

## Corruption, Public Investment and Revenue: Evidence from Nigeria

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### Abstract

In this study, we present evidence of the effects of corruption on public investment and revenue in Nigeria. We find that corruption distort the entire decision process associated with public investment. The evidence we presented shows that higher corruption increase higher public investment. We could not conclude on the effect corruption has on public revenue in Nigeria due to the insignificant of the coefficient of corruption in our model. In addition, we present evidence of efforts by Nigeria government to tackle corruption over the years. While we accept that achievement in this area had been made, we emphasize the need for more collaborative efforts by all stakeholders to effectively tackle corruption in Nigeria.

**Keywords:** Corruption; GDP; Government expenditure; General budget revenue and tax revenue

### Introduction

In the last few years, corruption has dominated public issue discuss in Nigeria. There are a lot questions on how public finance is being handled by successive government in the last few years and more and more people had come to realize what corruption is capable of doing to public finance and by extension to the welfare of the general public. This could be, in part, as a result of much attention and publicity given to it by the media and the 'revolution' in the telecommunication industry beginning from year 2000. In addition, most foreign donors have stressed the need for transparency in the handling of donations given to Nigeria as precondition for future donations. This has raised the level of awareness when it comes to the issue of corruption in Nigeria. The existence of private media and the creation of an agency such as the Economic and Financial Crime Commission (EFCC) and Independent Corrupt Practices Commission (ICPC) by the administration former President Olusegun Obasanjo to tackle corrupt related cases in both the public and private sectors in Nigeria, had attracted public attention to this crime against the public.

The presence of problems such as high inflation, high unemployment and slow growth, inadequate provision of infrastructural facilities in Nigeria are yet to be tackled. There is perceived believe by majority of the public that these problems can be solve if corruption is reduced to the barest minimum if not totally eradicated. This had led to strong pressure by civil society organizations, human Right Activists, Opposition Parties, Patriotic and well-meaning Nigerians on the successive government of the day on the need to fight corruption to a standstill. In fact, it is safe to say that President Mohammed Buhari rose to power using fight against corruption as his major campaign slogan and promise prior to 2015.

In a recent survey conducted by the Nigeria Bureau of Statistics (NBS), over N400 billion was paid as bribe to public officials between June 2015 and May 2016. This sum is equivalent to 39% of education budgets in 2016 (federal and state combined). The report went further to rank government agencies and it is unfortunate that revenue collecting agencies are among the top agencies that have engaged in bribery. Top of the list is police force. According to the report, nearly one out of every encounter with the police results in bribery. This is closely followed by the prosecutors, 33%, judges and magistrates 31.5%, car registration/driving license 28.5%; tax and customs officers-27.3%, public utilities officers-22.4% and land registry officers 20.9%. This research work by NBS exposes the endemic corruption in Nigeria but failed to tell us how

it impact on government revenue. Thus the need to launch another study to specifically study the effect corruption has on government revenue. It is important to note that whatever affects government revenue will affect her ability to provide basic infrastructural facilities needed for economic growth and development.

Economic growth can be define as the persistent increase in the final market value of goods and services produce by citizens of a country within a period of time. Economic growth is one of the major macroeconomic goals of any country. Many factors had been put forward by various scholars to be responsible for economic growth of a typical country. These factors includes capital formation, saving, research and learning, population growth, geography, among others. These factors have direct impact on growth according to various growth theories and their proponents. In this paper, we shall examined the impacts of corruption on fiscal policies, public spending and ultimately on economic growth.

Previous studies on this topic are riddles with controversy as scholars failed to agree on the impact of corruption on economic growth. Scholars such as Rose-Ackerman (1978), Klitgaard (1988), and Wade (1982), have tried to understand better the complexities behind the existence and persistence of corruption. Much of these intellectual discussions revolve around understanding the implication of rent-seeking activities and the role of institutions on the impact of corruption for economic performance.

