Challenges of accountability and development in Nigeria

An auto-regressive distributed lag approach

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Abstract

Purpose – The purpose of this paper is to examine the challenges of accountability and development in Nigeria. In the literature, corruption is seen as an indicator of a lack of political accountability in most countries of the world, especially in less developed countries such as Nigeria. The Nigerian Government has taken several actions to address the problems of bad governance and corruption that have impeded economic development, but unfortunately these measures have not yielded the desired results.

Design/methodology/approach – Thus, this study examined accountability and developmental issues in Nigeria using secondary data and then made use of the auto-regressive distributed lag econometric technique to analyze the data.

Findings – The results from the study found that a rise in total government expenditure poses a danger of reducing Nigeria's economic development in the long run and that control of corruption and political (the institutional variables) has a direct and significant effect on Nigeria's economic development.

Originality/value – Therefore, upon these findings, this paper recommended that for Nigeria to experience development, corruption should be eliminated, and the Nigerian Government should spend on viable projects and economic activities that will be beneficial to the populace and the society at large and hence bring about economic development. Accountability is the hallmark of a prudent government that ensures efficient management of resources and transparency in the utilization of funds by the government. The absence of accountability mechanism allows corruption to thrive, which hinders the developmental process.

Keywords Political accountability, Economic development, Auto-regressive distributed lag (ARDL)

Paper type Research paper

1. Introduction

Corruption is a major threat to a nation's political and economic development. Since the colonial period and to date, corruption remains a deeply depressing problem faced by Nigeria, even though this occurrence has really affected the Nigerian system. There is an urgent need now to find a solution to this problem that cannot be postponed to another day. The reason several countries have in place completely distinct mechanisms to check the

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corruption epidemic. For example, in Nigeria, the threat of as a result of the weak institutional framework was discussed at different gatherings nevertheless; this unpleasant cankerworm continues to live with us in every facet of our efforts. The government of Nigeria has taken huge steps to tackle bad governance and the country's corruption issues in the past (Ejemeyovwi *et al.*, 2018; Mohammed, 2013). Public service reform is one of such processes (reform of public procurement, monetization to reduce waste and these measures to decrease overflowing staff), creating anti-corruption enforcement agencies, for instance, the ICPC, EFCC and CBN sanitization of the financial services industry under the former CBN Governor – Lamido Sanusi, which disclosed that the management of several banks in Nigeria faced theft. Menace of corruption is also being fought by the present Muhammadu Buhari administration.

Regardless of the achievements accomplished by these methods, the condition is still unabated as corruption continues to exist in every Nigerian domestic life (Monograph Series Foundation of CLEEN, 2010). In this regard, it is noteworthy to state that corruption has its dare costs on the Nigerian economy and is one among the factors accountable for its underdevelopment (social, economic and political). Being accountable is the hallmark of a judicious government that ensures transparency in the utilization of funds by the government and efficient management of resources. In the literature, corruption is seen as an indicator in most nations of the world, particularly in less developed countries, such as Nigeria, for the absence of political accountability. Ogundiya (2009) admitted that corruption is neither particular to the culture nor bound to the scheme. However, in nations where government institutions and the legal system are very weak and comparatively underdeveloped, the practice of corruption is more widespread. With these characteristics, most developing nations are more likely than advanced countries to suffer from corruption ills.

The corruption crisis and the difficulties of governance and sustainable development have become more evident in Nigeria right from the inception of the civilian rule in 1999 than ever before. Moreover, it has raised concern in the minds of the individuals, their rulers and even the international community because, in Nigeria, corruption is what almost everybody engages in. Achebe (2009) noted that most Nigerians are fraudulent, the reason being that their environment encourages them to engage in such an act; corruption goes with power, as anyone that makes money and spends it is accorded respect without regard to the source of his wealth or how he made the money, whether it is legitimate or not. It is also relevant to note that corruption in Nigeria has advanced from the point of small-scale corruption to a high alarming rate, particularly since the military regime of General Ibrahim Babangida. The corruption crisis poses a challenge to Nigeria's governance and has shattered the country's image worldwide. Even David Cameron, the former British Prime Minister, cited "Nigeria is a fantastically corrupt nation" from The Guardian (2016), perhaps one of the two most corrupt countries in the world. It is deductible, however, that this is a generalization fallacy on the part of the British government because research studies on corruption do not support his claim (Imoukhuede, 2016).

Therefore, corruption that, despite all attempts to curb it, has come to survive and political accountability is at the main center of our discourse in this paper. In order words, the purpose of this survey is to examine the challenges of accountability as dictated by the menace of corruption and political accountability and how they affect the economic development of Nigeria. The remaining part of this study is arranged as stated: Section 2 presents the theoretical framework and the literature review. The methodology used in this document is presented in Section 3. Data analysis and debate are outlined in Section 4, whereas the paper's recommendations and conclusion are stated in Section 5.

