Corruption and Foreign Aid Nexus in the African Continent: An Empirical Analysis for Nigeria

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Abstract
The huge transfer of resources as foreign aid by various donors since 1960s and the unfortunate prevalence of high level of systemic corruption in Africa with Nigeria-a major culprit, has become a source of concerns in global discourse. Against this background, this study investigates the nature and pattern of causality existing between these important macroeconomic variables in Nigeria. Also, the study examines the relevance of the corruption trap hypothesis. Hence, Autoregressive Distributed-Lag (ARDL) models based on Cointegration and Granger-causality tests were utilized. Evidently, the findings indicate that both short and long-run causality exists between the two variables. Similarly, there is unidirectional causality flowing from corruption to foreign aid. The finding also reveals that neutral causality exists between foreign aid and economic growth, which negates theoretical expectations. Above all, the findings provide evidence that Nigeria is a victim of corruption trap. Hence, this study therefore recommends that Nigerian government should be more proactive on the anti-corruption war and to ensure that revenues from foreign aid are judiciously utilized. Again, there is the urgent need for more fiscal discipline at various levels of government in the country, so as to curtail the high level of fiscal recklessness that are fast becoming the governance culture in Nigeria.
Keywords: Corruption, Foreign aid, ARDL, Nigeria, Causality, Economic growth, Africa
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1.0 INTRODUCTION

Scholars and writers like Easterly and Levine (1997), Collier and Gunning (1999), Loxley and Sackey (2008) and a host of others, observe that numerous issues and events are of importance in Africa's growth and development process, especially the role of financial intermediation like foreign aid. And as rightly noted by Lancaster (1999): "The real problem of African development has been in the failure of the region to grow" (p. 490). As such, issues like investment, poverty, corruption, infrastructure, good governance and foreign aid among others, have continued to shape African economy in no small measure, either positively or negatively. In this connection, Harrigan and Wang (2011) submit that corruption is one of the factors advanced as responsible for the often disgusting effect of foreign aid. Hence, corruption is a serious threat and obstacle to the growth and development process of any country most particularly African countries like Nigeria. Furthermore, the consequential negative impacts of corruption in retarding the gains from foreign aid such as economic growth, massive investment, human capital development-HCD, poverty-reduction and good governance among others, has further brought the issue to limelight in African discourse. Notwithstanding, it has been noted that both corruption and foreign aid are issues of development with complexity that have numerous determinants and effects that are in line with each country peculiarity and characteristics (Consultancy Africa Intelligence, 2010).

In this vein, Brautigam and Knack (2004) in their article on foreign aid, institutions and governance in Sub-Saharan Africa (SSA) note that at the foundation of Africa's development problems is governance crisis. This implies poor quality institutions, weak rule of law, absence of accountability, tight controls over information and high levels of corruption virtually in all African countries. Easterly (2005) corroborates this position by stating that among the eight failed states known in the literature, seven of them are from Africa (i.e. Angola, Burundi, Liberia, Sudan, Sierra Leone, Somalia and DRC), which is a consequence of bad governance and high level of systemic corruption in these countries. This situation lends credence to the economic growth tragedy overwhelming the continent as identified in various studies like Easterly and Levine (1997), Anoruo and Braha (2005), Easterly (2005), Akonor (2008) and a host of others. As a matter of fact, high level of systemic corruption reduces the gains of foreign aid, which leads to lower economic growth. Also, lower economic growth could be responsible for higher corruption and vice-versa, especially in Nigeria where the existence of weak and fragile institutions are very common particularly in States and Local government areas. Importantly, corruption limits the pace of development, reduces the amount of public resources, and discourages private investment and savings, which further impedes the effective and efficient utilization of foreign aid.

In fact, Lancaster (1999) had earlier confirmed that one of the reasons for aid ineffectiveness in Africa is due to aid fungibility, which according to Abuzeid (2009) is a means of increasing the scope of corruption and rent-seeking syndrome. Lancaster (1999) specifically notes that significant amounts meant for the continent developmental activities were shipped to Swiss Banks and hence, he posits, "aid is a double-edged sword" (p. 497). He argues that foreign aid as a way out of poverty in Africa is simply a fool's errand, especially with what is happening in Zimbabwe. This is because the high level of systemic corruption in the continent is antithetical to

poverty eradication in most of the countries despite the huge amount of foreign aid they receive from donors. This situation is what Collier (2006) refers to as corruption trap and he states that Africa is caught in a "series of interlocking development traps" (p. 189). He opines that for aid to make meaningful impact on Africa's growth, it should be conditioned on processes rather than policies. It is however argued that both policies and processes are of paramount significant, especially when good policies in an enabling economic environment tend to facilitate and enhance the development process as noted by Burnside and Dollar (2000).

In this vein, considering the dismal economic growth performance of Nigeria in the last few decades despite her abundant resources, it is certainly a clear case of a "mesmerizing growth" i.e. more growth leading to more poverty and collapse of basic infrastructures. Indeed, Nigeria scenario is truly a case of African paradox of "excessive wealth, excessive poverty" or simply put, "poverty amidst plenty" (Mustafa & Abdul-Razak, 2012). This is in view of the high level of systemic corruption in the country as empirically observed by Aliyu and Elijah (2008) and generally with most African countries (Consultancy Africa Intelligence, 2010). More specifically, the huge transfer of resources as foreign aid by various developed countries like the US, UK, China, Japan Germany and a host of others are yet to make any meaningful impacts on the socio-economic welfare of the people. Similar gesture from multilateral financial institutions (MFIs) like the OECD, AfDB and IDB among others since 1960s, suffers from the same fate. For instance, from 1999-2007, Nigeria received the sum of US$6 billion (an equivalent of N696 billion) as development aid from various donors but unfortunately, Nigerians have only benefitted more poverty, deprivation and insecurity from this good gesture.

