

CORRUPTION, POLITICAL INSTABILITY AND ECONOMIC GROWTH: EVIDENCE FROM PANEL DATA

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ABSTRACT

Corruption has been an issue of major political and economic significance in Africa. The expectation that democracy offers a potential route to dealing with the developmental bottleneck of the region, has led to a resurgence of interest in analyzing the nexus between corruption, political instability and economic growth. This study examined these crucial links for seven West African countries considered as the hot-spot of the region from 2002-2018 using panel cointegration, panel dynamic OLS and causality. The results from the panel cointegration shows evidence of long run relationship between corruption, political instability and economic growth. The result of the panel dynamic OLS shows a negative and significant relationship between index of political instability and index of corruption. Also, the result from the Granger-causality shows evidence of unidirectional causality running from corruption and political instability to economic growth. Based on the result that emanated from this study, we suggest a critical need for politically fragmented states with high level of political instability to address the underlying problem that paved the way for conflict through concerted effort. This can be achieved through the design and implementation of policies that will address structural imbalances in the socio-economic and political space of the countries experiencing conflict. Also, corruption can be curbed or minimize by enhancing the quality of governance through intense institutional reform for better economic outcomes.

Keywords: Corruption, Economic growth, Political instability, Panel cointegration and causality

JEL codes: D73, D74, O43, C23

1. INTRODUCTION

The empirical literature is filled with robust relationship between indicators of economic development and the level of corruption (Trisman, 2000, 2007). Possible explanation for this relationship is that, development cannot take place in the absence of good governance. In other words, economic development creates a demand for good institutions or good governance system (Paldam and Gundlach, 2008). Globally, the quest for good governance

is predicated on the fact that it brings about higher level of economic development. It is not surprising that the expectation of higher average income lies at the heart of increasing pursuit of higher quality of living, including a less corrupt and more democratic society globally. The strong negative correlation between corruption and the level of economic development provides prima facie evidence of the negative impact of corruption in the value creation of any country. While ample evidence have shown that the underlying causality between economic development and corruption is likely to run both ways, although, majority of scholars agree that it is primarily running from corruption to economic development rather than other way round. Yet, the bi-directional relationship has all it takes to set in motion a virtuous circle of underdevelopment or otherwise. In other words, effort at fighting corruption like privatization, banking sector reform, aggressive anti-corruption campaigns and establishment of clear and transparent fiscal standards can strengthen the economy. Similarly, loss of output may occur due to misallocation of resources, distortions of incentives and other inefficiencies caused by corruption that represent real cost to society.

In recent years corruption has become an issue of major economic and political significance in Nigeria and other African countries. Corruption scandals has taken the center stage, since it has drawn widespread media attention. Newspapers frequently publish stories about illicit behavior by politicians and public officials. According to Heywood, (1997), media hype about corruption has triggered a widespread perception among general public who demand effective action and politicians who are eager to derive political capital by adopting an overbearing stance over the need to eliminate corrupt practices. This has led to increased electoral popularity of political parties committed to fighting corruption and the launching of high profile anti-corruption campaigns by governments of various ideological hues. In Nigeria and other African countries, fighting corruption has often times dominated electioneering campaign. For instance, in Nigeria, anti-corruption campaign featured prominently in the 2015 and 2019 general election. The reason why corruption is of particular concern for developing countries is that, it undermines economic growth, discourages foreign investment and reduces the resources available for infrastructure, public services and anti-poverty programmes. Also, it undermine political institutions by weakening the legitimacy and accountability of governments, it reduces the effectiveness of aid-funded development projects and weakens public support for development assistance in donor countries (Johnston, 1997; Mark, 1998).

The factors that determine economic growth are among the most extensively studied subjects in the economic literature. Recent interest among researchers is to look at some other politico-economic determinants of growth, in this regard, the emerging literature focus on the link between corruption, political instability and economic growth. For instance, Alesina et al (1996) find evidence that GDP is significantly lower in countries with high tendency of government collapse. This is so because unstable socio-economic and political environment raise uncertainty and risk thereby lowering investment Alesina and Perotti (1996). Similarly, Devereux and Wen, (1998) find evidence that that political instability raises the share of

government spending to GDP, this spending raises seigniorage revenue leading to increase in general price level (Aisen and Veiga, 2008). Through these mechanisms, political instability have the tendency to disrupt long term economic plan thereby inhibiting growth performance of these countries. Conventionally, corruption is considered to be an impediment to investment and growth (see Shleifer and Vishny, 1993; Mauro, 1995; Fisman and Svensson, 2007; Chan et al 2019; Song et al. 2020). Similarly, it has been found by Del Monte et al., (2001), Aidt et al., (2008), Angelopoulos et al., (2009) that corruption affect the majority of both developed and developing countries through distortion of resource allocation, decrease social welfare and capital accumulation, thereby, leading to lower growth and rising poverty. Also, corruption distort development and sustainable priorities (Morse 2006; Doig and McIvor 1999).

