An Empirical Investigation of the Institutions' Hypotheses in Nigeria

S. S. Abere[1] & T. O. Akinbobola[2]

Abstract

The study investigates the institutions' hypotheses (grease the wheels versus sand the wheels) in Nigeria by using the Autoregressive Distributed Lag (ARDL) technique. The result indicates that corruption has significant negative effect on GDP as a proxy for economic performance. The result, thus, upholds the existence of 'sand the wheels' hypothesis in Nigeria. The various cases of embezzlements of public funds in the country, coupled with the high rate of money laundering outside the country, may not have given room for the existence of 'grease the wheels' hypothesis. The study concludes that Nigeria has to develop its institutions for it to tap from the global progression.

Keywords: Institutions, Corruption, GDP, ARDL

1. Introduction

The role of institution cannot be underestimated in the development of an economy. This might have necessitated the developed economies to put in place institutional arrangements that enhance industrial productivity, jobs creation and favourable balance of payment, among others which are fundamental to the improved welfare of the citizenry. Nigeria, however, has been paying lip service to this important area. This is based on the fact that the country has, over the years, been tainted by social vices in the form of institutionalised corruption which hinders the public office holders from conscientiously delivering services crucial for improved economy. Several efforts that have been made to transform the Nigerian economy have proved abortive despite the country's abundant human and natural resources (World Bank, 2012). This might not be unconnected with the poor state of the domestic institutions in the country. Without proper institutions, most of the government's efforts to revamp the economy will only end at the paper level, while nothing meaningful will be achieved in terms of execution of projects. Given the large population of Nigeria, the country has ready market for series of products. Hence, the domestic market should be able to generate a large proportion of national income without necessarily relying on foreign countries if given favourable institutional environments. The quality of institution has become an integral part of the study of economic development. According to Borrmann *et al.* (2006), Acemoglu and Robinson (2008), 'institutions are the rules of the game in a society, they are the humanly devised constraints that shape human interaction'. Similarly, Udah and Ayara (2014) refer to institutions as the 'rules of the game while economic agents are the players'. Hence, the players are expected to play according to the rules of the game and the existing institutions should provide the right enticements or rewards for the good players and disciplinary measures for the bad players. In the same vein, Vitola and Senfelde (2015) opine that institutions are both formal and informal constraints that affect investment in both physical and human capital. The existence of strong institutions helps in building both investors' confidence and consumers' confidence. Once economic agents are sure of favourable business environment, then transaction costs are reduced.

Several studies (Acemoglu *et al.*, 2003; Tello *et al.*, 2005; Efendic *et al.*, 2010; Fosu, 2011; Udah and Ayara, 2014 and Iyoboyi *et al.*, 2016) emphasize that distortionary macroeconomic policies largely reflect institutional factors. These studies maintain that countries deprived of qualitative institutional settings found it impossible to maintain orderliness in an economy, giving room for the economic agents to extort the economy, and hence, distortionary macroeconomic policies.

---

[1] Department of Economics, Obafemi Awolowo University, Ile – Ife, Nigeria, sundayoluwasesan1@gmail.com +2347038205903

[2] Department of Economics, Obafemi Awolowo University, Ile – Ife, Nigeria, tbobola@yahoo.co.uk, +2348037172271

Nevertheless, some studies (Martin and Rowthorn, 2004; Simon and Zlatko, 2010; Asiama and Mobolaji, 2011 and Chuku *et al.*, 2011) do not find significant relationship, or even found negative relationship, between the quality of institutions and macroeconomic performance.

Moreover, some studies (Tanzi, 1998 and Marakbi and Turcu, 2016) support the 'greasing the wheels' hypothesis by stressing that corruption may encourage growth. This is exemplified by a case where inducement of bureaucrats gives room for capitalists to explore the available resources in the domestic economy, and thereby contributing to higher investment and growth. Meanwhile, previous studies failed to verify the institutions' hypotheses in Nigeria. The remaining part of this paper is organised thus: Section 2 caters for the review of literature while section 3 describes the methodology used. Section 4 contains the estimated results and section 5 concludes the study.

2. Review of Literature

The institutions' hypotheses serve as a theoretical structure for analysing the role of institutional quality on economic growth. There is no gainsaying in the fact that no economy is completely devoid of corruption across the globe. This is coupled with the assertion by some scholars that the level of corruption required in an economy to foster growth is, indeed, greater than zero where the fight against corruption is too expensive (Acemoglu and Verdier, 1998). Economists have alienated the institutions' hypotheses into two, and these are: 'grease the wheels' as opposed to 'sand the wheels' hypotheses. The former refers to a situation whereby corrupt practices lead to growth in an economy while the latter refers to a case where corruption deters growth in an economy. The proponents of 'grease the wheels' hypothesis (Leff, 1964 and Huntington, 1968) based their postulate on the possibility of regulated circular flow of income without leakage in the system. This is envisioned in a manner that is devoid of cases of money laundering outside the economy. Hence, if any public fund is embezzled by an economic agent, the economic agent still ends-up re-injects the money into the domestic economy in the form of investment in the economy. This gives room for expansion in the employment generation and productivity which culminate in economic growth as well as improvement in the welfare of the citizens. Those in the school of thought argue further that corrupt practices enhance the investors to get over some unnecessary bureaucratic procedures that officials hide under to frustrate conspicuously developmental projects. This may be viewed from the perspective that anyone would hardly scale through in any office in Nigeria without offering bribes – willing-lily. It is further argued that the readiness of capitalists to offer emoluments to bureaucrats stimulates the bureaucrats to go extra-miles in meeting-up with the demands of the investors, and thus engendering growth in the economy.