In this regard, the endemic prevalence of corruption in most part of African continent with Nigeria-a leading icon, has become a major source of concerns in global discourse as rightly observed by Transparency International (2011). This is in view of the fact that resources meant for provision of basic necessities and amenities of life are squandered and misappropriated as a result of corrupt practices by the public officials in charge. In this regard, Werlin (2005) was forthright when he posits on the case of corruption in Nigeria: "….the country's endemic corruption is the primary cause for the country's poverty" (p. 524). He notes further that the more impoverished a country is, the more likelihood that corruption is endemic in such country as the case with Nigeria. To this end, considering the socio-economic implications of both corruption and foreign aid on the development process of Nigeria and especially in view of scarce studies on these important economic variables about Nigeria, this study is thus justified. Against this background, this study investigates the nature and pattern of causality existing between corruption and foreign aid in Nigeria. Also, the study examines the relevance of the corruption trap hypothesis of Collier (2006) to the economic analysis of corruption in Nigeria. Against this background, this study hereby tests the following hypotheses: (i.) There is both short and long-run causality between corruption and foreign aid in Nigeria; (ii.) There is unidirectional causality flowing from corruption to foreign aid in Nigeria; and (iii.) Corruption trap hypothesis is relevant to the economic analysis of corruption in Nigeria. To this end, this introductory part serves as section one, while section two presents the literature review. Section three discusses the methodology adopted and section four presents the empirical results and discussions. The final section serves as the conclusion and recommendations segment.

2.0 LITERATURE REVIEW
2.1 Conceptual Issues
2.1.1 Corruption

The meaning of corruption according to Todaro and Smith (2009) implies the appropriation of public resources through the use and abuse of official power or influence for private benefits and other private purposes. This definition connotes unethical behaviors such as bribery (use of a reward to pervert judgment), nepotism (bestowal of patronage or favor on people base on filial relationship rather than merit) and misappropriation i.e. illegal appropriation of public resources for private uses. Dike (2011) notes that corruption is a global phenomenon and manifest in both petty and grand forms like bribery, embezzlement, fraud, favoritism, extortion and nepotism among others. Transparency International (2010) also defines it to mean the abuse of entrusted power for private gain. However, corruption is usually defined as the use of public office for private gains and benefits at the detriment of societal and collective interest. Consultancy Africa Intelligence (2010) states that corruption seems endemic in most African countries, especially in countries where institutions such as the legislature are weak, the rule of law is not strictly enforced and political patronage is the order of the day. Similarly, countries where the independence and professionalism of public and private sectors have been eroded and a situation where the civil society lacks the means to hold corrupt individuals to accountability, make such country susceptible to high level corruption as the case with Somalia, Sudan and Chad.

Mustafa and Abdul-Razak (2012) observe that lack of transparency, integrity and accountability are directly related to economic dismal performance, which have almost become permanent characteristics of many African countries. More especially, corruption undermines effective governance and erodes the social and moral fabric of nations. In this light, corruption is a serious menace with devastating consequences on the general sphere of a society. No wonder, Dike (2011) posits that the price of corruption is poverty, and as noted: "where

there is poverty, there is corruption". In the same vein, Gyimah-Brempong (2002) argues that corruption in the African continent is a systemic type due to the weak and fragile institutions prominent in most countries in the continent. Hence, the Transparency International (TI) survey on corruption for 2008 and 2010 reveals that most Sub-Saharan Africa countries surveyed are largely corrupt including Nigeria. The 2008 report notes that 64 percent scored less than 3 out of 10 and for the 2010 report, Botswana was adjudged as the least corrupt with a score of 5.8 (Consultancy Africa Intelligence, 2010). As a matter of fact, the report in its 178 countries survey exposed Somalia as the most corrupt country in the world with score 1.10. Other countries belonging to the same category include: Sudan, Chad, Guinea, Nigeria and Comoros among others. In view of this phenomenon in the continent, Transparency International (2008) submits that corruption is one of the daunting challenges to good governance, development and poverty alleviation in the African continent. Against this background, Table 1 provides more information on the state of affairs with respect to corruption in selected countries in the continent for the years 2010 and 2011. It is obvious from the reports presented that corruption has gained control of these countries because none of them scored the average value of 5. And by the rule of thumb, any score less than 5 means prevalence of high level corruption in that country.