The consequences of political instability, poor governance system and bureaucratic corruption on growth in Africa and its implication on rising insecurity has attracted discussion from scholars in recent time. This article add to the small but emerging literature on the relationship between corruption, political instability and economic growth in some selected conflict hot-spot in West Africa, these countries include; Nigeria, Niger, Mali, Liberia, Burkina Faso, Cote d'ivoire and Benin using panel dynamic OLS, cointegration and causality. To achieve this objective, the paper is structured into five sections. Section one deals with the introduction, section two is concern with empirical literature. Section three looks at the methodology, section discuss the result and findings of the study while section five concludes the paper.

2. LITERATURE REVIEW

Conventionally, corruption is considered to be an impediment to investment and growth (see Shleifer and Vishny, 1993; Mauro, 1995; Fisman and Svensson, 2007). Similarly, it has been found by Del Monte et al., (2001), Aidt et al., (2008), Angelopoulos et al., (2009) that corruption affect the majority of both developed and developing countries through distortion of resource allocation, decrease social welfare and capital accumulation, thereby, leading to lower growth and rising poverty. Also, corruption distort development and sustainable priorities (Morse 2006; Doig and McIvor 1999). For instance, Moorse (2006) tested the hypothesis regarding the detrimental impact of high levels of corruption on environmental sustainability, and finds that corruption stifles the indicators that necessitate environmental sustainability

Chan et al. (2019) examine the evolution of corruption and development in transitional economies using panel provincial data of China from 1995 to 2014 on prosecuted cases of corruption, their result show that during the early phase of China's economic reform a positive short-run relationship is indeed observed. However, there is a robust negative long-run cointegration relationship between corruption and per capita income. Acemoglu et al. (2001), argued that, since good institutions set the rules and incentives for the economy, it implies that they constitute an important determinants of development. Bait et al. (2017) further argued that having better and less corrupt institution enhance development. According to Cooray and Dzhumashev, (2018) corruption negatively affect economic

growth through its impact on labor supply. Similarly, evidence from China according to a study by Xu and Yano (2017) showed that anti-corruption effort has a positive impact on financing and investment in innovation. By weakening the enforcement of property rights, corruption inhibits the growth-inducing effect of financial development by re-directing credit to wasteful investment (Acemoglu and Verdier, 1998; Ghirmay, 2004; Arcand et al., 2015; Ahlin and Pang, 2008). Through all these mechanisms, corruption will affect the level of financial development hence, economic growth.

Tran et al. (2020) examine the effects of province-level financial development and corruption on the performance of Vietnamese firms in terms of the growth rates of sales, investment and sales per worker by employing firm-level dataset of more than 40,000 firms for the period 2009–2013 and applying a heteroskedasticity-based identification strategy. Their result showed that province-level financial development promotes firm growth, while corruption hinders it. Furthermore, the marginal effect of financial development on firm growth depends negatively on the level of corruption. Also, financial development aggravates the growth-impeding effect of corruption. Empirical studies from the growth-corruption literature are generally mixed. While some studies document that corruption hinders economic development because it weakens central governments and creates economic distortions (see Shleifer and Vishny, 1993; Mauro, 1995; Rand and Tarp, 2012; Batabyal and Chowdhury, 2015; Gründler and Potrafke, 2019). Other studies such as Leff, (1964), Leys, (1965), Huntington, (1968), Wang and You, (2012), showed that corruption may foster growth by alleviating the distortions of inefficient governance institutions. For instance, Wang and You (2012) used Chinese firm-level data and found that both corruption and financial development enhance the growth of firms.

