Volume 18 Issue 3
Originally issued as E1

Global Journal of HUMAN-SOCIAL SCIENCE: E
Economics
Volume 18 Issue 1 Version 1.0 Year 2018
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals
Online ISSN: 2249-460x & Print ISSN: 0975-587X

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GJHSS-E Classification: *FOR Code: 910103*

DOESGOVERNANCEINFLUENCEECONOMICGROWTHINSUBSAHARANAFRICA

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Does Governance Influence Economic Growth in Sub-Saharan Africa?

Salawu M.B.[α], Yusuff A.S [σ], Salman K.K. [ρ], Ogunniyi A.I [ω] & A.M Rufai[¥]

Abstract- Poor governance in Sub-Saharan Africa has been a major hindrance to economic growth of the region compared to other regions in the rest of the world. To examine the influence of governance on economic growth of Sub-Saharan Africa, panel data on growth rate of Gross Domestic Product, governance indicators and other indicators of the three selected Sub-Saharan Africa countries namely Nigeria, South-Africa and Ghana for the period of 1996-2015 were sourced from World Development Indicators of the World Bank and World Governance Indicators. The data were analyzed using Descriptive statistics, Principal Component Analysis, Ordinary Least Square Regression and Generalized Method of Moments. The result revealed that South Africa and Ghana enjoyed better governance than Nigeria. It was also found that governance impacts positively on the economic growth of South Africa and Ghana however a negative impact was experienced by Nigeria. The disaggregated governance indicators regression showed that political stability and control of corruption increase economic growth in South-Africa and Ghana while voice and accountability as well as control of corruption had negative influence on economic growth of Nigeria. The study thus recommends freedom of speech to citizens, accountability of leaders, political stability as well as control of corruption to enhance effective governance and economic growth in the region.

I. Introduction

Sub-Saharan Africa is a continent that is very rich in resources however the resources have been a curse for economic development in the region. Good economic outcomes in any part of the world can only be achieved through good governance as extensive evidences have shown that improving the quality of government impact positively on economic growth and development (Kaufman and Kraay, 2002). Economic governance is a wide concept that encompasses several core components namely Public financial management and accountability, Integrity of monetary and financial institution, Regulatory framework (Economic Commission of Africa, 2002). They further asserted that an economy benefit from good economic governance when institutions of government control the resources of the economy efficiently, formulate and implement efficient policies and regulations, can be monitored and held accountable, respect the rules and norms of economic interaction and a situation where economic activity is not disturbed by corruption and other activities that are not compliance with public trust.

The main elements of good governance as highlighted by Kaufmann, Kraay and Mastruzzi (2005) are accountability and responsibility of government, political stability and lack of violence, governance efficiency, legal framework, law enforcement and corruption control. Each of these elements is vital to economic growth and constituted the institutions of government. Acemoglu and Robinson (2012) have identified good and quality institutions as necessary requirement for long term GDP growth however the institutions in Sub-Saharan Africa is weak from global perspective and this may be one of the reasons for weak development in the region.

According to the World Bank (2013), the overall score for institution quality in Sub-Saharan Africa is below world average and there had been no improvement as the score reduces from -0.63 in 2012 to -0.67 in 2013. This has made the political stability of the region fallen relative to the rest of the world. The key factor identified for weak institution quality in the region is corruption. Transparency International (2013) defined and perceived corruption across a spectrum of illegal payments and transactions such as bribes, embezzlement, and money laundering among others. This index identified three categories of corruption namely Grand corruption, petty corruption and political corruption. Corruption impacts negatively on economic growth through reduction of FDI (Sanyal and Samatan, 2008), reduction of efficiency of government, reduction of tax raising ability of government (Tanzi and Davoodi, 2000), increase inequality (Gupta *et al.,* 2002) and reduce confidence in public institutions and political processes.

World Bank (2011) had declared corruption as the greatest obstacle to economic and social development as it undermines the rule of law and weakening the institutional foundations on which sustainable development of any economy depends. World Bank also affirmed that corruption is very high in sub-Saharan Africa as about 85% of the countries in the region score poorly in its measures of control of corruption and a strong correlation has been found between control of corruption and government effectiveness. Aside Corruption, democracy in sub-Saharan Africa is scarce and flawed as the democracy index calculated by the European International Union

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2014 revealed that only 8 out of the 44 countries in Sub-Saharan Africa included in the index are classified as fairly democratic while about 22 were categorized as authoritarian. The Centre for Systemic Peace also affirmed that Africa and Sub Saharan Africa had the highest fragility index in 2014 and this accounted for the sparse resilience and poor functioning government in the region.