Table 1: Corruption Perceptions Index for Selected African Countries (2010&2011)

S/N	COUNTRIES	SCORE – 2010	Rank	SCORE – 2011	Rank
1.	Algeria	2.90	(105)	2.9	(112)
2.	Burkina Faso	3.10	(98)	3.0	(100)
3.	Chad	1.70	(171)	2.0	(168)
4.	Comoros	2.10	(154)	2.4	(143)
5.	Djibouti	3.20	(91)	3.0	(100)
6.	Egypt	3.10	(98)	2.9	(112)
7.	Gambia	3.20	(91)	3.5	(77)
8.	Guinea	2.00	(164)	2.1	(164)
9.	Libya	2.20	(146)	2.0	(168)
10.	Mali	2.70	(116)	2.8	(118)
11.	Mauritania	2.30	(143)	2.4	(143)
12.	Morocco	3.40	(85)	3.4	(80)
13.	Niger	2.60	(123)	2.5	(134)
14.	Nigeria	2.40	(134)	2.4	(143)
15.	Senegal	2.90	(105)	2.9	(112)
16.	Sierra-Leone	2.40	(134)	2.5	(134)
17.	Somalia	1.10	(178)	1.0	(182)
18.	Sudan	1.60	(172)	1.6	(177)
19.	Tunisia	4.30	(59)	3.8	(73)

Source: Extracted from Transparency International Reports (2010, 2011).

NB: The figures in parentheses represent the global ranking of the country.

According to Transparency International (2011), Corruption Perceptions Index (CPI) score relates to perceptions of the degree of corruption in various countries as seen and felt by business people, risk analysts and the general public. Hence, the score ranges from 0-10; where 10 imply highly clean country and 0 means highly corrupt country. And unfortunately Nigeria, which is our case study scored 2.4 and ranked 143rd for 2011, which indicates a poor position for the country despite the Federal Government continuous anti-corruption war and activities in the country. To this end, the serious implication of the report presented above is that all countries in Table 1 are suffering from high level corruption. This scenario is a very dangerous phenomenon for the continent's development process, especially for Nigeria, which aspires to be among the top 20 developed economies by the year 2020.

2.1.2 Foreign Aid

Foreign aid in terms of its meaning and usefulness implies an income transfer, which may or may not produce growth. Thus, the outcome depends on its utilization by the recipient countries (Burnside & Dollar, 2000). As such, if aid is invested, it increases domestic output and if it is consumed, investment is halted or minimized. As a matter of fact, Shah, Ahmad and Zahid (2005) define foreign aid to mean: "those additional resources, which are used to raise the performance of the recipient country above the existing level" (p. 2). Nonetheless, foreign aid in simple terms means the transfer of resources/wealth from developed nations or international financial institutions (IFIs) to less developed countries. This could either be through bilateral or multilateral source for the purpose of promoting economic growth and development of the recipient countries. Foreign aid is also referred to as foreign assistance, development assistance/aid or external aid. However, the Development Assistance Committee (DAC) of the OECD refers to it as grants and concessional loans net of repayment of previous aid loans. This measure suggests that forgiveness of past loans connotes current aid (Easterly, 2003). In this

connection, the foreign aid emanating from OECD is known as Official Development Assistance (i.e. ODA), which has always been the major reference point when discussing about foreign aid in the literature (Riddell, 2007; IDB, 2008).

Shah et al. (2005) note that foreign aid has three main concessional elements, which are: (i.) grants that do not need to be repaid either the principal or interest; (ii.) loans that carry lower rates of interest or no interest at all as it is obtainable in Islamic Development Bank (IDB); and (iii.) loan with longer period of repayment than normally would be allowed. Hence, various types of foreign aid include: financial aid which could be either tied or untied (such as loans and grants), commodity aid, technical aid, foreign direct investment (FDI), emergency assistance, project aid, program aid and military aid. Foreign aid may also come in a variety of physical forms such as technical assistance, programs, projects such as infrastructural development and supplies of food or food aid (Moreira, 2003; Riddell, 2007). Other forms include debt forgiveness, sector assistance and investment. In view of this, Table 2 provides a summary of the total amount of aid to the African continent.

Table 2: Summary of Figures on Total Aid to Africa

Author	Amount	Period	Source
Easterly (2005)	US$568 billion	1960 – 2005	ODA
Werlin (2005)	US$600 billion	1965 – 2005	ODA
Akonor (2008)	US$600 billion	1960 – 2008	ODA
Loxley and Sackey (2008)	US$71.8 billion	1975 – 2004	ODA
Easterly and Williamson (2011)	US$690 billion	1960 – 2008	ODA
IDB (2010)	US$20.85 billion	1976 – 2010	IDB

Source: Adopted from Mustafa, Adewale and Abdul-Razak (2013).

The significance of the table presented is to provide a better perspective on the total aid stated by various authors in their articles, especially as it relates to ODA. In this connection, foreign aid can be referred to as a fiscal tool, which can be used to increase the revenue and expenditure base of low-income countries (LICs) and developing economies like Nigeria. Theoretically therefore, the objective of foreign aid is to promote economic development in recipient countries; whereas in reality, the results points to varying purpose and motives. Shah et al. (2005) submit that historical evidences confirm that in normal circumstances donor nations hardly assist other nations without expecting some corresponding benefits in return. Such benefits include: economic, strategic, political and military among others. Harrigan and Wang (2011) opine that the presence of donor's economic, political and strategic motivations and interests are possible reasons that could create distortions in the aid transfer process. Also, it diminishes the efficiency gains from this noble gesture to LDCs like African countries. It is not surprising therefore that Lancaster (1999) posits that foreign aid as a fiscal tool is certainly a double-edged sword, which could be used to make or mar the economy of recipient countries based on the purpose and motives of donors. Earlier before now, Chenery and Strout (1966) submit: "this mixture of motives has led to a complex system of aid administration in all countries" (p. 726).

