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Corruption, Institutional Quality and Economic Performance in an Emerging Economy: Lessons from Nigeria

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Authors' contributions

This whole work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

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ABSTRACT

The need to promote and sustain a virile economy has continued to be a major concern of most governments worldwide, including Nigeria. The reason for this is not farfetched. For instance, a developed economy offers prospects for increased employment, greater efficiency and improved balance of payments and increased standard of living. But in Nigeria, improved economic performance has over the years been marred by social vices such as institutionalized corruption which hinders the capacity of institutions to efficiently deliver services necessary to grow the economy. This paper descriptively and quantitatively examines how corruption and institutional quality in Nigeria have impacted on economic performance. In the light of the above, it was found that corruption and institutional quality (measured by contract intensive money) have statistically significant effect on economic performance in Nigeria. Thus, it is recommended that aggressive re-orientation and education of the masses and other key decision makers on the need to desist from rent-seeking activities is necessary. Once the scourge of corruption is successfully tackled, institutional quality will be strengthened and the much desired people centered economic growth will be achieved.

Keywords: Corruption; institutional quality; economic performance and Nigeria.

JEL: D73, O11 and O12.

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1. INTRODUCTION

After almost four decades of various stabilization programmes (1970-2012) in Nigeria, macroeconomic aggregates are still not at the desired threshold. Various economic prescriptions have been implemented, anchoring on the theoretical arguments of the Classical and Keynesian schools, and perhaps the Marxists in recent times. The Classical economists believe that capital accumulation, technological advancement and perfect competitive markets would improve economic performance through increased productivity. Whereas the Keynesians believe in short-run demand management, which involves direct and urgent government intervention in economic activities, the Marxists see the solution to economic problems to be a political one. The situation is no doubt complex. However, what is certain is that the Nigerian economy has experimented with all these theoretical prescriptions from direct government control of economic activities in the 1970s and early 1980s to greater reliance on the market forces to achieve efficient resource allocation in the mid 1980s and early 1990s and recently, the introduction of various political cum economic reforms in the form of comprehensive economic blueprint. Despite all these efforts, the country continues to experience poor economic performance.

Available statistics indicate that between 1970 to 1980, inflation rate, unemployment and GDP growth rates were at an average of 15 percent, 5.4 percent and 31.5 percent respectively. Between 1990 and 2000, inflation rate increased to an average of 20 percent, unemployment rate stood at 5 percent and GDP growth rate was at an average of 5.2 percent. The period of 2001-2012 witnessed a decline in GDP growth rate which stood at an average of 6.5 percent with inflation still remaining in double digit average of 13.5 percent, unemployment rate at 16.7 percent and poverty incidence still high at 70.5 percent [1]. It must be noted that within these periods, the problem of primitive capitalist accumulation of wealth for selfish gain(s) had intensified. This primitive capitalist accumulation of wealth is manifested in the abuse/exploitation of offices of trust for economic rents. Perhaps, this may be an indication that capital accumulation, technological advancement and demand management measures are necessary but not sufficient conditions for improved economic performance. Rather, improved economic performance demands efficient institutions and a high level of trust from custodians of public offices.

Unfortunately, in Nigeria, economic rents perpetuated on the cover of ethnicity take precedence over productivity. The unbridled taste to promote corruption as a means of redistributing wealth in favour of certain ethnic enclave and political groups is a "negative" manifestation of poor institutional quality in Nigeria. Those who occupy public offices see it as a privileged opportunity for them to partake corruptly in the consumption of the "national cake" and by this, they engage in activities for the benefit of their "ethnic nationalities" or political/economic associates. It is common to hear such an irritating phrase as the "Nigerian factor". This factor which arises from corruption simply implies that standards have been compromised by the basic institutions in service delivery. This factor has made nonsense of accountability in the country. According to [2], this factor (corruption) has worsened and weakened institutions, such as the legislative, executive and the judicial institutions where rule of law and adherence to formal rules are not rigorously observed, where political patronage is standard practice, where the independence and professionalism of the public sector has been eroded and where civil society lacks the means to bring public pressure to bear. Up until 2012, Nigeria has not been exonerated from the list of top ten leading countries on corruption and this is evident in Transparency International's consistent rating of Nigeria as one of the most corrupt countries in the past two decades.