With development and availability of data, many scholars had done work on corruption and macroeconomic indicators across countries. Mario has work on the econometric analysis and evidence of the negative impact of corruption on investment and growth, Stone et al. and Paul use surveys to extract evidence of high transactions costs that accompany activities commonly believed to be associated with corruption, e.g., customs and Daniel Shang-Jin [1] work on the

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effects of corruption on the customs clearance process in some selected countries. Other scholars show that corruption has negative impact on economic growth especially for countries with high quality institutions [2-4]. Murphy argues that corruption hurt innovation and healthy competition. This has the potential to reduce private investment and ultimately hurt economic growth. In addition, corruption creates inequality in opportunities, similar to income and wealth inequality with its consequences of frustrations and social-political instability. However, theories of corruption point out that corruption could be a grease in the wheel of economic growth. For example, a country with weak institutions could be a fertile ground for corruption because people will prefer to pay bribe to passing through all the bureaucratic bottleneck as that will be cheaper; In other word corruption I desirable [5-7]. In view of the above controversy, this paper attempts to empirically evaluate the effect of corruption on economic growth in ECOWAS sub-region base on the analytical work of Mauro [3].

This paper is organized into 5 sessions. The first session is the introductory part, followed by the review of empirical literature. Session 3 take into consideration, the scope of corruption and session four focus on methodology and sources of data. Result presentation, interpretation and conclusion completes the last sessions.

## Review of Empirical Literature

Using simple regression with four hypothesis, Tanzi and Davoodi evaluate the effects of corruption on the decision making process of investment expenditures, on quality of infrastructures and government revenues [8]. The result shows evidence of positive relationship between corruption and public investment, negative relationship between corruption and government revenue, expenditures on operation and maintenance, and quality of public infrastructures. Their findings suggest that public expenditures rise with increase in corruption, while productivity falls. One other finding is that distortion is higher with weaker institutions relative to stronger institutions. The study established the channels through which corruption affect economic growth which include public revenue, public expenditures, and quality of infrastructures.

Jinyoung study the impacts of corruption on government revenue in 44-46 countries [9]. In his study, he shows that if corruption leads to tax evasion, improper tax exemptions or weak tax administration then it will lead to a decrease in government revenue. He went further to posit that the composition of government revenue will be distorted due to corruption; that the proportion of international revenue will rises relative to domestic revenue with corruption. He also finds out that there is a positive and significant relationship between corruption and tax on international trade over current government revenue. In addition, there is negative and significant relationship between corruption and domestic tax revenue and total amount of government revenue over GDP.

Benjamin and Rohini review the evidence of corruption in developing countries with special focus on bribes to government officials and theft of government resources by public officials [10]. The paper tries to answer the questions of how much corruption is there, what are the 'efficiency consequences of corruption' and what is the determinant of the level of corruption in developing countries. There is strong evidence of the response of corruption to 'standard economic incentive theory'. However, the effects of anti-corruption policies attenuate as officials find alternative strategies to pursue rents.

Muhlis and Ahmet investigate the effects of corruption on

government revenue in Turkey between 1980 and 2001 [11]. They use data from Turkish economy to test the hypothesis that corruption is associated with low General Budget Revenue (GBR), Tax Revenue (TR), direct tax and Indirect tax. To test this, they apply simple OLS technique and the estimation results confirm the hypotheses assumed.

Acemoglu and Verdier investigate the effect of corruption on airport productive efficiency using an unbalanced panel data of selected European airports between 2003 and 2009 [12]. They apply robust cluster random effects model after calculating the net variable factor productivity using multilateral index. The result shows strong evidence of negative impacts of corruption on airport operating efficiency. However the effects depend on the form of ownership of the airport. Airports under the public-private ownership are more likely to experience lower levels of efficiency when located in corrupt countries. In relative terms, they operate less efficiently than fully and or majority government owned airports in high corrupt country. Economic regulation, competition level and other airport's features are the control variables in their work.

A number of robustness checks were carried out. For example, three alternative measures of corruption were used: international Country Risk Guide (ICRG) corruption Index, Corruption perception index (CPI), and Control of Corruption Index (CCI). The implication of their finding is that management and ownership structures of airports in a corrupt environment determine the operation efficiency of the airports.

