

Governance and Development in Africa: A Panel Causal Investigation

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Abstract

This study examined the direction of causality and relationship between governance and development in a panel of 37 African countries during 1996 to 2016 period. The Panel cointegration supports the existence of long-run relationship between governance and development in African countries. The study found bidirectional causality between governance and development in the short-run and unidirectional causality from development to governance in the long-run for African countries. The policy implication from these findings suggests that for African countries to experience good governance in the long-run, there must be in place an improved human development indicator that affects positively the wellbeing and standard of living of the citizenries.

Key words: Governance; Development; Panel cointegration; Africa

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INTRODUCTION

Most African countries had their independence in 1960 and subsequently on 25th May, 1963, 32 countries formed the Organisation of African Unity (OAU) purposely to strengthen the self-rule governance as well as total liberation of political and economic from all forms of neo-colonialism. For over five decades, the state of

development in the continent has been retrogressed as reflected in the poverty situation that engendered the conflict and violence cum acute famine and environmental loss which are unknown to other continents and regions. Governance has long been suspected to be the major factor constituting impediment to the African economic development since late 1970s when African economies suffered major set-back during post-independence. As a way out of these menace, Kabumba (2005) cited UNDP (1997b), Bretton Woods Institutions (BWIs) commissioned a report in 1981, "Accelerated Development in Sub-Saharan Africa: An Agenda for Action": The "Berg Report" (World Bank, 1981), poor governance was highlighted as a major culprit responsible for Africa's poor state of economic health (Fosu, 2017). The report recommended appropriate economic and political governance for leaders from Africa. Subsequently, these leaders adopted regional integration strategy with the establishment of African Union on 26th May, 2001. Increasingly, public finance experts and policy makers have recognized the importance of good governance for inclusive growth and development which led to the development of the New Partnership for Africa's Development (NEPAD) by the African Heads of State in October 2001 with the four main goals which are based on the underlying principles of a good governance, institution and democracy. These goals are eradication of poverty, promotion of sustainable growth and development, integration of Africa into the world economy, and accelerating the empowerment of women.

Scholars and researchers agreed that there is a strong relationship between governance and development yet the direction of causality of the duo is debatable (Smith, 2007; Dixit, 2009; Arndt & Oman 2006). There exists either a conflict or a relationship between the two phenomena as a strand of argument posited that for the African state to experience meaningful economic progress and development, the nature of governance has been considered as an indispensable tool because

good governance forms the basis and accompanied with sustainable development as against the other scholars that have posited that development should be pursued before paying attention to good governance. Other scholars have maintained that good governance and development can be pursued simultaneously (Sen, 1999; Kambula, 2005). Acknowledging the fact that some authoritarian state such as South Korea, Singapore, post reform China have experienced faster economic growth rates than many less authoritarian countries such as India, Jamaica, Costa Rica, according to Sen, this is based on highly selective limited information which does not employ any rigorous statistical testing over wide-ranging data available and hence misleading.

The question of revealing of choice by the poor between political freedom and fulfillment of economic wellbeing and the conclusion that the poor will invariably choose the latter equally has no empirical evidence. This is because political freedom and civic right enable the citizens to draw attention of government forcefully and demand appropriate action of government in relation to their general needs. It is therefore, doubtful and controversial whether good governance is sine-qua-non to development or otherwise as the question is ongoing in the empirical literature. Acknowledging the fact that there is close linkage between good governance and sustainable development, yet the unanswered question in the literature is on determination of the strategies which African countries should adopt to ensure that they continue to enjoy the benefit of both good governance and economic development. The sole objective of this study therefore, is to investigate the causal relationship between governance and economic development in the 37 Africa countries over a period of 1996-2016 with the aid of panel regression analysis. Undoubtedly, finding from this study will be of immense value to African leaders in the process of policy formulation towards tackling the wide spread of the problem of underdevelopment in African countries.