2. Literature review

It is not an easy task to define corruption (Olugbenga, 2007; Odofin and Omojuwa, 2007; Ajibewa, 2006; Faloore, 2010; Igbuzor, 2008 also cited in Egwemi, 2012). Indeed, it is a daunting challenge to define corruption. On its part, Transparency International has chosen a clear and focused definition of the term as "abuse of the power entrusted to private gain." It can also be interpreted as a pervasion or shift for selfish gain from generally accepted rules or laws (Waziri, 2010). According to Iyoha and Oyerinde (2010), accountability is the key to wealth creation and free society preservation. Twenty-first-century poor countries are neither those who do not possess human and material resources nor those that have one degree of poverty or the other, but rather people who are unable to account for whatever possessions they have. Meaning that accountability would stay essential to building a feasible socio-political economy. Accountability is therefore essential and applicable because officials should demonstrate correctly that they have exercised the authority granted and achieved the agreed goals and objectives through the effective and efficient use of the resources provided.

However, literature notes that economic development does not have a widely accepted definition. Rodney (1973) argues that development is a multi-faceted method. It involves enhanced ability and capacity at the individual level, self-discipline and accountability as well as material well-being. Conceptualizing growth from the view of Rodney, therefore, meant that innovation exists when individuals have the liberty to make decisions, the ability to make do with available resources for survival, creativity in the sense of initiating thoughts, the option of offering timely solutions to emerging issues and overall discipline to respect formal regulations and informal societal values, norms, cultures and behaviors. Some authors who researched about corruption have found that it has adverse effects on any nation's growth and development. Ekpo and Agbenebo (1985), Obadan (2001) and Adewale (2011) opined that illegal activities distort the financial system inherently and impair hardwork, perseverance and performance. It is capable of turning funds into personal or private use designed for society's development. They maintain that corruption gives no space for honest procedures of choice and also distorts prices.

Political capital has gained revenue from bureaucratic corruption that does not impact production (redistributive effect). Teles discovered that as political capital accumulates, less human capital is generated, thus restricting the capacity of the country's economic growth. Therefore, he proposed a new strategy to the transformation process between democracy and development where reduced levels of corruption and greater growth rates will be implied by more democratic regimes.

2.1 Corruption, accountability and economic development in Nigeria

It has been observed from the literature that corruption is a consequence of underdevelopment. In Nigeria, several instances have occurred where funds assigned to the country's development have been mismanaged by holders of political offices. For example, regardless of these states' enormous Federal allocation, the Finance Minister complained about a lack of physical development in most federal states. Ngwube and Okoli (2013) opined that corruption stems from using resources to sponsor elephant projects (which are never completed or abandoned) instead of developing infrastructures, for instance, building schools, hospitals, highways and water and power supplies. Osoba (1996) quoted in Alemika (2012) argues that economic corruption dents the ability of a nation to provide the people with the fundamental necessity of life. According to Egharevba and Chiazor (2012), "The primary factor that is accountable for Nigeria's underdevelopment in all sectors is political corruption."

Nigeria's accountability problem began shortly after independence when the country discovered crude oil, the volume of government fiscal and economic operations improved dramatically, as a consequence of this windfall. This sudden rise in the financial resources of government placed a very serious pressure on the already fragile financial management institutional systems inherited from the colonial masters, so even the primary goals of control and accountability, which the hereditary bureaucratic structure sought to maintain, collapse under the weight of the government's extended financial activities (Okpala, 2012). When accountability is enhanced in the public sphere, it has the ability to reduce corruption, clientelism and capture. Corruption infers the use of public office to enrich oneself, an action that can distort the market and hamper the services' delivery. Clientelism means an unethical channeling of government funds to particular groups of client that changes the political competition's dynamics and contributes to inadequate delivery of public facilities, whereas capture implies additional rents for specific economic actors that alter the markets and even worsen the consumers' position, employers and the environment in relation to companies (Okpala, 2012).

In a study carried out by Okala (2012) on financial accountability in the public sector of Nigeria, weak public sector transparency in Nigeria was observed, resulting from inadequate record-keeping and outdated financial regulatory framework, Act of 1958, Audit Ordinance 1956, which he attributed as the crux for lack of public sector accountability in Nigeria. In addition, this study discovered that professional accounting base as regards the number and quality of accountants promoting public sector procurement policy in the country is very poor; absence of transparency is highly correlated with inadequate supervision by Nigerian professional bodies resulting in elevated levels of corruption, clientelism and system capture. This inevitably translates into underdevelopment of the Nigerian economy given the level resources and potential capacity of the country. High financial indiscipline and wastages are the outcomes of Nigeria's public sector.