Sub-Saharan economies namely Nigeria, South Africa, Angola, Ethiopia and Ghana accounted for 41% of the region's population and 71% of its GDP in 2013 (Euromonitor International, 2017) however these countries were ranked low interms of governance with Africa as a region recording an average of 0.551 as governance index in 2011. This average is lower than 0.744, 0.655, 0.561 and 0.601 recorded by European Union OECD, Latin Americans and Caribbean, Asia pacific and CIS Central Asia Balkans respectively and higher than 0.539 recorded by Arab states (WGI, 2011).

Table 1: Gross Domestic Product and World Governance Index of five largest Economies in Sub-Saharan Africa

Country	GDP 2016 (Million US Dollars)	GDP World Ranking	WGI (2011)	WGI 2008 World Ranking	WGI 2011World Ranking	WGI 2011 Regional Ranking (Africa)
Nigeria	405,083	26	0.512	165	157	33
South-Africa	294,841	38	0.638	38	68	5
Angola	89,633	62	0.505	166	161	37
Ethiopia	72,374	66	0.486	156	165	40
Ghana	42,690	85	0.616	50	80	7

Source: World Bank Development Indicators(2017) and World Governance Index (2011)

Comparing the GDP with WGI regional ranking in Table 1, Nigeria with the highest GDP in Sub-Saharan Africa ranks 33rd out of the 45 African countries considered in the estimation while South Africa and Ghana with the second and fifth GDP ranks 5th and 7th respectively. This implied that governance varies across countries in the same region and that some countries enjoy better governance than the other. The low average WGI recorded by Africa in which Sub-Saharan Africa countries form its majority must be concern to policy makers as Africa is the source of majority of raw materials used by the developed economies yet most Africa countries remain under developed and contribute less to the world economic growth and development. It is therefore crucial to examine the effect of governance on economic growth of Sub-Saharan Africa with focus on some selected countries (Ghana, Nigeria and South Africa. These countries were selected because they are among the five largest economies in Sub-Saharan Africa. This is necessary to identify how good governance has contributed to the economies of countries that drive the economy of Sub-Saharan Africa and to promote formulation of policies that will improve the governance of countries in the region.

II. Objectives of the Study

The main objective of the study is to examine the effect of governance on economic growth of Sub-Saharan Africa. The specific objectives of the study are to:

- assess the trend of the various indicators of governance.
- describe the trend of economic growth in the region.
- examine the effect of governance performances on economic growth. Examine

III. Justification of the Study

The rejuvenation of Sub-Saharan Africa can only be achieved through good governance as it does not only enhance macroeconomic stability but also assist government in the implementation of developmental and poverty reduction policies; signal government's adherence to standards of institutional functioning free of corruption or other such rent-seeking behaviours. Existing literatures found that governance impact positively on economic development (Gerring *et al*., 2005, Persson and Tabellini 2006; Han *et al.,* 2014). However, literatures that linked governance to economic growth in Sub-Saharan Africa are scarce. Although studies that linked the individual indicators of governance to economic growth exist this study contributes to knowledge by aggregating the indicators of governance to generate the governance index using the Principal Component Analysis (PCA) so as to control for multicollinearity among variables. The study also compares countries with high Gross Domestic Product (GDP) and positive indicators of governance that is Ghana and South-Africa with country with high GDP and negative indicators of governance i.e. Nigeria, with the aim of bringing out policy recommendations to improve the governance and economic growth of countries with poor governance in Sub-Sahara Africa. Furthermore, Africa which is majorly made up of Sub-Saharan Africa had low governance index when compared with other continents in the world (WGI, 2011). Therefore, assessing the impact of governance on economic growth could give insight on its effectiveness in Sub-

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Saharan Africa. This study could therefore serve as a basis for the formulation of efficient policies that would enhance good governance and economic growth in Sub-Saharan Africa.

IV. Methodology

a) Scope of the Study

Sub-Saharan Africa is the area of the continent of Africa that lies south of the Sahara. The region is made up of about of 48 countries out of the 54 countries found in Africa. The region had a population of 969,234,251 in 2015 and this is expected to grow up to 1.5-2 billion in 2050 with a population density of 80 per km^2. The countries with major contribution to the Gross Domestic Product in the region are Nigeria, South-Africa, Ghana, Angola and Ethiopia. These countries were reported to contribute about 70% of GDP of Sub-Saharan Africa in 2013 and Nigeria still remain the giant in the region as Nigeria has the highest contribution to GDP in the region till date. This study focused on three out the five countries identified as major contributors to the GDP in the region. The countries were Nigeria, South-Africa and Ghana. South-Africa and Ghana were used as panel to compare the effect of governance on the economic growth of the two countries with Nigeria.

Data: Data for this study was sourced from World Development Indicators of the World Bank and the World Governance Indicators (2016). The data covers the period of 1996 to 2015. Data on GDP growth rate, trade openness which was measured by the share of export and import to GDP, share of working population, access to sanitation were sourced from the World Development Indicators while Governance indicators namely (i) Voice and accountability (ii)Political stability (iii)Government effectiveness (Governance efficiency)(iv) Rule of law (Legal framework) (v) Regulatory quality (Law enforcement) (vi) Control of corruption were sourced from the World Governance Indicators.