This explains why scholars of political economy have attributed the economic and socio-political disorganization of Nigeria to corruption and weak institutions. The extents of the interplay of these two issues (corruption and weak institutions) are pronounced where resources for distribution are involved. The disfavoured political/economic groups out of frustration/disillusionment begin to take actions that undermine overall economic performance. Such individuals or groups, having lost hope in the entire system, begin to cultivate either a radical attitude or systematic withdrawal of their love/pride for the country, the implication of which is in two folds. Firstly, there would be a geometric increase in corrupt activities by the favoured group(s) who superintend over resource distribution as they corruptly cart away the nation's resources for selfish gain(s). Secondly, the disfavoured group(s) would engage in unjust/corrupt activities by compromising standards for selfish short term gains [3]. With these scenarios, corruption and other rent-seeking activities become "normal" economic activities. This adversely affects service delivery by institutions. Perhaps, that is why in the last decade, most public affairs analysts and international communities have strongly believed that corruption and weak institutions are the twin reasons for Nigeria's poor macro-economic performance. These twin factors (corruption and institutional quality) have not been simultaneously empirically investigated in Nigeria using contemporary econometric methodology. To the best of our knowledge, most studies have investigated either quantitatively or descriptively the effects of these twin variables on economic performance separately.

Therefore, the objective of this study is to demonstrate quantitatively how corruption and institutional quality relatively impact on economic performance in Nigeria using a single model equation. In essence, this research intends to re-emphasize the existence of a nexus between corruption, institutional quality and economic performance in Nigeria. It is an analysis that relies on the review of available data of the Nigerian economy to evaluate the interplay of corruption and institutional quality on economic performance. The study is informed by the unimpressive macro-economic performance in Nigeria that is theoretically attributed to the high level of corruption and weak institutions. The study is arranged in six sections. Following this introduction is section 2 which clarifies some theoretical issues as used in the paper. Section 3 attempts a geometric illustration of the effects of corruption and institutional quality on economic performance in Nigeria. Section 4 describes the model and data and section 5 presents and discusses the estimated results. Finally, section 6 concludes the paper with policy suggestion(s).

2. THEORETICAL ISSUES

This section attempts a review of the key concepts and other theoretical issues as used in this study.

2.1 Corruption

"Corruption" is a worldwide issue and that is why the control of corruption is one of the good governance indicators advocated by World Bank. But the level and types of corruption have changed between historical epochs and across countries. In recent times, its frequency, variance and sophistication have reached unprecedented levels, especially in less developed countries, hence, the attention it has attracted from scholars in different disciplines including economics, law, sociology, psychology and criminology. A clear cut definition of the word corruption is however difficult. This is because corruption covers a wide range of morally offensive or criminal acts; thus, its precise definition is not easy. [4] defined corruption as the

perversion of integrity or state of affairs through bribery, favour or moral depravity. Corruption involves the injection of additional but improper transactions aimed at changing the normal course of events and altering judgments and positions of trust.

[5] defined corruption as the use of public office for private gains. This includes bribery and extortion, which involves at least two parties, and that which public office holder can carry out alone including fraud and embezzlement. To economists, corruption may be referred to as 'rent seeking' activity. This is an activity that illegitimately yields income over and above what a factor needs for retention in a particular employment. Rent seeking is mostly associated with unfair exploitation of loopholes in official policies. Thus, smuggling, bunkering and black marketing are parts of rent seeking. There are so many definitions of corruption but for lack of space, we will limit ourselves to these few. On a general note, corruption is simply the misuse of public resources for selfish gains.

Because of the ambivalence associated with corruption (i.e., the great deal of controversy concerning its desirability or otherwise) in many societies, a variety of terms are used in referring to corrupt acts in these societies. Thus frequently, one hears of such terms as 'kick back' and 'side deals'. In Nigeria, corruption has been referred to by expressions such as 'man know man', giving of 'kola', "runs", use of 'long legs' "language power" and "power point" etc. Corruption has been classified based on its causes to include political corruption, moral corruption, economic corruption, bureaucratic corruption and judicial corruption [6]. But it is not the place of this study to dwell much on these types of corruption.