1. CONCEPTUAL REVIEW

1.1 Governance

The concept of governance which could either good or bad is synonymous to government or management. Governance is the use of power in the management of a country's economic and social resources for development. According to UNDP (1997), governance embraces all the methods whether good or bad that societies adopt to distribute power and manage public resources and problems. Good governance which is in vogue should not be misunderstood as synonymous to governance but as its subset. Good governance is described as the effective management of a country's social and economic resources in an opened manner, transparent accountable and equitable (Khan, 1998). It is a democratic form

of governance that is relied on public participation, accountability, transparency and responsible management of public resources for the purpose of equitable and sustainable development. UNDP (1997b) has identified four types of governance and these are economic governance, political governance, administrative governance and systemic governance.

Economic governance includes the processes of decision making that directly or indirectly affects the activities of a country or its relationship with other economies. This type of governance has a major influence on societal issues such equity in wealth distribution, poverty, quality of life and standard of living. *Political governance* refers to the decision making and policy implementation of a legitimate and authoritative state which consists of separate arms of government representing the interests of a plurality polity and allows citizens to freely elect their representatives in a free and fair election. The *administrative governance* comprises of a system of policy implementation carried out through an efficient, independent and open public sector while *systemic governance* includes the all processes and structures of society that guide socio-economic and political relationships to protect cultural and religious beliefs and values to create and maintain a free, healthy, secure environment with equal opportunity that lead to better life for all.

1.2 Development

The concept of development - and the lack of it cut across African countries - simply means advancement in human and environmental condition. Economic development is not only about a mathematical and statistical increment in the Gross Domestic Products (GDPs) of a particular country but also include a fundamental progressive improvement in the standard of living of people and their environment. Development may be sustainable or temporary but for the pace of development in any country to fully realized its goals and objectives, it must be sustainable. Sustainable development however, has been described as that development that meets the present needs without compromising the ability to meet their own needs of future generations but sustainable economic development is that economically sustainable system that is able to produce goods and services on a continuing basis, to maintain manageable levels of government and external debt and to avoid extreme sectoral imbalances which damage agriculture and industrial production (Harris, 2000).

Therefore, the economic perspective of sustainability from neoclassical economic theory is the maximization of welfare over time. The impacts of sustainable economic development will be felt in African countries when the necessary governmental structures and policies that minimize corruption level and the rate of political instability are in existence and hence the importance of this study.

2. EMPIRICAL REVIEW

The relevant literature on Governance and Development in Africa.

Table 1
Summary of the Empirical Literature on Governance and Development in Africa

Author(s)	Objective(s)	Empirical evidence
Bollen and Jackman (1985)	Examined economic and non-economic determinants of political democracy in a sample of almost 100 countries	Economic development was significant in all regression analyses
Gupta et al. (1998)	Analyzed the relationship among democracy, political instability and economic growth in a sample of 120 countries	Growth in income per capita has a positive impact on democracy, but the effect on political violence is negative
Gyimah-Brempong and Traynor (1999)	Explored the relationship between political instability and economic growth in SSA	Higher economic growth leads to lesser political instability
Aisen and Veiga (2013)	Assessed the effect of political instability on economic growth in a sample of 169 countries from 1960 to 2004	Higher political instability leads to lower GDP per capita growth rates via its effect on productivity growth as well as physical and human capital accumulation
Okafor et al. (2014)	Investigated the impact of corruption in a sample of 48 SSA countries from 1996 to 2008	Corruption has a significant negative relationship with economic development
Del Monte and Papagni (2007)	Evaluated the factors responsible for high corruption in Italy during the 1963-2001 period	Level of economic development has a significant impact on corruption
Butkiewicz and Yanikkaya (2006)	Estimated the relationship between economic growth and five measures of democracy in 100 countries from 1970 to 1999	Democratic countries have higher growth rates
Fosu (2002)	Studied the different effects of various elite political instability situations (which include coups d'état, abortive coups or coup plots) on economic growth in 31 SSA countries from 1960 to 1986	Abortive coups and coup plots rather than successful coups have a negative effect on economic growth
Mbaku (1988)	Examined the impact of political instability on economic development in SSA countries	Lack of political stability has negatively impacted economic performance
Ades and Chua (1997)	Evaluated the effect of regional instability on economic growth in 98 countries from 1960 to 1985	Existence of negative spillovers in politically unstable neighboring countries
Alesina et al. (1996)	Investigated the relationship between political instability and GDP per capita growth in a sample of 113 countries from 1950 to 1982	Growth tends to be lower in countries and periods with a strong tendency for government collapse
Abu Nurudeen et al. (2015)	Examine the causal relationship among corruption, political instability and economic development in the ECOWAS from 1996 to 2012	Political instability granger-causes economic development in the short term, while political instability and economic development granger-cause corruption in the long-run. Positive unidirectional Granger Causality from political instability to economic development in the short run and positive unidirectional granger causality from political instability and economic development to corruption in the long run