Governance Indicators: Kaufmann and Kraay (2008) classified governance indicators in two groups based on two main criteria: (a) what they measure (b) on what sources and opinion they are based. In this study however, the analysis of good governance for the three countries of interest in sub-Saharan Africa (Ghana, Nigeria and South Africa) was based on the six main indicators defined by the World Bank. These indicators are:(i)Voice and accountability (ii)Political stability (iii)Government effectiveness (Governance efficiency) (iv) Rule of law (Legal framework) (v) Regulatory quality (Law enforcement) (vi)Control of corruption. The evaluation of these indicators was made by ranking 230 countries on the bases of percentile. The better the ranking the more positive is considered the index of that country. The World Bank makes an evaluation of each indicator of governance from -2.5 (bad performance) to +2.5 (good performance).

Table 2: Definitions of Governance Indicators

	Indicators	Definition
1	Voice and Accountability	Measured by the extent to which a country's citizens are able to participate in selecting their govern-ment as well as freedom of expression, association, and the press.
2	Political Stability	Measured by the likelihood that a government will be destabilized by unconstitutional or violent means, including terrorism.
3	Government Effectiveness	Measured by the quality of public services, the capacity of civil services and their independence from political pressure, and the quality of policy formulation.
4	Rule of law	Measured by the ability of a government to provide sound policies and regulations that enable and promote private sector development.
5	Regulatory quality	Measured by the extent to which agents have confidence in and abide by the rules of society, including the quality of property rights, the police and the courts, and the risk of crime.
6	Control of corruption	Measured by the extent to which public power is exercised for private gain, including both petty and grand forms of corruption as well as elite "capture" of the state.

Source: Kaufmann et al., 2010

V. Method of Data Analysis

Descriptive Statistics: This involved the use of graph to describe the trend in the Gross Domestic Product (GDP) and the six indicators of governance considered in this study.

Principal Component Analysis (PCA): PCA was used to aggregate the six indicators of governance to generate the governance index *(GOVINDEX).* This technique is mostly used on quantitative data and it is commonly used to emphasize variation and bring out strong pattern in a dataset so as to make the data easy to explore and visualize. The methodology is also capable of fulfilling the orthogonal condition of no correlation among the indicators thus controlling for multicollinearity. The eigenvalue is the variance of the variable explained by the associated component.

Ordinary Least Square Regression (OLS): This method was used to estimate a simple fixed effects model without controlling for potential endogeneity in the model. Some other control variables were added in addition to the GDP growth rate (GDPGR) and governance index (GOVINDEX).The variables are

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percentage of working age population (AGE), Foreign Direct Investment (FDI), Access to improve sanitation (SAN), Trade Openness (TO). The results were presented in two forms, one is the aggregated governance index (GOVINDEX) and the other is the disaggregated governance indicators i.e. (which shows the individual effects of each governance indicators on the dependent variable that is GDP growth rate). Also, results for Ghana and South Africa are estimated as a panel data and were compared to estimates from Nigeria'sdata. The purpose of this is to know precisely how Nigeria economy responds to these governance indicators because of its dominant negative evaluations for all the six governance indicators. The models for the aggregated governance index and individual governance indicators are thus represented as:

$$GDPGR = \beta_0 + \beta_1 GOVINDEX + \beta_2 AGE + \beta_3 FDI + \beta_4 SAN + \beta_5 TO + \varepsilon \quad (1)$$

Where; GDPGR= Gross Domestic Product Growth Rate, GOVINDEX= Governance Index,
AGE= Percentage of working age population,FDI= Foreign Direct Investment,
SAN= Access to improved Sanitation, TO= Trade Openness.

$$GDPGR = \beta_0 + \beta_1 VC + \beta_2 PS + \beta_3 GE + \beta_4 RQ + \beta_5 RL + \beta_6 CC + \beta_7 AGE + \beta_8 FDI + \beta_9 SAN + \beta_{10} TO + \varepsilon \quad (2)$$

Where; GDPGR= Gross Domestic Product Growth rate, VC= Voice and accountability,
PS= Political stability, GE= Government effectiveness, RQ= Regulatory quality, RL= Rule of law, CC= Control of corruption, AGE= Percentage of working age population, FDI= Foreign Direct Investment, SAN= Access to improved Sanitation, TO= Trade Openness.

Generalized Method of Moments: This was used to further clarify the contribution of governance on economic growth and control for endogeneity. The equation was transformed by taking the first-order difference, with all lagged governance index and control variables used as instruments. The reason for choosing the lagged values for these two variables and all the lagged periods as the instruments is that it avoids the "over identifying" problem judged by the Sargan test and avoids second-order serial correlation judged by the autocorrelation test.

