical Model
This study is anchored on the theories of corruption (principal-agent theory, moralist theory, revisionist theory, cultural and customary activity theory, Marxian theory of corruption, beneficial grease theory, and rent-seeking theory) and the four-sector Keynesian model. From the corruption theories, corruption can either "sand the wheels" of economic growth or "grease the wheels" of economic growth. Hence, the economic growth model can be expressed in a functional form as:

$$Y = f(CPI) \qquad (2)$$

where Y is national income or economic growth and CPI is the corruption indicator. However, corruption may hurt the economy directly or affect the drivers of economic growth, as highlighted in the Keynesian model. Thus, the four-sector Keynesian model or economic growth model can be specified as follows:

$$Y = f(C, I, G, NX)$$

(3)

where Y is the national income, C is the consumption expenditure, I is the Investment expenditure, G is the government expenditure and NX is the net exports (Exports-Imports). As stated earlier, the broad theories of corruption states that corruption may either grease the wheels of economic growth or sand the wheels of economic growth. Capturing Y as economic growth (rate of change of RGDP), C as household consumption, G as government spending and $EXPT$ as good and services exported while $IMPT$ as good and services imported. Incorporating the corruption index, the mode becomes:

$$ECG = f(CPI, HHC, I, GSP, EXPT, IMPT)$$

(4)

ECG=Economic growth: the rate of change of real GDP, CPI= Corruption Perceptions Index, HHC= Household consumption as percent of GDP, GSP= Government spending as percent of GDP, ITOP= Trade openness, EXPT=exports of goods and services, and IMPT=imports of goods and services.

Further decomposing the investment component (I) into domestic and foreign investment, the model can be re-stated as:

$$ECG = f(CPI, HHC, DIV, FDI, GSP, EXPT, IMPT)$$

(5)

where FDI= Foreign Direct Investment, percent of GDP and DIV= Domestic Capital investment as percent of GDP.

Converting the above equation to a probabilistic mathematical form, we have

$$ECG = \beta_0 + \beta_1 CPI + \beta_2 HHC + \beta_3 DIV + \beta_4 FDI + \beta_5 GSP + \beta_6 EXPT + \beta_7 IMPT + \mu_t$$

(6)

where: β_0 is the intercept, $\beta_1 - \beta_7$ are the parameters to be estimated U_t is the error term. However, corruption can influence economic growth through its impact on investment in physical capital (Romer, 1994; Mauro, 1995; Ades & Di-Tella, 1997; Mauro, 1997; Wei, 2000; Jain, 2001) and other growth determinants. Corruption also distorts investment in human capital. It weakens tax administration and can lead to tax evasion and improper tax exemptions, adds to the operating cost of government and affects the composition of government expenditure, which lowers tax revenue and diminishes the resources available for funding public provision of services, including education and health (Mauro, 1997; Gupta, Davoodi & Alonso-Terme, 2002). Thus, corruption has a potential impact on government size by encouraging increased and inefficient allocation of government resources as corrupt officials seek to maximize their rent extracting potential (Montinola & Jackman, 2002). Corrupt officials could also take an alternative route and maximize their rents by limiting the amount of public consumption expenditures. Corruption also affects trade balance in terms of rent-seeking activities created through quotas or licenses (Krueger, 1974; Southgate *et al.*, 2000). Hence, VAR models were used to estimate the relationship between corruption and economic growth in Nigeria.

Data and Sources
This study employed secondary data on the relevant variables. The data on economic growth (rate of change of real GDP), household consumption as a percent of GDP, foreign direct investment as a percent of GDP, domestic capital investment as a percent of GDP, government spending as a percent of GDP, trade openness, political stability, exports of goods and services as a percent of GDP and imports of goods and services as a percent of GDP were retrieved from World Bank Statistics, while data on the corruption perception index were retrieved from Transparency International. The study has a short time frame of 34 years (1986-2019).

Method of Data Analysis
This research used both descriptive and econometric techniques. The descriptive techniques that are used include means, median, skewness, kurtosis, and Jarque-Bera (normality test), while the econometric techniques include the Augmented Dickey Fuller (ADF) test, Johansen cointegration test, and Vector Error Correction test. To avoid spurious estimates, the Jarque-Bera test of normality is adopted in this study to determine if the data sets, estimates and residuals are well modeled by a normal distribution. The vector error correction (VEC) residuals serial correlation LM test was used to determine whether there was evidence of serial correlation at d-lag. The Vector Error Correction VEC residuals normality test was used to assess whether the residuals were normally distributed, while Vector Error Correction (VEC) residuals heteroscedasticity tests were used to examine the presence or absence of heteroscedasticity in the model.

Results and discussion

Results 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 test for all the time series variables used in the estimation are presented in the Table 1.

