



THE EFFECTS OF GOVERNANCE ON ECONOMIC DEVELOPMENT IN SUB-SAHARAN AFRICA

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Abstract

This study aims to determine the effect of governance on economic development in Sub-Saharan Africa. The methodology involves the Generalised Method of Moments (GMM) between the 1996-2018 periods for 33 Sub-Saharan African countries. The results indicate that political stability and government effectiveness have a positive significant impact on economic development while regulatory quality, voice and accountability, control of corruption and rule of law negatively and significantly affect economic development. The recommendations from the results implore leaders in Sub-Saharan African countries to engage in peace building missions which can be achieved by voluntarily restraining from wars and setting up peace agreements amongst nations of this sub region. Also, control measures should be taken by the States to check corruption and embezzlement with these control jurisdictions empowered to sanction defaulters.

Keywords: Governance, economic development, Africa, GMM

INTRODUCTION

Nowadays, several developing countries are faced with the problem of underdevelopment. The case is particularly worst in Africa with the region classified as the least developed in the globe. Traditional economic theories have however failed to provide adequate answers for the apparent disparities in economic performance across countries and regions (Nchofoung et al., 2022; Nchofoung and Asongu, 2022a). Several factors have been cited to be at the origin of this lag in development moving from low endowment in infrastructures, to poor institutional setup characterised by persistence insecurity and high levels of corruption (Achuo et al., 2021; Ngouhouo et al., 2021; Nchofoung et al., 2021). In spite of the numerous efforts and economic reforms undertaken over the years by this sub-region, most of them have experienced slow economic transformation. This is further compounded by political upheavals experienced in these countries. Social unrests and economic recession have been largely attributed to institutional failure and have led to an increased recognition of the role of institutions as determinant for economic growth and development (Ngouhouo et al., 2021; Nchofoung, 2022). For example the current so called “Anglophone crisis” in Cameroon can be largely attributed to government failure to address issues pertaining to citizens’ equal participation in the decision making of the country which has paralysed economic activities in most parts of the country and equally lead to the destruction of economic infrastructures. Similar scenario of events have been observed in several other countries in the sub-region including Central African Republic, Ivory coast, Mali, DRC, just to name a few. The general consensus is that the continued underdevelopment of the third world countries, especially those in Sub-Saharan Africa is a product of institutional failure (Siba, 2008). It has been argued that macroeconomic policies, no matter how well formulated, will have little impact in an environment characterised by weak institutions.

The effect of governance or the role of government institutions, such as the rule of law and well-functioning property rights (Rodrik et al., 2004; Rodrik, 2008) in explaining long-run economic performance, has emerged from new institutional economics, pioneered by North (1989, 1991). Several studies have focused on the quality of governance or the quality of public institutions and the possible interaction between government size and governance. There is now evidence, that although government size by itself might have negative growth effects, the effects are larger for economies or societies that also suffer from low quality of governance and vice versa (Nchofoung and Asongu, 2022b).

Though there seems to be a theoretical agreement on the role played by governance through democracy, government effectiveness and the fight against corruption on economic growth and development, empirical findings reveal mixed views. There is inconclusive evidence

on the relationship between governance and economic development and possible reverse causality among the variables. Despite claims of becoming democratic nations, many Sub-Saharan African countries in their quasi totality still lag behind in terms of structural transformation. The failure of conventional determinants of economic growth and development in explaining disparities in terms of macro-economic performance brings back to light the quest of more comprehensive answers to what determine the economic development of nations (Tafah and Njong, 2019).

In recent times, there has been widespread doubt among economists and policy makers alike as to the adequacy of traditional economic theory in explaining and proffering solutions to the problems of modern economies. This is based on the continued underdevelopment of third world countries in spite of the myriad combination of policies they have implemented over the years. This has been further reinforced by the recent global economic recession which was largely attributed to institutional failure, and has led to an increased recognition (in main stream economics) of the role of institutions as a critical determinant of the level of economic growth and development of a nation. The importance of institutions on the relations of production can be seen in terms of their impact on individual and social behaviour. The quality of social characteristics which are necessary for the attainment of efficient economic outcomes such as norms, ethics and morals, are dependent on the quality and strength of a society's institutions. In general, it would be difficult to enforce contracts, protect property rights, business contracts, ensure the adequate and timely dissemination of information to economic agents, and ensure transparency and accountability in an environment characterised by low moral and ethical standards, and thus, weak institutions. In such a situation, the cost and risk involved in carrying out a business venture becomes very high for firms and will generally reduce the propensity of firms to invest in such countries (Budak, 2006; Budak & Sumpor, 2009). Against this background, this paper investigates the effects of governance on economic development in Sub-Saharan Africa.