Song et al. (2020) used panel cointegration and panel error correction models from 2002-2016 to investigate the long run relationship among corruption, economic growth and financial development for 142 developing and developed countries 142 sub-sample. The results confirm that between economic growth (GDP), corruption (COR) and financial development (BM), a long-term cointegration relationship exists in both sample for developing countries. The VECM shows the causal relationships exist between economic growth to financial development and corruption to financial development in the long run. But for developed countries the causalities are absent. The policy implication is that, for developing countries, boosting economic growth and can help promote financial development but curbing corruption has adverse effects on financial development.

3. METHODOLOGY

To investigate the long-run relationship between output growth, corruption and political stability, we employed a panel data framework. The long-run relationship between the aforementioned variables can be specified as follows:

$$GRTH_{it} = \alpha_{it} + \beta_{1i}POLINS + \beta_{2i}CORR + \epsilon_{it} \quad 1$$

The subscript $i=1, \dots, N$ denotes the country while $t=1, \dots, T$ denotes the time period. GRWTH is the growth rate of GDP; POLINS is the index of political instability; CORR is

the index of corruption. The parameters β_1 and β_2 correspond to the long run elasticities of growth rate of GDP GRWTH with respect to corruption CORR and political instability POLINS. The sign of β_1 and β_2 are expected to be negative as growth of GDP will plummet under both scenarios. Political instability and corruption has been identified fundamental problems rolling back development in countries prone with conflict and or high level of corruption.

3.1 Data Description

We assemble data of 7 West African countries (Nigeria, Niger, Mali, Liberia, Cote d’Ivoire, Burkina Faso and Benin) that have experienced one form of instability or the other for the period 2002-2018. The paper adopt some numbers of indicators for the assessment of corruption and political instability. The governance indicator use in this paper is control of corruption CORR and political stability and absence of violence measure PINST. The estimate of governance (ranges from approximately -2.5 (weak) to 2.5 (strong) governance performance) and the data is obtained from World Wide Governance Indicator of the World Bank. The data for economic growth (growth rate of GDP in %) is obtained from World Development Indicator (WDI) and it covers the period 2002 to 2018.

4. RESULT/DISCUSSION OF FINDINGS

Table 1 presents the descriptive statistics for the variables used in the estimations. The result shows that there is substantial variation in variables, as indicated in the standard deviation which suggest that the dispersion around their averages is relatively wide, also, the kurtosis that measures the peakedness or flatness of the series distribution indicated that the series peaked to the surface or leptokurtic relative to the normal distribution. The skewness value have negative skewness (long left tail) indicating more lower value than the sample average.

Table 1. Descriptive Statistics

	MEAN	OBS.	MEDIA N	MAXIMU M	MINIMUM	STD DEV	SKEWNES S	KURTOSI S
GRTH	4.56	112	4.91	15.33	-30.15	4.56	-3.91	31.36
CORR	-0.73	112	-0.67	0.01	-1.43	0.32	-0.15	3.64
POLINT	-0.83	112	-0.85	0.82	-2.26	0.87	-0.02	3.72

Source: Author’s construct based on estimated data

Next, we perform the unit root test to ascertain if our variables of interest has unit root or not. In the literature, a number of panel unit root tests have been proposed which include Levin et al. (2002), Breitung (2000), Im et al. (2003), Maddala and Wu (1999), Choi (2001) and Hadri (2000). Levin et al. (2002) utilized the generalized individual unit root test to panels with heterogeneous serially correlated errors, fixed effects and individual deterministic trends. One of its major drawbacks is that, it requires a homogeneous autoregressive root under the alternative hypothesis. In contrast, Im et al. (2003) put forward a panel unit root test that allows for a heterogeneous autoregressive coefficient under the alternative hypothesis. Essentially, the test averages the individual augmented Dickey–Fuller (ADF) test statistics. However, the fundamental drawback of both the Levin et al.

(2002) and Im et al. (2003) tests is that, they suffer from a dramatic loss of power when individual specific trends are included due to bias correction. The Fisher type panel unit root test is proposed by Maddala and Wu (1999) and Choi (2001), it combines the probability values from individual unit root tests. The test neither requires a balanced panel nor identical lag lengths in the individual regressions. Maddala and Wu (1999) argued that a Fisher type test with bootstrapped probability values is an outstanding choice for testing cointegration in addition to non-stationarity tests in panels. As such, our interpretation of unit root result in this study is based on MW panel unit root test with intercept and time trend since our data set exhibit clear trends. The result of the panel unit root test as presented in Table 2 showed that all variables are stationary at first difference which suggest the possibility of cointegration among our series.

