CORRUPTION AND ECONOMIC GROWTH IN WEST AFRICA

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Submission date: 29-Apr-2020 09:59PM (UTC+0100)
Submission ID: 1311456903
File name: REVISED_JEJAK_CORRUPTION_AND_ECONOMIC_GROWTH_IN_WEST_AFRICA.doc (145K)
Word count: 2612
Character count: 15639

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ABSTRACT

The link between corruption and economic growth was considered with data that span between 2000 to 2018 in fifteen West Africa countries and the use of Panel FMOL. It was found that the variables used were I(1) and long run equilibrium relationship exists. Only foreign direct investment did not meet the *a priori* expectation while the result for corruption supports the 'grease on the wheel hypothesis'. Corruption and economic growth were found to also support the U-shaped hypothesis. However, corruption does not lead to efficient outcome and therefore should not be allowed at any level of governance.

Key Words: Corruption, Economic Growth, Panel FMOL, U-Shaped Hypothesis, West Africa

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INTRODUCTION

As noted by Gorai (2016), corruption can be conceptualized based on the perception of the researcher; hence Theobald and Williams (1999) opined that the definition of corruption is complex because it is not tied to any disciplinary allegiance. For example, corruption in the public sector is the misused of entrusted authority for private gains (Seldadyo & De Haan, 2006). Corruption occurs in several forms like dishonesty, fraud, bribery, embezzlement, blackmailing, nepotism and favouritism which occurs in different sectors of the economy. There are two schools of taught with respect to the relationship between corruption and economic growth. The first one is of the opinion that corruption propels economic growth through tips and briberies which reduces bureaucracies in organization known as "grease the wheels hypothesis" (Leff, 1964). The other noted that corruption decreases economic growth through prevention of efficiency in production and innovation known as "sand in the wheel hypothesis" (Mauro, 1998; Svensson, 2005).

There are several theories that explain corruption. According to Granovetter (1992), there is the classical perspective dominated by economists' reason for corruption and its impact on production efficiency. It involves the principal and the agent, where the principals are the senior government officials and the junior personnel, the agents. The junior personnel are believed to have some privileged information than the principals who may wish to pay illegally to have access to certain classified information. There are also the moralist and the functionalist perspectives of corruption. The moralist noted that corruption is an immoral behaviour which may make someone to lose his or her respect in the society (Gould, 2002). The functionalist views corruption as playing an important role in the society by speeding up some difficult process in administration (Johnston, 2000).

Corruption, particularly, political and public sector corruption has been a major problem in West Africa. It is widespread in the societies where poverty and unemployment are high and the masses have lost government trust which has led to widespread crime and political unrest (UN Office for West Africa, UNOWA, 2006). The report from the corruption perception index of 2018 revealed that several countries have no impressive results despite government efforts which in some cases are cosmetic because it creates more corrupt act through bribery. The report is even worse for West African countries because from the Transparency International report on corruption of 2018, out of the 16 countries in the region, Nigeria had 27 out of 100 while Ghana scored 41, Cabo Verde scored the highest in West Africa with a 57 out of 100, though, on the average, West Africa ranges about 30% (Corruption Perceptions Index, 2018).

Consensus has not been established on the empirical relationship between corruption and economic growth for panel of countries while related studies in West Africa are not common. However, theoretical justification remains ambiguous. Empirical evidences with the use of different panel estimation methods by Boussalham (2018); Gründler and Potrafke (2019); Tidiane (2019) established inverse relationship between corruption and economic growth for 160 countries; 175 countries and WAEMU region, respectively. This implies that corruption sands the wheel of economic growth in the countries. On the other hand, Saha and Sen (2019) found positive relationship and concluded that corruption and economic growth have direct relationship in autocracies as compared to democracies. The objective of this paper is to empirically ascertain the relationship between corruption and economic growth in West Africa since empirical consensus is yet to be established. It is also possible that the

relationship between corruption and economic growth could be U-shaped which has not been tested in recent studies to the best of my knowledge.

RESEARCH METHODS

Let a simple production function be stated as:

$$Y_{it} = f\left(L_{it}, X_{it}, V_{it}\right),\ i = 1,2,...,15,\ t = 2000,2001,...,2018. \quad (1)$$

Where:

Y_{it} is real GDP; measure of economic growth of country i at time t

L_{it} is labour force of country i at time t

X_{it} is social determinant like education of country i at time t

V_{it} is corruption index of country i at time t

From (1), a Cobb-Douglas production function can be specified as:

$$Y_{it} = A_{it} L_{it}^{\lambda} X_{it}^{\gamma} V_{it}^{1-\lambda-\gamma} \quad (2)$$

A in (2) in this paper is used to capture the effects of other factors of production like some other growth determinants used in the estimation. Though, Solow (1956) used A to capture technological changes, and he also noted that A could be the effect of other factors like war, natural disaster and even economic reforms.