This paper contributes to literature by examining the development outcome of SSA region through variation in different governance indicators. This is of great necessity given that the region has been classified as the worst in governance and remains the most undeveloped in the World (Ngouhouo et al., 2021). Equally, all the indicators of governance do not perform the same, leaving room for the need for further investigations on the type of governance that best suits economic development and the path to set for the rest of the indicators. Besides, economic development is approached through a composite index built through the principal component analysis.

This paper is structured as follows. Section 1 introduces the paper. Section 2 situates the paper in its proper perspective by reviewing both theoretical and empirical literature on governance and economic development. Section 3 discusses the method of data analysis. Empirical evidence on the effects of governance on economic development in Sub-Saharan Africa is reported in Section 4, while Section 5 concludes the paper with some policy implications.

LITERATURE REVIEW

In exploring the role of role of governance on economic development in Sub-Saharan Africa, we highlight some theoretical underpinnings and salient empirical findings. With regards to theoretical foundations, three main economic schools of thought on the role of governance in development are prominent, notably: the successful society; the governance for growth school, which has recently emerged and the social order school. The first school of thought centres around shaping the governance and development agenda with a focus on key features and characteristics of a successful society. Omweri and Otieno's (2019) survey of the major theories of governance with respect to economic development especially in Asian countries suggests that the successful society possesses the following key characteristics in terms of 'good governance' and exemplary economic development: competitiveness; strong institutions and rules-based conduct as effective, adaptable, stable, and accountable institutions; and social capital for actions to facilitate competitiveness and build strong institutions. Importantly, this way of thinking about governance and development also results in the pursuit of broad-based governance interventions or reforms.

The second school of thought emerged from research that showed a link between good governance and economic growth (Knack & Keefer 1995; Hausmann et al. 2004) – that is, countries with 'good' governance have higher rates of economic growth in comparison to those with poor governance. Indeed, for many economists and political economists, therefore, the main theories of governance and development are found in the interpretation of the dynamics of the relationship between governance and economic growth. Furthermore, not only are growth and increases in per capita income viewed by some academics as the *raison d'être* of development, but enhanced governance is viewed to be at the heart of the development puzzle. One leading academic economist has even declared that 'good governance is development itself. Combine it with material well-being, and we attain the level of advanced societies' (Rodrik, 2008). Interestingly, Rodrik (2008) offers a measured and cautionary conclusion to his paper on governance by noting that economists have little to say about 'good governance', but much to contribute to the governance for growth agenda. Moreover, Acemoglu (2008) argues that the

link between enhanced governance and governance for growth is neither clear-cut nor can it be confidently pursued as a policy. He offers five additional recommendations that are essentially cautionary points. The first is that there is no general recipe for improving institutions. Secondly, the pitfalls of policy reform should be avoided, and the political economy constraints should be recognized. Thirdly, policies can create new and potentially dangerous political constituencies. The fourth recommendation is that public goods are indispensable and lastly, openness and transparency are important.

The third school of thought and perhaps the most creative, robust and interesting theory on the overall subject is provided by North et al. (2008). They divide the world's 200 countries into two parts: 175 countries with 85% of the world's population have a social order that first appeared about ten millennia ago, and exists to this day in various forms or stages that are part of the 'natural state' (which replaced the primitive or first social order). The remaining 25 countries, representing about 15% of the global population, are characterised by the third social order, which first emerged in a few societies at the end of the eighteenth and beginning of the nineteenth centuries, the 'open access society'. There are at least three key points to the thesis presented by North et al. (2008). First, social order is maintained through the interplay between competition, institutions and beliefs. Second, with respect to the transition to open access, the historical and institutional context is important, but the specific details of change and the specific institutions that are the agents of change differ across societies. Therefore, they believe that modern economics fails to understand that interventions and proposed reforms supported by international organisations must conform to existing beliefs about economic, social and cultural systems in the natural state (i.e. the developing country) to be appropriate and successful. Third, institutions and organisations help to reduce the threat of violence and disorder. It is these key insights that are central to this thesis on governance, development and social order. However, the common feature in these three schools of thought is that institutions do matter. Yet, the profound differences in each theory also lie in the perspectives on, as well as the context and approach to, institutions, societies and the dynamics of development progress.