Table 2. Panel Unit Root Result

	LLC		IM, PESARAN & SHIN		ADF-FISHER CHI-SQUARE	
	Level	1st Diff	Level	1st Diff	Level	1st Diff
GRTH	2.65	-16.81	-4.35	-11.78	-29.85	-77.59
PROB	0.11	0.00	0.14	0.06	0.39	0.05
CORR	7.02	-16.89	0.76	-1.57	37.42	-63.04
PROB	0.30	0.00	0.29	0.00	0.22	0.00
POLINT	-0.09	-1.70	0.87	-5.12	66.72	-103.4
PROB	0.41	0.04	0.16	0.03	0.22	0.06

Source: Author’s construct based on estimated data

4.1 Panel Cointegration Test

We utilize the method proposed by Pedroni (1999, 2004) to test for cointegration among our variables. Pedroni's panel cointegration is a heterogeneous panel cointegration method that allows for individual-specific fixed effects and deterministic trends, and can be expressed as $GRWTH_{it} = \alpha_{it} + \delta_i t + \beta_{1i}POLINS + \beta_{2i}CORR + \epsilon_{it}$ 2

The parameter α_{it} and δ_i are country and time fixed effect respectively. ϵ_{it} is an error term. To test the null hypothesis of no cointegration in heterogeneous panel, Pedroni (1999, 2004) proposes seven statistics, which comprises of two test. The first type is the panel cointegration tests (within-dimension) and the second is the groups mean panel cointegration tests (between-dimension) (Hamit-Hagggar 2012). All the tests are measured based on equation 2.

Table 2. Pedroni Panel Cointegration Test Results

Test statistics	No trend	Trend
Alternative hypothesis: common AR coefs. (within-dimension)		
Panel v-Statistic	-1.46(0.99)	1.20(0.15)
Panel rho-Statistic	-1.52(0.17)	1.57(0.11)
Panel PP-Statistic	-4.81(0.07)	-5.81(0.03)
Panel ADF-Statistic	-4.88(0.01)	-5.40(0.05)
Alternative hypothesis: individual AR coefs (between-dimension)		
Group rho-Statistic	0.34(0.15)	1.37(0.91)
Group PP-Statistic	-5.74(0.04)	-6.79(0.00)
Group ADF-Statistic	-5.28(0.00)	-6.47(0.01)

Statistics are asymptotically distributed as normal. Figures in bracket are probability value

Source; Author's construct based on estimated data

The results of the Pedroni (2004) panel cointegration tests is presented in Table 2. From the result, six of the seven panel cointegration tests indicate that the null hypothesis of no cointegration is rejected at the 1%, 5% and 10% significance level when only intercept is included. With respect to the case of intercept and a linear trend, four out of seven panel cointegration tests reject the null hypothesis of no cointegration at the 1% and 5% significance level. As such, we can conclude that majority of the statistics provide evidence of the co-movement among the variables over the long-run.

The cointegrating relationship that exist between our variables indicated that we can proceed to estimate the long run coefficients using the panel dynamic OLS (DOLS approach)¹. As evident in Table 3, the panel parameter is -2.546 for index of political instability and -3.287 for index of corruption. In both cases, the cointegration coefficient are statistically significant and negative at the 1% and 5% respectively. They result implies that a 1% increase in the index of political instability raises growth by -2.5%, similarly a 1% increase in corruption raises growth by -3.3%. Our findings on the link between corruption and growth is supported by studies like (Aidt, 2009; De Vaal and Ebben, 2011 and Dzhumashev, 2014). This findings indicates that corruption alters the effect of institutions on the economy thereby impacting negatively on growth. The growth-political instability nexus indicates that political instability negatively affect growth by reducing the rates of productivity growth as well as physical and human capital accumulation. For similar result see (Gurgul and Lach 2013 for Central European countries; Tabassam et al 2016 for Pakistan)

Table 3. Long run estimate with Panel Dynamic DOLS

DEPENDENT VARIABLE:	COEFFICIENTS	T-STATISTICS
GRTH		
POLINT	-2.546**	-3.729
CORR	-3.287*	-8.210

Note: *? ** indicates 1% and 5% respectively. Abbreviations: GRTH= Growth rate of GDP; CORR= Index of corruption; POLINT= Index of political instability