However, several studies (Pellegrini and Gerlagh, 2004; Akai *et al.*, 2005; among others) have criticised the 'grease the wheels' hypothesis by maintaining that corruption, indeed, hamper growth, and thus give credence to the 'sand the wheels' hypothesis in an economy. Those in this other school of thought emphasise that the larger proportion of the embezzlements in an economy is laundered abroad. It is commonly raised in the developing countries, Nigeria inclusive, that the foreign economies provide save-havens for money launderers at the expense of the domestic economies. Thus, this practice creates a leakage in the circular flow of income in the domestic economies. The antagonists of the 'grease the wheels' hypothesis further argue that corrupt practices on the part of the bureaucrats lead to misallocation of the available resources in the economy. Apparently, in an economy that is characterised by high level of corruption, the bureaucrats would not mind reallocating resources from the productive activities to the less or even non-productive ones – in as much as the activities would favour their personal aggrandisements. There is also the possibility that corruption breeds weak internal audit system which would have served as check on the activities of the bureaucrats. Yet another means through which corruption may impede economic growth is the fact that it is culpable of damaging the image of a country at the international level, thus driving foreign investors away from the economy. It is, however, problematic to conclude, on the sole ground of the theoretical structures, which of the two hypotheses exists in the Nigerian economy without empirical investigation. Thus, Rodrik (1999) asserts that countries experiencing the sharpest drops in GDP are 'those with divided societies and weak institutions'; and institutional quality is adjudged to be responsible for the cyclical nature of monetary policy and output growth (Duncan, 2011). Several studies (Acemoglu *et al.*, 2003; Tello *et al.*, 2005; Efendic *et al.*, 2010; Fosu, 2011; Udah and Ayara, 2014 andIyoboyi *et al.*, 2016) emphasize that distortionary macroeconomic policies largely reflect institutional factors. These studies maintain that countries deprived of qualitative institutional settings found it impossible to maintain orderliness in an economy, giving room for the economic agents to extort the economy, and hence, distortionary macroeconomic policies. Nevertheless, some studies (Martin and Rowthorn, 2004; Simon and Zlatko, 2010; Asiama and Mobolaji, 2011 and Chuku *et al.*, 2011) do not find significant relationship, or even found negative relationship, between the quality of institutions and macroeconomic performance.

Moreover, some studies (Tanzi, 1998 and Marakbi and Turcu, 2016) support the 'greasing the wheels' hypothesis by stressing that corruption may encourage growth. This is exemplified by a case where inducement of bureaucrats gives room for capitalists to explore the available resources in the domestic economy, and thereby contributing to higher investment and growth.

Lui (1985) builds an equilibrium queuing model of bribery to depict that bureaucratic corrupt practices do give room for the selection of the most efficient firms by awarding contracts to the contractors offering the highest bribes. In the same vein, Beck and Maher (1986) conclude that since only the most powerful companies (or investors) are able to pay the highest bribes, corruption greases the wheels of the economy by allocating investments more efficiently. Similarly, the study by Kaufman and Wei (1999), even though supporting the greasing the wheels hypothesis, maintains that the capability of bureaucratic corruption to quicken procedures could be restricted based on the reality that establishments that offer bribes waste more time in the course of negotiating regulations. A scenario of this kind is argued to have adverse effects on the behaviour of the officials as they are stimulated to delay the procedures to enhance greater administrative bottlenecks so as to give room for bribes (Bardhan, 2006). Acemoglu *et al.* (2002) argue that institutional reversal is responsible for the reversal of fortune in the colonised areas that were relatively rich before the colonisation, but now relatively poor. Also, Acemoglu *et al.* (2003) observe that countries that have adopted distortionary macroeconomic policies happen to have experienced slower economic growth in the post-war era as a result of their weak institutions. Similarly, the study by Rodrik *et al.* (2004) reveals the primacy of the role of institutional quality over geography and trade on economic development. The result indicates that institutional quality indicators (property rights and rule of law) always enter with a significant positive. The study concludes that once institutions are controlled for, integration has no effect on incomes, while geography has, at best, weak direct effects. Acemoglu *et al.* (2005) point out that economic institutions determine the incentives of and the constraints on economic actors, and shape economic outcomes. Nsouli *et al.* (2004) attribute a stronger institutional and political environment to improved macroeconomic outcomes in the long-run. However, Farrugia (2007) submits that the weak institutional prowess generally experienced by the small Island states constitute a great challenge in adjusting to the varying global trade environs. Also, the study by Acemoglu and Robinson (2008) argues that the foremost determinants of disparities in growth across the globe are variations in economic institutions. Hence, the study maintains that the panacea to the problem of development in any economy necessitates the reformation of its institutions. Similarly, Seputiene (2009) evaluates the impact of institutions on the level of income. The study concludes that high institutional quality positively influences economic growth. Efendic *et al.* (2010) explore the relationship between institutional improvement and economic performance in transition countries (TCs). The study generally found that institutions play significant role in explaining economic performances in TCs. Meanwhile, the study by Simon and Zlatko (2010) does not find significant link between widely used measures of institutions and the various indicators of economic performance.