There seem to be no consensus on the effect of corruption on economic performance. Some scholars [7,6,8,9,10] have empirically shown that corruption increases transaction costs, lowers efficiency of public spending, hinders foreign private investment and undermines institutional quality. All these cumulatively increase economic uncertainty which in the long run, slows down economic progress. However, [11,12] argued that corruption might be desirable as it may provide a leeway for entrepreneurs to bypass inefficient regulations and hence induce a more efficient provision of government services. Advocates of this view believe that corruption introduces efficiency in the economy and affects economic growth positively, as it helps to circumvent bureaucratic inefficiencies and rigidities. This is the 'greasing the wheel' argument. According to them, corruption helps to overcome inefficiencies in government regulations by acting as a way out of cumbersome policies. Thus, corruption allows entrepreneurs to avoid bureaucratic delays. Thus, corruption aids economic growth to some extent.

Theoretically, the Social control theory of corruption posits that without effective control measures, defiance becomes the norm [13] according to this theory, humans rationalize on what is more rewarding and proceed to take action on that basis. Thus, in the absence of fear of penalty or sanctions, there is nothing to deter people from fraudulently enriching themselves at the expense of others. As this phenomenon snowballs, it actually becomes accepted as a norm, as is currently the case with some forms of corruption in many African countries including Nigeria.

2.2 The Role of Institutions in Economic Performance

A basic assumption of neoclassical growth theory stipulates that economic growth takes place by a combination and accumulation of capital and labour, each capable of being substituted for each other. More formally: $Y=A f(L,K)$. Where Y =economy's output, K =capital, L =labour and A =the efficiency parameter called technical progress. It represents the efficiency with

which capital and labour are utilized. Without technical progress, and given the assumption of diminishing marginal returns to capital, economic growth would eventually come to a halt in spite of credible government policies to alter the declining trend of growth. This is the fundamental deficiency and critique of exogenous growth theory which has given way to the now popularized endogenous growth. The strength of the latter lies in the fact that even in the face of declining returns to labour and capital inputs, the presence of A (i.e. technical progress) would continuously push the production possibility curves of economies outward. But technical progress, it has been variously shown, depends on the strength of institutions. What then are institutions? [14] defines institutions as the formal and informal constraints on political, economic and social interactions. They are the rules, enforcement mechanisms and organizations. Institutions are the incentive systems that induce people to behave in certain ways; and if they are effective, they structure and provide incentives and also structure economic, political and social activity. They can make predictable our dealings with each other every day in all kinds of forms and shapes. They therefore, not only reduce uncertainty in the world but allow us to get on with everyday business and solve problems effectively. Institutions encompass "the public bodies through which the state discharges its most fundamental responsibilities, maintaining law and order, investing in essential infrastructure and raising taxes to finance such activities" [7]. The effectiveness of institutions is aptly seen in a market economy, where good institutions (in the absence of corrupt practices) can help transmit information, enforce property rights and contracts and manage competition in the market place. Broadly speaking, institutions are expected to facilitate the generation of ideas, stimulate innovations, lower transaction costs and correct government failures, and by extension facilitate economic growth [15]. Institutions establish incentives by establishing the rules by which the economic game is played. Incentives are a kind of reward abilities in legitimate economic processes in the hope that one will be rewarded first, and that such reward will ultimately be diffused for the benefit of the society/economy. Without the provision of such framework of incentives, such mechanisms, individuals and society's talents will lay dormant and waste. Incentives provided by institutions also mean that any worker will find it more rewarding to remain in his chosen field or career with the optimism that society will give him his due.

Incentives, however, are not enough. It is just one side of the prism through which an ideal society should be mirrored. Disincentives form the other side of the coin. Human nature untamed and unbridled by good institutions is a recipe for societal decay, economic collapse and moral misery. Disincentives are a set of restraint on our base human instincts which decries decency, civility and the lawful order. Self interest often translates to selfishness, greed, avarice and the rabid accumulation of wealth (corruption) often exceeding the moral boundary. A major role of institutions in the society is to reduce uncertainty. Institutional quality is weakened when as a result of corrupt practices, service delivery by institutions becomes increasingly uncertain. This is perhaps what President Obama had in mind when he echoed to the rest of Africa from Ghana in 2010 that Africa does not need strong men but strong institutions. Strong institutions (devoid of corrupt practices) are the underlying superstructure which guarantees policy continuity and unfettered economic growth/development.