Source: Author's construct based on estimated data

4.2 Panel Causality Test

The existence of a long-run cointegration among our variables of interest necessitates the need to explore Granger causality. To define the direction of causality among our variables in both the long-run and short-run, we utilized a panel-based error correction model. The two-step Engle and Granger (1987) model is used for testing the Granger causality among GDP growth rate (GRTH), index of political instability (POLINS) and corruption (CORR). The steps consist of first estimating the long-run equilibrium model specified in Eq. (2) in order to obtain the estimated residuals, and then use the residuals lagged one period as the error correction term. The system of equation in relation to the Granger-causality test and the error correction is stated as follows

¹ See Kao and Change (2000) for details on panel DOLS

$$\begin{bmatrix} \Delta GRTH_{i,t} \\ \Delta POLINS_{i,t} \\ \Delta CORR_{i,t} \end{bmatrix} = \begin{bmatrix} \pi_1 \\ \pi_2 \\ \pi_3 \end{bmatrix} + \sum_{m=1}^p \begin{bmatrix} \alpha_{1m} & \beta_{1m} & \delta_{1m} \\ \alpha_{2m} & \beta_{2m} & \delta_{2m} \\ \alpha_{3m} & \beta_{3m} & \delta_{3m} \end{bmatrix} \begin{bmatrix} \Delta GRTH_{i,t-m} \\ \Delta POLINS_{i,t-m} \\ \Delta CORR_{i,t-m} \end{bmatrix} + \begin{bmatrix} \omega_1 \\ \omega_2 \\ \omega_3 \end{bmatrix} ECT_{i,t-1} + \begin{bmatrix} \varepsilon_{1,it} \\ \varepsilon_{2,it} \\ \varepsilon_{3,it} \end{bmatrix} \quad (3)$$

In equation 3, Δ stands for the 1st difference operator. The p represents the lag length, while i stands for country i in the panel ($i=1,2,\dots,N$); t denotes the year in the panel ($t=1,2,\dots,T$); ε_{it} is a normally distributed random error term for all i and t with a zero mean and a finite heterogeneous variance. The ECTs are Error-Correction Terms, derived from the cointegrating equations. Sources of causation can be identified by testing for significance of the coefficients on the lagged variables in Equation (3). Implicit in equation 3 is that either $\Delta GRTH_t$, $\Delta POLINS_t$ and $\Delta CORR_t$ or a combination of them must be caused by ECT_{t-1} which in itself is a function of $GRTH_{t-1}, POLINS_{t-1}, CORR_{t-1}$. Intuitively, if $\{GRTH_t, CORR_t\}$ share a common trend, then the current change in $GRTH_t$ (as the dependent variable) is partly the result of $GRTH_t$ moving into alignment with the trend value $CORR_t$ (as the independent variable). Granger-causality or endogeneity of the dependent variables can be exposed either through the statistical significance of: (i) the lagged ECTs (ω 's) by a t-test; (ii) a joint test applied to the significance of the sum of the lag of each explanatory variable (α 's, β 's, δ 's) in turn by a joint F or Wald χ^2 test. The non-significance of both t and F or Wald χ^2 indicates econometrics exogeneity of the dependent variable (Masih and Masih, 1996).

Table 3. Panel Causality Test Result

DEPENDENT VARIABLES	INDEPENDENT VARIABLES				
	Short run			Long run	
	$GRTH_{t-1}$	$POLINS_{t-1}$	$CORR_{t-1}$	ECT	Joint Causality
$GRTH_t$	NA	0.512 (0.025)	1.008 (0.098)	-1.068 (0.102)	1.292 (0.088)
$POLINS_t$	0.691 (0.120)	NA	1.897 (0.114)	-0.072 (0.706)	0.706 (0.131)
$CORR_t$	3.488 (0.223)	0.084 (0.481)	NA	-0.568 (0.889)	3.936 (0.921)

Source: Author's construct based on estimated data

Table 3 shows that at the 1 per cent and 10 per cent level of significance the null hypotheses that political instability ($POLINS$) and corruption ($CORR$) does not Granger-cause economic growth can be rejected in the short run, suggesting that higher level of corruption and political instability could affect growth significantly in these countries. The result also show evidence of unidirectional causality captured by the ECT channel of causality from political instability ($POLINS$) and corruption to economic growth. Similarly, it is also interesting to note that the joint causality which is another measure of short run causality is significant in the growth equation, while none of the short run channels captured by the

$GRTH_{t-1}$, $POLINS_{t-1}$, $CORR_{t-1}$ and the ECT terms is significant in any of the political instability and corruption equation. The result is not surprising as corruption is of particular concern for developing countries, especially in Africa, because it undermines economic growth, discourages foreign investment, it reduces the resources available for infrastructure, public services and social programmes that have direct impact on the poor and vulnerable people in the society, it is inimical to sustainable development, poverty reduction and good governance. According to Johnston (1997), corruption undermine political institutions by weakening the legitimacy and accountability of governments. All these put together can cause political upheavals due to massive discontentment by citizens and the quest for good governance.