The general specification for GMM is:

$$Y_{i,t} - Y_{i,t-1} = \alpha\left(Y_{i,t-1} - Y_{i,t-2}\right) + \beta'\left(X_{i,t} - X_{i,t-1}\right) + \left(V_t - V_{t-1}\right) + \left(\varepsilon_{i,t} - \varepsilon_{i,t-1}\right)$$

Where; Y= Dependent variable that is GDP growth rate, X= Independent Variables that is governance indicators and other explanatory variables, V_t= time specific effect , ε_t=error term

VI. Results and Discussion

a) *Trends of the Gross Domestic Product of Selected Countries in Sub-Saharan Africa*

The trends of GDP growth rate in Ghana, Nigeria and South Africa between 1996 and 2015 was shown in Figure 1. It was found that the growth of GDP in the three countries is positive and relatively stable for most of the period under study with Nigeria experiencing 10 percent growth rate in 2003 and a further boost of 33 percent the following year and had its lowest growth in 1999 with 0.4 percent growth in GDP. This could be caused by political instability as a result of the major shift in power from the Military Government to the Civilian Government in Nigeria. Ghana however, experienced its highest growth in 2011 with 14.04 percent growth and had its lowest growth in 2000 with just 3.7 percent growth. South Africa rarely enjoyed more than 5 percent growth in GDP throughout the study period with its highest growth of just 5.6 percent in 2006 and plummeted to a negative growth of -1.5 percent three years after. This could be as a result of constant xenophobic attacks amongst its citizens which made it difficult for the regulatory authority to uphold most of the governance indicators especially the regulatory quality and rule of law indices.

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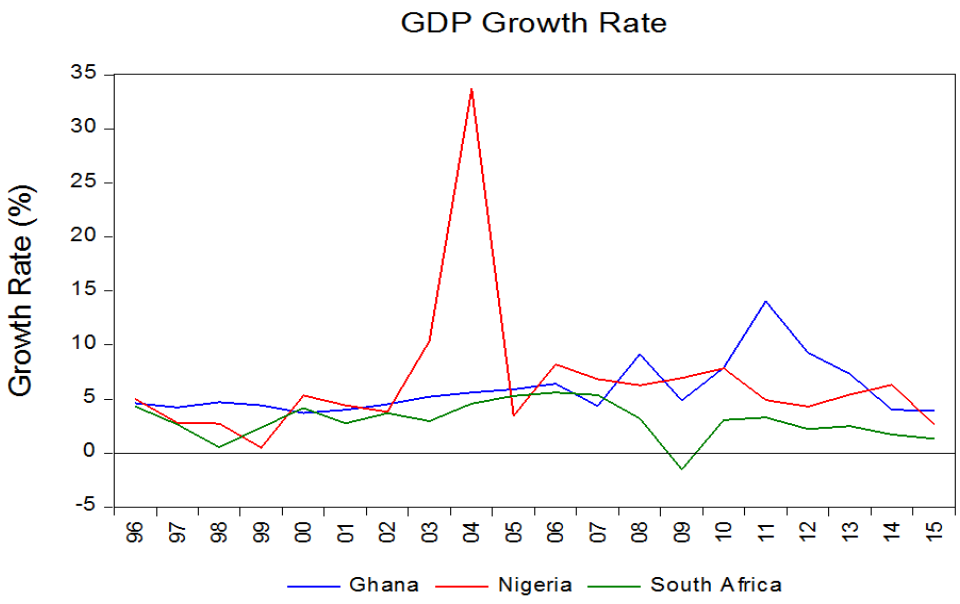

Source: World Development Indicators online database(2016)

Figure 1: Trend of GDP Growth Rate in Ghana, Nigeria and South Africa (1996 – 2015)

b) Trends of the Governance Indicators of Selected Countries in Sub-Saharan Africa

Trends of the governance indicators were presented in Figure 2. Voice and accountability is fairly stable and positive for South Africa, dominantly negative for Nigeria and Ghana shows an improvement over the study period. The index started very high for South Africa in 1996 with 0.85 and continues to increase till it gets to its highest of 0.89 in 1998 after which it started to decrease but didn't get to zero with its lowest rating at 0.55 in 2008 and 2009 successively. Nigeria on the other hand was dominated by negative indices throughout the period with its lowest periods coming at the time of military governance in the country (1996 – 1999). Ghana however, despite its lowest rating of -0.34 in 1996, improved consistently to its highest rating of 0.51 in 2015. In general, for the three countries, the index is between -1.7 and + 0.90 with highest and lowest evaluationfor South Africa and Nigeria respectively.