Table 1: Result of the ADF unit root test

Variables	At level	First Difference	1%Critical Level	5%Critical Level	10%Critical Level	Order of Integration
ECG	-2.099316	-10.00043	-3.661661	-2.960411	-2.619160	I(1)
Prob	0.2463	0.0000*				
CPI	-1.536997	-5.789469	-3.661661	-2.960411	-2.619160	I(1)
Prob	0.5024	0.0000*				
HHC	-1.631017	-7.952016	-3.661661	-2.960411	-2.619160	I(1)
Prob	0.4556	0.0000*				
DIV	-1.645216	-6.334026	-3.661661	-2.960411	-2.619160	I(1)
Prob	0.4486	0.0000*				
FDI	-1.871339	-7.278108	-3.661661	-2.960411	-2.619160	I(1)
Prob	0.1435	0.0000*				
GSP	-1.117194	-5.201088	-3.661661	-2.960411	-2.619160	I(1)
Prob	0.6967	0.0002*				
EXPT	-2.078647	-7.563218	-3.661661	-2.960411	-2.619160	I(1)
Prob	0.2576	0.0000*				

IMPT	-1.431532	-7.281346	-3.661661	-2.960411	-2.619160	I(1)
Prob	0.3171	0.0000*				

Source: Extractions from E-views 10 Output

The unit root result in Table 1 reveals that all the series are stationary at first difference because the probability values of the ADF statistics at first difference are less than 0.05 critical values. 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 Johansen cointegration test for the determination of long-run relationships.

Direct Impact of Corruption on Economic Growth

This study examines the long-run and short-run direct impact of corruption on economic growth in Nigeria. The results of the Johansen cointegration test and the VECM were utilized for the analysis.
The study examines whether a long-run relationship exists among the variables using the Johansen cointegration test result. Hence, the Johansen hypothesized cointegration was carried out to determine the number of cointegrating vectors among the variables included in the study. It offers two tests, viz., the trace test and the max-eigen test, with a view to identifying the number of cointegrating vectors. The results are shown in Table 2 and Table 3.

Table 2: Result of Unrestricted Co-integration Rank Test (Trace)

Null hypothesis	Hypothesized No of CEs	Eigen value	Trace statistic	0.05 critical value	Prob **
r = 0	None *	0.848369	194.3393	159.5297	0.0002
r ≤ 1	At most 1*	0.685428	135.8638	125.6154	0.0102
r ≤ 2	At most 2*	0.650074	100.0110	95.75366	0.0246
r ≤ 3	At most 3	0.594729	67.45997	69.81889	0.0760
r ≤ 4	At most 4	0.396299	39.46079	47.85613	0.2424
r ≤ 5	At most 5	0.350312	23.81583	29.79707	0.2083
r ≤ 6	At most 6	0.195785	10.44670	15.49471	0.2479
r ≤ 7	At most 7	0.112282	3.692152	3.841466	0.0547

Source: Extractions from E-views 10 output. Trace test indicates 3 co-integrating equation(s) at the 0.05 level *denotes rejection of the hypothesis at the 0.05 level. **(Mackinnon-Haug-Michelis, 1999) p-values.

Table 2 reveals that there is cointegration among the variables. This is because the trace statistic values of 194.3393 for none, 135.8638 for at most one and 100.0110 for at most two are greater than the critical values of 159.5297, 125.6154 and 95.75366 at the 5% level of significance, respectively. Therefore, the study rejects the null hypothesis of at most two cointegrating equation(s). Thus, the Trace statistic test indicates 3 cointegrating equations at the 5% level of significance.

Table 3: Result of Unrestricted Co-integration Rank Test (Maximum Eigen value)

Null hypothesis	Hypothesized No of CEs	Eigen value	Trace statistic	0.05critical value	Prob **
r = 0	None *	0.848369	58.47551	52.36261	0.0105
r ≤ 1	At most 1	0.685428	35.85280	46.23142	0.4068
r ≤ 2	At most 2	0.650074	32.55104	40.07757	0.2738

r ≤ 3	At most 3	0.594729	27.99919	33.87687	0.2135
r ≤ 4	At most 4	0.396299	15.64495	27.58434	0.6957
r ≤ 5	At most 5	0.350312	13.36914	21.13162	0.4188
r ≤ 6	At most 6	0.195785	6.754544	14.26460	0.5186
r ≤ 7	At most 7	0.112282	3.692152	3.841466	0.0547

Source: Extractions from E-views output. Max-Eigen value test indicates 1 co-integrating equation(s) at the 0.05 level *denotes rejection of the hypothesis at the 0.05 level. **(Mackinnon-Haug-Michelis, 1999) p-values.

Additionally, the Max-Eigen value test rejects the null hypothesis if the Max-Eigen value test statistics exceed their respective critical values. Table 5 reveals that there is cointegration among the variables. This is because the eigenvalue statistic of 58.47551 is greater than the critical value of 52.36261 at the 5% level of significance. The study rejects the null hypothesis of none of the hypothesized number of cointegrating equation(s). Thus, the Max-Eigen statistic indicates 1 cointegrating equation at the 5 percent level of significance. Based on the Trace and Max-Eigen test statistics, there is a long-run relationship among the variables incorporated in the model.