Gberevbie *et al.* (2013) ascribed underdevelopment in Nigeria to bad governance at various levels of government, which is a consequence of failing to provide appropriate accountability in public resource management. They contend that any society that treats accountability with disdain, unethical practices will prevail as a means of doing business, both in the public and private industries, and will become a way of life for the individuals, whereby anything that runs contrary to the norm is considered unusual. There is a strong positive correlation between genuine leadership that subscribes to adequate accountability in public resource management and development in a society. Gberevbie *et al.* (2013) reviewed the connection between sustainable development accountability and leadership challenges in Nigeria in another research work. The research highlighted a lack of accountability to include unethical behavior, bad maintenance culture, bad resource management, corruption by public officials and insufficient funding for project execution in Nigeria. This study therefore suggested that the government should embrace other applied strategy to promoting accountability, which is a determined fight against immoral behaviors and corruption, adequate resource management and dedication of more funds to execute capital projects that may have a significant effect on people's lives to improve living standards.

Nwogu and Ijirshar (2016) carried out a study on the effect of corruption on Nigeria's cultural values and economic growth, placing the need for reorientation of value. The research shows an adverse effect of corruption on economic growth and thus attributes a declining level of Nigerian cultural values to corruption that required the need for reorientation of value, which will give redemption to the country's domestic image and character. This research work proposes the efficient use of anti-corruption organizations and the process of re-orientation in the country's education scheme, while the government should properly finance the development capital project.

Evansa and Alenoghene (2015) examined in another study the impact of corruption on various sectors of the Nigerian economy. Their results disclosed that Nigeria's agriculture, services, wholesale and retail industries get affected the most by corruption. This study also demonstrates how corruption control has an important impact on corruption reduction. They found that Nigeria requires powerful vision and political will, credible leadership, a frontal assault, fresh employees, unconventional techniques, deregulation, close coordination, technology harnessing and tailoring global knowledge to local circumstances in the fight against corruption. Adewale (2011), using the dependent variable gross domestic product (GDP) and public domestic investment (PINV), money supply (MS), gross capital formation (CAPL), corruption perception index (CPI), unemployment rate (UNEMPL) and external debt (EXTD) as independent variables, found a significant inverse relationship between output growth and corruption in Nigeria. In line with the hypothesis that corruption impedes growth, this study found out that Nigeria's economic growth is impeded by corruption.

Kasim (2016) used descriptive analysis to analyze the effect on accountability and development in Nigeria of public expenditure management. He discovered that the management of public expenditure is a catalyst for growth in all countries, including Nigeria. Against this background, he believed that pursuing economic policies that can rapidly monitor growth and development and allocating financial resources to priority areas will only deliver ideal outcomes when there is an efficient control measure that will hold political officials responsible for the money spent. Imoukhuede (2016) also used descriptive analysis to investigate corruption, political accountability and governance challenges. He concentrated on Nigeria's fourth republic from 1999 to 2016. He discovered that political accountability remains a key pillar of effective and efficient use of government's economic resources and pillar of sustainability. He stressed that accountability eliminates waste and includes efficiency, efficiency, openness, discipline, integrity, transparency and good governance.

Examining the mechanism by which Nigeria's economic development is being affected by corruption, Essien (2012) shows some likely root causes of corruption and likely factors that give rise to its worsening in the Nigerian economy. He ascribed this to the public office holder's lack of accountability. He asserted that Nigeria requires a selfless, disciplined and visionary leader to significantly reduce corruption in Nigeria. The judiciary should be sufficiently transparent to bring justice to the individuals; the mode of manufacturing should be equity, without which anti-corruption policies taken in Nigeria will have little or no impact and corruption will not diminish but accentuate. Moreover, Nigeria's desire for significant economic development will be appropriately matched with the lizard's desire for hair.

Castro and Numes (2013) stressed that to attract FDI as a boost to growth and development, the host nation must be seen as transparent and anti-corruption. Ogunmuyiwa (2012) disclosed that corruption in Nigeria is negatively linked to FDI; this means that investors are not keen on making FDIs high in corrupt practices in the perceived nation. A study by Akinlabi *et al.* (2011) reveals important beneficial relationships between FDI and Nigeria's economic growth, but for Nigeria to garner big volumes of FDI inflows, every form of corruption at all levels of government must be extremely decreased. Idowu and Awe (2014) argue that Nigeria's FDI was not encouraging as a result of major national faults such as high inflation, bad facilities, corruption and insecurity reflecting the country's nominal growth, low interest rates and unfavorable and unnecessary trade and capital inflow barriers, mainly as a result of legal requirements.