The three countries struggled to maintain a stable political environment as shown in Figure 2 with all of these countries getting a negative evaluation for most of the study period. The index is positive in Ghana from 2004 – 2007, 2011 – 2013, 2015 and in South Africa form 2006 – 2008 and 2011. Nigeria has the lowest evaluation with -2.19 in 2010 reflecting the local insurgency of the Islamic extremist called Boko Haram that started in 2009 and South Africa with the highest of 0.20 in 2007 with Ghana coming closely at 0.18 in 2005. The indices vary between -2.19 and + 0.20 among the three countries.

Evaluations for government effectiveness and rule of law looked pretty similar for the three countries as shown in Figure 2. A characteristic for the three countries is that both indices is predominantly positive for South Africa, negative for Nigeria and Ghana over around the origin (zero). South Africa's highest evaluation for government effectiveness came in 1996 with 0.88 with its highest evaluation for rule of law with 0.23 coming at 2006. The country maintained its positive evaluation for both rule of lawand government effectiveness for most of the study period with its lowest of -0.01 and 0.27 for both indicators coming at 1996 and 2015 respectively. For Ghana, the evaluation for both rule of law and government effectiveness fluctuated around zero (positive and negative) for most of the study period. Nigeria however, is dominated by negative indices for both indicators throughout the period with rule of law being the worse off (especially between 2002 to 2005) between the two indicators.

Regulatory quality and control of corruption indices in Figure 2 shows that they are also dominated with negative evaluations for Nigeria and fluctuated around zero (positive and negative) for Ghana. Regulatory quality index evaluation for South Africa is steadily positive going from its lowest of 0.27 in 1998 to peaking at 0.78 in 2003 while control of corruption was at its highest with 0.76 in 1996 but decreased continuously to its lowest -0.11 in 2013 and 2014 In summary, it can be seen that of all the three countries, South Africa has the better evaluation in all the governance indicators except the political stability. Ghana is average with most of its governance indicators hovering around zero. The black sheep here is Nigeria, which has all its governance indicators below zero. Therefore, it will be interesting to know how these indicators affect the economic growth (proxy GDP growth rate) in these sub-Sahara African countries.

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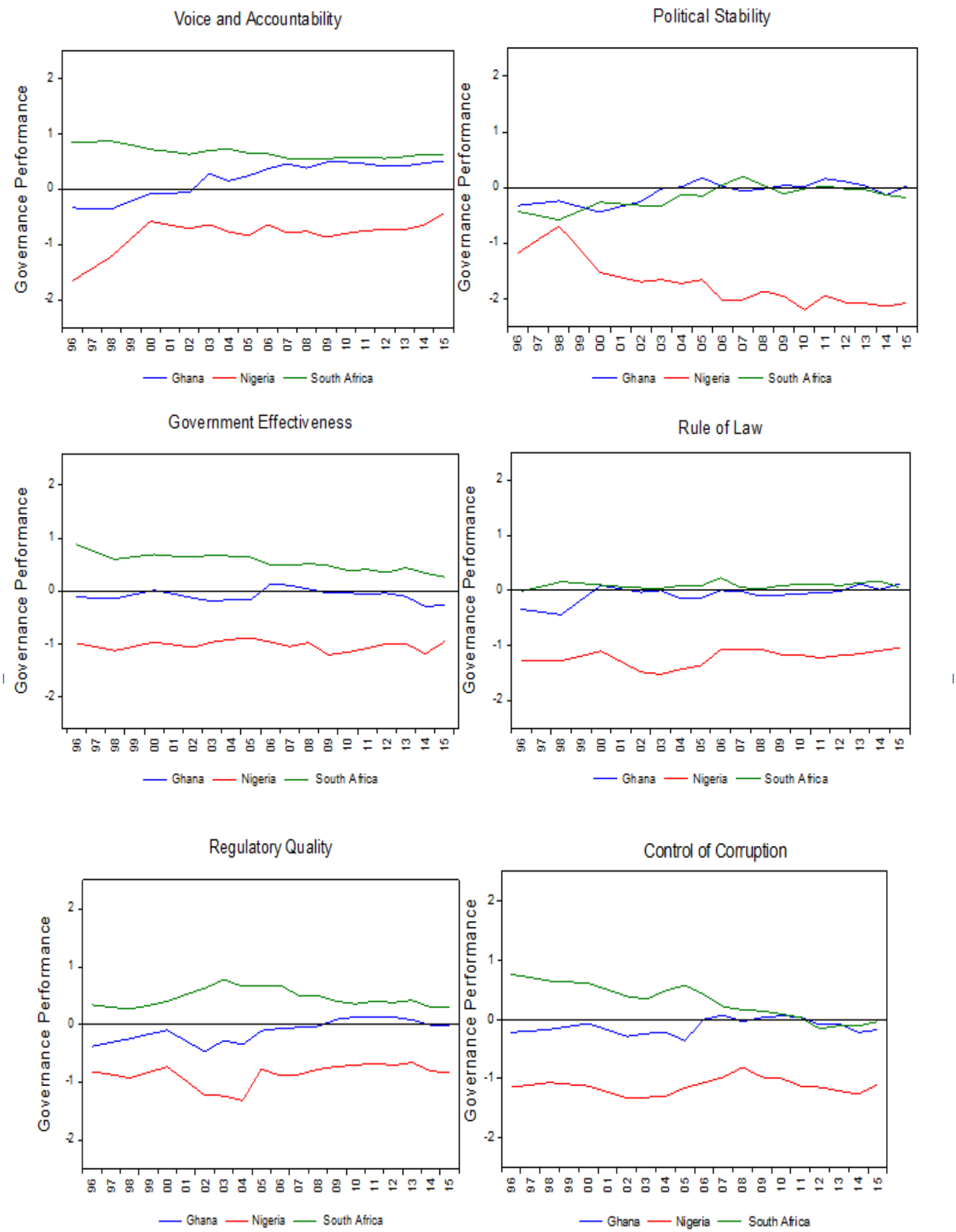