The Long-run Direct Impact of Corruption on Economic Growth

In order to determine the nature of the long run relationship by using the reversed estimates of the normalized Johansen co-integrating equation this is based on the lowest log likelihood. It is stated as:

$$ECG = -3.07CPI + 35.09HHC + 37.68DIV + 3.57FDI + 42.35GSP + 31.31EXPT - 31.25IMPT$$

$$(0.632) \quad (3.808) \quad (3.977) \quad (1.395) \quad (4.366) \quad (3.555) \quad (3.724)$$

$$[4.859] \quad [9.215] \quad [9.473] \quad [2.556] \quad [9.699] \quad [8.806] \quad [8.3901]$$

Note: Standard errors are in parentheses () and t-statistics in brackets [ ]

The estimated coefficient of the corruption perception index is negative (-3.07). This conforms to the theoretical expectation of the "sand the wheels" view of corruption. The coefficient is statistically significant at the 5% level. This implies that a one percentage change (increase) in the corruption perception index leads to a 3.07% decrease in economic growth, and vice versa, ceteris paribus. Thus, there is a strong negative influence of perceived corruption on economic growth in Nigeria in the long run. This conforms to the theoretical relationship between corruption and economic growth. This finding is consistent with that of (Adewale, 2011; Adenike, 2013), who found a negative effect of corruption on economic growth in Nigeria in the long run.

The estimated coefficient of household consumption (HHC) is positive (35.09). 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 increases in economic growth in Nigeria in the long run, and vice versa, ceteris paribus. The coefficient of domestic investment (DIV) is also positive (37.68) and theoretically plausible and statistically significant at the 5% level of significance. This implies that a one percentage change (increase) in domestic investment would significantly lead to increases in economic growth, and vice versa, ceteris paribus.

Thus, domestic investment has a strong positive influence on economic growth in Nigeria in the long run.

Moreover, the estimated coefficient of foreign direct investment has a positive sign. The coefficient is also statistically significant at the 5% level of significance. This implies that a one percentage change (increase) in foreign direct investment significantly accounts for 3.57% 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, which conforms to the theoretical a priori expectation. It is also statistically significant at the 5% level of significance. By magnitude and sign, it implies that a one percentage change (increase) in government spending leads to an approximately 42.35% increase in economic growth in Nigeria in the long run and vice versa, ceteris paribus. This implies that changes in government spending exert a strong influence on economic growth in Nigeria in the long run. The estimated coefficient of export of goods and services is also theoretically plausible and statistically significant at the 5% level of significance. This implies that a percentage change (increase) in exports leads to 31.31% increases in economic growth in Nigeria in the long run and vice versa, ceteris paribus. Thus, there is a significant positive impact of export of goods and services on economic growth in Nigeria. Furthermore, the coefficient of import of goods and services is theoretically plausible and statistically significant at the 5% level of significance. This implies that a one percent increase in import of goods and services leads to economic growth in Nigeria to decrease by 3.72%.

The Short-Run Direct Impact of Corruption on Economic Growth

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 estimated coefficients of the explanatory variables in the error correction model measure the short-run relationship. The results are summarized in Table 4.

Table 4: Vector Error-Correction Estimates

Variables	Coefficient	Std. Error	t-Statistic	Prob.
CointEq1	-0.00182	0.059459	-0.03062	0.9756
D(ECG(-1))	-0.3942	0.188388	-2.09248	0.0379
D(CPI(-1))	-0.24065	0.343761	-0.70006	0.4849
D(HHC(-1))	-2.9992	3.217415	-0.93218	0.3526
D(DIV(-1))	3.10729	3.265181	0.95165	0.3426
D(FDI(-1))	0.479817	0.563557	0.851408	0.3958
D(GSP(-1))	-3.0045	3.202431	-0.93819	0.3495
D(EXPT(-1))	2.80151	3.081393	0.90917	0.3646
D(IMPT(-1))	3.155587	3.207202	0.983906	0.3266

$R^2 = 0.677321$ $\overline{R}^2 = 0.553316$ F-statistic = 2.130851
Source: Extractions from E-views 10 output

The short-run estimates in Table 4 show that the corruption perception index is not statistically significant at influencing the economic growth of Nigeria in the short run at the 5% level of significance. However, it conforms to the "sand the wheels" perspective of the effect of corruption. This implies that increases in the perceived level of corruption in Nigeria do not significantly lead to a decrease in economic growth in the short run. The results of the short-run estimates also reveal that household consumption and government spending have negative but insignificant impacts on economic growth in Nigeria in the short run. This implies that spending by households on consumption and the spending by government do not exert a positive influence on economic growth in the short run but serve as temporary withdrawers. Thus, the multiplier effect of an increase in consumption and government spending is felt in the long run only.