Ibrahim and Okunade (2015) in their study found that a long run relationship exists between corruption, unemployment growth and economic growth in Nigeria. Consequently, the results of the assessment show how corruption positively affects Nigeria's production. Therefore, Nigeria's increase in growth rate becomes affected by the country's elevated corruption level, making the few rich to be richer. Therefore, the political will to prosecute anyone discovered guilty of corruption regardless of their situation, tribe, religion or party affiliation needs to be developed. Such a penalty would also serve to dissuade others and contribute to improving real economic growth and development. Jacob and Umoh (2017) remarked that in distinct cultures and distinct historical epochs, the impact or magnitude of corruption had changed. Recently, in most developing countries, this topic has predicted such a prominent social element that it cannot be ignored, stressing that corruption is likely that "sector" that has sustained a steady growth in post-independence Africa. Social, political and economic development deteriorated or relapsed into crisis management.

3. Theoretical framework

Two mainstreams theories that properly explain economic development are the classical and contemporary theories. The weakness of the classical theories of development is that underdevelopment is attributed to a single cause. This assertion has been faulted by findings in the empirical literature, which disclosed that a single factor in the development phase alone could not ensure success. This major weakness in the classical theories is addressed in the contemporary models of development. The two parts of this contemporary theory, a new theory of growth and contemporary theories, and the theory of coordination failure recognize the complementary function of government and market, where a certain level of government interference is needed to guarantee that desired results that are accomplished in the case of associated failures in the market.

This study is based on the endogenous growth or new growth theory, also theory of coordination failure. The former describes an economy's long-run growth based on endogenous technological change as opposed to the exogenous technological change in the theory of neoclassical growth or the Solow model. New growth theorists (Romer, 1986; Lucas, 1988; Aghion and Howitt, 1992) give special importance to technological changed linked to knowledge production. They argued that knowledge production results from complementary investment in investment in education, infrastructure or research and development. However, the failure of markets to produce enough knowledge because of the divergence between social cost and market cost of knowledge for individuals compels the need for policy intervention to impact growth in the long run. Therefore, these models (new growth) promote government role and public policies in complementary investment for the investment of human capital and the promotion of foreign private investment in knowledge-intensive industries.

Coordination failure theory shows the issues of market failure that need careful government intervention to attain optimum equilibrium. The fundamental concept of the coordination failure theory is the market's inability to guarantee coordination between complementary investment projects. Investment is said to be complementary when one investment's returns rely on other investments. The outcome of coordination failure is an equilibrium outcome inferior to an optimal resource allocation outcome in which all agents are better off. Hoff and Stiglitz (2000) referred to this inferior outcome as an underdevelopment equilibrium. Coordination failure theorists (Rosensteun-Rodan, 1943; Nurkse, 1953; Hirschman, 1957) highlighted the role of government and policymakers in solving the underdevelopment equilibrium problem.

4. Methodology

4.1 Model specification

To examine how corruption and political accountability affect economic development in Nigeria, the regression model follows the empirical works of Ertimi *et al.* (2016) and Siddiqui and Ahmed (2013) assuming that institutions have an impact on economic growth.

The regression model's implicit form is provided as follows:

$$\mathrm{GDPC_t} = f(\mathrm{GCF_t},\quad \mathrm{TGE_t},\quad \mathrm{CC_t},\quad \mathrm{POLW_t}) \tag{1}$$

Explicit form of the regression model is as follows:

$$\mathrm{GDPC_t} = A \quad \mathrm{GCF_t^{\beta_1}} \mathrm{TGE_t^{\beta_2}} e^{\beta_3 \mathrm{CC}_t + \beta_4 \mathrm{POLW}_t} \ \mu_t \tag{2}$$

where *e* denotes the exponential symbol. The dependent variable is GDPC serving as a proxy for economic development, while the main explanatory (institutional) variables in the model are political will (POLW) and control of corruption (CC), which are used to capture government accountability. The other explanatory variable in the study is gross capital formation (GCF) representing domestic investment into the economy and total government expenditure (TGE) reflecting public investment.