Source: Authors' estimates using data from World Bank, World Governance Indicators online database

Figure 2: Trends of Voice and Accountability, Political Stability, Government Effectiveness, Rule of Law, Regulatory Quality, Control of Corruption in Ghana, Nigeria and South Africa (1996 – 2015)

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c) *PCA Result for the Governance Index*

i. *Result of the Principal Component Analysis*

As shown in Table 4, the highest eigenvalue was 5.44 which explained 91% variation among the governance indicator variables. Since no other eigenvalue matches the figures of the first eigenvalue, i.e. the first eigenvalue explained the largest variation, and then the first principal component (PC 1) was selected. Therefore, governance index was obtained. The governance index was later used in the panel regression analysis.

Table 3: Standardized Loading of the Components

	PC 1	PC 2	PC 3	PC 4	PC 5	PC 6
Control of corruption	0.42	-0.20	-0.37	-0.52	-0.27	0.56
Government effectiveness	0.42	-0.22	-0.35	-0.25	0.39	-0.66
Political stability	0.38	0.86	-0.08	0.03	0.31	0.16
Rule of law	0.42	0.18	0.32	0.00	-0.73	-0.40
Regulatory quality	0.41	-0.26	-0.27	0.82	-0.03	0.16
Voice and accountability	0.41	-0.28	0.75	-0.07	0.38	0.21

PC = Principal component
Source: Authors' estimates

Table 4: Eigenvalue, Proportion Variance and Cumulative Variance

	PC1	PC2	PC3	PC4	PC5	PC 6
Eigenvalue	5.44	0.30	0.11	0.08	0.05	0.03
Proportion variance	0.91	0.05	0.02	0.01	0.01	0.00
Cumulative variance	0.906	0.956	0.974	0.988	0.996	1.000

PC = Principal component
Source: Authors' estimates

d) *Effect of Governance on Economic Growth*

i. *OLS Result using GDP Growth Rate with Aggregated Governance Indicators*

The effect of governance on economic growth using the aggregated governance indicators as shown in Table 5 revealed that the governance index for Ghana and South Africa had significant positive effect on the GDP growth in these countries at 5% level of significance. Access to good sanitation and share of working population were also significant albeit a negative effect on the dependent variable at 1% and 10% level respectively. However, governance index was found to have a significant negative effect on GDP growth in Nigeria which is contrary to the estimates for Ghana and South Africa at 5% level. This implies that Ghana and South-Africa enjoyed better governance than Nigeria thus influencing their economic growth positively as previously reported in literatures.

Table 5: OLS Result using GDP Growth Rate with Aggregated Governance Index

	Ghana and South Africa			Nigeria		
	Estimated Coefficient	T-value	P-value	Estimated Coefficient	T-value	P-value
Governance index	2.47	3.07**	0.004	-12.73	-2.32**	0.036
Share of working population	-0.21	-1.65*	0.109	-3.92	-1.69	0.114
Foreign direct investment	-3.75	-0.04	0.97	-5.35	-0.54	0.594
Access to good sanitation	-0.21	-3.67***	0.001	0.4	-0.27	0.794
Trade openness	0.00	0.07	0.942	-0.14	-0.85	0.412
Adjusted R-squared	0.45			0.16		

*Note: *** means significant at 1%, ** means significant at 5% and * means significant at 10%*
Source: Authors' estimates

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ii. *OLS Result using GDP Growth Rate with disaggregated Governance Indicators*

The OLS result using GDP growth rate with disaggregated governance indicators was presented in Table 6. The result showed that control of corruption and political stability has a significant positive effect on GDP growth rate in Ghana and South Africa at 5% level of significance. That is, a unit increase in control of corruption and political stability will lead to 6.21 units and 7.57 units increase in the GDP growth rate of Ghana and South Africa respectively. Access to good sanitation was also found to have a significant negative effect on GDP growth in Ghana and South Africa. Nigeria estimates, otherwise, showed that only regulatory quality is significant albeit with negative effect on GDP growth of all the six governance indicators considered in this study.