Similarly, the short-run estimates show that domestic investment, foreign direct investment, export of goods and services and export of goods and services have positive but insignificant impact on economic growth in the short-run at 5% level of significance. The implication is that changes in domestic investment, foreign direct investment and export of goods and services have weak influence in explaining the changes in economic growth in the short-run. The estimated coefficient of error correction term is negative and it has a low magnitude of 0.18%. Its magnitude indicates that in case of any deviation, the long run equilibrium is adjusted slowly where about 0.18% 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 0.18%. It is also glaring from the coefficient of multiple determinations (R^2) has a good fit as the independent variables were found to jointly explain 67% of the movement in the dependent variable with the adjusted R-squared of 55%. The overall significance of the models is explained by the F-statistic of 3.130851 which is significant at 5% level. Finally, the coefficients of the short run dynamics show that corruption negatively affects economic growth of the Nigerian economy in the short-run.

The Indirect Effects of Corruption on Economic Growth

The study found that corruption has positive influence on household consumption in Nigeria in the short-run. However, it is not statistically significant at 5% level of significance. The implication is that there is weak positive instantaneous influence of corruption on household consumption in Nigeria. The study further reveals that corruption has negative influence on domestic investment, foreign direct investment, government spending, export of and import of goods and services in the short-run. The implication is that higher perceived level of corruption discourages domestic and foreign investment, hurts government spending and reduces the level of export and import of goods and services in Nigeria. It implies that there is weak transmission or indirect effect of corruption on economic growth in Nigeria. This is consistent with the findings of Sunkanmi and Isola (2014) who found that there was no significant relationship between corruption and the economic growth determinants in Nigeria. The negative influence of corruption on foreign direct inflows is consistent with the findings of (Ade, *et al.*, 2011) who found that low level of corruption in the host countries is correlated with a large amount of FDI inflows and vice versa. More so, the result on the relationship between investment and economic

growth is consistent with the findings of Baliamoune-Lutz and Ndikumana (2008), and Méon and Sekkat (2005) who found that corruption discourages private investment.

Impulse Response and Accumulated Forecast Error Variance

This study examines the impulse response of economic growth to shocks in corruption in Nigeria, the accumulated forecast error variance of economic growth to shocks in corruption in Nigeria, impulse response of corruption to shocks in economic growth in Nigeria and the accumulated forecast error variance of corruption to shocks in economic growth in Nigeria.

Impulse Response of Economic Growth to Shocks in Corruption and other variables in Nigeria

The result of the impulse response of economic growth to shocks in corruption and other variables is presented in Figure 1
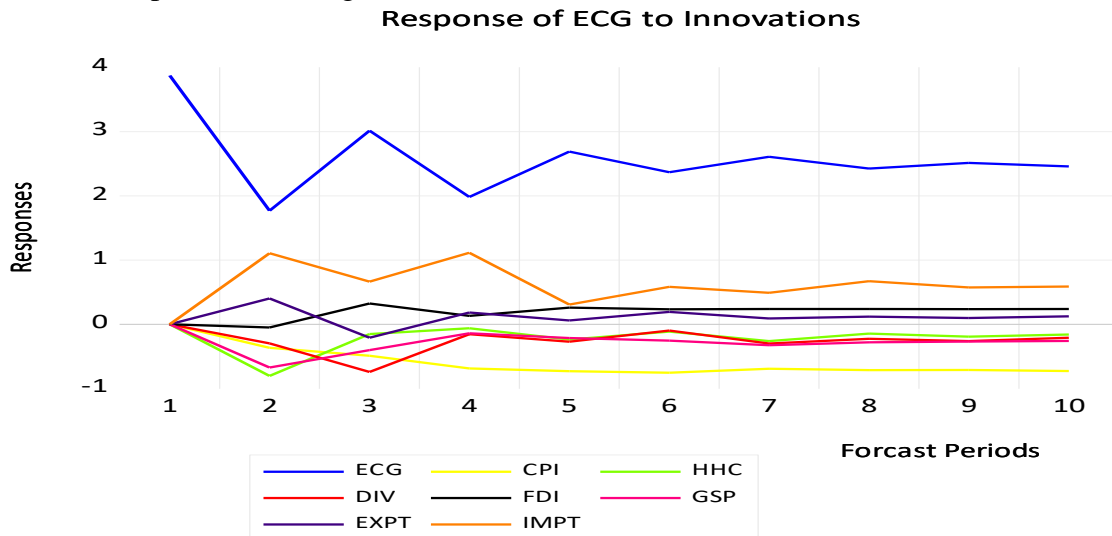

Figure 1: Response of Economic Growth to Shocks in Corruption and other Variables
Source: E-views Output

The impulse response result reveals that economic growth would respond positively to a standard deviation own shock throughout the forecast period. The result also shows that the response of economic growth would decline in the second period and fourth period of the forecast period but recover in the third and fifth period of the forecast. The response of economic growth to own shock would recover with less fluctuations in the remaining forecast periods. The study also shows that economic growth would respond negatively to shock in corruption, domestic investment, household consumption and government spending in Nigeria. The implication is that household consumption are less productive when there is gross lack of investment turns to be counterproductive. More so, the government spending in Nigeria is marred by corruption thus would exact negative influence on economic growth in the short-run with relatively less negative effect in the long-run as compared to the short-run. However, economic growth would respond positively to shock in foreign direct investment and import of goods and services. The

implication is that economic growth would increase in an event of shock in foreign direct investment flows and import of goods and services throughout the forecast period. Shocks in export of goods and services would have initial positive influence on economic growth but turns slightly negative in the third period and reverts to positive response in the long-run. The implication is that economic growth responds negatively and permanently to shock in corruption in Nigeria.