2.3. Conceptualizing Economic Performance

Economic performance as used here simply implies economic development. [16] as cited by (17) perhaps best posed the basic questions about the meaning of economic development by asserting that: "the questions to ask about a country's development are therefore: What has been happening to poverty? What has been happening to inequality? What has been

happening to unemployment? If all the three have declined over time from high levels, then beyond doubts, this can be a period of development for the country concerned. If one or two of these central problems have been growing worse, especially if all three have, it would be strange to call the result development, even if per capita income doubles". However, [17] emphasized that the dearth of reliable statistical data on the key variables highlighted above usually hinders the use of these variables, especially in developing countries, including Nigeria. Moreover, economic growth is much easier to measure by looking at the Gross Domestic Product (GDP). The concept of economic growth refers to sustained increase in the per capita output or income of a country over a specific period of time. Economic growth is unimpressive if the increase in per capita output is not sustained. The question that may readily come to mind is why economic growth is a widely held macroeconomic goal? The answer is not farfetched. The growth of total output relative to population means a higher standard of living. A higher standard of living on the other hand depends on the equitable distribution of output without any prejudice. This is only made possible through efficient service delivery by institutions manned by selfless individuals. In which case, "the quality of institutions and honesty of persons" (who are detribalized) have a role to play in ensuring economic development as emphasized by [16].

3. THE EFFECTS OF CORRUPTION AND INSTITUTIONAL QUALITY ON ECONOMIC PERFORMANCE IN NIGERIA

Several empirical studies have shown a negative relationship between corruption and economic growth. It is well acknowledged by scholars that corruption diverts resources from the poor to the rich; increases the cost of running businesses, distorts public expenditures and deters foreign investment necessary for improved economic performance [18,19]. The level of corruption is all time high in Nigeria owing to the co-existence of multi-ethnic groups within the same geographical territory with each ethnic group struggling to be in a position to allocate national resources. This had had severe negative consequences on institutions and economic growth vis-a-vis development of Nigeria. Even where improper conduct does not involve government officials, the effects are still severe. Corruption has negatively affected governance and the larger social structure (institutions) in Nigeria.

[17] pointed out that corruption has crippled the state's (Nigeria) ability to deliver for its citizen's enjoyment of even the minimum social and economic rights including healthcare and education. This generally has led to a retardation of economic development and to the deterioration of whatever public infrastructures that has been put in place. Critically, it has been observed that in Nigeria, uncontrolled and extreme corruption has led to bad governance. Corruption and institutional failures swallowed about 40 percent of Nigeria's \$20 billion annual oil income [20]. Other specific negative consequences of corruption in Nigeria are: loss of much needed revenue; decrease in the level of Foreign Direct Investment and loss of viable businesses by Nigerians. Corruption diminishes national prestige and respect, leads to brain drain, civil unrest, business failure and unemployment, absence of law and order and above all, poor economic performance [21].

[17] opined that, corruption is worse than terrorism because it is responsible for perpetual collapse of infrastructures and institutions in Nigeria; it is the cause of the endemic poverty and underdevelopment and cyclical failure of democracy to take root. Corruption has stifled businesses/institutions that are unwilling to engage in this nefarious activity in Nigeria. Ironically, it also eventually destroys the institutions that yield to this practice, thus halting or at least slowing down considerably, the march towards improved economic performance and

ultimately sustained economic development [22]. The current wave of unbridled oil theft (which amounts to an average of between \$750Million and \$1.5billion annually) is facilitated by corrupt political leaders (corrupt ethnic zealots) who conspire and hide to commit this crime against the Nigerian state knowing that they may be protected from prosecution because of the fact that they belong to a particular cabal and by this act, they are taking their share of “the national cake”. Thus, oil theft or bunkering is a major revenue loss to Nigeria as well as a serious challenge to Nigeria’s economic development because 85 per cent of total revenue receipts of government come from the oil sector.

An opinion poll conducted by the Guardian Newspaper in Nigeria revealed that 70 per cent of the 1,080 respondents picked corruption as one of the worst problems hindering the nation’s advancement [23]. In the same vein, [24], asserted that Nigeria’s previous leaders stole about 64 trillion Naira (about US \$507billion) from public coffers. In the list by the Berlin based anti-corruption watchdog for its 2010 rating, Nigeria was ranked 134 out of 178 countries surveyed with 2.4points. The rating showed that Nigeria ranked 22 ahead of other African countries like Togo, Sierra-Leone, Zimbabwe, Mauritania, Cote d’ Ivoire, Libya, Guinea, Guinea-Bissau, Congo and Kenya (Transparency international, 2010).