Besides highlighting the key theoretical basis with respect to the governance-development nexus, we now explore some extant empirical literature. For instance, Bokpin (2017) revealed that foreign direct investment (FDI) inflows significantly increase environmental degradation; hence causing a negative impact on environmental sustainability. The study affirmed that, for FDI to have a positive impact on environmental sustainability there need to be strong governance and quality institutions in place to check the conduct of businesses financed through the FDI flows. In a related study investigating whether governance facilitates foreign direct investment in developing countries, Hossain, & Rahman (2017) showed that improved

governance increases FDI inflows. Likewise, Ajide, Adeniyi and Raheem (2014) showed that control of corruption, political stability and government effectiveness matter for the influence of FDI on economic growth in SSA. This key finding was found to be robust even in models where these three governance indicators were interacted with FDI. Furthermore, the results from threshold-type sample splitting showed that in the sample containing countries with a higher level of governance, the positive impact of FDI on growth has larger magnitude vis-à-vis the comparator group with poorer governance indicators. This significant threshold effects remained robust across specifications.

In addition, Saidi, Ochi and Ghadri, (2013) examined the impact of governance indicators and macroeconomic variables on the attractiveness of foreign direct investment in 20 developed and developing countries over the period 1998-2011 using fixed effects panel regressions. The results generally indicated that only two indicators of governance namely, political stability and regulatory quality have a significant impact on FDI inflows. This indicated, for the overall sample, that foreign investors are interested in political stability and regulatory quality in their choice of investment abroad. In a related study for Africa, Gangi and Abdulrazak (2012) concluded that for African countries to improve their investment climate and increase the inflow of FDI, it is necessary to enhance the state of governance. The major limitation of this paper was the absence of different sources for governance indicators, and absence of long time series data on some other governance indicators such as transparency.

Besides studies focussing on the governance-FDI nexus, extensive literature exists on the direct governance-development nexus. For example, Emara and Chiu (2016) evaluated the impact of governance on economic growth using a group of 188 countries in Middle Eastern and North African countries (MENA). The authors concluded that nine countries of the MENA region have shown a positive correlation between governance and economic growth and that governance explains only 35.9% of the variations in economic growth in the MENA region. They equally assert that that majority of the MENA countries have achieved fragile levels of economic growth that does not depend on sound governance. AlBassam (2013) investigated the relationship between governance and economic growth during times of crisis, and revealed the existence of a significant, strong, and positive correlation between each governance indicator and gross domestic product (GDP). It was also revealed that a country's level of development influences the effect of the economic crisis on shaping the relationship between governance and growth. The study concluded that there exist instability in the relationship between governance and economic growth during the economic crisis and calls for the need for long-term strategies to promote global and national good governance practices that are not adversely affected by crises as countries with different levels of development have different requirements and

demands to improve governance and enhance economic growth. These findings have been corroborated by Pèrè (2015).

Furthermore, Sikod and Teke, (2012) showed that based on quality of governance and scores that capture political, economic and financial risk, Cameroon fares worse than Botswana and Senegal in all six governance indicators, with wider disparities in voice and accountability, rule of law, and control of corruption. It was also seen that Cameroon does poorly in its governance measures and that the control of corruption, government effectiveness and political stability affect economic growth negatively in Cameroon. The authors thus concluded that there is a direct relationship between governance and economic performance and that Cameroon has lagged behind in development due to bad governance and recommended good governance as solution. In a similar study for developing countries, Lahouij (2017) contends that governance is highly positively associated with economic development in developing countries regardless of their level of income. Specifically, the result demonstrated that voice and accountability, political stability, and rule of law are positively and significantly related to economic development of Low Income economies. Political stability, government effectiveness, regulatory quality, and control of corruption make a great deal to economic development of Lower Middle-Income countries. Voice and accountability, government effectiveness, regulatory quality, and rule of law are highly positively correlated with economic growth of Upper Middle-Income Economies. These findings are consistent with the results of Azam and Emirullah (2014) and Jiandang et al. (2018) who examined the role of governance in economic development across selected countries in Asia and the Pacific. Rafayet et al (2017) equally conclude on the existence of a statistically significant positive effect of government effectiveness on economic growth in the sub-samples of high- and low-income countries. The impact of government effectiveness on economic growth is seen to be positive in the sub-sample of middle-income countries but not statistically significant.

METHODOLOGY

In order to examine the effects of governance on economic development, we formulate a model which is a modified version of Hamid (2017) model by including control variables such as foreign investment, industrialisation, domestic investment, inflation, financial development and monetary union belonging. However it should be noted that the first model includes exclusively the six indicators of governance as specified below:

$$DEV_{it} = \theta_0 + \theta_1 DEV_{it-1} + \theta_2 VA_{it} + \theta_3 PSTAB_{it} + \theta_4 GEF_{it} + \theta_5 RQ_{it} + \theta_6 RLAW_{it} + \theta_7 COR_{it} + \varepsilon_{it}$$

Later on, some control variables are added to the above model to find out if the result remains consistent from one specification to the other.