Osabuohien *et al.* (2012) evaluate the economic planning in Nigeria in relation to the roles of institutions in the economic outcomes. The study highlights the necessity of Nigeria to improve on its institutions as this would afford supportive role to planning. Alexiou *et al.* (2014) explore the link between institutional quality and economic growth along with other key economic variables in Sudan. The study points out that the quality of the institutional environment is one of the most significant factors responsible for economic performance. In the same vein, the study by Sekwati and Seabe (2014) shows that institutions in Botswana are fairly strong to provide support for privatisation, legal and political environment, as well as protection of physical property rights; though protection of intellectual property rights appears to be very weak. Udah and Ayara (2014) explore the nexus among institutions, governance structure and economic performance in Nigeria. Using OLS technique, the results reveal that government effectiveness and accountability have significant positive effect on economic performance. Similarly, the study by Ubi and Udah (2014) examines how corruption and institutional quality in Nigeria have impacted on economic performance. The results portray that corruption and institutional quality have significant influence on economic performance. Iyoboyi and Pedro (2014) investigate the effect of institutional quality on macroeconomic performance in Nigeria. The results of the generalized impulse response functions indicate that one standard deviation innovation on institutional quality leads to decline in macroeconomic performance throughout the time horizons, whereas the results of the variance decomposition reveal that a larger proportion of the variations in Nigeria's macroeconomic performance is not ascribed to the fluctuations in the quality of the institutional arrangement in the country. Adigozalov and Rahimov (2015) study the role of institutional quality in the cyclicality of macroeconomic policies of transition economies.

Using panel GMM on annual data, the study found that the quality of institutions accounts for a significant role in their capability to carry out counter-cyclical macroeconomic policy. Khalid (2015) gives credence to the observed studies that establish direct relation between trade openness and the quality of institutional setting in an economy.

The study reveals that, in the existence of extractive political institutions, the effect of trade openness on economic institutions declines significantly. Likewise, Vitola and Senfelde (2015) found that institutions significantly impact socioeconomic performance around the globe. Aynur and Gokalp (2016) examine the link between institutions and macroeconomic performance in the developing countries. The study reveals that the various measures of institution have direct influence on the macroeconomic performance of the developing countries. Conversely, other measures of institutional quality such as judiciary independence, civil freedoms, black market exchange rate, collective bargaining and political stability portray adverse impact on the macroeconomic performances of developing countries.

3. Methodology

3.1 Model Specification

Thus, in achieving the objective of the study which is 'to investigate the institutions 'hypotheses (grease the wheels versus sand the wheels) in Nigeria', the implicit functional model for this study is stated thus:

$$GDP = f(INQ) \tag{1}$$

Where GDP represents gross domestic product as a measure of economic performance while INQ represents the institutional quality measures which comprise of democratic accountability (DEMA), corruption (CORR), bureaucratic quality (BURQ), government stability (GOVS), law and order (LAWO). Hence, Equation (1) is restated as:

$$GDP = f(DEMA, CORR, BURQ, GOVS, LAWO) \tag{2}$$

It should be noted that the logarithmic form of the gross domestic product (GDP) is used while the institutional quality measures that already appear in their rate form are utilized directly. This is in line with the study by Iyoboyi and Pedro (2014) which transforms RGDP, government expenditure and money into the logarithmic form while the nominal form of institutional capacity is incorporated into the estimated model. By expressing equation (2) in its explicit form, it becomes:

$$lnGDP_t = \alpha_0 + \alpha_1 DEMA_t + \alpha_2 CORR_t + \alpha_3 BURQ_t + \alpha_4 GOVS_t + \alpha_5 LAWO_t + \varepsilon_t \tag{3}$$

Where all variables are as earlier defined, ε_t is the stochastic term and α_i $(i = 0, 1, 2, 3, 4, 5)$ are parameters to be estimated.

3.2 Estimation Method

In order to investigate the institution's hypotheses, this study utilizes the autoregressive distributed lag (ARDL) approach developed by Pesaran, Shin and Smith (1996) and Pesaran and Shin (1999). The superiority of this approach over other co-integrating techniques such as the Johansen and Juselius's (1990) Maximum Likelihood technique lies in the fact that the ARDL technique does not necessarily require that the variables in the model to be I(1) or to be of the same order. Hence, it can conveniently accommodate a mixture of I(0) and I(1) variables in a model. Also, it gives room for variables to be assigned different lag-lengths as they enter the model. It is equally suitable for the estimation of the long-run and short-run parameters of the model simultaneously while avoiding the problems posed by non-stationary time series data. Even though the ARDL approach is appropriate for handling model with combination of I(0) and I(1) variables, care must be taken to ensure that the variables in the model are devoid of integration of higher order, for instance, I(2) variables. The variables used in this study are subjected to the unit root test to ensure that the model is devoid of I(2) variables. The unrestricted error correction form of the ARDL model for Equation (3) is specified as follows:

$$\Delta \ln GDP_t = \beta_0 + \sum_{i=1}^{p} \tau_i \Delta \ln GDP_{t-i} + \sum_{i=0}^{q_1} \delta_i \Delta DEMA_{t-i} + \sum_{i=0}^{q_2} \theta_i \Delta CORR_{t-i} + \sum_{i=0}^{q_3} \lambda_i \Delta BURQ_{t-i} + \sum_{i=0}^{q_4} \psi_i \Delta GOVS_{t-i} +$$

$$\sum_{i=0}^{q_5} \pi_i \Delta LAWO_{t-i} + \beta_1 \ln GDP_{t-1} + \beta_2 DEMA_{t-1} + \beta_3 CORR_{t-1} + \beta_4 BURQ_{t-1} + \beta_5 GOVS_{t-1} + \beta_6 LAWO_{t-1} + \upsilon_t \tag{4}$$