5. CONCLUSION AND RECOMMENDATION

Corruption is a complex and multifaceted phenomenon. This study examined the link between corruption, political instability and economic growth in 7 African countries which include; Nigeria, Niger, Mali, Liberia, Cote d'ivore, Burkina Faso and Benin from 2002-2018 using panel cointegration and causality. The result from the panel cointegration shows that long run relationship exist between corruption, political instability and economic growth. The result from the Granger-causality shows evidence of causality running from political instability, corruption to economic growth, suggesting that higher level of corruption and political instability could affect growth significantly in these countries. The result also show evidence of unidirectional causality captured by the ECT channel of causality from political instability (POLINS) and corruption (CORR) to economic growth. From the result, it can be argued that an environment of weak governance and high level of corruption discourages foreign investment, reduce domestic investment, reduces the resources available for infrastructure, public services and social programmes that have direct impact on the poor and vulnerable people in the society, it exert an inordinately high cost on countries by denying them access to international capital market, distorted allocation of government expenditure away from education, health and the maintenance of infrastructure and toward less efficient public project that provide scope for bribe taking opportunities; these undermine sustainable development effort with implication on economic growth. According to Mauro (1995) high level of corruption and bureaucratic inefficiency are likely to impede investment and growth.

The result that political instability Granger-cause economic growth is in line with other empirical studies. For instance, Alesina et al (1996) find evidence that GDP is significantly lower in countries with high tendency of government collapse. This is so because unstable socio-economic and political environment raise uncertainty and risk thereby lowering investment Alesina and Perotti (1996). Similarly, Devereux and Wen, (1998) find evidence that that political instability raises the share of government spending to GDP, this spending raises seigniorage revenue leading to increase in general price level (Aisen and Veiga, 2008). Through these mechanisms, political instability have the tendency to disrupt long term economic plan thereby inhibiting growth performance of these countries.

Based on the result that emanated from this study, we suggest a critical need for politically fragmented states with high level of political instability to address the underlying problem that paved the way for conflict through concerted effort. This can be achieved through the design and implementation of economic policies that will address structural imbalances in the socio-economic and political space of the countries experiencing conflict. Also, corruption can be curbed or minimize by enhancing the quality of governance through intense institutional reform for better economic outcomes.

REFERENCES

- Acemoglu, D., Johnson, S., and Robinson, J., (2001), 'The colonial origins of comparative development: an empirical investigation,' *Am. Econ. Rev.* 91, 1369–1401.
- Acemoglu, D., Verdier, T., (1998), 'Property rights, corruption and the allocation of talent: A general equilibrium approach,' *The Economic Journal*, 108 (450), 1381–1403.
- Adegboyega, K and Abdulkareem, S. B (2012), 'Corruption in the Nigerian public health delivery system,' *Sokoto Journal of the Social Sciences*, 2, (2)
- Ahlin, C., Pang, J., (2008), 'Are financial development and corruption control substitutes in promoting growth?' *Journal of Development Economics*, 86 (2), 414–433.
- Aidt, T., Dutta, J., Sena, V., (2008), 'Governance regimes, corruption and growth: theory and evidence,' *J. Comp. Econ.*, 36, 195–220.
- Aisen, A and Veiga, F. J (2008), 'The political economy of seigniorage,' *Journal of Development Economics*, 87, 29-50.
- Akindele, S. T (1995), 'Corruption and economic retardation: A retrospective analysis of Nigeria's experience since independence,' In: Adegboyega, K and Abdulkareem, S. B (2012). Corruption in the Nigerian public health delivery system, *Sokoto Journal of the Social Sciences*, 2 (2)
- Alesina, A., Ozler, S., Roubini, N., Swagel, P. (1996), 'Political instability and economic growth,' *Journal of Economic Growth*, 1, 189–211.
- Alesina, A., Perotti, R. (1996), 'Income distribution, political instability, and investment,' *European Economic Review*, 40, 1203–1228.
- Aluko, J. O (2006), 'Corruption in local government system in Nigeria. In: Adegboyega, K and Abdulkareem, S. B (2012). Corruption in the Nigerian public health delivery system, *Sokoto Journal of the Social Sciences*, 2 (2).
- Angelopoulos, K., Philippopoulos, A., Vassilatos, V., (2009), 'The social cost of rent seeking in Europe,' *Eur. J. Polit. Econ.*, 25, 280–299.
- Arcand, J. L., Berkes, E., Panizza, U., (2015), 'Too much finance?' *Journal of Economic Growth* 20, (2), 105–148.
- Bai, J., Jayachandran, S., Malesky, E., and Olken, B., (2017), 'Firm growth and corruption: empirical evidence from Vietnam,' *Econ. J.*, 129, 982–993.
- Batabyal, S. and Chowdhury, A (2015), 'Curbing corruption, financial development and income inequality,' *Progress in Development Studies*, 15, (1), 49-72.
- Breitung, J. (2000). The Local Power of Some Unit Root Tests for Panel Data. Nonstationary

