

Influence of Institutions on Inclusive Economic Growth in West Africa

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Abstract

This study investigates the influence of institutions on inclusive economic growth in West Africa. The study employed a pooled mean group estimation technique and cross-sectional dependency, slope heterogeneity, panel unit root, and co-integration tests to analyze the data spanning from the period 1990 to 2022. The test of cross-sectional dependency and the slope heterogeneity reveals that the cross-sectional countries are independent and the slopes of the regression coefficients are heterogeneous across implying there is strong cross-sectional independency among the countries in West Africa due to globalization and trade liberalization. The penal unit root test result shows that economic growth and institutional variables at the initial difference remain stationary but trade openness is stationary at the level. Additionally, the co-integration finding shows that institutions and inclusive economic growth in West Africa are related over the long term. The study concludes that, although the impact varies between countries, institutions have a statistically significant long-term impact on inclusive economic growth in West African nations. Therefore, the study recommends that institutional variables in West Africa such as; the rule of law and control of corruption should be strengthened by governments of West African countries for continuous and inclusive economic growth as well as intensify their fights against violence or terrorism specifically in the region through their security agencies as these does not support growth inclusivity in the West African countries.

Keywords: West Africa, Institutions, Inclusive Growth

JEL Classification: E02, H04

1. Introduction

The debates concerning institutions' impact on economic growth continued to receive considerable attention because of African countries' drive to achieve not only inclusiveness in growth but also the sustainability of such inclusive economic growth and development in the continents. (United Nations Report, 2021). This drive for inclusivity and sustainability in the growth of nations has a long history and has been deliberated upon several times among scholars of economists since Adam Smith's era after he publicized the famous book titled "Wealth of Nations" and since then no agreement has been reached. The Neoclassical school of thought (Solow, 1956) and endogenous growth models (Romer, 1990) argued that the differences in economic development between countries may be explained by innovations, capital accumulation, and human capital. It is still very unclear though, why other nations like Togo, Sierra, Ghana, Leone, Kenya, and Nigeria do not adhere to these development components. These variables are the outcome of deeper underlying causes or the so-called deep drivers of development as noted by Bloch and Tang (2004).

Over the past thirty years, institutional factors rather than other underlying variables like geography, culture, and openness have continued to draw greater attention. The new institutional economists noted that institutions not only matter for the inclusivity of growth and development but also determine the future of a region (Estache, 2016). Ever since the seminal work on the role of institutions in economic growth and development by Douglas North, as a result, there is now an increasingly large body of literature on institutions as the underlying factor influencing national and regional variations in economic development. Institutions influence the growth and development of a nation (North, 1990). According to studies, nations with strong institutions that support free business and private property have seen economic "miracles," whereas those with weak institutions have endured decades of economic stagnation and poverty (Mehmood, Din, Aman-Ullah, Khan & Fareed, 2021; Seyingbo and Adeniyi, 2018; Yildirim and Gokalp, 2016; Acemoglu et al., 2005).

The motivation for this study is embedded in the fact that West African countries need to achieve inclusive economic growth for the region given the considerations of institutional indicators as identified by the World governance indices of the World Bank and the relevance of institutional theory as well as the pooled mean group estimation techniques in panel data of sixteen West African countries from 1990 to 2022. Five sections make up the structure of this study. The literature review is covered in section two after the introduction, followed by section three on methodology, and section four on results and discussions. The study is concluded in Section 5, which also offers policy implications.