Gamberoni look at the role of corruption in explaining within-sector production factor allocation efficiency in a business environment in nine European countries between 2003 and 2012. Their work is based on conditional convergence model. The result shows a positive relationship between growth in corruption and both labor and capital misallocation dynamics. The link became larger the smaller the country, 'the lower the degree of political stability and of civil liberties, and the weaker the quality of its regulations' after they control for 'country framework conditions'. In addition, they were able to show that the relationship between changes in corruption and total factor productivity (TFP) growth is negative. In order to solve the possible problem of omitted variable bias, they used two instrumental variables: the percentage of women in parliament and freedom of the press in 'instrumenting' corruption. This implies that corruption growth is positively related to factor misallocation dynamics. As corruption rises, changes in factor misallocation rises and this will lead to decrease productivity and or efficiency. Hence corruption is efficiency decreasing [13].

Aidt et al. on their part study the determinant of corruption and economic growth with special focus on the role of political accountability. Their model incorporate two governance regimes 'define by quality of political institutions'. Their result shows a regime specific relationship between corruption and growth [14]. They also employ a threshold model and treat corruption as endogenous variable, then estimate the effect of corruption on growth. Two regimes were identified: high quality political and low quality institutions regimes. The result shows there is negative relationship between corruption and economic growth in the regime with high quality political institutions.

De Rosa examines the effects of corruption on productivity in Central and Eastern Europe. Enterprise data from 28 countries was used to test this. The effects of corruption on productivity are then compared with the effects of red tape and this help we understand 'bribe tax' as 'time tax' imposes on firms. The result shows that only the bribe tax has

a negative impact on firm level productivity with insignificant effects of time tax on productivity. They also find that bribery will be harmful for firm-level productivity in a country with weaker institutions and high level of corruption [15].

Mo investigates the effects of corruption on economic growth in 54 countries. Using Ordinary Least Square estimations, the result shows that a 1% increase in the level of corruption will decrease growth rate by about 0.72%. Thus corruption has a negative impact on economic growth. Evidence from the work suggests that the channel through which corruption affects growth is via political instability. Political instability accounts for about 53% of the total effect of corruption on economic growth. The study also shows that the level of human capital and share of private investment is negatively affected by corruption.

Nicholas on his part studies the effect of corruption on economic growth of China. To do this, a regression model is used. He used provincial income as proxy for economic growth. His model follows that of Barro. To account for differences in provincial growth rate, special Economic Zone (SEZ) is used as a dummy variable for provinces designated as such and those that are not. The result shows that there is a strong impact of corruption on economic growth. Specifically, a rise in corruption prevention effort by 1% in the nation as a whole will lead to 0.002% increase in national income.

Jia and Tae study the impact of corruption on local airport efficiency in US. To do this, they selected US Commercial airports [16]. They first came up with a theory which predicts the effects of corruption on productivity and the allocation of inputs of airports. Using the stochastic variable cost frontier model, they test the prediction of the theory. The empirical evidence shows that: a. airports are less productive in more corrupt environment. b. contracting-out to replace in-house labour is more common in a corrupt environment. They argue that local government corruption affect the cost of providing public goods. This is because the bureaucrats have no 'strong incentives to pursue mandated tasks' under environment riddles with corruption.

Javier and Ma del Mar analyze the influence of corruption on productivity levels and growth rates in a sample of O.E.C.D countries. They deploy frontier approach in order to do this. Thus they were able to study on one hand, the effects of corruption on productivity levels and on the other to determine the channels through which it affects productivity growth. The result shows a negative effect of corruption on productivity with positive correlation between corruption indicators and productivity levels. Evidence of negative relationship between corruption and economic growth was also found; this follows Elisa et al. [17].

Salinas-Jimenez et al. investigate the role of corruption in the determination of the firm's efficiency. To do this simple theoretical model, 80 electric distribution firms were selected from 13 Latin American countries for the year 1994 and 2001 and a unique data set with firm-level information explore [18,19].