Equation (2) is linearized. The log of both sides is taken. This is shown as follows:

$$\mathrm{LnGDPC_t} = \beta_0 + \beta_1 \mathrm{LnGCF_t} + \beta_1 \mathrm{LnTGE_t} + \beta_2 \mathrm{CC_t} + \beta_3 \mathrm{POLW_t} + \ \mu_t \tag{3}$$

where $\mathrm{lnGDPC_t}$, $\mathrm{lnTGE_t}$ and $\mathrm{lnGCF_t}$ are the logarithmic function of the GDP per capita (GDPC), TGE and GCF, respectively. CC is an institutional variable that is being used in this study to capture the political accountability of the Nigerian Government. It is anticipated that a positive relationship should exist between the variable and economic development. This is because, in the long run, government policy targeted at improving the level of corruption control brings about a rise in the level of income per capita, hence economic development. POLW is another institutional variable that is used to capture political accountability reflecting the government's commitment to adhering to policies implemented. This study anticipates that a direct relationship should exist with the dependent variable. The positive effect of domestic investment (GCF) is situated in the literature, as an investment should have a direct effect on development (Romer, 1986); on the other hand, government expenditure (TGE) could have either a positive or negative effect. Ertimi *et al.* (2016) note that public investment is positive when it is directed at infrastructure but could hamper growth when it generates higher taxes.

4.2 Description of data and variable

The data used in this study spans the period between 1980 and 2017. The variables' description used is outlined in Table I.

4.3 Estimation technique

The auto-regressive distributed lag (ARDL) bounds test was adopted for this study that draws insight from the empirical studies of Osabohien *et al.* (2018a) and Matthew *et al.* (2019). This research work engages the ARDL based on its uniqueness of being able to accommodate for variables integrated of order zero [I(0)] or order one [I(1)]. However, the ARDL model is not suitable for macroeconomic variables integrated of the order two [I(2)]. Co-integration is determined through the bounds test by matching the computed F-statistics to the appropriate critical values (Osabohien *et al.*, 2018b). According to Okodua and Ewetan (2013), when the computed F-statistics is less than the lower bound value, [I(0)], there is no co-integration. However, if the computed F-statistics is greater than the upper bound value, I(1), then there is co-integration. For this study, Narayan (2004) estimates are used following the criticism of the sample size ranging from 30 to 80; the Pesaran statistics might be misleading.

The conditional error correction ARDL model to be estimated from equation (3) is given as follows:

$$\begin{aligned}\Delta \mathrm{LnGDPC}_t = {} & \beta_0 + \sum_{j=1}^{p} \phi_j \, \Delta \mathrm{LnGDPC}_{t-j} + \sum_{j=0}^{p} \psi_j \, \Delta \mathrm{LnGCF}_{t-j} + \sum_{j=0}^{p} \theta_j \, \Delta \mathrm{LnTGE}_{t-j} \\ & + \sum_{j=0}^{p} \lambda_j \, \Delta \mathrm{CC}_{t-j} + \sum_{j=0}^{p} \alpha_j \, \Delta \mathrm{POLW}_{t-j} + \delta_1 \mathrm{LnGDPC}_{t-1} \\ & + \delta_2 \mathrm{LnGCF}_{t-1} + \delta_3 \mathrm{LnTGE}_{t-1} + \delta_4 \mathrm{CC}_{t-1} + \delta_5 \mathrm{POLW}_{t-1} + \mu_t \end{aligned} \tag{4}$$

where Δ is the first-difference operator and the optimal lag length is denoted by p.

Variable	Identifier	Description	Source
Gross domestic product per capita	GDPC	The dependent variable used was GDPC that was used to capture economic development, measure the total productive capacity of a country by dividing GDP with respect to the total population. Per capita GDP shows the relative performance of a country	WDI
Gross capital formation	GCF	GCF measures the rise in the net physical assets (investment less disposals) for the study period. This excludes the depreciation or consumption of fixed capital and land purchase	WDI
Total government expenditure	TGE	Government expenditure measures the level of investment, government consumption, transfer payments and goods and services acquired in creating further wealth, such as infrastructure investment or research spending	CBN
Control of corruption	CC	CC as an indicator of institutional and democratic accountability measures the perception of how much public authority is exercised for personal benefit, including small and large types of corruption. This is used to proxy political accountability	WGI
Political will	POLW	POLW measures the political intention to effectively deliver some political actions	

Source: Authors' compliation (2019)

Table I. Description of data and variables

The null hypothesis of the bounds test (H_0) states that there is no co-integration, whereas the alternative hypothesis (H_1) states that there is co-integration. This is expressed as follows:

$$H_0: \ \delta_1 = \ \delta_2 = \ \delta_3 = \ \delta_4 = \ \delta_5 = 0$$

$$H_1: \ \delta_1 \neq \ \delta_2 \neq \ \delta_3 \neq \ \delta_4 \neq \ \delta_5 \neq 0$$