3. DATA AND METHODOLOGY

3.1 Data

The use of panel data is increasingly gaining relevance in recent years. Many studies on the different economic

topic employed panel data rather than time series data to investigate economic data partly because of the need to harmonize regional policies and more generally due to advantages of panel data in contrast with time series data. Hsiao (2003) documents the advantages of using panel

data and these are represented in Baltagi (2008) such as: controlling for individual heterogeneity and give more informative data, more sample variability, less colinearity among the variables, and more efficiency. This paper therefore, applied panel data of governance and real GDP of forty African countries over the 1996 to 2016 years. The annual data of governance and real GDP per capital derived from WGI and WDI. Governance is measured as the average of six indicators of good governance and real GDP measured in constant 2005 dollars, the natural logarithms of variables are denoted as LGOV and LGDP.

3.2 Methodology

3.2.1 Panel Unit Root Test

Several Panel unit root tests have been presented to test for the order of integration of panel data. Four tests proposed by Levin, Lin and Chu (2002), Im, Pesaran and Shin (2003), Breitung (2000) and Fisher-type test proposed by Maddala and Wu (1999) and Choi (2001) to test the null hypothesis of having unit root were adopted in this study. Levin and Lin (1992) and Levin, Lin and Chu (2002) followed Dickey and Fuller (1979, 1981) by considering a panel extension of the null hypothesis that each individual time series in the panel contains a unit root against the alternative hypothesis that all individual series are stationary (Hsiao, 2003). The adjusted *t*-statistic of Levin, Lin and Chu (2002) test is as follows.

3.2.2 Panel Cointegration Test

This paper applied panel cointegration test of Pedroni (1999, 2004) and Kao (1999). Pedroni presented seven statistics for testing the null hypothesis of no cointegration in panel data. Four statistics called panel cointegration statistics and they are based on pooling along what is commonly referred to as the “within” dimension. These four panel cointegration statistics referred to as panel

v-statistic, panel *p*-statistics, panel *t*-statistic (non-parametric) and panel *t*-statistic (parametric). The other three statistics developed by Pedroni called group-mean panel cointegration statistics, are based on pooling along what is commonly referred to as the “between” dimension and they are as follows: group *p*-statistic (parametric), group *t*-statistic (non-parametric) and group *t*-statistic (parametric). Kao (1999) presented parametric residual-based panel cointegration. He expanded four DF-types and one ADF-type tests for testing the null hypothesis of no cointegration. The tests are based on the spurious least squares dummy variable (LSDV) panel regression equation with one single regressor. This study however adopts the Kao test of cointegration because of the Pedroni test procedure imposed restrictive a priori assumption of a unique cointegrating vector.

3.2.3 Granger Causality Test

In other to achieve the sole objective of this study which is to investigate the causality relationship between two variables of interest in panel data, we can adopt the following bi-variate vector autoregressive (VAR) model and employing Wald’s test:

$$y_{it} = \alpha_i + \sum_{k=1}^k \delta_{ik} y_{it-k} + \sum_{k=1}^k \theta_{ik} x_{it-k} + \varepsilon_{it}, \quad (1)$$

$$x_{it} = \beta_i + \sum_{k=1}^k \gamma_{ik} x_{it-k} + \sum_{k=1}^k \sigma_{ik} y_{it-k} + \mu_{it}. \quad (2)$$

Where $t=1, \dots, T$; $i=1, \dots, N$; k refers to the lag, ε_{it} and μ_{it} denote white-noise error terms. y_{it} is the development proxied by real Gross Domestic Product (GDP) per capital and x_{it} is the governance index.

