

Institutional Reform and Corruption on Economic Growth of Nigeria

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ABSTRACT: The study examined the effect of institutional reform and corruption on economic growth of Nigeria; these were with the view to determining the relationship among institutional reform, corruption and economic growth in Nigeria. Secondary data were used for the study. Data series on corruption index, rule of law and government contract repudiation covering the period from 1985 to 2018 were sourced from the International Country Risk Guide (ICRG) indicators. Data collected were analyzed using tables, graphs, Autoregressive Distributed Lag (ARDL). The ARDL estimates revealed that rule of law and government contract repudiation have a positive effect on economic growth in the long run. On the other hand, the result revealed that corruption has a negative and significant effect on economic growth in the long run. The study concluded that institutional reform and level of corruption are important in determining economic growth in Nigeria.

KEYWORDS: Institutional reform, corruption, economic growth

Introduction

The literature on Institutional approach to development stresses the importance of term “good institutions”. The term is generally described as the traditions and institutions which explain the authority as applied in a giving country matters for economic growth and poverty. This understanding surface from the earlier work of institutional economists such as North, (1990), Murphy, Shleifer, and Vishny (1993), their pioneering works generated a wide spreads of cross-sectional empirical evidences, suggesting a positive relationship between institutional structures and economic growth.

Good quality institutions may promote incentive structure that leads to higher economic growth through reducing uncertainty and promoting efficiency (North 1990). Hall and Jones (1999) argued that overall productivity of factors of production in a country is driven by the quality of its institutions. Later in the year 2010, Acemoglu and Robinson, further argued that Institutions were the fundamental determinant of economic growth and facilitate development differences across countries.

On the other hand, corruption is a symptom and result of institutional weakness, with potential negative effects on the economic performance of a country, corruption hinders growth through its adverse effects on investment in physical capital, human capital, and political instability (Ceyhun, 2016). Corruption is seen as a daunting obstacle to sustainable development, a constraint on education, health care and poverty alleviation and a great impediment to the achievement of the Millennium Development Goals (MDGs), the Vision 20:20 and other several goals and agenda of various successive governments in Nigeria (Eigen 2010). Adewale (2011) explained that corruption is an act of diverting the resources that should have been used for developmental purposes of the society to private or personal use. This accumulation of the national economic resources for personal benefits had variously contributed to the leakage of capital from Nigeria for illegal deposits abroad. He further postulated that corruption has a crowding out effect on the growth and development of the country.

In Nigeria, much of the high rates of corruption have been largely due to the absence of institutional quality that direct attention away from predation to production. When the primary function of the state is essentially redistributive or predatory, productive activities become less significant as a driving force of economic growth (Iyoha, and Oriakhi 2002). According to Deepak (1998) there is a growing agreement that the evolution of institutional reforms is one of the central explanations of differing level of corruption and economic growth. It is against this background that this empirical work is motivated to analyze the relationship among institution reform, corruption and economic growth in Nigeria.

Nigeria is a nation in dire need of growth and development like most other nations of the world. The dream of growth for the improvement in the economy of the nation seems to be fading away. This could be ascribed to the inability of the various governments in the past to effectively utilize the available scarce resources to accomplish the desired goals of economic growth. One of the major reasons for this state of affair is the high rate of corruption in the country (Gberevbie and Iyoha 2007).

From the behavior of past governments in Nigeria, it does seem that the issue of corruption and institutional reforms was taken for granted (Hamid 2011). This is evidenced by the frequency of how important political institutions such as the rule of law, electoral process, labour rights and democratization procedures and civil liberties are often abused, while setting ambitious economic growth goals to be achieved.

The implicit assumption was that once the institution is right, corruption is reduced and economic improvements will result from there Yusuf and Malarvizhi (2014). However, while the argument may seem plausible on the surface, there is yet no credible empirical evidence to substantiate it in Nigeria. This lack of empirical evidence to guide the trajectory of policy reforms may have caused policy makers to be unconscious of sequencing of institutional reforms to achieve sustainable and sustained growth.

This paper tackles the general questions of the role of institutional reform and corruption in achieving economic growth, treated among others by Adogamhe, (2010); Sachs, McArthur, Schmidt-Traub, Kruk, Bahadur, Faye and McCord (2004). On the contrary to these authors who were interested in the effects of institutions on the level of poverty and per capita income. This article is interested in the direction of influence from economic growth to institutions and whether institutional reforms are what are needed to address structural problems at an early stage of development.