The result shows that inefficient firms are strongly associated with more corruption. This is in line with their model. This implies that corrupt firms employ more inputs for a given level of output. They further identify other elements that can cause inefficiency to include public ownership, inflation and lack of law and order. However, corruption appears to play separate and 'more robust role'.

Evidence in literature suggests that income shock caused by natural resources shocks could lead to more rents to be expropriated and more corruption. For examples, Caselli and Michaels argue that oil revenues

shared among the municipalities in Brazil due to a rise in off-shore oil production in Brazil lead to increase in corruption [20].

## Scope of Corruption

Corruption is defined as the unlawful use of public power for private gain. By implication, public officials increase their utilities and properties through corruption. Corruption takes different forms and ways through which it occurs. In Nigeria, the most common form of corruption is bribery and extortion. Thus one is not surprise when NBS ranked Nigeria police first because they are known for kind of corruption. Other forms of corruption include influence peddling, nepotism (common among politicians, especially in the appointment into various political positions), fraud and embezzlement among others.

It should be stressed that the degree to which this act is carried is determined largely by the power ascribe to self by the official engage in corruption, the level of connection with the power that be, the believes that he/she will (will not) be caught in the act and the position he/she occupied.

Various studies had come up with various causes of corruption over the years. For example, Djankov et al. points out that government's intervention in private market is the major cause of corruption. Johnson et al., believe that large unofficial market is responsible for high level of corruption in the economy. Policy distortions, lack of openness to trade for long period and apparent income inequality are some other causes of corruption in the literature [21].

Another issue worthy of discussing in this paper is the issue of the consequences of corruption. We will limit this discussion to tax revenue since our aim is to study the impact of corruption on public revenue in Nigeria. Recent cross-country empirical findings by Friedman et al., 2000; Johnson et al., 1999; Hindricks et al, 1999; and Tanzi and Davoodi, 1997 shows that higher level of corruption leads to lower tax revenue, *ceteris paribus*.

In a country where corruption exists, tax payers are likely to be exempted from tax by tax officials after paying certain amount as bribe to them. There is also a high chance that taxpayers may refuse to pay tax when they discover that there is high level of public corruption. This is because, they do not believe the tax officials and doubt that the money could end up in private pocket or not well-utilize for public gain. Hence the argument that corruption reduces the revenue generation of government.

In the area of public investment, the execution tends to be large and most times contracted to either local or international contractors. Getting this kind of project for execution by private enterprises can be very profitable because of their large and complex nature. Thus it is will appealing to managers of these enterprises to pay "commission" to the government officials to get the contract awarded to their firms. This commission has become a norm in some countries and sometimes calculated as percentage of the total cost of the project. Once the "commission" becomes a percentage of total project cost, then public officials will be motivated to increase the scope of the projects and hence the total cost in order to earn more commission on it even if the increment do not have any economic benefit to the society. In other scenerios, bribe are practically paid up front to facilitate the enterprise win the bid to execute the project even it does not have the capacity to do so. Even when they have the ability to carry out the job, the cost of bribe paid could jeopardize the quality of the work they will deliver at the end

of the projects. In Nigeria, what happens most times is that friends and relatives of highly placed people in the society win government project for a ghost company and sub-contract it to other firms at an amount lower than what it is and get profit for doing nothing. In all of these examples, it is evidence that country will end with project at a very high cost than it should be without corruption or on with a project of inferior quality will not last the test of time.

Another recent argument in literature is on whether corruption is a distortion in the wheel of growth or a Greese. Lui [22] hypothesizes that the size of bribes by different economic agents represents the opportunity cost of not engaging corrupt related activities. The more efficient agents are, the more they are able or willing to buy lower effective red tape which is reflected in lower "time tax". This theory was, however, not without critics, a common phenomenon in economics. Authors such as Kaufmann and Wei [22] argue that Lui's theory treated regulatory burden as exogenous and independent of the incentives for officials to take bribes. It is possible to modify the incentives of the bureaucrat using specific measures. Thus, Lui's theory was termed a partial equilibrium in nature.