$$\begin{aligned}
 DEV_{it} = & \beta_0 + \beta_1 DEV_{it-1} + \beta_2 VA_{it} + \beta_3 PSTAB_{it} + \beta_4 GEF_{it} + \beta_5 RQ_{it} + \beta_6 RLAW_{it} + \beta_7 COR_{it} \\
 & + \beta_8 FDI_{it} + \beta_9 GDI_{it} + \beta_{10} dummyFCFA_{it} + \beta_{11} INF_{it} + \beta_{12} IND_{it} \\
 & + \beta_{13} DCPS_{it} + \mu_{it}
 \end{aligned}$$

DEV_{t-1} is the lagged value of economic development that is the previous year value of economic development. The inclusion of this variable is to ascertain if there exist a lag effect or regressive effect of economic development level of previous year on the current level of economic development. It also fulfils the requirement of System GMM requirement. Engjell (2015), Bassam (2013), Hamid (2017), Maria et al (2009) all captured development using this method.

Voice and accountability (VA) is the first indicator of institutional quality. It measures the extent to which a country's citizens are able to participate in selecting their government as well as freedom of expression, freedom of association and freedom of media. The more the citizens are able to select their rulers and express their opinion in a country, the more they are able to assess and sanction government actions and policies. This was used by Bassam (2013), Hamid (2017), Maria et al (2009). We therefore postulate a negative effect of VA on inflation and a positive sign of VA in the economic development model.

Political stability (PSTAB) reflects the perceptions of the probability that government will be destabilised by or overthrown by unconstitutional means or violence, as well as politically driven violence and terrorism. Political stability is crucial for economic development as it guarantee a stable environment for investment. Bassam (2013) and Hamid (2017) measured this variable in this thesis.

Government effectiveness (GEF) is our third indicator of institutional quality which captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies. Government effectiveness can participate in reducing bureaucratic constraints through sound public services delivery and efficient resources allocation. Government effectiveness can also translate into sound policies to maintain inflation at reasonable levels as can be seen in the works of Engjell (2015), Maria et al (2009) and Rafayet et al (2017).

Regulatory Quality (RQ) is the fourth institutional quality proxy. It reflects perceptions of the ability of the government to formulate and implement sound policies and

regulations that permit and promote private sector development (Engjell, 2015). A favourable environment for the private sector may translate into increase into private investment due to increase in the productivity of private capital due to favourable regulations and policies.

Rule of law (RLAW) is the fifth indicator of institutional quality included in our models. It measures the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. The ability of guaranteeing property rights is fundamental for private investment. (Fondo et al., 2012; Engjell, 2015; Hamid, 2017).

The last indicator of institutional quality is control of corruption (COR). It reflects the perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests. Corruption increases the costs of production which may deter investments. Moreover, corruption distorts the efficient allocation of resources in an economy. Thus, the ability of government to control corruption improves on the quality of public services and can stimulate investment as can be seen in the works of Fondo et al (2012), Hamid (2017) and Maria et al (2009).

Gross domestic investment is captured in this work by gross fixed capital formation as a percentage of GDP. Capital formation or accumulation refers simply to the process of accrual or stocking of assets of value, the increase in wealth or the creation of further wealth. GFCF (formerly gross domestic fixed investment) includes land improvements, plant, machinery, and equipment purchases and the construction of roads, railways, schools, offices, hospitals, private residential dwellings, and commercial and industrial buildings. (World Bank, 2015).

Industrialisation is measured in this study by manufacturing value added as a percentage of GDP. (World Bank, 2020).

Domestic credit to the private sector is measured in this study by domestic capital to the private sector as a percentage of GDP. (World Bank, 2020).

Inflation (INF) is measured by the growth rate of Consumer Price Index (CPI). Traditionally, literature uses two proxies to capture macroeconomic stability namely inflation and interest rate. These two measurements are suitable to capture uncertainty that prevail in an unstable economic environment as can be seen in Maria et al (2009). However, lot of missing values of the real interest rate in the data set constraint the author to use inflation rate as a proxy for macroeconomic stability (instability more precisely).

Our last control variable is foreign direct investment inflow (FDI) measured as a percentage of GDP. This is a proxy to foreign capital which classical economists advocate to be the way out for developing countries characterised by low level of saving, capital and therefore investment which they believe are the drivers of economic development. However, there is no clear stand of literature on the relationship between FDI and inflation. This relationship depends on the elasticity of supply since foreign investment may usually translate into higher income. This is as used by Rafayet et al (2017).