This study significantly differs from the study of Adogamhe, (2010); Sachs, et al. (2004) by complementing empirical evidences with historical evidences from the successful developing economies on whether institutions are necessary before a country can achieve economic development at an early stage of economic development. Lastly, so far our knowledge goes beyond reasonable doubt, these existing studies did not solve the endogeneity problems in their studies, this paper aim to overcome this kind of shortcoming by using the ARDL Approach to Co integration through the error correction analysis. This signifies there is lack of clear understanding on the causal linkage between institutions and economic growth in Nigeria; hence, a thorough examination of the impact of institutions and level of corruption in specific to Nigeria is now imperative. Following the introduction above the remaining section will be structured as follows; part two will focus on theoretical and empirical literature review while the remaining section will present method and discussion of the results.

Theoretical Literature Review

a. Institution quality hypothesis

The institution quality hypothesis contends that the institutional framework within which economic agents interact with each other in an economy affects economic growth and development.

According to this view, what matters most are the rules of the game in a society, which are defined by the prevailing explicit and implicit behavioral norms and their ability to create appropriate incentives for desirable economic behavior (Rodrik and Subramanian 2004). Acemoglu and Robinson (2010) further argue that institutions are the fundamental determinant of economic growth and cause development differences across countries. Poor quality institutions may slow down the economic activities by providing room to economic agents to remain busy in redistributive politics with lower economic returns rather than growth promoting economic activities (Murphy, Shleifer, and Vishny 1993).

On the other hand, good quality institutions may promote incentive structure that leads to higher economic growth through reducing uncertainty and promoting efficiency (North 1990). Hall and Jones (1999) argued that overall productivity of factors of production in a country is driven by the quality of its institutions. Efficient, well developed and uncorrupted institutions guarantee that labor can only be used for productive purposes and not wasted in rent seeking activities, which leads to higher economic growth (North 1990).

Good quality institutions enhance the ability of a country to adopt new technologies invented elsewhere which may play an important role in upgrading the development process of a country (Bernard and Jones 1996). Iqbal and Daly (2014) argue that weak institutions divert resources from productive sector to unproductive sector hence promote rent seeking activities. While, strong institutions reduce the chances of rent seeking activities and accelerate economic growth process and productivity of the reproducible factors. This study argues that weak institutional framework creates an opportunity for rent seeking behavior that may divert resources to unproductive sectors. The consequences of these activities for growth can be negative: resources may not be efficiently allocated, externalities may be ignored, and transaction costs may be increased. The incomplete rule of law, non-enforcement of property rights, inadequate policies and the lack of reliable infrastructure constitute a weak institutional framework that may promote rent seeking activities (Iqbal and Daly 2014).

b. Sand in the Wheels and Greasing the Wheel Hypotheses

The greasing the wheels hypothesis postulates that corruption is beneficial for growth and development because it allows circumventing administrative impediments. This view first gained prominence back in the 1960s with a provocative article called "Economic Development through Bureaucratic Corruption" by Leff (1964). Since then it has been given a theoretical foundation by works of, Lui (1985) and Beck and Maher (1986) and most recently, various empirical claims have been made in its favor. For example, Egger and Winner (2005) conclude using a data set of 73 developed and less developed countries, the study found that corruption is a stimulus for FDI, which confirms the position of Leff (1964) that corruption can be beneficial in circumventing regulatory and administrative restrictions. The general idea is that corruption facilitates beneficial trades that would otherwise not have taken place. In doing so, it promotes efficiency by allowing individuals in the private sector to correct pre-existing government failures of various sorts.