According to [17], a nationwide corruption survey by the Nigeria Corruption Index (NCI) 2007 identified the Nigerian Police as the most corrupt organization in the country, closely followed by the Power Holding Company of Nigeria (PHCN). Corruption in the Education Ministry was found to have increased from 63 per cent in 2005 to 74 per cent in 2007, as against 96 per cent to 99 per cent for the Police in the corresponding period. The Independent National Electoral Commission (INEC) was among the new organizations identified as corrupt among the 16 organizations on a list which included Joint Admission Matriculation Board, the Presidency, and the Nigerian National Petroleum Corporation (NNPC). Institutional failure arising from corruption is conspicuously brought to the fore in the crass inefficiency and waste in the administration of the nation’s refineries by the Nigerian National Petroleum Corporation (NNPC). It is widely acknowledged that this institution is a drain pipe on the nation’s revenue as a lot of corrupt activities such as smuggling and diversion of petroleum products, fuel diversion and fraudulent domestic market practices are directly or indirectly aided by officials of this institution [25]. The Federal Road Safety Commission (FRSC) and the Nigerian Railway Corporation (NRC) were identified as the least corrupt organizations with respect to bribe taking from the populace as at June 2007 [26]. In financial institutions as at 2009, 15 former bank Executive officers/Managing directors were charged with corruption, under the money laundering and allied offences of the EFCC Establishment Act.

In the light of these various levels of corruption in the different institutions mentioned above, it becomes very glaring why these institutions are weak in the delivery of efficient services necessary for improved economic performance. As a matter of emphasis, the state of institutional quality in Nigeria is in doubt. The implication on the economy is that it leads to welfare loss or dead weight loss arising from a drastic reduction in output and services production. This exists as the consumer/producer surplus is lost. This is more or less due to restriction imposed on output by corruption and weak institutions.

4. THE MODEL AND DATA

The period of analysis covers 1970-2012. This is the longest period for which numerical data is available and accessible. The econometric approach is based on a time series data regression. The model specification is consistent with the endogenous growth theory briefly reviewed in section 2.1above. The original endogenous production function is thus:

$$Y=AK^\alpha L^{1-\alpha} K^\beta \quad (1)$$

Where

Y=real GDP per capita at time t

A= total factor productivity

K=Capital stock

L=Labour

For simplicity, it is assumed that each productive unit will use the same level of capital and labour. Then, the aggregate production function becomes

$$Y=AK^\alpha L^\beta \quad (2)$$

Where α & β are elasticity coefficients.

It is assumed that the impact of corruption and institutions on economic performance possibly operates through total factor productivity (TFP) or technical efficiency (A). [27] had argued the role institutions play in increasing technical efficiency. Thus the level of technical efficiency is affected by corruption and the quality of institutions. This in turn affects the efficiency of investment and economic performance. Since the paper intends to demonstrate quantitatively how corruption and institutional quality impact on economic performance in Nigeria, it is assumed therefore, that TFP is a function of corruption (measured by corruption index) and quality of institutions (measured by a proxy, contract intensive money).

Thus:

$$A = f(\text{corr and cim}) \quad (3)$$

Where:

CORR = Corruption

CIM = Contract Intensive Money calculated by Broad money supply minus currency in circulation divided by broad money supply. It is used as an indicator of property rights and property right measures trust, the degree to which a country's law protect private property.

Combining equations 2 and 3,

$$Y = f(\text{CORR, CIM, K, L}) \quad (4)$$

From equation 4 an explicit estimation function is specified, after taking the natural logs of both sides as follows:

$$\text{LogY} = a_0 + a_1\text{CORR} + a_2\text{CIM} + a_3\text{K} + a_4\text{L} + \text{Et} \quad (5)$$

Where all the variables are as previously defined and Et is the error term. The sign of all the elasticity coefficients are expected to be positive except for corruption that is expected to be negative.

This paper adopted the co-integration and error correction paradigms to investigate the relationship between economic performance, corruption and institutional quality from 1970 to 2012. Given data instability in Nigeria occasioned by policy instability cum economic disruptions etc, it becomes increasingly useful to test the time series property of the variables

included in regression analysis for meaningful economic results. The paper adopts the general to specific approach to arrive at the parsimonious estimate by eliminating jointly insignificant variables. The error correction term shows the speed of adjustment to restore equilibrium in the dynamic model. In particular, the ECM coefficient shows how quickly variables converge to equilibrium and the ECM term is expected to have a negative sign [28].