Generalized Method of Moments (GMM) is adopted as technique of estimation in this study. This technique of estimation works in cases where the number of restricted moments in the data generating process is more than the number of parameters to be estimated; the GMM permits the parameters to be over-identified which is the case with the equation in this paper. GMM estimation technique provides a natural way to easily construct tests which take account of sampling and estimation errors. The GMM is suitable when the panel has a short time dimension and larger country (subject) dimension ($N = 33$ greater than $T = 22$).

Secondly, the GMM estimators can be constructed without the specification of the full data generating process (DGP), which otherwise would be required for the construction of the maximum likelihood estimator. This peculiarity has been the reason why researchers have been analysing partially specified economic models and studying potentially mis-specified dynamic models which are designed to match target moments (Hansen, 2007) among others.

There are two variants of the dynamic GMM notably the difference GMM (Arellano and Bond, 1991) and the system GMM (Arellano and Bover, 1995). If the difference GMM instrument variables at first difference with data at levels, the system GMM goes beyond by also instrumenting levels with differences. Roodman (2009) identifies 3 main reasons for using system GMM rather than difference GMM: (1) system GMM is more efficient as it allows for the use of more instruments by specifying two equations (difference and level equation); (2) it accounts for unbalanced panel which in the case of difference GMM is magnified and (3) the system GMM does not expunge the fixed effects as opposed to difference GMM.

The data for this empirical study is collected between 1996-2018 periods for 33 Sub-Saharan Africa countries. The sources of the data include the World development indicators of the World Bank and the Worldwide Governance indicators of the World Bank. The choice of the study period is based on the availability of data within the time of this research.

RESULTS AND DISCUSSION

Table 1: Summary of Descriptive statistics

Variable		Mean	Std. Dev.	Min	Max	Observations
Dev	overall	-1.51e-09	1.73201	-3.165714	4.831236	N = 735
	between		1.508146	-2.17182	4.256494	n = 33
	within		0.864697	-3.42152	2.051992	T = 22.2727
Va	overall	-.5969751	.661422	-2.00014	.862501	N = 655
	between		.6323929	-1.812134	.6562675	n = 33
	within		.2205715	-1.657391	.1154032	T = 19.8485
gef	overall	-.7740287	.5633235	-1.910816	1.020496	N = 655
	between		.5391804	-1.645284	.5223739	n = 33
	within		.1867384	-1.597358	.0389446	T = 19.8485
pstab	overall	-.5905853	.8511886	-2.844653	1.200234	N = 655
	between		.7590134	-2.23719	1.020921	n = 33
	within		.4094874	-2.1085	.7715977	T = 19.8485
cor	overall	-.7290746	.5848967	-1.928533	1.216737	N = 655
	between		.5595193	-1.575356	.9294633	n = 33
	within		.1940493	-1.515261	.2067907	T = 19.8485
Rq	overall	-.6654559	.5812199	-2.297536	.8042418	N = 655
	between		.5527452	-1.777952	.5711975	n = 33
	within		.2017778	-1.570394	.4100726	T = 19.8485
rlaw	overall	-.7566567	.5973276	-2.129996	.7305223	N = 655
	between		.5711162	-1.670781	.6212694	n = 33
	within		.1987175	-1.709541	.1106609	T = 19.8485
gdi	overall	20.54533	8.12565	2.000441	61.30966	N = 758
	between		5.628841	10.33894	30.47056	n = 33
	within		5.940142	2.578622	53.59712	T = 22.9697
fdi	overall	4.575271	10.78355	-8.589433	161.8237	N = 759
	between		5.193027	.5050065	22.249	n = 33
	within		9.492103	-20.19838	145.645	T = 23
ind	overall	26.57639	15.3975	3.243096	84.3492	N = 758
	between		14.9643	7.857109	73.59325	n = 33
	within		4.403467	5.31339	58.0685	T = 22.9697
inf	overall	16.74188	155.3869	-8.97474	4145.106	N = 750
	between		44.40628	1.364058	246.5881	n = 33
	within		149.0829	-222.5659	3915.26	T-bar = 22.73
Dcps	overall	23.63162	118.3336	.4025806	2564.493	N = 759
	between		39.41101	3.099011	201.7083	n = 33
	within		111.7797	-176.8708	2386.416	T = 23

Results from the descriptive analysis in table 1 reveal that the mean economic index for the sample is -1.51e-09 while the overall standard deviation is 1.73201 indicating high level dispersion around the mean value with values of economic development index ranging from -3.165714 to 4.831236. The between standard deviation is 1.508146 which is greater than the

within standard deviation (0.864697) which indicates that the high variability is mostly attributed to variability between panels than variability within panels (countries).