Equation (2) can also be stated in log form as:

$$LNY_{it} = LNA_{it} + \lambda LNL_{it} + \gamma LNX_{it} + (1-\lambda-\gamma)LNV_{it} \quad (3)$$

On the basis of (3), the estimated model is:

$$LNRGDP_{it} = \eta_0 + \eta_1 LNPSENR_{it} + \eta_2 LNODA_{it} + \eta_3 LNLBRF_{it} + \eta_4 LNFDI_{it} + \eta_5 LNCPI_{it} + \eta_6 LNUNEM_{it} + \mu_{it} \quad (4)$$

Where LN before a variable is the log of that variable

$RGDP = Y =$ Real gross domestic product (GDP) measure of economic growth

$PSENR = X =$ Primary school enrolment

$ODA =$ Official Development Assistance

$LBRF =$ Labour force

$FDI =$ Foreign direct investment

$CPI = V =$ Corruption perception index

$UNEM =$ Unemployment rate

All the data were sourced from World Development Indicators, 2018.

A priori, $\eta_1, \eta_2, \eta_3, \eta_4 \succ 0$; $\eta_5, \eta_6 \prec 0$.

The stationarity test was done with the Im, Pesaran, and Shin (2003) method. The test allows for heterogeneous version of the Dicky Fuller test (Hall and Mairesse, 2002). The panel co-integration method by Pedroni (1999, 2004) was used to establish long run relationship among the variables. It is based on within-dimension or between-dimension statistic. The within-dimension based statistics are referred to as panel co-integration statistics while between-dimension statistics are considered as group-mean co-integration statistics. As noted by Quyoom and Imran (2012), the main strength of the Pedroni test is that it allows for individual member-specific fixed effects, deterministic trends and slope coefficients. The estimation was carried out with the use of the fully modified ordinary least squares (FMOLS) estimation method first introduced by Pedroni (2000). The method takes into account both the serial correlation and endogeneity problems that may be present in the variable which is not case in the ordinary least squares.

RESULTS AND DISCUSSION

Panel Stationarity Result

Table 1 presents the panel stationarity results and shows that the variables are I(1).

Table 1: IPS Panel Stationarity Result

Variable	Individual Effects			Individual Intercept and Trend		
	Stat.	**Probability**	**Remark**	**Stat.**	**Probability**	**Remark**
LNRGDP	-0.75350	0.2256	Non stationary	0.51155	0.6955	Non stationary
D(LNRGDP)	-5.66215	0.0000***	I(1)	-6.19437	0.0000***	I(1)
LNPSENR	-1.12976	0.1293	Non stationarity	1.79251	0.9635	Non stationarity
D(LNPSENR)	-4.32846	0.0000***	I(1)	-3.96906	0.0000***	I(1)
LNODA	0.54632	0.7076	Non stationary	-0.43137	0.3331	Non stationary
D(LNODA)	-5.57445	0.0000***	I(1)	-4.19422	0.0000***	I(1)
LNLBRF	-0.19789	0.4216	Non stationary	0.83395	0.7978	Non stationary
D(LNLBRF)	-1.78801	0.0369**	I(1)	-2.53103	0.0057**	I(1)
LNFDI	-0.25554	0.3992	Non stationary	2.08237	0.9813	Non stationary
D(LNFDI)	-5.42576	0.0000***	I(1)	-3.55453	0.0002***	I(1)
LNCPI	0.42865	0.6659	Non stationary	-1.01747	0.1545	Non stationary
D(LNCPI)	-7.22523	0.0000***	I(1)	-5.04303	0.0000***	I(1)
LNUNEM	-0.07205	0.4713	Non stationary	-0.24927	0.4016	Non stationary
D(LNUNEM)	-4.04265	0.0000***	I(1)	-2.03559	0.0209**	I(1)

*** (**) significant at (1%)(5%).

Cointegration Results

Table 2: Pedroni Cointegration Results

	Within Dimension	Between Dimension
PP – Statistics	-3.127008***	-7.618006***
ADF Statistics	-2.000571**	-2.181946**

*** (**) significant at (1%)(5%).

The result reveals that cointegration relationship exists among the variables.