Where Δ is the differenced operator, $\beta_i, \tau_i, \delta_i, \theta_i, \lambda_i, \psi_i$ and π_i are parameters to be estimated, p is the number of lags of the dependent variable and q_i is the number of lags of the explanatory variables. The F-statistic is used to test the null hypothesis of no co-integration $(H_0: \beta_1 = \beta_2 = \beta_3 = \cdots = \beta_6 = 0)$ against the alternate hypothesis. Two sets of critical values are provided by Pesaran *et al.* (1996) to handle the possibility of either the variables are I(0) or I(1). One set assumes that all the variables are I(0) while the other set assumes that all the variables are I(1).

The null hypothesis of no long-run relationship (or no co-integration) is rejected if the computed F-statistic exceeds the upper bound of the critical value. Conversely, if the computed F-statistic is below the lower bound, then the null hypothesis is accepted. However, if the F-statistic falls within the critical value, the result is adjudged to be inconclusive. Consequent upon the confirmation of the existence of co-integration among the variables in the model, the coefficients of the long-run relation of GDP equation and the associated error correction model is estimated for inferences.

3.3 Description and Measurement of Variables

3.3.1   Gross Domestic Product (GDP): The real gross domestic product refers to the nominal GDP deflated by composite consumer price index. Thus, the real GDP is an inflation-adjusted measure that reflects the value of all commodities produced in a country at a given year, and it is expressed in base-year prices (Leykun and Sharma, 2017). It is a good indicator of a country's microeconomic status and development (Gadda and Marcotullio, 2016).

3.3.2   Measurement of Institutional Quality: In the course of the analysis, five institutional indexes are considered to investigate the institution's hypotheses in Nigeria. The variables are derived from the International Country Risk Guide (ICRG) database. This is with a view to encompass the diverse aspects of institutional development.

3.3.2.1 Democratic Accountability (DEMA): This deals with the extent to which the government responds to the yearnings of the populace, given the fact that its electoral success is solely a function of its degree of responsiveness in a truly democratic system of government. The reverse may, however, be the case in an autocratic setting.

3.3.2.2 Corruption (CORR): This is utilised to appraise the extent at which corruption is prevalent in Nigeria. The index taken into account in this variable encompasses several facets of corruption in a political structure. This categorically entails demands for special payments and bribes related to import and export licenses, exchange controls, tax assessments, excessive patronage, nepotism, 'favour-for-favour', illegal party funding, vote-buying and other forms of electoral vices. These corrupt practices serve as a threat to investment (both domestic and foreign) in diverse ways as follows: distortion of the economic and financial environment; reduction in the efficiency of government and business by giving room for unimaginable politicians to assume leadership posts through patronage rather than ability, and introduction of an inherent instability in the political setting.

3.3.2.3 Bureaucracy Quality (BURQ): This assesses the institutional strength as well as the quality of the bureaucracy as an intervening variable which has the tendency to mitigate drastic changes in government policies or distortions in government activities as a result of a change in government. It is used as a measure of public sector performance. Countries which are deficient in the cushioning effect of a strong bureaucracy are adversely affected by a change in the political system since a change in government would be traumatic in terms of policy formulation as well as everyday administrative functions. Thus, a country with a well-functioning, competent bureaucracy would not just produce more information, but more accurate information as well.

3.3.2.4 Government Stability (GOVS): This serves as a measure of the government's capability to execute its manifestoes as well as its capability to remain in office. This is, however, a function of the form of governance, the consistency of the government as well as governing party or parties, the proximity of the subsequent election, the government's influence on the legislative arm, and the general endorsement of government policies, among others.

3.3.2.5 Law and Order (LAWO): These key terms are explained in two ways as follows: 'law' evaluates the strength as well as the impartiality of the legal system while 'order' evaluates common observance of the law.

3.4 Scope and Sources of Data

The study covers the period between 1986 and 2016. This spans the period in which Nigeria adopts series of economic policies in its attempts to stabilise the economy. This study makes use of the secondary source of data for all the variables involved. The data on GDP are sourced from the World Development Indicators (WDI) database while data on the five measures of institutional quality are extracted from the International Country Risk Guide (ICRG) database. It should be noted that the data on the five variables extracted from the ICRG are rescaled on the scale of 0 – 10 to give room for uniform scale of measurement of data.

4. Estimated Results

This study carries out unit root test and the result shows that all the variables in the estimated model are integrated of order one, that is I(1), both when the test is performed with intercept alone and when it is performed with intercept and linear trend. The result of the ARDL Bounds Test in Table 1 indicates that the computed F-statistic (8.92) is higher than the upper bound of the Critical Value Bounds, even at 1% level of significance (4.15).