Further descriptive results indicate that all the mean values of the six indicators of governance and institutional quality namely voice and accountability (VA), government effectiveness (GEF), political stability (PSTAB), regulatory quality (RQ), rule of law (RLAW) and control of corruption (COR) are negative indicating poor governance and weak institutions across the selected countries over time. These results can be justified by the fact that undemocratic mechanisms of accession to power are still very rampant in sub Saharan Africa. The region still suffers a lot of socio political crises. Recent examples include Zimbabwe, Burkina Faso, Mali and Cameroon just to indicate a few.

The overall mean value of gross domestic investment (captured by gross fixed capital formation measured as a percentage of GDP) is 20.54533 which implies that on average the selected countries domestic investment stands at 20.55% of their average GDP level. It should also be noted that investment greatly varies across countries and over time as depicted by the overall standard deviation calculated at 8.12565 which reveals that there is great dispersion in the sample. Similarly, the mean value of foreign direct investment (FDI) stands at 4.575271

In a nutshell, it can be seen that all six indicators of governance positively correlates with economic development index as it was observed that all the line of best fit were positively trending. This can be ascertained using a pairwise correlation matrix as show in table 2.

Table 2: Pairwise correlation matrix

	dev	Va	gef	cor	pstab	rq	Rlaw
dev	1.0000						
va	0.2528 (0.0000)	1.0000					
gef	0.3924 (0.0000)	0.5748 (0.0000)	1.0000				
cor	0.3152 (0.0000)	0.5545 (0.0000)	0.5733 (0.0000)	1.0000			
Pstab	0.4938 (0.0000)	0.3510 (0.0000)	0.4111 (0.0000)	0.4034 (0.0000)	1.0000		
Rq	0.3388 (0.0000)	0.5681 (0.0000)	0.5900 (0.0000)	0.5267 (0.0000)	0.3847 (0.0000)	1.0000	
Rlaw	0.3965 (0.0000)	0.6184 (0.0000)	0.5904 (0.0000)	0.5771 (0.0000)	0.4287 (0.0000)	0.4995 (0.0000)	1.0000

Note: P-values in parenthesis

It can be seen from the pairwise correlation matrix that the correlation coefficient between all six indicators of governance and economic development are positive and

statistically significant which postulates that governance positively relates with economic development. However, this relationship is properly address in the GMM regression analysis which results are presented in table 3.

Table 3: The impact of governance on economic development in Sub-Saharan Africa

VARIABLES	(1)	(2)
	Dependent variable: economic development	
L.dev	0.172*** (0.00501)	0.0134 (0.0395)
Va	-0.595*** (0.0318)	-0.876*** (0.160)
Gef	2.134*** (0.0606)	0.179 (0.173)
Pstab	0.733*** (0.0340)	0.523** (0.207)
Cor	-0.200*** (0.0550)	-0.512* (0.296)
Rq	-0.450*** (0.0774)	-0.967** (0.439)
Rlaw	-0.504*** (0.147)	2.243*** (0.536)
Glob		0.107*** (0.0146)
Gdi		-0.0100 (0.0144)
Fdi		0.0305 (0.0247)
Ind		0.0476*** (0.00252)
Dcps		0.0645 (0.0848)
Inf		0.000383
CFA		(0.000821)
		-0.0092 (0.1375261)
Constant	1.051*** (0.0440)	-5.592*** (0.941)
Observations	608	576
Number of countries	33	33
Prop>AR1	0.00189	0.000184
Prop>AR2	0.354	0.253
Instruments	24	27
Prop>sargan	0.810	0.106
Prop>Hansen	0.237	0.509
Fisher	26937***	433.7***

Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

The results from table 3 is valid econometrically, this is because our number of instruments is less than the number of cross-sections (Rodman, 2009). Moreover, the Hansen and Sargan probabilities are all less than 10% indicating the validity of our instruments. Besides, the Fisher statistics show that our model is globally significant.

Results from table 3 reveal that the coefficient of the lag value of economic development is consistently positive indicating that lag value of economic development relates positively with the current level of economic development in Sub-Sahara Africa. In other words, the level of economic development of the previous year has a positive impact on the economic development of the following year. This result is significant at 1% level which implies that there is a significant lag effect of economic development in Sub-Saharan Africa.

Without any control variable, results from the GMM estimation show that there is a negative effect of voice and accountability, corruption, regulatory quality and rule of law on economic development in Sub-Saharan Africa. However, when control variables are included in the model, the other variables become positive except voice and accountability, corruption and regulatory quality. This is explained by the fact that SSA countries still have more to do as far as democratic principles are concerned. While some of these countries are gradually succeeding in their democratic transitions, majority are still in autocracy and military rule. This explains the negative effect of voice and accountability. That of regulatory quality is explained by the fact that the public service in SSA is made by high rate of incompetence and administrative bottlenecks. Administrative files take months to be treated, slowing down development.