A time series data set was obtained from different sources. The data on economic performance (measured by real GDP), capital (captured by gross fixed capital formation, K) and institutional quality (measured by CIM) were obtained from the Central Bank of Nigeria Statistical bulletin, (2012) while the data on corruption (CORR) was obtained from transparency international corruption index, 2012. The data on labour force (LF) was obtained from National Bureau of Statistics, 2012).

5. PRESENTATION AND DISCUSSION OF RESULTS

5.1 Presentation of Results

The first step involved in the estimation of a linear relationship is the comprehensive pre-testing procedure to investigate the characteristics of the time series variables. Using the augmented Dickey-Fuller tests, the results as presented in Table 1 below shows that all the series (variables) are stationary at first difference. That is, the result indicates that the variables GDP, CIM, CORR, K, and LF are integrated of order one – 1(1). Therefore, a co-integration test was carried out to confirm and determine the existence of a long-run relationship among the variables in the equation.

Table 1. ADF unit root test

Variables	ADF Statistics (Computed)		5% Critical Value		Remark
	Level	1 st Difference	Level	1 st difference	
GDP	-1.985917	-3.9588401	-2.9378	-2.9399	1(1)
CORR	-1.935202	-3.952768	-2.9378	-2.9399	1(1)
CIM	-1.085054	-2.616292	-2.9378	-2.9399	1(1)
K	-2.119791	-3.742901	-2.9378	-2.9399	1(1)
LF	-1.87344	-3.16174	-2.9378	-2.9399	1(1)

Source: Computed by authors using E-views

The Johansen co-integration test (Table 2) reveals that there is a long-run relationship between gross domestic products (GDP) and other variables captured in the model. The result indicates one co-integrating equation(s) at 5 per cent level. The conclusion drawn from the result is that there exists a unique long-run relationship between LOG(GDP), LOG(CIM), LOG(CORR), LOG(K) and LOG(LF). Since there is one co-integrating equation, an economic interpretation of the long-run on gross domestic product in Nigeria can be obtained by normalizing the estimates of the unconstrained co-integrating equation on gross domestic product. The identified co-integrating equation can then be used as an error correction term (ECM) in the error correction model. This series will form the error correction variable, similar to the residuals generated when using the Engle-Granger two-stage method.

Table 2. Johansen co-integration test

Series: GDP CORR CIM K LF				
Lags interval: 1 to 1				
Eigenvalue	Likelihood Ratio	5 percent Critical value	1 percent Critical value	Hypothesized No. of CE(s)
0.554103	77.76278	68.52	76.07	None **
0.427096	46.26377	47.21	54.46	At most 1
0.274209	24.53931	29.68	35.65	At most 2
0.222494	12.04006	15.41	20.04	At most 3
0.055458	2.225149	3.76	6.65	At most 4

*(**) denotes rejection of the hypothesis at 5%(1%) significance level. L.R. test indicates 1 cointegrating equation(s) at 5% significance level, Source: Authors' computation.*

Having established the extent and form of co-integrating relationships between the variables of the model, an over parameterized error correction model as shown in Appendix 1 was estimated. At this level, the over parameterized model is difficult to interpret in any meaningful way: its main function is to allow us to identify the main dynamic patterns in the model. But this study will be concerned with the parsimonious model that is more interpretable. Table 3 shows the result of the parsimonious model.

Table 3. Parsimonious model

Dependent variable: LOG (GDP)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LOG(GDP(-1)))	0.715224	0.131996	5.418534	0.0000
D(LOG(CORR))	-0.632818	0.269300	-3.493198	0.0005
D(LOG(CORR(-1)))	-0.543471	0.240152	1.430225	0.1630
D(LOG(CIM))	0.373143	1.137825	-2.642309	0.0056
D(LOG(CIM(-1)))	0.279207	1.427585	-1.279787	0.2516
D(LOG(K))	0.055714	0.127119	-2.438283	0.0003
D(LOG(LF))	0.790230	0.702479	2.124916	0.0005
ECM	-0.541031	0.022793	-4.800128	0.0009
C	0.859511	1.219388	2.704871	0.0063
R-squared	0.843242			
Adjusted R-squared	0.801707			
F-statistic	70.13036			
Durbin-Watson stat	1.969827			

Source: Authors' computation

From Table 3, the lagged value of gross domestic product (GDP) is positive and conforms to economic theory. This implies that a 1 percent increase in last year's GDP will lead to 0.715224 percent increase in economic growth (the GDP) of the current or present year, ceteris paribus. Also, the coefficient of the lagged GDP is statistically significant at 5 per cent level.