Generally, it is argued that the reason why corruption is not exogenous is that those who benefit from it are likely to work hard to preserve the status quo or aggravated it. Hence, Aidt and Dutta argued that even if corruption helps to overcome regulatory cumbersome in the short term, it creates more incentives for more of such regulations in the long run. Micro-level empirical evidence opposes this theory; corruption is found to increase time spent by managers dealing with red tape.

Baumol [23] argues that corruption may distort allocation of resources through increase in the returns to rent-seeking relative to productive activities. An environment prone to rampant corruption may encourage individuals to reduce interaction with the state, thus delaying expansion and resort to operating in the informal sector of the economy or forgoing entrepreneur.

Djankov et al. [21] corroborate this argument in their finding that corruption and large unofficial economies will make entry of new firms difficult. This is what we will term 'Distortion Hypothesis' of corruption.

However, Djankov et al [20] argument will be irrelevant in public institutions that are "naturally" a monopoly. This is because whether there is corruption or not, the law does not permit private investment in such institutions. Part of the argument in Baumol such as the disincentive to entrepreneur, which we can term it 'intrapreneur' in public agency, is valid to some extent. When you have the wrong people in the right place, creativity will be difficult to come by. This could explain why generally in Africa, civil service is characterized by inefficiency.

Base on the above discussion, we shall be testing two testable hypotheses about the relationship between corruption and the kinds of government revenue.

These are:

- **Hypothesis-1:** High corruptions lead to high public investment
- **Hypothesis-2:** High corruptions lead to low public revenues.

In order to successfully test these hypotheses, we adopt Ordinary Least Square (OLS) technique. We used natural log of per capital gross domestic product (GDP) and public Investment (PI) as share

of GDP as our control variable. These variables also affect the level of government revenues. For instance, it is important to take into account changes in government revenues for the period under study since we are using time series data in the analysis. Since GDP is used to denote the level of income and by implication the level of potential tax base of the country; GDP can serve this purpose perfectly well. public revenue is very important factor in tax revenue because budget makers take into account this variable during budget preparation.

Since the main objective of this study is to find out the relationship between corruption, government revenue, and public investment we will not border ourselves too much on the signs of the control variables. We do not have a priori expectation for the signs of our main variables.

We adopt Tanzi and Davoodi [8] models to test the above hypotheses.

Model 1: we regressed

$$\ln PI_t = \alpha + \beta_1 CPI_t + \delta_1 \ln GDP_t + \epsilon_t \quad (1)$$

Model 2:

$$\ln PR_t = \alpha + \beta_1 CPI_t + \delta_1 \ln GDP_t + \epsilon_t \quad (2)$$

Where:

PR=public Revenue

PI=Public Investment

CPI=Corruption Perception Index

GDP=Real per capita Gross Domestic Product

Ln=log.

The first equation test the hypothesis-1 while equations 2, test hypothesis-2.

## Definitions of Variable and Sources of Data

In order to run our analysis, this paper use indices of corruption perception Index (CPI) from Transparency International (TI). The data are collected from different surveys and countries are ranked based on her perceived level of corruption over the period 1997-2017. The choice of the years was born out of the availability of data. We also use data from the Central Bank of Nigeria (CBN) for public revenue, public Expenditure, while data on real per capital GDP (Local Currency) are source from World Bank's World Development Indicators (WDI).

Data on corruption ranges from 0 to 10. The lower the index, the more corrupt a country is and the higher the index, the least corrupt is the country. Government capital expenditure and budget revenue are used as proxy for public investment and public revenue respectively. Data for tax revenue are very scarce and unavailable. We also introduce real per capita GDP as control variable to capture the economic growth of Nigeria as that is one of the determinant of revenue generation and investment of a country. It becomes very important to use this control variable because we are dealing with time series data and changes in the source of government revenue for the period under considerations must be factor in. real per capita GDP is very important in this regard. It shows the level of income and thus the level of potential tax base of Nigeria economy. Real per capita GDP also denote the stage of economic development of a country. The stage of development of a country will determine the level of investment needed. Furthermore, Government revenue-real GDP ratio is also used as one control variable



for model 1 because as this variable rises, the chances to finance the investment rise as well.