An alternative view of corruption is that it creates rather than corrects inefficiencies. The sand in the wheels hypothesis, postulates that corruption impedes growth and development because it entails resource misallocation, raises transaction costs, and has other negative effects. This view has a long tradition within public choice (e.g., Buchanan and Tullock, 1962; Rose-Ackerman, 1999). It was given a new life by Shleifer and Vishny (1993, 1998). They have, in fact, coined the term "the grabbing hand" to describe how corruption arises because government officials seek rents whenever they can, subject only to the constraints given by economic, legal and political institutions. Corruption is a symptom and result of institutional weakness, with potential negative effects on the economic performance of a country; it increases the cost of operations and maintenance in public institutions (Mauro 2002). This enhances inefficiency in public institutions, and raises the prices of public and social services, potentially increasing inflation rates in countries.

c. The Neo-classical growth theory

The accumulation of productive factors and the existence of diminishing returns have found modern expression in neoclassical production theory in the form of a production function. The production function summarizes the amount of output that can be produced with various combinations of inputs. The most commonly used form of the production function models output as depending on just two inputs—capital and labor, according to a particularly convenient mathematical form (the Cobb-Douglas production function). It is commonly assumed that the production function is “constant returns to scale”. This means that a doubling of *all* inputs will lead to double of output. For instance, if the amount of capital is increased without any increase in labor, each subsequent addition of capital will yield smaller and smaller increments to output. Furthermore, there are three main variables to explain economic growth; capital (K), technology (A) and labor (L). The Neo-classical growth theory can be presented as follows:

$$Y = F(A, K, L) \dots\dots\dots (1)$$

The growth theory categorized capital into two; physical capital and human capital. Physical capital generates economic growth because it increases labor productivity. The key assumption of the model is that the production function moves according to a diminishing return to capital. This theory will be adopted as the theoretical framework of this research.

Empirical Literature Review

Bertrand (2013) examines the relationship among corruption, institution and economic development. The methodology makes use of cross national data developed by the World Bank on perceived level of corruption, institutional framework quality and economic development to test various hypotheses. The added value of the study is thus to investigate the impact of both institutional framework quality and corruption on economic development. The empirical finding supported the sand in the wheel school of thought in relationship to the effect of corruption on economic development

Sawyer (2010) examined governance, institutional quality and economic growth. The study built the relationship between these variables through total factor productivity and economic growth in Latin America. After reviewing the literature on the determinants of economic growth in Latin America, he attributed that slow growth of total factor productivity (TFP) as the primary cause of their slow economic growth. And that slow growth TFP was linked to the quality of institutions and governance in the region. For measuring institutional quality data has been taken from Ease of Doing Business data, and the scores for Rule of Law and Regulatory Quality were taken from the Governance Matters data. Yusuf and Malarvizhi (2014), examine institutional qualities and economic growth performance of Nigeria. This study employed two methods, the ARDL model approach to co integration and Causality, this study found that higher sustainable improvement in good institutions is associated with rising growth and per capita income. Pertaining to the major area of dispute on the direction of influence, the findings of this study indicate that there is a reverse causality and suggests that the government needs to focus on development of critical institutional sectors that may yield faster dynamic transformational change.

Methodology

Based on the neo-classical growth theoretical framework discussed above, consider the following Cobb-Douglas function which exhibits constant returns to scale but diminishing return to individual factors:

$$Y = AK^\alpha L^{1-\alpha} \dots\dots\dots (2)$$

Where $\alpha < 1$, and Y is the real output in country at time t, K is the physical capital in the country at time t, and L is the amount of labour in the country at time t. A represents a labour-augmenting technology in the country at time t and is assumed to grow exogenously at rate g. The standard derivation of steady state income per capita function then will be:

$$\ln y = \ln A_0 + gt + \frac{\alpha}{1-\alpha} \ln s - \frac{\alpha}{1-\alpha} \ln(n + g + \delta) \dots\dots\dots (3)$$

Where s represents physical capital, n is the rate of population growth, g is technological progress and δ is depreciation rate all of which are constant and exogenous for any period. The primary motivation to use Solow framework is particularly due the fact that it has a shift parameter, A, that according to Mankiw, Gregory, Romer, and Weil (1992), reflects not just labour-augmenting technology, but also other factors such as resource endowments, climate, institutions, and so on (institutions term is added to the list by Campos and Nugent (1998). Therefore, the notion of institutions affecting total factor productivity can be explicitly incorporated in the model via a function of A, such as

$$A = A_0 e^{gt+l} \dots\dots\dots (4)$$

Where gt is growth rate of technology and l is institutional reform. Thus, a growth model based on Equation (2) incorporated with Equation (4) can be conveniently derived as the following:

$$\ln y = \ln A_0 + gt + l + \frac{\alpha}{1-\alpha} \ln s - \frac{\alpha}{1-\alpha} \ln(n + g + \delta) \dots\dots\dots (5)$$