Also, the current value of corruption has a negative sign that is in line with economic theoretical expectation. The coefficient of corruption is statistically significant at 5 per cent level. The implication of this result is that a 1 percent rise in the current level of corruption will lead to 0.632818 percent decrease in the current level of gross domestic product (economic growth) in Nigeria, all things being equal. This result further supports the study by [8,29] that

independently examined the effect of corruption on economic activities in different developing economies respectively and discovered that corruption was a major hindrance to economic growth and development.

The lagged value of corruption has a negative sign that is in line with economic theoretical expectation. The coefficient of corruption is statistically insignificant at 5 percent level. The implication of this result is that last year's level of corruption does not have a significant effect on the current level of economic growth even though a 1 percent rise in the current level of corruption will lead to 0.543471 percent decrease in the current level of gross domestic product (economic growth), all things being equal.

In the same table, the value of institution quality (as measured by contract intensive money) and its one year lagged value are contemporaneously positive but only the current value of institution is statistically significant at 5 percent level while the one year lagged value is not. This means that an improvement in institutional quality over the years would definitely lead to increase in economic growth in Nigeria. Thus, low level of corruption and improved institutional quality is necessary for enhanced and sustained economic growth in Nigeria.

The coefficient of capital investment (K) is correctly signed and statistically significant at 5 percent level. This means that we are 95 percent confident that an increase in the volume/value of capital investment will enhance the rise in economic performance (GDP) by 0.055714 percent, *ceteris paribus*. On this basis, capital is an important factor for continual ebb and flow of business/economic activities in Nigeria. In the same vein, the coefficient of labour force (LF) is positive and in line with economic theoretical expectations. The labour force coefficient is statistically significant at 5 percent level. Thus, there is 95 percent confidence level that a 1 percent increase in labour force would engender a 0.790230 per cent improvement in economic performance in Nigeria, all things being equal. This is not surprising given that within the period under study, the Nigerian government has invested significantly in human capital development.

The strong significance of the coefficient of the error correction mechanism (ECM) supports our earlier argument that the variables are indeed co-integrated. The ECM shows a relatively high speed of adjustment (54 percent) of the short-run and long-run equilibrium behavior of gross domestic product (economic performance) and its explanatory variables.

The adjusted R^2 shows that about 80 percent of the total variation in economic performance (measured by gross domestic product) is determined by changes in the explanatory variables. Thus, it is a good fit. The F-statistics (70.13) indicates that all the variables are jointly statistically significant at 5 per cent level. The Durbin Watson statistics of 1.9 reveals that it is within the acceptable bounds, thus it is good for policy analysis.

5.2 Discussion of Results

The parsimonious results show that corruption is statistically significant and its coefficient has the correct *a priori* sign. This strongly underscores the relative importance of corruption in the determination of economic performance in Nigeria. This is because as corruption increases, it retards economic performance, all things being equal. This result is consistent with the work of [30]. Specifically, [30] maintained that corruption lowers fiscal revenues, hinders the building of infrastructures and industrial growth which is necessary for improved economic performance. The result also supports [24] assertion that corruption is responsible for perpetual collapse of infrastructure and institutions in Nigeria.

The institutional quality component of the estimated equation is equally important. This is because institutions theorists believe that economic agents rely on the state for enforcing contracts and protection; hence in countries where corrupt officials abuse their authority for self enrichment, economic agents would be unwilling to carry out any transactions. This explains why such states remain under-developed. Specifically, according to institutions theorists, upholding and credibly enforcing property rights stands crucial in any economic transactions. The proxy for measuring institutional quality on economic performance is contract intensive money (CIM). CIM is used because it determines to a greater extent the quality of institutions and this measure has been extensively used by most scholars.