- Panels, *Panel Cointegration and Dynamic Panels*, 15, 161–177.
- Chan, K.S., Dang, V. Q. T and Li, T (2019). The evolution of corruption and development in transitional economies: Evidence from China, *Economic Modelling*, <https://doi.org/10.1016/j.econmod.2019.09.001>
- Choi, I. (2001), 'Unit root tests for panel data,' *Journal of International Money and Finance*, pages 249-272
- Cooray, A., and Dzhumashev, R., (2018), 'The effect of corruption on labour market outcomes,' *Econ. Model.*, 74, 207–218.
- Del Monte, A., Papagni, E., and Del Monte, A., (2001), 'Public expenditure, corruption, and economic growth: the case of Italy,' *Eur. J. Polit. Econ.*, 17, 1–16.
- Devereux, M., and Wen, J. F (1998). Political instability, capital taxation and growth,' *European Economic Review*, 42, 1635-1651
- Doig, A., and McIvor, S. (1999), 'Feature review Corruption and its control in the developmental context: An analysis and selective review of the literature' *Third World Quarterly*, Vol. 20, No. 3, 657-676.
- Duschinsky, M. P (2002), 'Financing politics: A global view,' *Journal of democracy*, Vol. 13, No. 4, pp. 69-86
- Fisman, R and Svensson, J., (2007), 'Are corruption and taxation really harmful to growth? Firm level evidence,' *Journal of Development Economics*, 83, 63–75.
- Ghirmay, T., (2004), 'Financial development and economic growth in Sub-Saharan African countries: Evidence from time series analysis,' *African Development Review*, 16, (3), 415–432
- Gründler, K., Potrafke, N. (2019), 'Corruption and economic growth: New empirical evidence,' *European Journal of Political Economy*.
- Hadri, K., 2000. Testing for stationarity in heterogeneous panel data. *Econ. J.* 3 (2), 148–161.
- Hamit-Hagger, M (2012), 'Greenhouse gas emissions, energy consumption and economic growth: A panel cointegration analysis from Canadian industrial sector perspective,' *Energy Economics*, 34, 358-364
- Heywood, P., (1997), 'Political Corruption: Problems and Perspectives, *Political Studies*, 45, (3), 417-35
- Huntington, S. P., (1968), *Political Order in Changing Societies*, Yale University Press, New Haven, CT.
- Im, K. S., Pesaran, M. H., & Shin, Y. (2003). Testing for unit roots in heterogeneous panels. *Journal of Econometrics*, 115(1), 53–74. [https://doi.org/10.1016/S0304-4076\(03\)00092-7](https://doi.org/10.1016/S0304-4076(03)00092-7)
- Johnston, M., (1997), 'What Can Be Done about Entrenched Corruption? Paper presented to the Ninth Annual Bank Conference on Development Economics, The World Bank, Washington, DC, 30 April-1 May.
- Leff, N. H., (1964), 'Economic development through bureaucratic corruption, *American Behavioral Scientist*, 8 (3), 8–14.
- Levin, A., Lin, C. F., & Chu, C. S. J. (2002). Unit root tests in panel data: Asymptotic and