2.2 Theoretical Framework
2.2.1 Financial Two-Gap Model
The model is also known as the Double Deficits Model (DDM), which was propounded by Chenery and Strout (1966). It has remained the most quoted and cited model on economic growth and foreign aid discourses and debates in the literature. The underlining propositions of the model are: (i.) that economic growth is promoted and enhanced by foreign aid; and (ii.) that gap exists between savings and investment (I-S) or between export and import (M-E), which LDCs could not overcome. This is in view of the limited resources or foreign exchange shortage in LDCs and thus, it should be filled by foreign aid. In this regard therefore, foreign aid is considered as a potential stimulant and determinant of economic growth for LDCs. It is in this connection that Easterly (2003) posits that foreign aid has the strong growth effect vis-à-vis its role of galvanizing and boosting domestic investment in LDCs above what domestic savings can actually achieve. However, this anticipated contributions and gains are being marred by high level of systemic corruption in most LDCs, especially Africa. In this vein, Mustafa et al. (2013) lends credence to this position: "Unfortunately, the presence of high level corruption in the African continent has continued to retard the gains of foreign aid (p. 108)".

2.2.2 Principal-Agent Theory
This theory is especially popularized in the works of Rose-Ackerman (1978) and Klitgaard (1988). The theory is essentially concern about the issue of interest and the desire for its protection. Hence, it means a situation when an individual/group act (s) in the interest of another i.e. agent-principal relationship (Mustafa, Yussof & Adewale, 2011). In this connection, it states that the analysis of corruption is situated in the interaction and interrelations that exist within and without public bodies. It postulates that corruption occurs as a result of betrayal on the part of the agent against the interest of the principal (Rose-Ackerman, 1978). The basic assumptions of this theory are: (i.) that a goal conflict exists between the so-called principals and agents – who are assumed to have tendency and preference for corrupt transactions as long as the anticipated benefits

outweighs the costs; and (ii.) that agents have more information than the principals, which leads to unbalanced information known as information asymmetry (Klitgaard, 1988). Hence, the implication of the relationship between both groups is that agents may have access to more specific information than the principal, due to the self-interest of the former. Mustafa et al. (2011) submit that the agent-principal relationship ranges from the simple to the complex situation. Thus, the analysis of corruption can be done using the Principal-agent framework. Nevertheless, in classical discourse, bureaucratic corruption refers to the rulers as principals and the bureaucrats as the agents who are supposed to carry out delegated tasks but do otherwise as a result of their self-interests or benefits (Becker & Stigler, 1974; Van Rijckeghem & Weder, 2001). However, in our case, the principal is the donor countries or international donor agencies like OECD, DFID and IDB among others; while agents refer to recipient countries/governments in LDCs and developing countries like Africa. This is because foreign aid from donors is theoretically meant to stimulate and enhance the economies of recipient countries as noted by Chenery and Strout (1966). But due to the corrupt nature and practices of the recipient countries, the development assistance is diverted and squandered. Notwithstanding, empirical studies (see Minoiu & Reddy, 2010; Charron, 2011; Easterly & Williamson, 2011) indicate that donors in some cases tacitly support the corrupt practices by recipient governments as the case with the Late Mobutu Sese-sekou. Hence, the complexities in corruption-aid nexus discourse as noted by Chenery and Strout (1966) and Consultancy Africa Intelligence (2010).

2.3 Corruption-Aid Nexus Discourse: Empirical Review

Gyimah-Brempong (2002) states that since most African countries are large recipients of foreign aid and they suffer from weak and fragile institutions, there is every tendency that aid is going to be siphoned due to the high level corruption in the continent. Therefore, the consequential negative impacts of corruption in retarding the gains of foreign aid like growth, investment, poverty-reduction and good governance has become a major issue in African economic discourse. According to Anoruo and Braha (2005), handful studies are available on the relationship existing between corruption and economic growth in Africa. In fact, virtually no empirical studies could be easily accessed on the relationship between foreign aid and corruption in the continent and especially for Nigeria. Nevertheless, Gyimah-Brempong (2002) in a study on the impacts of corruption on economic growth and income inequality, adopts panel data from African countries and utilized a dynamic panel estimator as methodology. His finding indicates that corruption, which is the major variable of investigation decreases economic growth directly and indirectly via investment in physical capital. He also observes that the combined effects of corruption on growth and income points to the fact that the poor bear the brunt and pains of corruption in the continent. According to him, curtailing corruption is a necessary step to increase the well-being of the majority of African citizens.

Also, a study by Aliyu and Elijah (2008) on the impact of corruption on economic growth in Nigeria from 1986-2007 produced some interesting findings. They adopted cointegration and error correction mechanism (ECM) techniques to achieve their objectives. Their findings discover that corruption exerts significant and direct impacts on economic growth. According to them, corruption indirectly affects growth through government capital expenditure (GCE), human capital development and total employment. Basically, their study reveals that about 20 percent of the increase in GCE ends up in private pockets of government officials and contractors. Again, Charron (2011) examines the impact of foreign aid on corruption with the use of panel data from 1986-2006. His findings indicate bidirectional causality (i.e. feedback hypothesis) between both variables. He submits that the result is consistent with previous findings among scholars. However, an interesting discovery from his study revealed that bilateral donors like the US, UK, Japan and others, tie their national self-interest to the aid they provided to recipient countries. Also, multilateral aid is more effective in the fight against corruption. It is important to state that his finding is in agreement with theoretical expectation about the motive of bilateral aid. It is in view of this motive that corruption in LDCs like African countries, especially Nigeria leads to lower overall growth because rent-seeking is associated with it. As such, resources are thereby diverted from productive activities to non-productive ventures like settling political associates and thugs as the case in Nigeria.