The regression model for the ARDL bounds test is estimated with the use of Akaike information criteria (AIC) as recommended by Liew (2004), while a maximum lag length of two is selected for the regressors in line with the recommendation of Pesaran and Shin (1999). Following the confirmation of the existence of co-integration, the long-run regression model to be estimated is represented as follws:

$$\begin{aligned}\mathrm{LnGDPC}_t = \ & \beta_1 + \sum_{j=1}^{p} \phi_{1j}\mathrm{LnGDPC}_{t-j} + \sum_{j=0}^{p} \theta_{1j}\mathrm{LnGCF}_{t-j} + \sum_{j=0}^{p} \lambda_{1j}\,\mathrm{LnTGE}_{t-j} \\ & + \sum_{j=0}^{p} \psi_{1j}\mathrm{CC}_{t-j} + \sum_{j=0}^{p} \gamma_{1j}\mathrm{POLW}_{t-j} + \mu_t\end{aligned} \tag{5}$$

The short-run behavior of the regression model determined from the EC form is given as follws:

$$\begin{aligned}\mathrm{LnGDPC}_t = \beta_2 & + \sum_{j=1}^{p} \phi_{2j}\ \Delta\,\mathrm{LnGDPC}_{t-j} + \sum_{j=0}^{p} \theta_{2j}\ \Delta\,\mathrm{LnGCF}_{t-j} + \sum_{j=0}^{p} \lambda_{2j}\ \Delta\,\mathrm{LnTGE}_{t-j} \\ & + \sum_{j=0}^{p} \Psi_{2j}\,\Delta\mathrm{CC}_{t-j} + \sum_{j=0}^{p} \gamma_{2j}\,\mathrm{POLW}_{t-j} + \ \sigma\ \mathrm{ECM}_{t-1} + \ \mu_t\end{aligned} \tag{6}$$

The error correction term ECM_{t-1} is given as follows:

$$\begin{aligned}\mathrm{ECM}_t = \mathrm{LnGDPC}_t - \Big[\beta_1 + & \ \sum\nolimits_{j=1}^{p} \phi_{1j}\mathrm{LnGDPC}_{t-j} + \ \sum\nolimits_{j=0}^{p} \theta_{1j}\mathrm{LnGCF}_{t-j} \\ & + \sum\nolimits_{j=0}^{p} \lambda_{1j}\mathrm{LnTGE}_{t-j} + \sum\nolimits_{j=1}^{p} \psi_{1j}\mathrm{CC}_{t-j} + \sum_{j=0}^{p} \gamma_{1j}\,\mathrm{POLW}_{t-j}\Big]\end{aligned} \tag{7}$$

where the speed of the adjustment parameter is denoted by σ.

4.4 Data analysis and discussion

The first test conducted is the unit root test. The ADF test is used for this study. A variable is said to be I(0) when the ADF statistics is greater than the critical value, indicating that it is stationary. However, when the augmented Dickey–Fuller test statistics is less than the critical value, it implies that the variable is non-stationary, hence the reason to take the 1st difference. Table II shows the unit root test results depicting that total government

Variables	Test statistics	Critical value	Remarks	Test statistics	Critical value	Remarks	Order of integration
LnGDPC	−0.163	−2.946	Non-stationary	−4.852**	−2.948	stationary	I(1)
LnGCF	−0.346	−2.960	Non-stationary	−3.805**	−2.960	stationary	I(1)
LnTGE	−4.604**	−2.960	Stationary	–	–	–	I(0)
CC	−3.166**	−3.052	Stationary	–	–	–	I(0)
POLW	−2.166**	−2.976	Non-stationary	−5.415**	−2.957	stationary	I(1)

Note: **implies 5% level of significance
Source: Authors' computation (2019) using E-Views 10

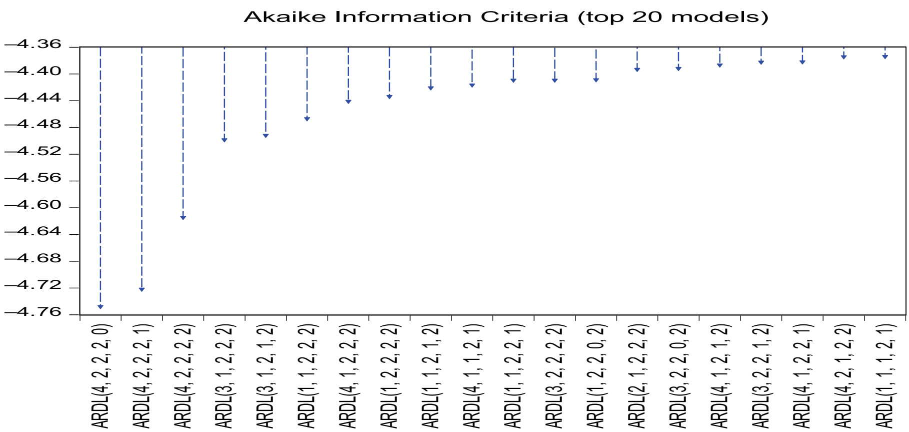
Table II.
Results of the unit root

expenditure is stationary at levels, whereas others became stationary after the first difference.