4. EMPIRICAL RESULT

4.1 Panel Unit Root Test

The results of Levin et al. (2002), Im et al. (2003), Breitung (2000) and Fisher-type panel unit root test of forty African reported in Table 2

Table 2
Panel Unit Root Test

Panel tests	Variables	LGDPK		LGOV	
		At level	At 1 st diff.	At level	At 1 st diff.
Levin, Lin, & Chu test		0.47636	-8.72916***	-6.31718***	-----
Im, Pesaran and Shin test		4.68756	-12.1865***	-3.32234***	-----
Breitung test		1.0×10 ⁻¹¹	-3.27842***	1.95754	-5.5418***
ADF Fisher chi-sq. test		27.5142	273.211***	127.205***	-----
PP Fisher chi-sq. test		23.1166	300.624***	84.5528	261.746***

Note. *** denotes statistical significance at the 1% level.
Source: Authors’ Computation (2017).

Table 2 reveals the results of several panel unit root tests. The results show that LGDPK is non-stationary at levels and become stationary at first difference which means that LGDPK is integrated of order (1). Some panel

unit root tests show that LGOV is stationary at level while others reveal that it is stationary at first difference i.e. it may maybe regard as a variable integrated of order (0) and (1).

4.2 Panel Cointegration Test

Table 3 shows the results of Kao panel cointegration test. The result of Kao panel cointegration test rejects the null hypothesis of no cointegration which implies that there is long-run relationship between governance and development in this panel.

Table 3
Kao Panel Cointegration Test

Panel group statistics	t-statistics
ADF	-1.431555*

Note. * denotes significance at 10% level.
 Source: Authors' Computation (2017).

4.3 Panel Causality Test

In order to determine the direction of causality between governance and development in African countries panel causality which is based on Wald's test was applied in this paper. Based on the result from Kao panel Cointegration Test which is enabled us to reject the null hypothesis of no cointegration between governance and development in African countries, we therefore employed a panel-VECM framework which incorporate both long-run and short-run causality between governance and development.

$$\Delta LGDPK_{it} = \alpha_i + \sum_{k=1}^k \delta_{ik} \Delta LGDPK_{it-k} + \sum_{k=1}^k \theta_{ik} \Delta LGOV_{it-k} + \varphi_i ECT_{t-1} + \varepsilon_{it}, \quad (3)$$

$$\Delta LGDPK_{it} = \beta_i + \sum_{k=1}^k \gamma_{ik} \Delta LGOV_{it-k} + \sum_{k=1}^k \sigma_{ik} \Delta LGDPK_{it-k} + \varphi_i ECT_{t-1} + \mu_{it}. \quad (4)$$

Where Δ is the first difference operator and ECT_{t-1} is lagged values of the error correction term. The short-run causality from development to governance tested by $H_0: \sigma_i = 0$ for all i and k in Equation (3). Also, the null hypothesis for Equation (4) is $H_0: \sigma_i = 0 = 0$ for all i and k , which test short-run causality from governance to development. The long-run causality was however investigated by null hypothesis of no long-run causality in each Equations (3) and (4) by examining the significance of the coefficient of the respective error correction term. The optimum lag-length was selected using Akaike information criterion (AIC) WHICH IS 3 lags. The result of panel causality is reported in Table 4.

Table 4
Panel Causality Test

Dependent variable	Sources of causation		
	Short-run	Long-run	
	$\Delta LGOV$	$\Delta LGDPK$	ECT
$\Delta LGOV$	-----	0.446003***	0.00037
$\Delta LGDPK$	0.035001***	-----	0.0390***

Note. *** denotes statistical significance at 1% level.
 Source: Authors' Computation (2017).

The evidence of panel causality shows bidirectional causality between governance and development in the

short-run for the African countries and unidirectional causality from development to governance in the long-run.

CONCLUSION

There are numerous studies on measuring the impact of (good) governance on the development in Africa but there is no consensus in the literature. In this study however, we made attempt to investigate the causal relationship between governance and development in African economies in both short-run and long-run. The result of the panel cointegration test indicates that there is long-run relationship between governance and development. The panel causality framework based on Wald's test performed after cointegration test indicates bidirectional causality between governance and development in the short-run for the African countries and unidirectional causality from development to governance in the long-run. The policy implication from these findings is that for African countries to experience good governance there must be in place for improved (human) development indicators in the life style of the citizenries in long-run.