- finite-sample properties. *Journal of Econometrics*, 108(1), 1–24.
[https://doi.org/10.1016/S0304-4076\(01\)00098-7](https://doi.org/10.1016/S0304-4076(01)00098-7)
- Leys, C., (1965), ‘What is the problem about corruption?’, *The Journal of Modern African Studies*, 3 (2), 215–230.
- Maddala, G. S., & Wu, S. (1999). A Comparative Study of Unit Root Tests with Panel Data and a New Simple Test. *Oxford Bulletin of Economics and Statistics*, 61(s1), 631–652. <https://doi.org/10.1111/1468-0084.61.s1.13>
- Mark, R (1998), ‘Corruption and development: An introduction,’ *The European Journal of Development Research*, 10,(1), 1-14
- Masih, A. M. M., & Masih, R. (1996), ‘Energy consumption, real income and temporal causality: results from a multi-country study based on cointegration and error-correction modelling techniques,’ *Energy Economics*, 18 (3), 165–183.
- Mauro, P., (1995), ‘Corruption and growth,’ *Quarterly Journal of Economics*, 110, 681–712.
- Morse, S. (2006), ‘Is corruption bad for environmental sustainability? A cross-national analysis,’ *Ecology and Society*, 11, (1)
- Mungiu-Pippidi, A., and Hartmann, T. (2019), ‘Corruption and Development: An Overview,’ in *Oxford Research Encyclopedia of Economics and Finance*, <https://doi.org/10.1093/acrefore/9780190625979.013.237>
- Ojo, J (2008), ‘Money politics, political corruption and local government elections in Nigeria,’ *Money and politics in Nigeria*, *International Foundation for Electoral System (IFES)- Nigeria*.
- Oyejide, T. A (2008), ‘Corruption and development: A Nigerian perspective,’ being a paper presented at the 38th Annual Accountant Conference Held at Abuja, 14th October
- Pedroni, P (1999) Critical values for cointegration tests in heterogeneous panels with multiple regressors, *Oxford Bulletin of Economics and Statistics* 61, 653–670
- Pedroni, P. (2004), ‘Panel cointegration: asymptotic and finite sample properties of pooled time series tests with an application to the ppp hypothesis,’ *Econometric Theory*, Vol. 20, No. 3, 597-625. doi:10.1017/S0266466604203073
- Rand, J., Tarp, F. (2012), ‘Firm-level corruption in Vietnam,’ *Economic Development and Cultural Change*, 60 (3), 571–595.
- Shleifer, A., Vishny, R.W., (1993), ‘Corruption,’ *Quarterly Journal of Economics*, 108, 599– 617.
- Song, C.-Q., Chang, C.-P., and Gong, Q (2020), ‘Economic growth, corruption, and financial development: Global evidence,’ *Economic Modelling*, doi: <https://doi.org/10.1016/j.econmod.2020.02.022>.
- Stephen O., Alex A., Kofo A., Olaoluwa U., Olajide D and Emmanuel O (2020), ‘Corruption perception, institutional quality and performance of listed companies in Nigeria,’ *Heliyon*, Vol. 5, e02569
- Sumah, S (2018), ‘Corruption, causes and consequences,’ <http://dx.doi.org/10.5772/intechopen.72953>

- Susan, Rose-Ackerman (1999), *Corruption and Government: Causes, Consequences and Reform*, Cambridge University Press
- Tran, V.T., Walle, Y.M and Herwartz, H (2020), 'The impact of local financial development on firm growth in Vietnam: Does the level of corruption matter?,' *European Journal of Political Economy*, <https://doi.org/10.1016/j.ejpoleco.2020.101858>.
- Trisman, D., (2000), 'The cause of corruption: a cross-national study,' *J. Public Econ*, 76, 399–457.
- Trisman, D., (2007), 'What have we learned about the cause of corruption form ten years of cross-national empirical research?,' *Annual Review of Political Science*, 10, 211–244.
- Wang, Y., You, J., (2012), 'Corruption and firm growth: Evidence from China,' *China Economic Review*, 23 (2), 415–433.
- World Bank, (1997), *The State in a Changing World*, World Development Report, Washington DC.
- Xu, G., and Yano, G., (2017), 'How does anti-corruption affect corporate innovation? Evidence from recent anti-corruption efforts in China,' *J. Comp. Econ.*, 45, 498–519.