Having selected a maximum optimal lag length of 2 for the regressors using the AIC, the ARDL model that reduces the AIC is (4, 2, 1, 2, 2). This is shown in Figure 1.

The ARDL bounds test result to determine the co-integration is shown in Table III, and the results show that the computed *F*-statistics (8.179) is greater than the critical values of the upper bounds level at different significance levels. This implies that we do not accept the null hypothesis of no co-integration and conclude that there exists a long-run relationship between economic development, control of corruption and political accountability as well as the other macroeconomic variables.

The coefficient estimates of the long-run regression model are shown in Table IV. To be concise, the focus of the discussion is on the institutional variables; control of corruption and political will. The control of corruption and political will have a positive sign and are statistically significant at 5 and 10 per cent levels, respectively. This denotes that an increase in the level of control of corruption and political will in Nigeria brings about economic development or an increase in the level of GDPC. In particular, this study



Source: Authors' compilation (2019) using E-Views 10

Figure 1.
AIC (top 20 models)

found out that the control of corruption has coefficient values of 0.781994, implying that a unit increase in the institutional variables will yield about 78.1 per cent rise in GDPC. This finding supports the study of Osabohien *et al.* (2018a, 2018b) using similar method (ARDL approach to co-integration) pointed out that Nigeria's institutions in terms of control of corruption, political rights and civil liberty are set policies and directives towards achieving economic growth and development and food security amongst others. The study concluded that the Nigerian institutional framework such as control of corruption, political rights and civil liberty is considered weak, and this has hindered the economic development of Nigeria.

The coefficient value of political will suggest that a unit increase in the political will of the Nigerian Government in ensuring that they adhere to policy implemented will induce about 6.01 per cent rise in GDPC. With respect to political will, and still drawing insight from the study of Osabohien *et al.* (2018a, 2018b), the implication of the findings in this study is that strong institutional framework in terms of political will invariably enhance the level of economic development by 6.01 per cent, through effective government policies and programs, while weak institutional framework weakens the level of development by approximately 94 per cent through ineffective government policies and programs.

The general discourse from literature is that institutions such as regulatory quality, rule of law, control of corruption, voice and accountability, government effectiveness, political right and civil liberty in Nigeria have been perceived to be weak and have been the rationale for the slow rate of economic development (Osabohien *et al.*, 2018a, 2018b). In view of this, Nigeria's efforts to reduce corruption cannot be underestimated as the nation strives for economic growth and development, full employment, food safety among others. It is, therefore, very much suggested that anti-corruption agencies be strengthened and restructured, in particular, the EFCC and ICPC in quest to the building of a strong institutional framework in Nigeria (Matthew *et al.*, 2019; Osabohien *et al.*, 2017).

Test statistic	Value	Significance level(%)	Critical value bounds	
F-statistics	8.179	1	I(0)	I(1)
		5	4.280	5.840
		10	3.058	4.223
			2.525	3.560

Source: Authors' computation (2019)

Table III.
ARDL Bounds test

Dependent variable: lnGDPC	Coefficient	Standard error	*T*-statistics
LnGCF	0.704106	0.167323	4.208062
LnTGE	−0.259703	0.153484	−1.692056
CC	0.781994	0.198688	3.935787
POLW	0.060186	0.032874	1.830838

Source: Authors' computation (2019)

Table IV.
Long-run coefficients

Irrespective of the theoretical purview and the ever-growing Nigerian public expenditure, this has not reflected on the economic development of Nigeria (Efobi and Osabuohien, 2012). In an empirical study, Efobi and Osabuohien (2012) explored Nigerian Government expenditure effect on economic growth and noted that, over the years, government expenditure has not generated the required level of economic growth in Nigeria. It was noted that between the periods of 1966 and 1980, the Nigerian economy growth rate hovers on averages of −4.25 and −1.25 per cent, while government expenditure growth rate increased on the average from 1.12 to 58.96 per cent. This is confirmed in this study from the ARDL results that an increase in total government expenditure poses a danger of reducing economic development by −25.97 per cent in the long run. This is against the *a priori* expectation and the reason behind this can be attributed to the country's fiscal imbalance and weak institutional framework and budget misallocation.

From ARDL results it was observed that in the long run, 1 per cent rise in GCF will increase the level of economic development by approximately 70.4 per cent; this supports the findings of Mutreja *et al.* (2018).

Table V reports the estimates of the ECM. The particular focus here is on the coefficient of the ECM as reflected by CointEq(−1). This study expects that the coefficient will have an inverse sign and should usually lie between zero and one. From the results presented, the ECM is −1.23445, showing that it is negative but slightly above 1. This suggests that the speed of adjustment used to determine how shocks developed in each period are automatically adjusted for in the following periods is very fast. Furthermore, as seen, the result is statistically significant at the level of 5 per cent.