The Accumulated Forecast Error Variance of Economic Growth to Shocks in Corruption in Nigeria

The result of the accumulated forecast error variance of economic growth to shocks in corruption in Nigeria is summarized and presented in Table 5.

Table 5: Variance Decomposition of Economic Growth to Shocks in Corruption

Period	ECG	CPI	HHC	DIV	FDI	GSP	EXPT	IMPT
Short-run (Third year)	86.39%	1.20%	2.13%	2.04%	0.34%	1.96%	0.65%	5.28%
Long-run (Tenth year)	84.71%	4.90%	1.10%	1.24%	0.57%	1.32%	0.40%	5.76%
Decision	Decreasing	Increasing	Decreasing	Decreasing	Increasing	Decreasing	Decreasing	Increasing

Source: Extractions from E-views output

Analysis of the accumulated forecast error variance decomposition covers short-run (third forecast period), and long-run (tenth forecast period). The result of the accumulated forecast error variance of economic growth to shocks in corruption in Nigeria suggests that innovation in corruption accounts for about 1.20% and 4.90% of the variations in economic growth in Nigeria in the short run and in the long run. This implies that the changes in economic growth due to shocks in corruption would increase over time. Similarly, a unitary shock in household consumption, domestic investment, government spending and export of goods and services explains about 2.13%, 2.04%, 1.96% and 0.65% of the accumulated forecast error variance of economic growth in the short-run, and 1.10%, 1.24%, 1.32% and 0.40% of the accumulated forecast error variance of economic growth in the long run respectively. This implies that variance in economic growth due to innovations in household consumption domestic investment, government spending and export of goods and services would decrease overtime. In addition, the variations in economic growth due to innovation in foreign direct investment and import of goods and services are 0.35% and 0.57% in the short-run and 5.28% and 5.76% in the long-run respectively. This implies that variance in economic growth due to innovations in government spending and import of goods and services would increase overtime. The accumulated forecast error variance of economic growth to own shock would account for 86.39% in the short-run and 84.71% in the long-run. This implies that variance in economic growth would decline over time to own shock. The result further shows that majority of the accumulated forecast error variance of economic growth would be accounted by own shocks in the short-run and long-run.

Conclusion and policy recommendations

The study concludes that corruption inhibits economic growth in Nigeria. Although, it has shown effect direct and indirect effects on economic growth in the short-run, the long reign of corruption practices decay or deteriorate the level of economic growth in the country. This further discourages foreign direct inflows and domestic investment in the country. This study has therefore debunked the perspective that corruption grease the wheels of economic growth but infers that it sands the wheels of economic growth in Nigeria. Based on the study findings, the following recommendations were made:

    i.   Given that corruption has negatively affected economic growth 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 negative effect of corruption on economic growth in the country.

    ii.   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.

    iii.   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.

    iv.   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.

v. More so, even though there is weak direct and indirect effect of corruption on economic growth, the increase in the level of domestic and foreign direct investment may reduce the high level of corruption in Nigeria. This is attributed to the fact that there is often times improvement in welfare when investment increase. Hence, reduces the tendencies of corrupt practices among people.

vi. 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.

vii. 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.

viii. 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.

ix. 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.

References

1. Ade, A. O., Babatude, H. & Awoniyi, M. A. (2011). The relationship between corruption, foreign direct investment and economic growth in Nigeria. An empirical investigation. *Journal of Research in International Business and Management,* 1(9), 278-292.

2. Adenike, E. T. (2013). An econometric analysis of the impact of corruption on economic growth in Nigeria. *E3 Journal of Business Management and Economics*, 4(3): 054-065.

3. Ades, A. & DiTella, R. (1997). The new economics of corruption: A survey and some new results. *Political Studies,* 155, 496-515. https://doi.org/10.1111/1467-9248.00093

4. Adewale, S. B. (2011). The crowding-out effects of corruption in Nigeria: An empirical study. *Journal of Business Management and Economics*, 2(2): 059-068

5. Aidt, T. S. (2003). Economic analysis of corruption: A survey. *The Economic Journal*, 113 (November). https://doi.org/10.1046/j.0013-0133.2003.00171.x

6. Ajie, H. A. & Gbenga, O. (2015). Corruption and economic growth in Nigeria: An empirical analysis 1996 – 2013. *European Journal of Business and Management*, 7(5).

7.   Akinpelu, Y. (1983), "Values in Nigeria" in Nduka O. & Iheoma A. (Eds), *New Perspective in Moral Education.* Evans Brothers, Ibadan.

8.   Akor, L. (2014). The transparency international and Nigeria's corruption perception index: implications for sustainable transformation. *Global Journal of Interdisciplinary Social Science*, 3(5), 37-43.