Similarly, without control variables, results from the table above show that government effectiveness exerts a positive impact on the level of economic development in SSA. This outcome is statistically significant at 1 % level. This shows that government effectiveness is an important variable to be considered in the execution of developmental strategies within Sub-Saharan African countries. This is in line with the work of Rafayet et al (2017) who found a significant positive effect of government effectiveness on economic growth in a panel of 81 countries.

One key result arising from the table above shows that political stability exerts a positive impact on the level of economic development in Sub-Sahara Africa. It should be noted that this result is consistent from one specification to another. In effect, an increase in political stability index by 1 point of the selected countries will bring about 0.52 point increase in the economic development index on average. Furthermore, this outcome is statistically significant at 1% and 5% level respectively in both models which implies that political stability is a vital variable to be considered in the implementation of developmental strategies within Sub-Saharan Africa countries. This result is in line with a priori expectation and also conforms to the new institutional

economics postulate with claims that good governance and quality of institutions can foster economic growth and development. When the economy is politically stable, it reduces uncertainty that characterises instable economy. By so doing it encourages private investment which through the principle of multiplier will lead to increase in national income. This result however contradicts the findings of Fondo et al (2012) in Cameroon who found that political stability significantly compromise economic growth.

In that same vein, results from the GMM estimation procedure reveal that there is a consistent negative effect of control of corruption on the level of economic development in Sub-Saharan Africa. Also, it was found that this result is statistically significant at 1% and 10% level respectively in both models. SSA still lacks efficiency in corruption control. There is high rate of corruption in processing and award of contracts. Developmental projects are halt in most countries because developmental funds have been syphoned into private accounts. The result is in conformity with new institutional economists theory who postulate that differences in economic performance of countries despite capital accumulation and technological improvements can be attributed to the quality of institutions or governance as a whole (Easterly et al., 2004, Glaeser et al., 2004).

Further results indicate that, similarly to the previous result, both coefficients of regulatory quality are negative. This outcome signifies that there is a negative effect of regulatory quality on economic development in Sub-Saharan Africa. On average, the coefficient of regulatory quality is 0.967 implying that increase in regulatory quality index in the selected countries by 1 point will lead to a fall in economic development index by 0.09 point everything else held constant. It should further be noted that both coefficients are significant though at different levels (5% and 10% respectively for the model without and the model with control variables). Generally, the regulatory quality in Sub-Saharan Africa does not favour economic development but rather, significantly hinder it. This result also contradicts the finding by Hamid (2017) and Kauffman et al (2005) who found that regulatory quality exerts a positive significant effect on lower and upper middle income economies economic performance.

The last indicator of governance used in this study is rule of law. Results from data analysis in the model without control variables show that there is a negative effect of rule of law on economic development in Sub-Saharan Africa given that the coefficient of rule of law is negative. This result shows that rule of law negatively affect the economic development of the selected countries. However, it should be noted that this coefficient is also statistically significant at 1% level. Therefore, there is evidence of a significant impact of rule of law on economic development in Sub-Saharan Africa.

Going by the control variables, results from the GMM analysis indicate that the coefficient of gross domestic investment is negative (-0.0100). In effect, an increase in domestic investment measured as a percentage of GDP by 1 point will result in about 0.01 point decrease in economic development index. Though marginal it should also be noted that this result is statistically insignificant. Thus, there is a negative but insignificant effect of domestic investment on economic development in Sub-Saharan Africa.

Furthermore, results in table 3 show that the coefficient of foreign direct investment inflows is positive. In effect, contrary to domestic investment, there is a positive impact of foreign investment on economic development in Sub-Saharan Africa. An increase in FDI inflows captured as a percentage of GDP will lead to a rise in the index of economic development in Sub-Saharan Africa. However, just like domestic investment, no significant effect could be established between foreign investment and economic development in selected countries of Sub-Saharan Africa.

Additional results indicate that there is a positive impact of industrialisation on economic development in Sub-Saharan Africa given that the coefficient of industrialisation is positive (0.0476). In effect, an increase of the share of industrial sector in the national income by 1 point will bring about 0.0476 point increase in the index of economic development in Sub-Saharan Africa *ceteris paribus*. Furthermore, it can also be noted that this result is significant at 1% level. In brief, there is a positive and significant impact of industrialisation on economic development in the selected countries. This result is thus supported by the learning by doing, technological imitation and gain from increased specialisation. This result is therefore in line with the findings of Weiss and Tribe (2016) who found that industrialisation positively impact economic development.