Furthermore, another study by Anoruo and Braha (2005), which utilized panel unit root and Phillips-Hansen fully modified OLS procedures, investigates the effects of corruption on economic growth in 18 African countries. Their findings lend supports to Gyimah-Brempong (2002), which establishes that corruption retards economic growth directly by lowering productivity and indirectly by restricting investment in both physical and human capital. Thus, their study shows that corruption negatively granger-causes economic growth and as such all hands must be on deck to fight it to a standstill in the continent. In another related study by Gomanee, Girma and Morrisey (2005) on aid-growth nexus in 25 SSA countries, reveals a positive relationship. They argued that the poor record of growth in the African continent is not due to aid ineffectiveness but other factors like bad policy environment, corruption and bad governance among others. Williams (2003) also identifies corruption as a major reason why aid has not been effective in promoting Africa's growth. Also, a recent study by Mustafa et al. (2013) on foreign aid and corruption in selected African Countries utilized ARDL model. The findings from

their study indicate that both short and long-run causality exist between corruption and foreign aid in the sample countries. Similarly, their findings show that the pattern of causality in these countries is both unidirectional and bidirectional in nature. More importantly, their findings discover that the corruption trap hypothesis of Collier (2006) is relevant to all the countries in the sample, especially Morocco.

Quantitatively, Akonor (2008) submits that the African Union estimated that the continent loses US$148 billion or a quarter of its entire GDP to corruption on yearly basis. It is also disheartening to state that African leaders stole more than $140 billion of their state resources in the last four decades and over US$854 billion have been reported as illicit financial outflows from the continent during the same period (Dowden, 2011). Prominent among the leaders who looted his country was the former President of Zaire (now DRC) - Mobutu Sese Sekou, who was richer than his own country which he ruled from 1965-1997 (Bovard, 1986; Ayittey, 2005). In this connection, Lancaster (1999) describes him as a case of profoundly corrupt and incompetent leader who rendered foreign aid ineffective despite the huge amount of foreign assistance he got, especially from the US, France and Belgium. This also explains the reasons why foreign aid has continued to have less impact on LDCs economies over the years, especially in Nigeria where corruption has become a cankerworm and systemic. In view of this, Abuzeid (2009) and Lum et al. (2009) submit that the largest bilateral aid donors, especially to Africa are basically the US, UK, France and Japan. For instance, according to Dagne (2011), US aid to Africa nearly quadrupled from US$1.2 billion in 2006 to US$6.9 billion in 2011 and US$7.7 billion was estimated for the year 2012. However, the leading recipient countries of US aid in Africa as at 2008 were Sudan ($666.3 m), Ethiopia ($659.1m) and Kenya ($634.4 m). Although, Kenya with $661.8m in 2011 top the list while Nigeria with $632.3m came second and South Africa received $571.1m. For the year 2012, Kenya was allocated the sum of $751.4m, Nigeria was expected to receive $660.4m and Ethiopia was to pocket $608.3m. Notwithstanding the fact that all these countries are among the most corrupt nations in the world as noted by Transparency International (2011) in its CPI report. From the foregoing review of empirical studies, it is evidently clear that corruption poses serious threat and challenge to the economic growth and development process of African countries. As such, corruption should be regarded as a major obstacle on the path of development in Nigeria, particularly because it retards the gains of foreign aid. To this end, Yaru (2009) submits: "Generally, there is an accord between theoretical and empirical studies that corruption has been inimical to economic growth and development" (p. 147). In view of the foregoing discussions, corruption is therefore considered an important determinant in the development process of Nigeria, which has been rated as one of the icons of corruption in the world by TI.

3.0 RESEARCH METHODOLOGY
3.1 Statements of Hypotheses
Considering the significant relationship existing between corruption and foreign aid as discussed in our literature review, the following hypotheses were tested in our study:
H1: There is both short and long-run causality between corruption and foreign aid in Nigeria.
H2: There is unidirectional causality flowing from corruption to foreign aid in Nigeria.
H3: Corruption trap hypothesis is relevant to the economic analysis of corruption in Nigeria.

3.2 Model Specification
This study adapted the model specification used by Anoruo and Braha (2005) in their study of corruption and economic growth in Africa. Also, we adopted dynamic models known as Autoregressive Distributed-Lag (ARDL) models using Cointegration and Granger-causality to estimate. Importantly, the data generated for estimation were disaggregated into quarterly data (i.e. 1997Q1-2009Q4) using Gandolfo (1981) procedure. Against this background, the econometric model specification is hereby given as:

$$AID_i = \alpha_0 + \alpha_{11}COR_i + \alpha_{12}EG_i + \alpha_{13}INF_i + u_i ....1$$

$$COR_i = \alpha_0 + \alpha_{21}AID_i + \alpha_{22}EG_i + \alpha_{23}INF_i + u_i ....2$$