Table 3: Panel FMOLS and Panel DOLS Results

Dependent Variable: LNRGDP		
	Panel (FMOLS)	
	(A) Linear Estimation	**(B)** Quadratic Estimation
LNPSENR	1.383701*** (6.731397)	1.367887*** (6.852146)
LNODA	0.389758*** (8.147296)	0.415414*** (8.810423)
LNLBRF	2.576171** (2.185826)	1.934027* (1.662081)

LNFDI	0.067982 (0.6964)	-0.096437 (-0.549617)
LNCPI	0.563435*** (4.406182)	-4.116935** (-2.408937)
LNCPI^2		0.696312** (2.737410)
LNUNEM	-0.036260 (-0.462133)	-0.038258 (-0.502417)
R^2	0.963712	0.964699
Adj. R^2	0.960797	0.961709

***(**)* 1%(5%)10% sig. respectively. ( ) the t-statistic

The panel FMOLS shows that all the control variables are significant in the determination of economic growth except FDI and unemployment rate. Both estimations (linear and quadratic) show that primary school enrolment (LNPSENR) proxy for human capital development is significant at one percent level of significance and has direct influence on economic growth of West Africa. The result shows that a one percent increase in primary school enrolment would increase economic growth by about 1.4% respectively in both estimations. The result further confirms the one obtained by Nelson and Phelps (1966) who noted that educated workforce may better understand the use of technology compared to uneducated one as this will further boost economic growth. Similarly, Bils and Klenow (2000) opined that high enrolment rate leads to faster improvement in productivity which means that faster growth in real gross domestic product resulted from countries with high enrolment in schools. The results therefore further reinstate the importance of education in enhancing economic growth as earlier noted by (Schultz, 1961).

ODA has significant and direct influence on economic growth and shows that an increase in ODA by say, 1 percent will increase economic growth by less than one percent in both estimations. It affirms the earlier one obtained by Moolio and Kong (2016) in their study of Cambodia, Lao PDR, Myanmar, and Vietnam. Labour force (LNLBRF) also significantly impacted on economic growth. An increase in labour force by about 1 percent will increase economic growth by less than three percent while foreign direct investment has mixed result in terms of the signs of the parameter estimates in the linear and quadratic estimations.

With respect to corruption variable, there is also a mixed result with respect to the parameter estimates on the linear and non- linear models. The result of the linear model shows that corruption has direct influence on economic growth and that an increase in corruption perception index by one percent will increase economic growth by less than one percent. The result affirms the one earlier obtained by Ahmad, Ullah and Arfeen (2012) for 60 developed and developing countries as well as 71 developed and developing economies. This result further ascertained the theory of Leff (1964) who opined that corruption is oil that greases the wheels of government. It is contrary to the result obtained by Boussalham (2018) and Tidiane (2019) and who found inverse relationship between corruption and economic growth.

In the non-linear estimation, corruption variable exhibited u-shape. It shows an inverse relationship with economic growth, gets to a critical lower level and later impacts positively. It implies that initially, corruption will impact inversely on economic growth through bribe taking which may lead to unfair competition and may prevent new opportunities and promote rent seeking. After a while the negative impact may get to a critical level where for example, the same bribery will help to overcome unnecessary government regulations and red tapism.

CONCLUSION

The paper empirically examined the relationship between corruption and economic growth in fifteen West Africa countries. Data for the period 2000 to 2018 and the panel fully modified ordinary least squares were used for the estimation. The variable used were integrated of order one and there is cointegration relation among the variables. Labour force was the most important variable that impacts on economic growth positively in terms of the parameter estimate. With respect to the linear estimation, corruption has direct relationship with economic growth thereby supports the hypothesis that corruption greases the wheels of economic growth rather than sand the wheels of economic growth. As per the quadratic estimation, the U-shaped relationship between corruption and economic growth was supported.

Based on the results estimates, the following are recommended. Official development assistance to West African countries should be effectively managed in such a way that it is not misused for activities that are not necessary through corrupt act. In addition, labour force should be encouraged through incentive like increased salaries and allowances as this will directly impact on economic growth. Rising unemployment in the region should be curtailed through programs that will encourage self employment like skill development. Though, from the result, corruption impacts on economic growth positively, it may not lead to efficient outcomes because of cutting of corners and probably breaches of protocols. Therefore, corruption should not be encouraged at any level of governance. Interest group or political influences should not be taken into consideration when fighting corruption at any level. Most importantly, offenders should be brought to book through constitutional means.

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