REFERENCES

- Abu, N., Karim, M. Z. A., & Aziz, M. I. A. (2014). Low savings rates in the Economic Community of West African States (ECOWAS): The role of the political instability-income interaction. *South East European Journal of Economics and Business*, 8(2), 53-63.
- Ades, A., & Chua, H. B. (1997). Thy neighbor's curse: Regional instability and economic growth. *Journal of Economic Growth*, 2(3), 279-304.
- Aisen, A., & Veiga, F. J. (2013). How does political instability affect economic growth? *European Journal of Political Economy*, 29, 151-167.
- Alesina, A., Ozler, S., Roubini, N., & Swagel, P. (1996). Political instability and economic growth. *Journal of Economic Growth*, 1(2), 189-212.
- Anoruo, E., & Braha, H. (2005). Corruption and economic growth: The African experience. *Journal of Sustainable Development in Africa*, 7(1), 43-55.
- Bollen, K. A., & Jackman, R. W. (1985). Economic and noneconomic determinants of political democracy in the 1960s. *Research in Political Sociology*, 1, 27-48.
- Breitung, J. (2000). The local power of some unit root tests for panel data. *Advances in Econometrics*, 15, 161-177.
- Butkiewicz, J. L., & Yanikkaya, H. (2006). Institutional quality and economic growth: Maintenance of the rule of law or democratic institutions, or both? *Economic Modelling*, 23 (4), 648-661.
- Choi, I. (2001). Unit root tests for panel data. *Journal of International Money and Finance*, 20, 249-272.

- Del Monte, A., & Papagni, E. (2007). The determinants of corruption in Italy: Regional panel data analysis. *European Journal of Political Economy*, 23(2), 379-396.
- Fosu, A. K. (2017). *Governance and Development in Africa: A concise review*. GDI Working Paper 2017-008. Manchester: The University of Manchester.
- Fosu, A. K. (2001). Political instability and economic growth in developing economies: Some specification empirics. *Economics Letters*, 70(2), 289-294.
- Gyimah-Brempong, K., & Traynor, T. L. (1999). Political instability, investment and economic growth in Sub-Saharan Africa. *Journal of African Economies*, 8(1), 52-86.
- Im, K. S., Pesaran, M. H., & Shin, Y. (2003). Testing for unit roots in heterogeneous panels. *Journal of Econometrics*, 115, 53-74.
- Kabumba I. (2005). *Good governance and sustainable development in Africa: Meaning, relationship, problems and strategies*. AAPAZ Zambia Paper.
- Kao, C. (1999). Spurious regression and residual-based tests for cointegration in panel data. *Journal of Econometrics*, 90, 1-44.
- Levin, A., & Lin, C. F. (1993). *Unit root tests in panel data: Asymptotic and finite sample properties*. Working paper, University of California, San Diego.
- Levin, A., Lin, C. F., & Chu, C. S. J. (2002). *Unit root tests in panel data: Asymptotic and finite sample properties*. Working Paper, University of California, San Diego.
- 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, 631-652.
- Mahmoodi & Mahmoodi. (2014). Government expenditure-GDP nexus: Panel causality evidence. *International Journal of Economy, Management and Social Sciences*, 3(1), 37-42.
- Mbaku, J. M. (1988). Political instability and economic development in Sub-Saharan Africa: Some recent evidence. *Review of Black Political Economy*, 17(1), 89-111.
- Okafor, C. E., Smith, M., & Ujah, N. (2014). Kleptocracy, nepotism, kakistocracy: Impact of corruption in Sub-Saharan African countries. *International Journal of Economics and Accounting*, 5(2), 97-115.
- Pedroni, P. (2004). Panel cointegration: Asymptotic and finite sample properties of pooled time series tests with an application to the PPP hypothesis. *Econometrics Theory*, 20, 597-625.
- Pedroni, P. (1999). Critical values for cointegration tests in heterogeneous panel with multiple regressors. *Oxford Bulletin of Economics and Statistics*, 61, 653-678.
- United Nations Development Programme (UNDP). (1997). *Governance for sustainable human development*. New York: United Nations Development Programme (UNDP).
- United Nations Development Programme (UNDP). (1997b). *Reconceptualising governance*. Discussion Paper 2. New York, Management Development and Governance Division, Bureau for Policy and Programme Support, United Nations Development Programme (UNDP).