Here: EG connotes economic growth measured by GDP per capita growth, COR represents corruption (proxy for corruption perceptions index-CPI), AID stands for foreign aid (proxy for Official Development Assistance-ODA) and INF implies inflation rate with consumer prices index as indicator. In the same vein, the u stands for the error terms and the parameters for the model include: $\alpha_{11}, \alpha_{12} - \alpha_{23}$. In view of the above equation, our long-run corruption-aid model is hereby specified as follows:

$$\ln(AID)_t = \alpha_1 + \beta_1(COR)_t + \beta_2\ln(EG)_t + \beta_3\ln(INF)_t + \varepsilon_t ....3$$

$$COR_t = \alpha_1 + \beta_4\ln(AID)_t + \beta_5\ln(EG)_t + \beta_6\ln(INF)_t + \varepsilon_t ....4$$

It must be noted that all the variables with the exception of corruption are in natural logarithm. Procedurally, the

estimation of our long-run model is not possible unless the existence of cointegration among the variables is ascertained through the use of bounds testing technique advanced by Pesaran and Pesaran (1997). In order to achieve this objective, we hereby specified the following generic form equation in which each variable comes in turn as dependent variable.

$$\Delta \ln(AID)_t = \alpha_0 + \sum_{i=1}^{p} \alpha_{1i} \, \Delta\ln(\text{AID})_{t-1} + \sum_{i=0}^{p} \alpha_{2i} \Delta(COR)_{t-1}$$

$$+ \sum_{i=0}^{p} \alpha_{3i} \Delta \ln(EG)_{t-1} + \sum_{i=0}^{p} \alpha_{4i} \Delta \ln(INF)_{t-1}$$

$$+ \delta_1 \ln(AID)_{t-1} + \delta_2 (COR)_{t-1} + \delta_3 \ln(EG)_{t-1}$$

$$+ \delta_4 \ln(INF)_{t-1} + v_t \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots 5$$

Here Δ means first-difference operator and p connotes the optimal lag length. Meanwhile, the ARDL procedures require that the determination of the presence of cointegration among the variables as specified in Eq. 5 is an important procedure that must be done. The procedure is based on F-test with a non-standard distribution and with two sets of critical values. In line with Pesaran and Pesaran (1997), two bands of critical values were calculated for a given significance level. This implies that a lower band assumes that all variables are 1(0) while 1(1) is assumed for an upper band. Therefore, if the calculated F-statistic lies above the upper level of the band, it connotes the presence of cointegration and thus, the null hypothesis should be rejected. On the other hand, if the F-statistic lies below the lower level band, it implies no cointegration, which is always the null hypothesis for cointegration. Also, when the F-statistic falls within the two bands of the critical values, then we conclude that inconclusiveness exists. In order to conduct the Granger-causality test, which is the major test to determine and ascertain the presence of short and long-run relationships among the variables, we hereby specified the following equation. It comprises both short-run and error correction technique (i.e. ECT-error correction term) to determine the long-run of the variables.

$$\Delta \ln(AID) = \alpha_0 + \sum_{i=1}^{p} \alpha_{1i} \, \Delta\ln(\text{AID})_{t-1} + \sum_{i=0}^{p} \alpha_{2i} \Delta(COR)_{t-1}$$

$$+ \sum_{i=0}^{p} \alpha_{3i} \Delta \ln(EG)_{t-1} + \sum_{i=0}^{p} \alpha_{4i} \Delta \ln(INF)_{t-1} + \lambda ECT_{t-1} \dots\dots\dots\dots\dots 6$$

$$\Delta(COR) = \alpha_0 + \sum_{i=1}^{p} \alpha_{1i} \, \Delta(COR)_{t-1} + \sum_{i=0}^{p} \alpha_{2i} \Delta\ln(AID)_{t-1}$$

$$+ \sum_{i=0}^{p} \alpha_{3i} \Delta\ln(EG)_{t-1} + \sum_{i=0}^{p} \alpha_{4i} \Delta \ln(INF)_{t-1} + \lambda ECT_{t-1} \dots\dots\dots\dots\dots 7$$

Here λ connotes the speed of adjustment parameter while ECT implies the obtained residuals from the cointegration model estimated in Eq. 5. Hence, when the cointegration of the variables is ascertained, we then proceeded to investigate the causality direction using the ECM (Error Correction Model) framework as specified in Eqs. 6 and 7. The ECT_{t-1} implies the lagged error correction term obtained from the long-run cointegration relationship. Therefore, the statistical significance of the coefficients of individual explanatory variable is utilized to determine the short-run Granger-causality while the significance of the coefficient of ECT_{t-1} provides information for the long-run cointegration.

4.0 EMPIRICAL RESULTS AND DISCUSSIONS
4.1 Empirical Results and Findings
In order to have a more informative and exploratory presentation of our results, a three stage approach proposed by Kouakou (2011) was adopted. This implies that the order of integration for all the variables in the model must be determined first using unit root test (i.e. stationarity). And when the stationarity of the variables have been confirmed, we then proceeded to the second stage of cointegration test among the variables using bounds test. The Granger-causality test, which represents the third and final stage was utilized to investigate the causal relationship among the variables. Against this background, the empirical results obtained are hereby presented in the tables commencing with stationarity test. The results of the unit root test presented in Table 3 indicate that all

the variables are either stationary at level or first difference with either 1 or 5 percent significance level.