9.   Alfada, A. (2019). The destructive effect of corruption on economic growth in Indonesia: A threshold model. *Heliyon*, 5(10): e02649. Available at https://sci-hub.tw/https://doi.org/10.1016/j.heliyon.2019.e02649

10.   Andvig, J.C., Fjeldstad, O., Amundsen, I., Sissener, T.K., & Søreide, T. (2000). Research on Corruption. A Policy Oriented Survey.

11.   Asom, S. T. & Ijirshar, V. U. (2017). The impact of corruption on economic growth and cultural values in Nigeria: A need for value re-orientation. *CARD International Journal of Management Studies, Business & Entrepreneurship Research.* 2(1): 91-113. https://doi.org/10.4172/2162-6359.1000388

12.   Bai, J., Jayachandran, S., Malesky, E. J. & Olken, B. A. (2013). Does economic growth reduce corruption? Theory and evidence from Vietnam. NBER Working Paper No. 19483. https://doi.org/10.3386/w19483

13.   Bai, J., Jayachandran, S., Malesky, E. J. & Olken, B. A. (2017). Firm growth and corruption: empirical evidence from Vietnam. *The Economic Journal*, 129, 651–677. https://doi.org/10.1111/ecoj.12560

14.   Bakare A.S. (2011). The crowding-out effects of corruption in Nigeria: An empirical study. *Journal of Business Management and Economic,* 2(2), 59-68.

15.   Baliamoune-Lutz, M. M & Ndikumana, L. L. (2008). Corruption and growth: Exploring the investment channel.

16.   Bayley, D.H. (1966). The effects of corruption in a developing nation. *Western Political Quarterly,* 19(4), 719- 732

17.   Becker, G. & Stigler, G. (1974). Law enforcement, malfeasance, and compensation of enforcers. *The Journal of legal Studies*, 3, 1–19. https://doi.org/10.1086/467507

18.   Bounoua, C. & Matallah, S. (2014). Corruption and economic growth: empirical evidence from Algeria. *International Journal of Innovation and Applied Studies,* 8(3), 927-946.

19.   Burns E.M. (1960), *Ideals in Conflict, the Political Theories of the* Contemporary World. Methuen and Company, London.

20.   Cabaravdic, A., & Nilsson, M. (2017). *The effect of corruption on economic growth.* (Bachelor thesis). Jonkoping University, International Business School. Retrieved from http://www.diva-portal.org/smash/get/diva2:1107921/FULLTEXT01.pdf

21.   Chimakonam, O. (2011). Corruption in Nigeria: Ethical and Biblical Perspectives. University of Calabar Press.

22.   Dike, V.E. (2005). Corruption in Nigeria: A new paradigm. *African Economic Analysis.* Available @ *www. African Economic Analysis.org.*

23.   Dwiputri, I. N. Pradiptyo, R. & Arsyad, L. (2019). Corruption and capital growth: identification of bribery by the firm. *International Journal of Economics and Management,* 13 (2), 1-13.

24.   Enofe, A. O Oriaifoh, A. Akolo, I. & Oriaifoh C. L. (2016). Corruption and Nigeria economic growth. *International Journal of Advanced Academic Research | Social & Management Sciences.* 2(4).

25.   Fraj, S. H. & Lachhab, A. (2015). Relationship between corruption and economic growth: the case of developing countries. *International Journal of Economics, Commerce and Management,* 3(9), 862-875.

26.   Gordon, H. & Scott (1965). Economic Theory of Common Property Resources. *Journal of Political Economy*, 62. https://doi.org/10.1086/257497

27.   Gründler, K. & Potrafke, N. (2019). Corruption and economic growth: new empirical evidence. ifo Working Paper No. 309.

28.   Gupta, S., Davoodi, H. & Alonso-Terme, R. (2002). Does Corruption Affect Income Inequality and Poverty? *Economics of Governance,* 3(1): 23-45. https://doi.org/10.1007/s101010100039

29.   Gyimah-Brempong K. (2002). Corruption, economic growth and income inequality in Africa" *Economics of Governance, 3(1): 183-209.* https://doi.org/10.1007/s101010200045

30.   Hindricks, J., Keen, M., & Muthoo, A., (1998). Corruption, extortion and evasion. *Journal of Public Economics*, 74, 395-430 https://doi.org/10.1016/S0047-2727(99)00030-4

31.   Hjertstedt, A. B. & Cetina, H (2016). *Why does corruption have different effects on economic growth?–A case study of Sub-Saharan Africa and Southeast Asia* (Master Dissertation). Linköpings universitet. Retrieved from http://www.diva-portal.org/smash/get/diva2:944458/FULLTEXT01.pdf

32.   Hodge, A., Shankar, S., Rao, P. D. S, & Duhs, A. (2009). *Exploring the links between corruption and growth*. School of Economics Discussion Paper No.392, June 2009, School of Economics, The University of Queensland. Australia.