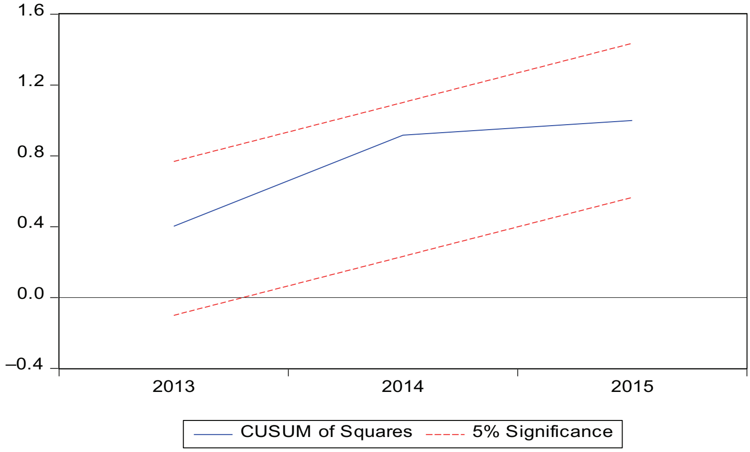
Finally, we verify the model by running some diagnostic tests to make sure that the regression model does not violate time series econometrics assumptions. To this end, the study tests for stability using the cumulative sum of squares (CUSUMS). It is expected that the CUSUMS line falls in between the critical boundaries at 5 per cent for the ARDL regression model to display parameter stability. As shown in Figure 2, the CUSUMS test line falls in between the critical boundaries, revealing parameter stability.

The diagnostic test used is the Breusch–Godfrey serial correlation LM test to detect whether there is autocorrelation, and to detect the presence of heteroscedasticity, the Breusch–Pagan–Godfrey heteroscedasticity test is used. It is expected that the probability value must not be significant at the level of 5 per cent to conclude that there is no autocorrelation and heteroscedasticity in the result. As reported in Table VI, the results reveal that the probability values for both tests are greater than 5 per cent. Therefore, we

Table V.
Error correction model (ECM) results

Variable	Coefficient	S.E.	*T*-statistics	Probility
D(LGDPC(−1))	0.190094	0.072455	2.623619	0.0788
D(LGDPC(−2))	0.384726	0.077496	4.964447	0.0157
D(LGDPC(−3))	0.428211	0.101103	4.235408	0.0241
D(LGCFF)	0.110787	0.028255	3.921024	0.0295
D(LGCFF(−1))	−0.329909	0.055388	−5.956382	0.0095
D(CC)	0.117581	0.039366	2.986875	0.0583
D(CC(−1))	−0.230771	0.056150	−4.109896	0.0261
D(POLWIL)	0.056173	0.006126	9.169811	0.0027
D(POLWIL(−1))	−0.030760	0.004981	−6.175486	0.0085
CointEq(−1)*	−1.234485	0.107907	−11.44027	0.0014

Source: Authors' computation (2019)



Source: Authors' compilation (2019) using E-Views 10

Figure 2. CUSUMS test

Table VI. Diagnostic tests

Diagnostic tests	Probability
Breusch–Godfrey serial correlation test	0.4575
Breusch–Pagan–Godfrey heteroskedasticity test	0.5491

Source: Authors' computation (2019)

can conclude by saying that autocorrelation and heteroscedasticity are not present in the regression model.

5. Recommendations and conclusion

The outcomes of this research work show that both political will and control of corruption have a direct and significant relationship with GDPC. This means that efforts by the government to ensure that they remain disciplined will bring about an improvement in the life of individuals in the economy. Therefore, this study recommends the following: first, improving the institutional framework of the economy that serves as a check on government activities is essential in the fight against corruption and making government accountable. This is because it is seen to have a positive and significant impact on the welfare of individuals in the economy. The government would be able to provide infrastructural and social amenities that will further bring about the development of Nigeria if corruption can be curbed. Second, the Nigerian Government should focus on investing in economic activities that will bring about the development of the country because GCF has a significant long-run impact on the level of economic development. Third, it is also recommended that government expenditure in Nigeria should be channeled toward productive activities and viable projects that will be beneficial to the populace so that the level of poverty will decrease if not totally eradicated.

This study examined the challenges of accountability and development in Nigeria. It has been observed from the literature that Nigeria is bedeviled with the prevalence of weak institutions that have contributed adversely to retarding the developmental process of the country. However, this can be remedied by the government via making a concerted effort to eradicate corruption and ensuring that public office holders and indeed everyone is held accountable for whatever action they take.

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