The functional form of equation (5) with appropriate error term is therefore specified as follows:

$$\ln y = \alpha + \beta l + \chi \ln s + \phi \ln(n + g + \delta) + \varepsilon \dots\dots\dots (6)$$

Where α, χ, β and ϕ are the parameters to be estimated. Equation (6) presents a heuristic way of testing the institutional reform effects on growth via its impact on factors productivity. The model specification on the impact of institutional qualities on economic growth can be stated as follows, from equation 6, l is institutional quality and assuming that depreciation and savings are constant following the work of Bimal and Satyaki (2014), then

$$GDP_t = f(INQ_t) \dots\dots\dots (7)$$

Where INQ is institutional reform. From equation 7 above, institutional reform can be decomposed into rule of law (LAW), government contract repudiation (GOV) and corruption (COR). (Sawyer, 2010; Knack and Keefer, 2005).

$$INQ_t = f(LAW, GOV, COR) \dots\dots\dots (8)$$

Substituting equation 8 in 7, then

$$GDP_t = f(LAW_t, GOV_t, COR_t) \dots\dots\dots (9)$$

Expressing equation 9 in explicit form becomes

$$GDP_t = \alpha + \beta LAW_t + \chi GOV_t + \delta COR_t + \varepsilon_t \dots\dots\dots (10)$$

Results and discussion

More often than not, most time-series data are not stationary at levels as some variables may be too small or too large to the extent that they may never return to their expected mean. It is this that has necessitated the need to carry out unit root test or stationarity test whenever we are dealing with time-series data. Consequently, all the examined variables are integrated of order one, $I(1)$. The implication of this order is that the time-series variables used in this study are non-stationary at their level forms, but are only stationary after their first difference.

Since the time-series data consist of variables that are $I(1)$ the next task is to test for the existence of co-integration, or otherwise, among the variables. In order to capture the extent of co-integration among the variables, the multivariate co-integration methodology proposed by Johansen and Juselius (1990) is utilized. This technique enables us to determine whether there is at least one linear combination of these variables that is $I(0)$. The trace test and the Max-Eigen test from this technique are made use of to establish the number of co-integrating vectors.

Table 1. Co-Integrating Results (with a linear trend) where r is the number of co-integrating vectors. Lag interval (1 to 2)

Trace Test				Max-Eigen Test			
Null	Alternative	Statistic	Prob.	Null	Alternative	Statistic	Prob.
$r = 0$	$r = 1$	177.7237	0.0000*	$r = 0$	$r = 1$	65.98640	0.0001*
$r \leq 1$	$r = 2$	111.7373	0.0025*	$r \leq 1$	$r = 2$	41.57603	0.0336*
$r \leq 2$	$r = 3$	70.16126	0.0469*	$r \leq 2$	$r = 3$	28.06793	0.2104
$r \leq 3$	$r = 4$	42.09333	0.1561	$r \leq 3$	$r = 4$	21.69204	0.2366
$r \leq 4$	$r = 5$	20.40129	0.3960	$r \leq 4$	$r = 5$	11.62585	0.5849
$r \leq 5$	$r = 6$	8.775439	0.3866	$r \leq 5$	$r = 6$	8.756583	0.3070
$r \leq 6$	$r = 7$	0.018857	0.8907	$r \leq 6$	$r = 7$	0.018857	0.8907
<i>Trace test indicates 2 co-integrating equations at the 0.05 level.</i>				<i>Max-Eigen test indicates 2 co-integrating equations at the 0.05 level.</i>			

Source: Author's Computation 2020

Both the trace test and the Max-Eigen test indicate that the null hypothesis of no co-integration (that is, $r = 0$) among the variables should be rejected, as both of them indicate 2 co-integrating equations at the 5% significant level. This implies that there is co-integration between economic growth (which is proxied by GDP) and the respective component of institutional reform at the 5% significant level. The existence of co-integration implies that there is long-run relationship among the variables in the model. Hence, the linear combination of two or more of these variables exhibits a long-run relationship.

In order to achieve the first objective of the study which is to examine the effect of institutional reforms on economic growth of Nigeria, equation 9 is estimated using ARDL. Institutional reform can be decomposed into rule of law (LAW) and government contract repudiation (GOV).