### Regression Result

To empirically test the hypotheses in the previous section, we run a regression analysis to determine the relationship between corruption and public revenue on one hand and corruption and public investment on the other hand. To avoid the problem of spurious regression we include control variables as stated above. The result shall be analyzed below.

#### Corruption and public investment

##### Hypothesis 1: High corruptions lead to high public investment:

To test this hypothesis, we first of all regress the log of public investment on a constant and corruption index. We then add log of real per capita GDP and finally added Government-GDP ratio to examine the robustness of the relationship between corruption and investment to the inclusion of these variables.

In the result (as shown in Table 1), we accept the hypothesis at 1% level for eqn. (1). However, the inclusion of the control variables does not change the sign of the coefficient of corruption index but the coefficient of corruption index is no longer significant even at 10% level. Real per capita GDP has a statistically significant positive coefficient indicating the important of the variable in financing investment (Table 1 and Figure 1).

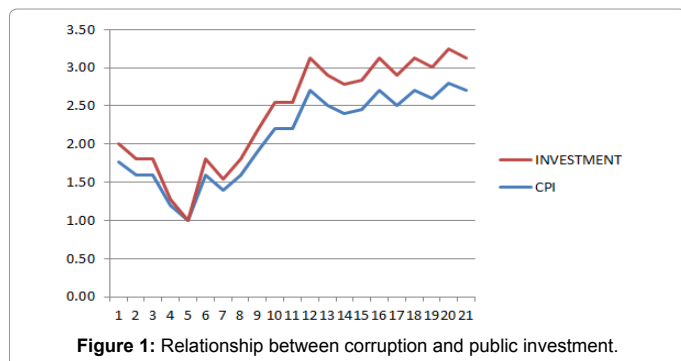


Figure 1: Relationship between corruption and public investment.

#### Corruption and government revenue

This hypothesis tests the indirect impact of corruption on public investment through government revenue. In Nigeria, there are high cases of alleged tax evasion, improper tax exemptions and or weak tax administration. This can lead to a reduction of revenue available for the government to invest on infrastructural development in the country. This leads us to the next hypothesis.

##### Hypothesis 2: high corruptions lead to low public revenues, ceteris paribus:

To test this hypothesis, we regress log of government revenue on corruption and then add log real per capita GDP to confirm the robustness of the result. As shown in Table 2, we cannot accept the hypothesis at 1%, 5%, and 10% level of significance (Table 2 and Figure 2).

#### Discussion

In literature, there are two main theories of corruption. The first is the Second Best theory. Proponent of this theory believes that corruption is a problem needed to solve another problem resulting from bureaucracy. In an economy riddled with a lot institutional bottlenecks that stifle efficiency, the introduction of corruption will help to solve the unnecessary bureaucracies and promote efficiency. Thus corruptions, to them, promote economic growth. If this is true, then one could deduce that corruption could also lead to increase revenue

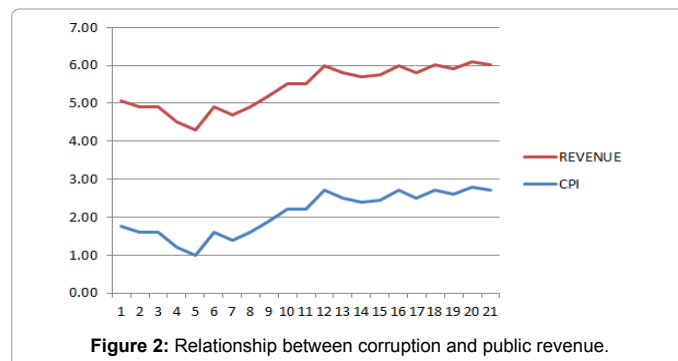


Figure 2: Relationship between corruption and public revenue.

Independent variables	(1)	(2)	(3)
Constant	2.141438 (0.147984)	-10.90841 (2.524872)	-12.23768 (2.975921)
Corruption index	0.570841* (0.068139)	0.059821 (0.108317)	0.026551 (0.11576)
Real per capita GDP		2.591192 (0.500976)	2.857375* (0.591945)
Government revenue-GDP ratio			-0.495458 (0.575948)
Adjusted R <sup>2</sup> Number of Observations	0.775744 21	0.884311	21 0.903395 21

\*Means significant at 1%

Table 1: The Effects of Corruption on Public Investment, 1997-2017.