33.   Hoinaru, R., Buda, D., Borlea, S. N., Vaidean, V. L. & Achim, M. V. (2020). The impact of corruption and shadow economy on the economic and sustainable development. Do they "sand the wheels" or "grease the wheels"? https://doi.org/10.3390/su12020481

34.   Huntington, S. P. (1968). *Political order in changing societies*. New Haven, CT: Yale University Press.

35.   Jain A.K. (2001). Corruption: A review. *Journal of Economic Surveys,* 15(1), 71-121. https://doi.org/10.1111/1467-6419.00133

36.   Kaufmann, D. (1998). Corruption: The Facts. *Foreign Policy,* 107, 114-131. https://doi.org/10.2307/1149337

37.   Keynes (1936). The general theory of employment, interest and money. *The Economic Journal* 46(182), 238-253. https://doi.org/10.2307/2225227

38.   Klitgaard, R. (1988). *Controlling Corruption*. University of California Press: Berkeley, CA.

39.   Knack, S. & Keefer, P. (1996). Does social capital have an economic payoff? A Cross-Country Investigation." *Quarterly Journal of Economics,* 112, 1251-1288. https://doi.org/10.1162/003355300555475

40.   Krueger, A. (1974). The political economy of the rent seeking society. *American Economic Review* 64, 291–303. https://www.jstor.org/stable/1808883

41.   Kyarem, R. N. (2015). Public Sector corruption and poverty in Nigeria: An empirical investigation of the transmission channels. *POLAC International Journal of Economics and Management Science*, 1(1): 46-62.

42.   Lawal, M.; & Ijirshar, U.V., (2015). Empirical analysis of exchange rate and Nigeria stock market performance. *International Journal of Science and Research (IJSR)*, 4(4): 1592-1600.

43.   Leff, N. (1964). Economic development through bureaucratic Corruption. *American Behavioral Scientist,* 18, 8-14. https://doi.org/10.1177/000276426400800303

44.   Liu, F. (1985). An equilibrium queue model of bribery. *Journal of Political Economy.* 93(4), 760-781. https://doi.org/10.1086/261329

45.   Mathew, R. E, Lawal, O. B & Joseph, A. I. (2013). Analysis of corruption and economic growth in Nigeria. *Afro Asian Journal of Social Sciences* 4(4.2).

46.   Mauro, P. (1995). Corruption and growth. *The Quarterly Journal of Economics*, 110(3): 681-712. https://doi.org/10.2307/2946696

47.   Mauro, P. (1997). The Effects of Corruption on Growth, Investment, and Government Expenditure: A Cross-Country Analysis", in Kimberly Ann Elliott, (eds.), *Corruption in the Global Economy*, Washington, DC: Institute for International Economics, pp.83-107.

48.   Méon, P. G., & Sekkat, K. (2005). Does corruption grease or sand the wheels of growth? *Public Choice*, 122(1-2), 69–97. https://doi.org/10.1007/s11127-005-3988-0

49.   Merton, R.K. (1958). *Social Theory and Social Structure.* New York: Free Press.

50.   Montinola, G. & Jackman, R. (2002). Sources of Corruption: A Cross-Country Study. *British Journal of Political Science,* 32, 147-170. https://doi.org/10.1017/S0007123402000066

51.   Myrdal, G. (1968). *Asian Drama: An Enquiry in the Poverty of Nations, Vol. II* New York, NY: The Twentieth Century Fund.

52.   Myrdal, G. (1968). *Asian Drama: An Inquiry into the Poverty of Nations*, Vol II, New York: Pantheon

53. Nageri, K. I., Umar, G. & Abdul, F. A. (2013). Corruption and economic development: evidence from Nigeria *Kuwait Chapter of Arabian Journal of Business and Management Review.* 3(2).

54. Ngutsav, A.S. (2018). Corruption, government expenditure and economic growth in Nigeria. *Lafia Journal of Economics and Management Sciences*, 3(1): 41-55

55. Nitisha (2019). *Keynesian Theory of National Income Determination*. Retrieved from http://www.economicsdiscussion.net/national-income/keynesian-theory-of-national-income-determination/4029

56. Nnoli, O. (1980). *Ethnic Politics in Nigeria,* Fourth Dimension Publishers, Enugu.

57. Nwankwo, O. (2014). Impact of corruption on economic growth in Nigeria impact of corruption on economic growth in Nigeria. *Mediterranean Journal of Social Sciences MCSER Publishing, Rome-Italy,* 5(6).

58. Nyagwui, N. E. (2017). Impacts of corruption on economic growth in developing countries. Seminar Paper. Philipss Universitat Marburg.

59. Obuah E (2010). Combating corruption in a failed state: The Nigerian Economic and Financial Crime Commission (EFCC). *Journal of Sustainable Development,* 12(1), 17-53.

60. Onakoya, A. B. & Folorunsho, I. I. (2015). Corruption and economic growth nexus: the Nigerian parody. *Yobe Journal of Economics*, 2(2), 177-192.

61. Persson, A, Rothstein, B & Teorell, J. (2013). Why Anticorruption Reforms Fail—Systemic Corruption as a Collective Action Problem. *Governance: An International Journal of Policy, Administration, and Institutions*, 26(3), 449–471. https://doi.org/10.1111/j.1468-0491.2012.01604.x

62. Rano A. S. U. & Akanni, O. E. (2009). Corruption and Economic Growth in Nigeria: 1986 -2007. *Munich Personal RePEc Archive-MPRA papers.* MPRA Paper No. 12504.