Table 2: ARDL Model Long-run Results
Dependent Variable: Economic Growth (LOG(GDP))

Long run coefficients				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(LAW)	0.437743	0.180891	2.419926	0.0198**
LOG(GOV)	0.253162	0.766185	0.330418	0.1702
LOG(COR)	-1.254034	0.422767	-2.966253	0.0162**
C	-7.545591	6.340310	-0.138690	0.8908

Source: Author's computation 2020

Note ***, ** and * are 1%, 5% and 10% significant level

The result reveals a positive and statistically significant relationship between rule of law and economic growth in the long run ($t = 2.42$, $p < 0.05$). This can be interpreted to mean that an increase in rule of law would cause economic growth to increase in the long run, suggesting that good institutions through stronger rule of law promote growth. This positive relation is consistent with the predictions of traditional economic theory. This theory states that good quality institutions may promote incentive structure that leads to higher economic growth through reducing uncertainty and promoting efficiency. This result is also consistent with the study of Bimal and Satyaki (2014) who found rule of law and political institutions both play a highly significant role in explaining variations in the extent of industrial development across the Indian states. Furthermore, the coefficient of government contract repudiation is positively related with economic growth but statistically not significant at 5 percent level of significance ($t = 0.330$, $p > 0.05$), hence it cannot be used to make inferences.

Corruption (measured by corruption index) variations have negative and statistically significant relation with economic growth at 5 percent level of significance ($t = -2.966$, $p < 0.05$) in the long run. This can be interpreted to mean that an increase in corruption level in Nigeria would cause economic growth to decrease. This is because corruption hinders growth through its adverse effects on investment in physical capital, human capital, and political instability. For instance, the coefficient of corruption is -1.25 which suggests that one unit or one percentage increase in corruption level will cause economic growth to decrease by 1.25 units or at an outrageous rate of 125% in the long run. The result supports the "sanding the wheels hypothesis", the "sanders" believe that corruption is an obstacle to growth. This confirms the result of the study by Ekundayo, Okenesi and Omojolaibi, (2013) that proved corruption impairs and impacts economic growth. Toke, Dutta and Sena (2009); Rahman, Kisunko and Kapoor (2004); Mobolaji and Omoteso (2009) also recorded a strong negative correlation between growths in genuine wealth per capita a direct measure of sustainable development and corruption.

Once the long-run co-integrating model has been estimated, the next step is to model the short-run dynamic parameters within the ARDL framework. Thus the lagged value of all level variables (a linear combination is denoted by the error-correction term, ECM_{t-1}) is retained in the ARDL model.

The short run impact of rule of law is positive and statistically significant at 5 percent level of significance ($t = 3.683$, $p < 0.05$). In short, institutional quality has an impact on economic growth in the short run as well as long run. The study is in line with Institution quality hypothesis. The finding is also supported by the studies conducted by Acemoglu and Robinson (2010), Iqbal and Daly (2014). The results further show that the coefficient of the error correction term (ECM_{t-1}) is negative, as expected, and highly significant at one percent level for all regression equations. The ECM represents the speed of adjustment of the dependent variable to its long-run equilibrium following a shock. Moreover, the significance of the ECM confirms the existence of a stable long-run relationship, and points to a long-run co-integration relationship

between the significant regressor and the dependent variable. The error correction term is -0.3841 which indicates that 38.4 percent of the previous year's deviation from long-run equilibrium will be restored within one year. This is corroborated by the R^2 value of 0.95 which shows that about 95 percent of the variation in Nigerian economic growth is explained by the variables of institutional reform and index of corruption.

Conclusion

The study examines the relationship among institutional reform, corruption and economic growth in Nigeria between 1985 and 2018. The specific objectives were to; examine the effect of institutional reforms on economic growth in Nigeria; examine the effect of government corruption on economic growth of Nigeria. From the foregoing analyses in the study, the following results were obtained: The result revealed that rule of law and government effectiveness as measures of institutional reform have positive and significant effect on economic growth both in the short run and long run. On the contrary, corruption measure by corruption perception index has negative effect both in the short run and long run. The result shows that the money embezzled by corrupt officials was not used to create wealth in the domestic economy, thereby having a negative multiplier effect on economic growth.

Furthermore, the result revealed that the model correct its short run disequilibrium by 6% annually. Based on the findings of the analyses, the study concludes that corruption in government reduces economic growth if measures are not put in place to control it. In addition, the study concludes that institutional reforms are important in determining economic growth in Nigeria.

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