The coefficient of institutional quality on economic performance was not only statistically significant but was consistent with economic theoretical expectation. This shows that an improvement in institutional quality could enhance economic performance in Nigeria. This is more so as improved institutional quality enhances the productive capacity of the economy and therefore may contribute to the resilience of the economy. As a matter of emphasis, strong institutions can drastically enhance Nigeria's ability to plan and execute developments projects, to change the structure of the economy and to efficiently reallocate resources. On the other hand, the implication of weak institutions on the economy is that it leads to welfare loss (dead weight loss).

On the relative importance of both variables in the determination of economic performance in Nigeria, the parsimonious result shows that corruption has a greater significant impact of 63 per cent on economic performance as against institutional quality that has 37 per cent. This implies that corruption is a serious hindrance to macro-economic performance than institutional quality in Nigeria. This result also gives credence to the widely held view that the bane of improved economic performance in Nigeria is corruption.

Capital and labour force that were used as control variables in the estimated model are equally statistically significant and conform to economic theory. This implies that these variables are necessary in the determination of economic performance in Nigeria, if and only if corruption is reduced and institutions strengthened.

6. CONCLUSION

This study investigated the dynamic relationship between economic performance and the twin variables of corruption and institutional quality in order to provide a platform for evidence based policies to tackle corruption and institutional weakness. This is important because the cost of corruption and weak institution is greater and this has been recognized in the literature. The analysis of data was carried out using the ordinary least squares (OLS) estimation technique because of its desirable properties of best, linear unbiased estimator.

The parsimonious results indicated that there exist a link between corruption, institutional quality and economic performance in Nigeria. The existence of this relationship has been and continues to be antithesis to economic progress in Nigeria. At present, due to corruption which has grossly undermined institutional quality, almost all economic cum political activities in Nigeria have rent-seeking undertone with serious negative consequences on economic performance. As noted in this paper, as long as the economics of corruption continues to play a greater role in economic/political transactions in terms of resource allocation and utilization, it will be difficult to achieve even distribution of national resources for the benefit of all. In view of this ugly trend, the government should embark on aggressive re-orientation/education of the populace (specifically, the elites who are the key decision makers) on the need to desist

from rent-seeking activities which impedes long term economic growth. Also, there is the need to mete out stiffer penalties (like forfeiture of all wealth acquired whether legitimately or otherwise and life jail) to public office holders who have been found guilty of corruption irrespective ethnic affiliations. Once the scourge of corruption is successfully tackled, institutional quality will greatly improve and this would have a positive ripple effect on economic performance in Nigeria.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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APPENDIX 1: OVERPARAMETERISED RESULT

Dependent Variable: LOG (GDP)
 Method: Least Squares
 Date: 03/14/14 Time: 09:49
 Sample (adjusted): 1972 2009
 Included observations: 38 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LOG(GDP(-1)))	0.900314	0.209452	4.298430	0.0003
D(LOG(GDP(-2)))	0.298318	0.220676	-1.351840	0.1902
D(LOG(CORR))	-0.402386	0.333564	2.007152	0.0044
D(LOG(CORR(-1)))	-0.251030	0.346923	3.723591	0.0009
D(LOG(CORR(-2)))	0.146101	0.301094	0.485232	0.6323
D(LOG(CIM))	0.093599	2.581838	-2.927091	0.0039
D(LOG(CIM(-1)))	0.029453	4.130616	4.781833	0.0000
D(LOG(CIM(-2)))	2.256239	2.906896	-0.776168	0.4459
D(LOG(K))	0.046112	0.156530	-2.294588	0.0011
D(LOG(K(-1)))	0.044404	0.147891	-0.300247	0.7668
D(LOG(K(-2)))	0.053311	0.140553	-0.379297	0.7081
D(LOG(LF))	3.234309	3.344333	-2.967101	0.0040
D(LOG(LF(-1)))	5.613492	3.438395	1.632591	0.1168
D(LOG(LF(-2)))	1.122738	1.273399	-0.881686	0.3875
ECM	-0.063628	0.077255	2.823610	0.0003
C	1.137432	1.780960	0.638662	0.5296
R-squared	0.650255	Mean dependent var		12.24099
Adjusted R-squared	0.616338	S.D. dependent var		1.170474
S.E. of regression	0.338552	Akaike info criterion		0.967286
Sum squared resid	2.521591	Schwarz criterion		1.656796
Log likelihood	-2.378440	F-statistic		28.01705
Durbin-Watson stat	2.160579	Prob(F-statistic)		0.000000

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