Table 1:	ARDL Bounds Test	
Test Statistic	Value	
F-Statistic	8.9169	
Critical Value Bounds		
Significance	I(0) Bound	I(1) Bound
10%	2.08	3
5%	2.39	3.38
2.5%	2.7	3.73
1%	3.06	4.15

Consequently, the null hypothesis of no long-run relationship among the variables in the model is rejected, concluding that there is co-integration among the variables. With the confirmation of the existence of long-run relationship between the dependent variable (lnGDP) and the independent variables (DEMA, CORR, BURQ, GOVS and LAWO), the unrestricted error correction form of the ARDL is utilized to obtain an estimate of the long-run parameters. Based on the Akaike Information Criterion, the selected model is an ARDL (2, 2, 2, 2, 1, 2) specification (see Figure 1).
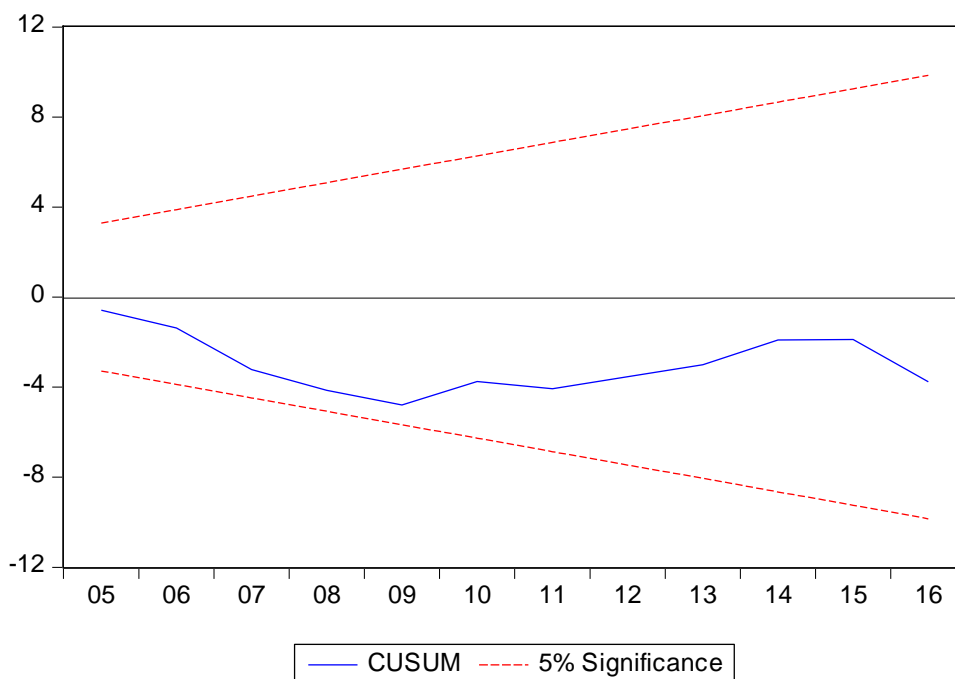

Figure 2: Cumulative Sum (CUSUM) Stability Test

Hence, it is evident that the model is devoid of any static or fixed regressor since they all have lagged terms in the model. This implies that the model contains dynamic regressors. The Breusch-Godfrey Serial Correlation LM Test shows that the selected model is devoid of serial correlation $(F = 0.7131, P = 0.5134)$ and $(* R^2 = 3.6199, P = 0.1637)$. This implies that the errors in the selected model are serially independent, and thus, the parameter estimates are consistent. Similarly, the Breusch-Pagan-Godfrey Heteroskedasticity Test $(F = 0.5377, P = 0.8774)$ and $(* R^2 = 12.1090, P = 0.7364)$ suggests no evidence of heteroskedasticity in the selected model. In addition, the Stability Diagnostic Tests (CUSUM Test and CUSUM of Squares Test reported in Figure 2 and Figure 3 respectively) reveal that the estimated coefficients of the selected model are stable over the time as the plot of these statistics falls inside the critical bounds. In order to investigate the institution's hypotheses (grease the wheels versus sand the wheels) in Nigeria, this study focuses on the effect of different institutional quality measures on GDP (as a proxy for economic growth). However, effort is geared mainly at the effect of corruption on GDP. In terms of a-priori expectation, democratic accountability (DEMA), bureaucracy quality (BURQ), government stability (GOVS), and law and order (LAWO) are expected to have positive effects on GDP while corruption (CORR) is expected to have negative effect on GDP. More explicitly, an unexpected improvement in democratic accountability, bureaucracy quality, government stability, and law and order ought to increase the GDP, and thus, the welfare of the populace. Conversely, an unexpected increase in corruption is expected to reduce the GDP, and hence, deteriorates the welfare of the populace.
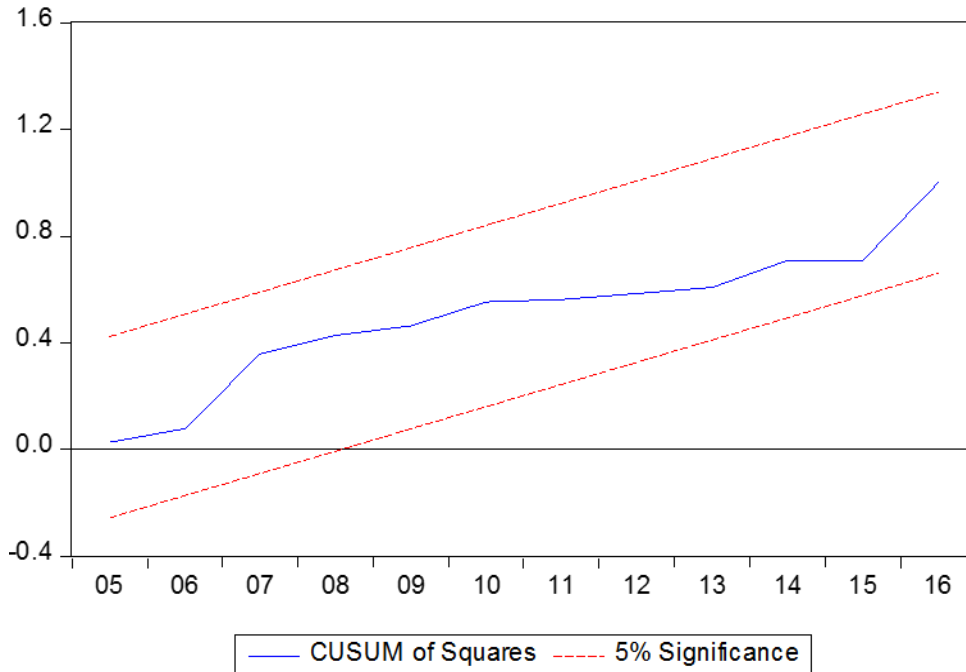
Figure 3: Cumulative Sum (CUSUM) of Squares Stability Test