Table 6: OLS Result using GDP Growth Rate with Disaggregated Governance Indicators

	Ghana and South Africa			Nigeria		
	Estimated Coefficient	T-value	P-value	Estimated Coefficient	T-value	P-value
Voice and accountability	-1.85	-0.78	0.443	-18.66	-0.85	0.418
Political stability	7.57	3.45**	0.002	-2.36	-0.24	0.816
Government effectiveness	3.99	1.06	0.298	8.50	0.44	0.668
Regulatory quality	1.96	0.87	0.392	-35.30	-2.26**	0.050
Rule of law	-4.75	-1.26	0.218	28.82	0.99	0.348
Control of corruption	6.21	-2.00**	0.050	-17.71	-0.66	0.528
Share of working population	-0.38	-1.44	0.161	-5.39	-0.84	0.421
Foreign direct investment	1.12	1.30	0.204	-1.38	-0.70	0.503
Access to good sanitation	-0.26	-2.34**	0.026	-0.82	-0.17	0.871
Trade openness	0.04	1.26	0.217	-0.13	-0.55	0.597
Adjusted R-squared	0.63			0.14		

*Note: *** means significant at 1%, ** means significant at 5% and * means significant at 10%*
Source: Authors' estimates

iii. *GMM Result using GDP Growth Rate with Aggregated Governance Indicators*

As shown in Table 7, after controlling for endogeneity, there are still significant positive effect of the governance index on GDP growth for Ghana and South Africa. The coefficient of 2.30 is an average contribution of governance to GDP growth. The results again suggested that governancehad significant negative effect on GDP growth in Nigeria relative to Ghana and South Africa. The new results are consistent with OLS method presented in Table 3. A comparison of Table 3 and 5 suggested that the control for endogeneity reduces the estimated effect of governance on economic development for Ghana and South Africa from 2.47 to 2.30 and from -12.73 to -13.44 for Nigeria. Share of working population had negative significant relationship with economic growth in the three countries considered while access to good sanitation had negative significant relationship with economic growth in Ghana and South Africa only.

Table 7: GMM Estimation Result with Aggregated Governance Indicator

	Ghana and South Africa			Nigeria		
	Estimated Coefficient	Z-value	P-value	Estimated Coefficient	Z-value	P-value
Gdpgr (-1)	0.18	1.34	0.179	-0.29	-1.22	0.222
Governance index	2.30	2.56***	0.010	-13.44	-2.87***	0.004
Foreign direct investment	-1.18	-0.14	0.890	-1.27	-1.23	0.219
Share of working population	-0.25	-2.11**	0.034	-5.60	-2.22**	0.026
Access to good sanitation	-0.19	-3.13**	0.002	1.30	0.76	0.448
Trade openness	0.00	0.00	0.998	-0.26	-1.47	0.141

Gdpgr = lagged gross domestic product, GMM = generalized method of moments
*Note: *** means significant at 1%, ** means significant at 5% and * means significant at 10%*
Source: Authors' estimates.

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iv. *GMM Result using GDP Growth Rate with Disaggregated Governance Indicators*

The result of the GMM using GDP growth with Disaggregated Governance Indicators as presented in Table 8 showed that only political stability and control of corruption is statistically significant for Ghana and South Africa at 1% and 5% level respectively, implying that these indicators has a positive and significant effect on GDP growth with political stability contributing more to their GDP growth. This goes in line with the OLS estimates although the new result shows a reduction in the estimates of political stability and control of corruption from 7.57 to 7.37 and 6.21 to 6.10 respectively as a result of control for endogeneity. However, government effectiveness is the only governance indicator that is statistical significant in Nigeria at 5% level. This implies that government effectiveness has a positive and significant effect on GDP growth in Nigeria. This isn't in line with the OLS result which suggested that only the regulatory quality is statistically significant with GDP growth in Nigeria. The result further revealed that voice and accountability, control of corruption, share of working population and access to good sanitation had negative effect on economic growth of Nigeria. This negative impact of control of corruption as well as voice and accountability on economic growth may be part of the reasons why Nigeria had not performed well interms of governance when compared with South-Africa and Ghana. Control of corruption and political stability had improved the governance of South-Africa and Ghana thus impacting positively on the economies of the two countries.