Independent variables	(1)	(2)
Constant	3.012652 (0.774507)	-24.34269 (19.81215)
Corruption index	0.18781 (0.356621)	-0.883399 0.84994
Log Real per capita GDP		5.431707 (3.931053)
Adjusted R <sup>2</sup> number of observations	-0.037487 21	0.009893 21

Table 2: The Effects of Corruption on Public Revenue, 1997-2017.

generation for the government assuming there is a positive relationship between economic growth and government revenue. Base on this theory, we expect that government revenue and corruption should be positively related. Our result partially confirm this albeit insignificant level of the coefficient and the fact that other control variables are not included as seen in Table 2. a quick look at Figure 2, also confirmed this. From the graph, we notice that corruption and public revenue move in the same direction. The second theory is the distortion theory of corruption. This theory is a direct opposite of the Second Best theory. The theory states that corruption lead to the diversion of productive time from economic activities to lobbying for favour to get work done. This means one need to know and be ready to bribe government officials before you get contract awarded or investment proposals approved. This kind of corruption will prevent entry of new firms into the industry and also lead to inflation of contract value. The last point could lead to high investment expenditure (on paper) but little to show for it on ground. This implies a positive relationship between public investment expenditure and corruption. Our result as shown in Table 1 confirmed this. The graph in Figure 1 reconfirmed this relationship as well. Though the statistical result is significant at just 1% when there is no control variable added, it is positive with the inclusion of control variables. This confirms the long held result of high level of corruption in public investment . This is because public investment involves huge capital and corruption is most prevalent especially in infrastructure sector. It also implies that low quality works as against high quality (negotiated) are done, and much of government revenue is diverted into private pocket thereby reducing government revenue. The implication of this for our analysis is that we expect negative relationship between government revenue and corruption. In Table 2, there is a negative relationship between corruption and government revenue but the coefficient is not significant at 1%, 5%, and 10%; thus it is difficult to conclude.

## Conclusion

There is no doubt the popular negative perception of corruption in the public service in Nigeria. The attention corruption had garnered lately is unprecedented with little or no achievement recorded in term of effort at combating it. Recently, vanguard Nigeria reported that between June 2015 and May 2016, over N400 billion was paid as bribe to public officials, quoting National Bureau of Statistics as their source. This is a payment for unproductive services and it calls for serious concern. According to the theory of economic growth, capital accumulation, population growth, education, geography, etc., are some of the major determinants of economic growth of any country. We know that without revenue, accumulation of capital, and quality education will be difficult if not impossible to achieve. We also know that revenue without investment in critical infrastructures will not guarantee growth; hence the importance of these two factors in the economic growth of Nigeria. In this study we study the impact corruption has on investment and public revenue using OLS. Mauro [3] provide evidences of many channels through which corruption can reduce economic growth. We further present evidences of the impact of corruption on public investment and revenue in this study.

First, we found that corruption increase public investment while reducing its productivity and thus reduce economic growth. However, the result is significant at just 1% level, though consistent with panel data analysis [3,23].

We cannot conclude that corruption reduce public revenue even though the coefficient of corruption is negative as we include

GDP variable (and positive without GDP variable) because it is not significant at all levels tested.

The implication of this finding is that economists should not be quick to praise politicians whenever capital budget is raise especially in Nigeria where corruption is said to be on the high side in the public sectors.

It is clear that this paper strictly focused on the problems and not solutions to corruption which leaves rooms for further study on the possible solutions aim at combating corruption in Nigeria. However, effort of government of Nigeria over time to fight corruption include the establishment of Economic and Financial Crime commission (EFCC) and Independent Corrupt Practices and Other Related Offences Commission (ICPC) saddle with the responsibilities of prosecuting corrupt officials in the court of law. In addition, various legislations had been put in place to combat corruption in the public sectors over time. No doubt, a lot had been achieved but more efforts are needed from both the citizens and politicians to fight what seems to be a hydra-headed monster that had define many problems in Nigeria. We cannot conclude that corruption reduce public revenue even though the coefficient of corruption is negative as we include GDP variable (and positive without GDP variable) because it is not significant at all levels tested.