Table 2:	ARDL Error Correction Model		
Variable	Coefficient	t-Statistic	Prob.
D(LNGDP(-1))	-0.98	-5.28*	0.0002
D(DEMA)	-0.08	-6.41*	0.0000
D(DEMA(-1))	-0.03	-3.32*	0.0061
	(-0.11)		
D(CORR)	0.06	1.16	0.2669
D(CORR(-1))	-0.15	-3.23*	0.0073
	(-0.09)		
D(BURQ)	0.03	3.18*	0.0080
D(BURQ(-1))	-0.10	-5.01*	0.0003
	(-0.07)		
D(GOVS)	0.04	4.71*	0.0005
D(LAWO)	0.02	1.91***	0.0800
D(LAWO(-1))	0.12	6.55*	0.0000
	(0.14)		
ECT(-1)	-0.01	-9.68*	0.0000
*Note: * and *** represent 1% and 10% levels of significance respectively.*			
() represents the addition of the coefficients of the preceding variable			

From the results of the Error Correction model (Table 2) and the long-run model (Table 3), democratic accountability has significant negative effect on GDP in the short-run $(t = -6.41, p < 0.01)$ while it has positive but insignificant effect on GDP in the long-run $(t = 0.50, p > 0.05)$. This effect of democratic accountability is at variant with the a-priori expectation. The result as well does not conform to the finding of the study by Udah and Ayara (2014) that government accountability has significant positive effect on economic performance. The result is not, however, surprising as the government in Nigeria has not been that responsive to the populace over the years. All the same, overcoming this adverse effect of democratic accountability on the economy as a whole calls for collective responsibility in terms of putting a round-peg in a round-hole whenever the need arises. The electoral choices of the electorate are imperative at enhancing improved democratic accountability in any democratic setting. In addition, the institutional arrangement should be developed to enforce the political office holders to be adequately and constitutionally responsive to the electorate. The results of this study further show that corruption has significant negative effect on GDP both in the short-run and in the long-run $(t = -3.23, p < 0.01; t = -2.29, p < 0.05)$. Given the prevailing level of corruption in Nigeria, this result is not unexpected. The result, thus, upholds the existence of 'sand the wheels' hypothesis in the country.

The various cases of embezzlements of public funds in the country coupled with the rate of money laundering outside the country may not have given room for the existence of 'grease the wheels' hypothesis. This result conforms with the findings of Pellegrini and Gerlagh (2004), Akai *et al.* (2005) that corruption has negative effect on investment which is a key determinant of economic growth. The result is also in conformity with the findings of Iyoboyi and Pedro (2014), Ubi and Udah (2014) that corruption has significant influence on economic performance in Nigeria.

Table 3:	ARDL Long-Run Result		
Variable	Coefficient	t-Statistic	Prob.
DEMA	0.75	0.50	0.6243
CORR	-0.03	-2.29**	0.0412
BURQ	2.87	0.23	0.8222
GOVS	-1.22	-0.18	0.8567
LAWO	-0.07	-2.32**	0.0387
C	1.04	1.02	0.3282
*Note: ** represents 5% level of significance.*			

Given this significant influence of corruption on GDP, coupled with its adverse effect on GDP, Nigeria still has a long way to go to better the lots of the populace. The implication of these results is that corruption is not, in any way, engendering growth in the country. Hence, there is existence of 'sand the wheels hypothesis' in Nigeria. This further suggests that there is no basis for rationalising corruption in the country. Therefore, serious, and sincere, efforts should be tailored towards eradicating the scourge of corruption in every facet of our society. In addition, bureaucracy quality has significant negative effect on GDP in the short-run $(t = -5.01, p < 0.01)$ while it has positive but insignificant effect on GDP in the long-run $(t = 0.23, p > 0.05)$. This effect of bureaucracy quality is not consistent with a-priori expectation. This result as well is at variant with the finding of Udah and Ayara (2014) that effectiveness has significant positive effect on economic performance. A result of this nature is not unexpected in Nigeria as one may hardly scale through in any office without giving bribe. The idea of hiding under bureaucracy by public office holders to exploit private individuals, business firms, and even, government agencies would not have given room for the positive effect of bureaucracy to be felt in the country. Since public office holders have adequate information on how to go about meeting the needs of their patronisers, the former easily capitalise on such opportunity at the detriment of the latter.