Table 8: GMM Estimation Result with Disaggregated Governance Indicators

	Ghana and South Africa			Nigeria		
	Estimated Coefficient	Z-value	P-value	Estimated Coefficient	Z-value	P-value
Gdpgr (-1)	-0.02	-0.16	0.875	-1.13	-2.48**	0.013
Voice and accountability	-1.22	-0.56	0.573	-80.25	-2.74***	0.006
Political stability	7.37	3.65***	0.000	5.12	0.49	0.624
Government effectiveness	5.74	1.53	0.125	39.41	2.17**	0.030
Regulatory quality	1.96	0.94	0.345	-10.70	-0.71	0.475
Rule of law	-5.88	-1.52	0.128	24.70	1.19	0.235
Control of corruption	6.10	2.15**	0.032	-35.07	-1.71*	0.088
Share of working population	-0.49	-1.83	0.067	-26.45	-2.54**	0.011
Foreign direct investment	7.58	0.98	0.328	-3.13	-0.21	0.836
Access to good sanitation	-0.30	-2.59***	0.010	-11.35	-1.77*	0.077
Trade openness	0.05	1.52	0.128	-0.04	-0.24	0.811

Gdpgr = lagged gross domestic product, GMM = generalized method of moments
*Note: *** means significant at 1%, ** means significant at 5% and * means significant at 10%*
Source: Authors' estimates.

VII. Conclusion and Recommendations

Nigeria despite its valuable contribution to the GDP of Sub-Saharan Africa is still characterized with poor governance as governance impacts negatively to economic growth in the country compared with South-Africa and Ghana which governance impacts positively on their economic growth. Political stability and control of corruption in South Africa and Ghana influence their governance thus increasing economic growth. Despite that Government effectiveness enhance growth in Nigeria, voice and accountability as well as control of corruption may outsmart government effectiveness thus resulting in poor governance and economic growth.

The study thus recommends that country like Nigeria and other countries in Sub-Saharan Africa should grant their citizens freedom to express themselves and make leaders accountable to the citizens. Countries should also focus more on the control of corruption in the region as corruption make other indicators of governance less effective thus hindering economic growth. Favourable political atmosphere should also be enhanced for all and sundry.

References Références Referencias

1. Acemoglu, D and J. Robinson (2012): Why Nations Fail: The origins of power, prosperity and poverty, Crown Business.
2. EIU (2014): Democracy Index 2014
3. Euromonitor International, (2017): www.euromonitor.com
4. Gerring, J., P. Bond, W. Barndt, and C. Moreno. (2005): Democracy and Growth: A Historical Perspective. World Politics. 57 (3). pp. 323–364.
5. Governance Indicators Database: www.govindicators.org
6. Gupta S., Davoodi and R. Alonso-Terme (2002): Does corruption affect equality and poverty? Economics of Government, 3(1) pp 23-45.
7. Han X., H. Khan and J. Zhuang 2014: Do Governance Indicators explain Development

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Performance? A Cross-Country Analysis. ADB Economics Working Paper No 417.
8. Kaufmann, Daniel and Aart Kraay (2007) 'Governance Indicators: Where Are We, Where Should We Be Going?' World Bank Policy Research Working Paper Series 4370.
9. Kaufmann, Daniel, Aart Kraay and Massimo Mastruzzi (2005) 'Governance Matters IV for 1996-2004', The World Bank World Bank, Institute Global Governance. Policy Research Working Paper.
10. Kaufmann, Daniel, Aart Kraay and Massimo Mastruzzi (2010) :'The Worldwide Governance Indicators: Methodology and Analytical Issues', The World Bank, Institute Global Governance, Policy Research Working Paper 5430.
11. Persson, T. and G. Tabellini (2006):Democratic Capital: The Nexus of Political and Economic Change. NBER Working Paper No. 12175. Cambridge, MA: National Bureau of Economic Research.
12. PwC 2011: Impact of corruption on Nigeria's Economy retrieved online www.pwc.com/ng
13. Sanyal R., and S. Samantha (2008): Effect of perception of Corruption on Outward US Foreign Direct Investment, Global Business and Economic Review, 10(1) pp 123-140
14. Tanzi, V. and H. Davoodi (2000): Corruptions, Growth and Public Finances, IMF Working Paper WP/00/182
15. Transparency International (2013): accessible at https: www.transparency.org
16. United Nations (2002): Economic Commission for Africa: Guideline for Enhancing Good Economic and Corporate Governance in Africa. New York, United Nations
17. World Bank (2011), Anticorruption, accessible at: http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTPUBLICSECTORANDGOVERNANCE/EXTANTICORRUPTION/0,,contentMDK:21540659~menuPK:384461~pagePK:148956~piPK:216618~theSitePK:384455,00.html
18. World Bank (2013): World Governance Indicators, accessible at: http://data.worldbank.org/ data-catalog/worldwide-governance-indicators
19. World Bank online Database: www. data. worldbank.org
20. World Bank Worldwide Governance Indicators online database. http://info.worldbank.org/
21. World Governance Index (2011): Why should World Governance e Evaluated and for what Purpose? Forum for new World Governance Report proposal Paper Series retrieved online www.world-governance.org

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