The coefficient of dummy FCFA (proxy for belonging to a monetary union) is negative (-0.0092) which implies that belonging to the FCFA zone compromises economic development. Said otherwise, countries belonging to the FCFA monetary union are less likely to be economical developed as the monetary union reduces their level of economic development. In figures, belonging to the FCFA zone reduces economic development index by 0.009 everything else held constant. This result is highly insignificant implying that belonging to the FCFA has an insignificant negative impact on economic development of member countries. This result therefore conforms to the finding of Henry (2018) who found that membership to the FCFA zone significantly compromises economic growth and concluded that it was difficult for FCFA member countries to use a growth enhancing monetary policy measures given that their monetary policy is defined at the union level. According to Henry (2019) the Franc CFA zone is a perfect case study for two reasons namely the fact that it is an unaccomplished economic integration and the

double monetary constraint facing members countries because of the pegging to another currency and that the monetary union was imposed on members countries as a colonial heritage without any regards to whether or not the members countries meet the criteria of an optimal currency area by McKinnon (1963) and Mundell (1961). Therefore, the benefits of an independent monetary policy are simply out of topics in these two communities because the monetary policy of the members countries is defined at the level of the two central banks (BEAC and BCEAO) and this policy must be aligned to that of the euro zone (Henry, 2019).

Similarly, globalisation has a positive and significant effect on economic development. This is in accordance with the work of Ngouhouo and Ewane. (2020) who argued that trade openness has a significant positive effect on economic growth in SSA.

Similarly, the coefficient of macroeconomic instability captured by inflation is positive which shows that there is a positive impact of inflation on economic development in sub-Sahara Africa. An increase of the average inflation rate in the selected countries will lead to a rise in the index of economic development. However, this result is not significant at all.

Quite similarly to inflation, results from data analysis also indicate that there is a positive effect of domestic credit to the private sector on economic development. This later result like inflation is not significant. Thus credit availability foster economic development in the selected countries insignificantly

CONCLUSION AND POLICY IMPLICATIONS

This paper was consecrated to the empirical investigation of the effects of governance on economic development in some selected Sub-Saharan African countries. The study thus formulated an economic development model. Economic development index was constructed using the principal component analysis of six indicators namely, GDP per capita, literacy rate of adult, life expectancy at birth, mortality rate, urbanisation and carbon dioxide emission per capita metric tons to account for environmental issues. Later on a regression model based on the system Generalised Method of Moments estimation procedure was specified firstly by including exclusively the six governance indicators by the World Governance Indicators and later on a second model which controls for industrialisation, domestic investment, foreign investment, inflation, credit availability and belonging to the FCFA monetary union. From the results given that political stability and government effectiveness had a positive significant effect on economic development in Sub-Saharan Africa, it can be recommended that countries in this sub region despite the numerous tensions, should strive for peace as this will enhance development. This can be done by voluntarily restraining from wars and setting up peace agreements or entente amongst nations of this sub region. Equally, governments should

improve the quality of public services, civil services as well as their ability in formulating, committing and implementing policies efficiently. This can be done through more emphasis on decentralised structures and services as well as through the reduction of administrative bottlenecks (by ensuring sound public service delivery and allocation of resources). For example increase use should be made of E-governance (inviting personnel to meetings through social media and holding meetings by zoom).

Similarly, the fact that voice and accountability, corruption, regulatory quality and rule of law had negative significant impacts on economic development in SSA showed that SSA countries still have more to do as far as democratic principles, corruption control, regulatory quality and rule of law are concerned. Consequently, it can also be recommended that countries in this sub region should put in place democratic mechanisms of accession to power as well as measures to check corruption and embezzlement. This can be done by enacting laws which severely punishes those who embezzle and to make sure that follow up is done at every level. Strategies to recover for economic development purposes embezzled money should be put in place as well as the law on declaration of assets before and after occupying an important post of responsibility.

In the same light, the states should formulate and implement sound policies and regulations that permit and promote private sector development.

In addition the agents should have confidence in and abide by the rules of society through free and fair judgement in matters of litigations.

Similarly, it is incumbent for the states to review the governance system by expanding the market potentials of the sub region. This can be done through improvement in the cross border trade amongst the states in SSA.

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APPENDIX**List of countries under study**

Serial number	Country
1	Cameroon
2	Gabon
3	Congo
4	Chad
5	CAR
6	E Guinea
7	Benin
8	Burkina
9	Gambia
10	Ghana
11	Guinea
12	G Bissau
13	Ivory C
14	Liberia
15	Mali
16	Niger
17	Nigeria
18	Senegal
19	Togo
20	Angola
21	Botswana
22	DRC
23	Malawi
24	Mozambique
25	Namibia
26	South A
27	Zambia
28	Zimbabwe
29	Burundi
30	Kenya
31	Rwanda
32	Tanzania
33	Uganda