However, government stability has significant positive effect on GDP in the short-run $(t = 4.71, p < 0.01)$ while it has insignificant effect in the long-run $(t = -0.18, p > 0.05)$. The short-run result elicits a persistent stability in GDP, and thus, conforms to a-priori expectation. This might be due to the level of stability in the course of changing government that the country has been experiencing since 1999 till date. Although the short-run result portrays that law and order has significant positive effect on GDP $(t = 6.55, p < 0.01)$, the long-run result depicts otherwise as law and order has significant adverse effect on GDP $(t = -2.32, p < 0.05)$. This long-run result is contrary to a-priori expectation. It is as well at variant with the findings of Rodrik *et al.* (2004), Aynur and Gokalp (2016) that law and order has significant positive effect on economic growth. The result, nonetheless, reflects the pitfalls of the judicial system in the country. Whereas the judicial officers are meant to be impartial in their dealings, the reverse is, more often than not, the case in Nigeria as the officials do not mind sacrificing the rule of law for personal and selfish aggrandisements. In the same vein, the law enforcement agencies often play to the gallery as a result of their partisan politics.

5. Conclusion and Recommendations

The study investigates the institution's hypotheses (grease the wheels versus sand the wheels), with emphasis on the effect of corruption on GDP in Nigeria, using the ARDL technique. The study finds that corruption has significant adverse effect on GDP. The result, thus, upholds the existence of 'sand the wheels' hypothesis in Nigeria. The various cases of embezzlements of public funds in the country, coupled with the rate of money laundering outside the country, may not have given room for the existence of 'grease the wheels' hypothesis. Given the existence of 'sand the wheels' hypothesis in Nigeria, value-reorientation of the populace to fight shy of all manners of corruption and embezzlements is recommended. The moment the menace of corruption is sincerely addressed, institutional quality will be strengthened and this will culminate in the enhancement of the standard of living of the populace. Thus, the study posits that Nigeria has to develop its institutions for it to tap from the positive effects of external shocks while mitigating the adverse effects that may crop up in the international market anytime.

References

Acemoglu, D., & Robinson, J. A. (2008). The role of institutions in growth and development. *Commission on Growth and Development*, Working Papers (10).

Acemoglu, D., &Verdier, T. (1998). Property rights, corruption and the allocation of talent: A general equilibrium approach. *The Economic Journal, 108*(450):1381-1403.

Acemoglu, D., Johnson, S., & Robinson, J. A. (2002). Reversal of fortune: Geography and institutions in the making of the modern world income distribution. *The Quarterly Journal of Economics, 117*, 1231-1294.

Acemoglu, D., Johnson, S., & Robinson, J. A. (2005). Institutions as a fundamental cause of long-run growth. *Handbook of Economic Growth, 1A.* Edited by P. Aghion and S. N. Durlauf, Elsevier. DOI: 10.1016/S1574-0684(05)01006-3

Acemoglu, D., Johnson, S., Robinson, J., & Tchaicharoen, Y. (2003). Institutional causes, macroeconomic symptoms: Volatility, crises and growth. *Journal of Monetary Economics, 50*, 49-123.

Adigozalov, S., & Rahimov, V. (2015). Institutional quality, cyclicality of macroeconomic policies and the effects of macroeconomic shocks: Evidence from transition economies. *Graduate Institute of International and Development Studies, International Economics Department*, Working Paper (HEIDWP0023).

Akai, N., Horiuchi, Y., & Sakata, M. (2005). Short-run and long-run effects of corruption on economic growth: Evidence from state-level cross-section data for the United States. *CIRJE Discussion Paper Series*.

Alexiou, C., Tsaliki, P., & Osman, H. R. (2014). Institutional quality and economic growth: Empirical evidence from the Sudanese Economy. *Economic Annals, LIX*(203),0013-3264. DOI: 10.2298/EKA1403119A

Asiama, J., & Mobolaji, H. (2011). Trade and financial openness, institutional quality, and financial development in sub-Saharan Africa. *International Conference* on international trade and investment. Available online.

Aynur, Y., & Gokalp, M. F. (2016). Institutions and economic performance: A review on the developing countries. *Procedia Economics and Finance*, 38, 347-359.

Beck, P. J., & Maher, M. W. (1986). A comparison of bribery and bidding in thin markets. *Economics Letters, 20*(1), 1-5.

Borrmann, A., Busse, M., & Neuhaus, S. (2006). Institutional quality and the gains from trade. Hamburgisches Welt-Wirtschafts-Archiv (HWWA), *Hamburg Institute of International Economics*, ISSN: 1616-4814, JEL Classification: F16, L51, O17, P48.

Chuku, C. A., Usenobong, F. A., Ndifreke, R. S., & Ekpeno, L. E. (2011). Oil price shocks and the dynamics of current account balances in Nigeria. *OPEC Energy Review, 35*(2), 119-139.