Table 3: Unit Root Test

Variables	Levels		First Differences	
	ADF	DF-GLS	ADF	DF-GLS
AID	-2.857	-2.843***	-6.199***	_____
Corruption	-1.679	-0.816	-4.093**-2.771**	
Growth	-2.926	-3.338***	-5.866***	_____
Inflation	-2.210	-5.314***	-3.627**_____	

Notes: The lag selection for the ADF is based on AIC with maximum lag of 4 because the study is dealing with quarterly data. In order to have a different specification, the study chose the lag for DF-GLS based on SIC with a maximum lag of 3. The null hypothesis is generally no stationarity. The significance levels of ***, ** and * connote 1%, 5% and 10% respectively.

In the same vein, the diagnostic test revealed that there is no serial correlation among all the variables, the functional form is correctly specified and no heteroscedasticity. Against this background, the bounds test was conducted to examine the level of cointegration among the variables and the results are presented in Table 4. The results of the bounds test indicate that at 10 percent significance level, the F-statistic falls between the lower and the upper bands with growth as the dependent variable.

Table 4: Bounds Test Results

Dependent Variable	F-Statistic	10%(0)	10%(1)	5%(0)	5%(1)	1%(0)	1%(1)
AID	10.035***	2.711	3.800	3.219	4.378	4.385	5.615
Corruption	3.835**	2.711	3.800	3.219	4.378	4.385	5.615
Growth	3.517*	2.711	3.800	3.219	4.378	4.385	5.615
Inflation	4.558***	2.711	3.800	3.219	4.378	4.385	5.615

Notes: The null hypothesis is no cointegration. The significance levels of *, ** and*** imply 10%, 5% and 1% respectively. The adopted critical values are from Pesaran and Pesaran (1997).

Also, similar fate holds for corruption and inflation as the dependent variables at 5 and 1 percent significance levels respectively. This scenario suggests inconclusiveness in the result. However, the proposal of Marashdeh and Shrestha (2010) that another means of establishing cointegration is by applying the ECM version of the ARDL model. In view of this recommendation, we therefore proceeded to the estimation of our ARDL model and the results are reported in Table 5.

Table 5: Granger-Causality Results

Variables	ΔAID	ΔCorruption	ΔGrowth	ΔInflation	ECT (-1)
ΔAID	------	6.686*	2.301	3.127	-1.861
ΔCorruption	.217	--------	-------	38.901***	-2.656**
ΔGrowth	6.096	10.647**	-------	2.417	-2.908***
ΔInflation	2.058	20.936***	6.658*	--------	-1.252

Notes: The chi-square statistics are reported for the variables while the t-statistic is reported for the ECT. The null hypothesis is no granger causality. The significance levels of *, ** and *** imply 10%, 5% and 1% respectively. The coverage period is from 1997Q1-2009Q4.

The Granger-causality results for Nigeria present some interesting findings. Among them is the fact that foreign aid does not have significant causality on any of the variable in the short-run; whereas corruption exerts complete causality on all the variables, especially in the short-run. In this regard, corruption granger-causes foreign aid both in the short and long-run at 10 and 5 percent significance levels respectively, without feedback from foreign aid. This scenario implies unidirectional causality from corruption to foreign aid. Similarly, corruption granger-causes growth in the short-run at 5 percent significance level without any feedback flowing from growth, which also suggests unidirectional causality. However, only inflation granger-causes corruption in the short-run at 1 percent significance level with feedback running from corruption also in the short-run at the same significance level of 1 percent. This type of causality between corruption and inflation represents a bidirectional or bilateral causality, which Kouakou (2011) described as a feedback hypothesis (a variant of causality). A very striking discovery is that neutral (independence) causality exists between foreign aid and economic growth, which is unexpected because, it runs contrary to theory. Importantly, corruption granger-causes all the variables in the short-run and more particularly foreign aid, which represents a variable of interest in this study, is also granger-cause by corruption in the long-run analysis.

4.2 Discussions
From the foregoing empirical results presented in Section 4.1, it is obvious that our findings have brought to limelight some interesting discoveries about Nigerian economy, especially the role and impact of corruption in retarding the gains from foreign aid. These findings are evident in the facts that the flow of causality from corruption to foreign aid is both in the short and long-run analysis in Nigeria. This implies that our hypothesis one should be accepted i.e." there is both short and long-run causality between corruption and foreign aid in Nigeria". This finding is consistent with the discovery of Mustafa et al. (2013) for some selected African countries. However, the serious implication of this finding is that corruption induces more foreign aid to be channelled into the country and thus perpetuating more corruption to be committed, especially in the long-run. It is no wondered therefore that the significance level of corruption in the short-run which was 10 percent got improved in the long-run to 5 percent (see Appendix). This also suggests that donors, especially developed countries like the US who continue to donate and allocate more foreign aid to Nigeria despite the corrupt state of affairs are only interested in protecting their national interests as noted by Harrigan and Wang (2011). They argued that donors' interests are possible reasons for some distortions in the economies of LDCs, which renders aid inefficient and unproductive.