63. Romer, P. (1994). New Goods, Old Theory, and the Welfare Costs of Trade Restrictions. *Journal of Development Economics,* 43(1), 5-38. https://doi.org/10.1016/0304-3878(94)90021-3

64. Rose-Ackerman, S. (1999). *Corruption and Government. Causes, Consequences and Reform*. Cambridge: Cambridge University Press.

65. Saha, S. & Sen, K. (2019). The corruption–growth relationship: Do political institutions matter? WIDER Working Paper 2019/65.

66. Sharma, C. & Mitra, A. (2019). Corruption and economic growth: some new empirical evidence from a global sample. *Journal of International Development,* John Wiley & Sons, Ltd. https://doi.org/10.1002/jid.3433

67. Shleifer, A., & Vishny, R. W. (1993). Corruption. *The Quarterly Journal of Economics*, 108(3), 599-617. https://doi.org/10.2307/2118402

68. Shuaib, I. M., Ekeria O. A. & Ogedengbe A. F. (2016). Impact of corruption on the growth of the Nigerian economy-1960-2012: Error Correction Mechanism (ECM). *Journal of Scientific Research & Reports,* 9(5), 1-13. https://doi.org/10.9734/JSRR/2016/15329

69. Southgate, D., Slazar-Canelos, P., Caracho-Saa, C. & Stewart, R. (2000). Markets, Institutions, and Forestry: The Consequences of Timber Trade Liberalization in Ecuador. *World Development,* 28(11), 2005-12. https://doi.org/10.1016/S0305-750X(00)00064-4

70. Sumah, S. (2018). "Corruption, Causes and Consequences," Chapters, in: Vito Bobek (ed.), Trade and Global Market, IntechOpen.

71. Summers (1977). Speech to the Summit of Eight Denner.

72. Sunkanmi, O. A & Isola L.A (2014). Corruption and Economic Growth in Nigeria: *Journal of Economics and Sustainable Developmen*t. 5(6).

73. Tanzi, V. & Davoodi, H. (1997). Corruption, Public Investment, and Growth. International Monetary Fund, IMF Working Papers: 97/139.

74. Thach, N N., Duong, M. B. & Oanh, T. T. K. (2017). Effects of corruption on economic growth-empirical study of Asia countries. *Imperial Journal of Interdisciplinary Research*, 3(7), 791-804.

75. Tidiane, N. C. (2019). Corruption, investment and economic growth in WAEMU countries. *International Journal of Economics and Finance*, 11(4), 30-39. https://doi.org/10.5539/ijef.v11n4p30

76.   Tiganasu, R., Pascariu, G., & Lupu, D. (2022). Competitiveness, fiscal policy and corruption: evidence from Central and Eastern European countries. Oeconomia Copernicana, 13(3), 667-698. https://doi.org/10.24136/oc.2022.020

77.   Ţigănaşu, R., Simionov, L., & Lupu, D. (2022). European Governments' Responses to the COVID-19 Pandemic during the First Wave: Resetting Governance Systems to Cope More Effectively with Future Shocks. Applied Spatial Analysis and Policy, 1-39. https://doi.org/10.1007/s12061-022-09481-z

78.   Tolu L & Ogunro K (2012). Combating corruption in Nigeria. *International Journal: Academic Research in Economics and Management Sciences,* 1(4).

79.   Transparency International (2013). *Corruption Index.*

80.   Transparency International (2014). *Corruption Index.*

81.   Transparency International (2015). *Corruption Index.*

82.   Tullock, G. (1967). The welfare costs of tariffs, monopolies, and theft. *Western Economic Journal* 5, 224–232.

83.   Ugur, M.& Dasgupta, N. (2011). "Corruption and economic growth: A meta-analysis of the evidence on low-income countries and beyond," MPRA Paper 31226, University Library of Munich, Germany.

84.   Vieira, P. C. C. (2018). The impact of corruption on economic growth, a bootstrapping analysis. FEP Working Papers No. 612. FEP-UP, School of Economics and Management, University of Porto.

85.   Wei, S. (1998). Corruption in Economic Development: Beneficial Grease, Minor Annoyance or Major Obstacle. Available @ http://www.nber.org/-wei

86.   Wei, S. J. (2000). How taxing is corruption on international investors? *Review of Economics and Statistics,* 82(1): 1-11. https://doi.org/10.1162/003465300558533

87.   World Bank (2012). Corruption and Economic Development. Helping Countries Combat Corruption: The Role of the World Bank

88.   World Bank (2022). GDP per capita growth (annual %) – Nigeria. https://data.worldbank.org/indicator/NY.GDP.PCAP.KD.ZG?locations=NG

89.   Wright, A. S. & Craigwell, R. (2013). Economic growth and corruption in developing economies: evidence from linear and non-linear panel causality tests.