Gadda, T. M. C., & Marcotullio, P. J. (2016). Changes in marine seafood consumption in Tokyo, Japan.

Efendic, A., Pugh, G., & Adnett, N. (2010). Institutions and economic performance: System GMM modelling of institutional effects in transition. Available online, JEL classification: E02; P30; P39.

Farrugia, N. (2007). The importance of institution building in small Island States. *Bank of Valletta Review*, (36), Autumn.

Fosu, A. K. (2011). Terms of trade and growth of resource economies: A tale of two countries. *Centre for the Study of African Economies*, CSAE Working Paper WPS/2011-09, Oxford University.

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

Iyoboyi, M., & Pedro, L. M. (2014). Institutional capacity and macroeconomic performance: Empirical evidence from Nigeria. *Research in Applied Economics, 6*(1), ISSN: 1948-5433.

Iyoboyi, M., Olarinde, M. O., & Abdulsalam, S. A. (2016). The institutional and policy environment and the quest for industrialization in Nigeria. *Journal of Economics and Behavioural Studies, 8*(2), 13-25, ISSN: 2220-6140.

Kaufmann, D., & Wei, S. J. (1999). Does "grease money" speed up the wheels of commerce? Technical report, *National Bureau of Economic Research*. Available online.

Khalid, U. (2015). Why trading with dictators may nevertheless help the people: On the interplay among trade, political regimes and economic institutions. Department of Economics, School of Economics and Management, Working Paper (15), JEL Classification: P14, P16, F14, F13.

Leff, N. (1964). Economic development through bureaucratic corruption. *American Behavioural Scientist, 8*(3), 6-14.

Leykun, F., & Sharma, D. (2017). Determinants of banks' profitability: Review and assessment. *International Journal of Management and Business Studies, 7*(1), 14-20, ISSN: 2230-9519.

Lui, F. T. (1985). An equilibrium queuing model of bribery. *The Journal of Political Economy*, 760-781.

Marakbi, R., & Turcu, C. (2016). Corruption, institutional quality and growth: A panel smooth transition regression approach. JEL classification: C34, D73, O43, O11.

Martin, B., & Rowthorn, R. (2004).Will stability last? *UBS research paper*, March.

Nsouli, S. M., Atoian, R., & Mourmouras, A. (2004). Institutions, program implementation and macroeconomic performance. *International Monetary Fund*, Working Paper, WP/04/184, JEL Classification Numbers: E61, F33, F34.

Osabuohien, E., Efobi, U. R., & Salami, A. (2012). Planning to fail or failing to plan: Institutional response to Nigeria's development question. *African Development Bank Group*, Working Paper Series (162). JEL classification: E61; O43; P48.

Pellegrini, L., & Gerlagh, R. (2004). Corruption's effect on growth and its transmission channels. *KYKLOS*, 57(3), 429-456.

Pesaran, M. H., Shin, Y., & Smith, R. J. (1996). Testing for the existence of a long-run relationship. *DAE* Working Paper (9622), University of Cambridge.

Pesaran, M. H., & Shin, Y. (1999). An autoregressive distributed lag modelling approach to co-integration analysis. In Econometrics and economic theory in the 20th century: The Ragnar Frisch Centennial Symposium. Cambridge University Press: Cambridge.

Rodrik, D. (1999). Where did all the growth go? External shocks, social conflict and growth collapses. *Journal of Economic Growth, 4*, Issue 4, 385-412.

Rodrik, D., Subramanian, A., & Trebbi, F. (2004). Institutions rule: The primacy of institutions over geography and integration in economic development. *Journal of Economic Growth*, 9(2), 131-156.

Sekwati, L., & Seabe, M. (2014). An appraisal of the quality of Botswana's institutions in supporting the privatisation programme.*Botswana Notes and Records, 47*.

Seputiene, J. (2009). The impact of institutional environment on economic development of the European Union Countries. Available at: http://www.icabr.com/fullpapers/Seputiene%20Jana.pdf

Simon, C., & Zlatko, N. (2010). Institutions and economic performance: What can be explained? *European Bank for Reconstruction and Development*, Working Paper (121). JEL Classification Number: D24, L21, O12, P48.

Tanzi, V. (1998). Corruption around the World. *IMF Staff Papers*, *45*(4), 559 –594.

Tello, W. P., Peschiera, J. A., & Rondan, N. R. (2005). Sources of economic instability: Are institutional factors the most important? JEL Classification: E32, O11, O23.

Ubi, P., & Udah, E. B. (2014). Corruption, institutional quality and economic performance in an Emerging Economy: Lessons from Nigeria. *British Journal of Economics, Management & Trade, 4*(11), 1708-1722. SCIENCEDOMAIN International. JEL: D73, 011 and 012.

Udah, E. B., & Ayara, N. (2014). Institutions, governance structure and economic performance nexus in Nigeria. *Journal of Economics and Sustainable Development*, 5(3), ISSN: 2222-2855.

Vitola, A., & Senfelde, M. (2015). The role of institutions in economic performance. Verslas: Teorijairpraktika / Business: Theory and Practice, 16(3), ISSN 1822-4202, http://www.btp.vgtu.lt, 271-279. doi:10.3846/btp.2015.498

World Bank (2012). World Bank Development Indicators. Available at: http://data.worldbank.org