Similarly, there is unidirectional causality from corruption to foreign aid without feedback from foreign aid both in the short and long-run analysis. This also implies that our second hypothesis of "there is unidirectional causality flowing from corruption to foreign aid in Nigeria" should be accepted. However, this finding runs contrary to the finding of Charron (2011), which recorded bidirectional causality between both variables in his study. Notwithstanding, our result goes to show that corruption impacts negatively on the economy of Nigeria whether in the short and long-run, which buttresses the position of Consultancy Africa Intelligence (2010) about each country peculiarity and characteristics on corruption. Moreover, our finding corroborates the rating of Nigeria by the Transparency International as one of the most corrupt countries in the world, especially in its CPI reports of 2011. In fact, the position of Gyimah-Brempong (2002) that since most African countries like Nigeria is large recipients of foreign aid, our finding is therefore suggestive that the tendency for siphoning is very high due to the high level corruption in the country, which corroborates his position.

Again, corruption exerts complete dominance on all the variables by granger-causing all, especially in the short-run and it also granger-causes foreign aid in the long-run at 5 percent significance level. This suggests that our hypothesis three should be accepted as well i.e. "corruption trap hypothesis is relevant to the economic analysis of corruption in Nigeria". Against this background, it can safely be argued that since corruption exerts significant control on foreign aid, growth and inflation variables, it implies that corruption has domineering and predictive power on the economy of Nigeria. In view of the foregoing analysis therefore, it is evidently clear that Nigeria is indeed a victim of the corruption trap hypothesis postulated by Collier (2006). This finding is also consistent with an earlier one by Mustafa et al. (2013) on some selected African countries. They observed that all the countries in their sample are victims of corruption trap, especially Morocco. In the same vein, the finding on corruption granger-causing growth is supported by Aliyu and Elijah (2008) in their study about corruption and economic growth in Nigeria. Their submission states thus: "...our results show that corruption has significant negative effect on economic growth" (p. 16).

Other interesting findings emanating from this study include: Firstly, neutral causality was discovered between foreign aid and growth in the short-run. This finding negates theoretical expectations on foreign aid as noted in some studies (see Chenery & Strout, 1966; Moreira, 2003; Riddell, 2007). This is because foreign aid is meant to stimulate and promote economic growth and development in recipient countries like Nigeria. Also, this finding underscores the fact that economic growth in Nigeria perhaps, was not stimulated by foreign aid in the short-run possibly due to insufficient foreign aid allocation then or more likely because of corruption, which affected foreign aid in the short-run as our finding revealed. Similarly, it could also imply that the provision of foreign aid by development partners/donors like the US to Nigeria in the short-run was not motivated by any growth performance but rather by ulterior motives of the donor. This position is noted in some studies like Shah et al. (2005), especially since Nigeria ("the Giant of Africa") is a strategic country in the African continent. They observed that in reality, historical evidences confirm that donor nations hardly assist other nations without corresponding benefits in return. These benefits could either be in the form of economic, military, strategic or political, as long as it promotes the national interest of the donor nation. This scenario is referred to as donor interest model in aid-growth nexus debate in the literature.

Secondly, only inflation demonstrates bidirectional causality with corruption at the same significance level of 1 percent in the short-run. This implies that as more money is stolen by government officials, the real value is eventually eroded by inflation. This suggests that they have to steal massive and huge amount for their loots/stolen money to be meaningful and significant. In this connection therefore, among the good cases of

corruption that caught our attention in recent times are the celebrated corruption sagas of the former Chairman of the National Pension Commission (PENCOM). Also, the N255m two bulletproof cars by the Aviation ministry and the SURE-P N500b fraud are indeed worthy of note as monumental corruption cases in the history of Nigeria. Furthermore, growth variable exerts control on inflation through unidirectional causality at 10 percent significance level. This connotes that the type of growth we witness in the Nigerian economy is not real growth but "mesmerizing growth" because it fuels inflation. This implies that whatever gains accrue to the people from economic growth like social welfare improvement is eroded by high inflation in the economy. As such, when workers salaries are increased, it does not make much difference because the anticipated gains would eventually be wiped off or reduced by inflationary effects. Hence, it is better for workers to seek for price stability and control of inflation from the government, so as to make whatever they earn meaningful and useful.

5.0 CONCLUSION AND RECOMMENDATIONS

An empirical investigation on the causal relationship existing between corruption and foreign aid in Nigeria, is indeed a worthwhile academic endeavor. This is in view of the significant role of these two macroeconomic variables in the growth and development process of the country. Essentially, the findings from this study have further lend credence to the various studies and reports by scholars, writers and international organizations like the TI on the negative impacts of corruption on the economies of most African countries like Nigeria. Basically therefore, this study established that Nigeria is a victim of corruption trap, which has continued to serve as a major impediment towards the realization of the gains of foreign aid as theoretically anticipated. This study also established that neutral causality exists between foreign aid and growth in Nigeria despite the huge amount of aid to the country. This lends supports to the fact that fiscal leakages in the form of corruption and others are present in the economy, which renders foreign aid inefficient and unproductive. And more importantly, the type of growth government officials celebrates in Nigeria could best be tagged as "mesmerizing growth". And that is why in the face of acclaimed yearly economic growth in the country, poverty continues to increase unabated (i.e. more growth leads to more poverty) – what a paradox! To this end, this study recommends that Nigerian government should be more committed and proactive on the anti-corruption war. Also, there is the urgent need for more fiscal discipline on the part of various levels of government in the country. This is to curtail the high level of systemic corruption, squandermania syndrome and fiscal recklessness, which have become governance culture among public officials in Nigeria.

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