The implication of this finding is that economists should not be quick to praise politicians whenever capital budget is raise especially in Nigeria where corruption is said to be on the high side in the public sectors.

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## References

1. Daniel K, Shang-Jin W (1999) Does grease money speed up the wheels of commerce? NBER Working Paper No. 7093.
2. Aidt TS, Dutta J (2008) Policy Compromises: Corruption and Regulation in a Democracy. *Economics and Politics* 20: 335-360.
3. Mauro P (1995) Corruption and Growth. *Quarterly Journal of Economics* 110: 681-712.
4. Nicholas D'A (2015) Corruption and Economic Growth in China: An Empirical Analysis. Theses, Essays, and Senior Honors Projects, John Carroll University, Carroll Collected.
5. Leff N (1964) Economic Development through Bureaucratic Corruption. *American Behavioural Science* 8: 8-14.
6. Huntington SP (1968) *Political Order in Changing Societies*. New Haven: Yale University Press.
7. Tanzi V, Davoodi H (1997) Corruption, Public Investment and Growth. *International Monetary Fund Working Paper* No. 139.
8. Jinyoung H (2002) A Note On the Relationship between Corruption and Government Revenue. *Journal of Economic Development* 27(2).
9. Benjamin AO, Rohini P (2011) Corruption in Developing Countries. NBER Working Paper, No. 17398.

10. Muhlis B, Ahmet B (2005) The Impact of Corruption on Government Revenue: The Turkish Case. *Yapi Kredi Economic Review* 16.
11. Acemoglu D, Verdier T (1998) Property Right, Corrupting and the Allocation of Talent: A General Equilibrium Approach. *Econ J* 108: 1381-1403.
12. Laingo MR (2015) Effect of Corruption on Efficiency of the European Airports. Center for Research on Economics of the Environment, Agri-Food, Transport and Energy (CREATE). Working Paper No. 2015-1.
13. Aidt T, Dutta J, Sena V (2008) Governance Regimes, Corruption and Growth: Theory and Evidence. *Journal of Comparative Economics* 36: 195-200.
14. De Rosa D, Gooroochurn N, Gorge H (2013) Corruption and Productivity: Firm-Level Evidence. Seminar Paper at Kiel Institute and the World Bank.
15. Jia Y, Tae O (2014) The Effect of Government Corruption on the Efficiency of US Commercial Airports. *Journal of Urban Economics* 80: 119-132.
16. Elisa G, Gartner C, Giordano C, Lopez-Garcia P (2016) Is Corruption Efficiency-Enhancing? A case Study of nine Central European Countries. European Central Bank Working Paper Number 1950.
17. Salinas-Jimenez J, Madel Mar Salinas-Jimenez (2006) Corruption and Productivity Growth in OECD Countries.
18. Dal Bo E, Rossi MA (2006) Corruption and Inefficiency: Theory and Evidence from Electric Utilities. *Journal of Public Economics*, Forthcoming.
19. Caselli F, Michaels G (2009) Do Oil Windfalls Improve Living Standards? Evidence from Brazil. CEP Discussion Papers, Centre for Economic Performance, LSE.
20. Djankov S, Rafael La P, Lopez-De-Silanes F, Shleifer A (2002) The Regulation of Entry. *Quarterly Journal of Economics* 117(1): 1-37.
21. Lui F (1985) An Equilibrium Queuing Model of Bribery. *Journal of Political Economy* 93: 760-781.
22. Baumol WJ (1990) Entrepreneurship: Productive, Unproductive, and Destructive. *The Journal of Political Economy* 98: 893-921.
23. Shantayanan D, Swaroop V, Heng-fu Z (1996) The Composition of Public Expenditure and Economic Growth. *Journal of Monetary Economics* 37: 313-344.