2. Literature Review

There are several studies on economic growth on the continent of Africa with very few emphasizing the part institutions play in achieving equitable and sustainable economic growth. For instance, Degbedji, Akpa, Chabossou & Osabohien (2024) studied the impact of institutional quality in the West African Economic and Monetary Union on the emergence of the green economy. The findings showed that the region's nations differ in how much institutional quality matters. This implies the impact of institutional quality on the green economy was significant in WAEMU. The study noted that for individual countries in West Africa to realize the desired degree of green economic growth, emphasis should be given to the improvement of their institutional quality which includes elements of good governance, political stability, prevention of corruption, and the lack of violence. They offered an evidence-based understanding of the function of institutional competence in fostering equitable and sustainable growth as these have significant policy implications for the WAEMU region. Hussen (2023) employed a generalized technique using moments and panel data to examine how institutional quality variables affect Sub-Saharan Africa's economic growth. The findings revealed that democratic, regulatory, and investment-promoting institutions significantly boost growth. Conversely, systems that avoid conflict have no discernible influence on growth when these institutions are taken into consideration. The study recommends that nations in the region ought to keep implementing institutional changes to accelerate economic growth. Institutions that support democracy, and investment in high-quality regulations are germane in SSA.

Chomen (2022) studied the connection between institutions and economic growth in Sub-Saharan African nations using a system-generalized approach of moments. The results showed that in Sub-Saharan African nations, there is no discernible link between institutions and economic growth. This discovery deepens the ongoing debate over the importance of institutions for African countries' abilities to prosper economically. Lakshmanasamy (2022) studied the impact of corruption and political institutions on economic growth among hundred and ten panelists from the world's developing nations. The findings showed that economic growth is favourably correlated with good governance but adversely correlated with corruption. Though growth is not much impacted by political stability, the absence of violence, or the availability of voice and accountability, rule of law and regulations have a positive effect

on the economy. The study recommends that for emerging economies, decentralization and democratization would boost economic growth.

Agyei and Idan (2022) studied the connection between equitable economic growth and trade openness in Sub-Saharan Africa utilizing institutional quality indices as a mediator. The findings revealed that institutional quality not only mediates between openness to commerce and inclusivity but also positive correlation between openness and inclusive economic growth in Sub-Saharan Africa. According to the study, Sub-Saharan African economies should keep reforming their institutions to strengthen the link between equitable economic growth and openness. Suhaibu, Andani & Anafo (2022) investigated the impact of Sub-Saharan African institutional quality on living standards. The findings revealed that institutional quality had no direct influence on standards of living but its impact of institutional quality on financial development influences standards of living through financial development. The study concluded that while inflation in the short-run retards financial development, it raises living standards. The SSA governments ought to enact policies and laws that fortify institutions to raise the living standards of citizens.

Mehmood, Din, Aman-Ullah, Khan & Fareed (2021) examined how South Asian countries' institutional quality affected their economic progress. The findings revealed that accountability, control of corruption, and rule of law, the three indicators of good governance have a favourable and substantial impact on economic growth while short-run results and rate of adjustment towards the long-run equilibrium vary throughout the countries. This seeming instability in governance in every nation while in the long term, results are the same across the countries. The study recommends fostering a stable political and economic environment and enhancing institutional quality indices. Economic growth can be promoted by the enhancement of national and regional perceptions. Wandeda, Masai, and Nyandemo (2021) studied the nexus between Sub-Saharan Africa's institutional quality and economic growth. The findings revealed that In Sub-Saharan Africa, institutional quality and economic growth are significantly and directly correlated. In specific, the discovery showed that the influence of institutional quality on economic growth differs in different sub-regions in Sub-Saharan Africa. However, institutional quality exerts a greater effect on income growth in the West African region than in Central, Eastern, and South Africa respectively. The study recommended that countries in SSA should reform and emphasize the independent institutional quality to curb economic crimes, and deepen democratic operations, civil rights, and the involvement of citizens in the growth and development agenda of the region.

Olaniyi and Oladeji (2021) assessed the moderating effect of institutional quality on the link between finance and economic growth in West Africa using a dynamic panel generalized approach of moments. The findings revealed that although growth was negatively impacted by the link between financial development and institutional quality, financial development had a distinctly positive impact on growth. It advanced the claim that institutional quality causes the benefits of financial growth in West Africa to be diffused and leaked out. Ogbuabori, Orji, Manasseh & Anthony-Orji (2020) investigated the influence of institutional quality on economic growth in West Africa utilizing panel two stages square and system generalized method of moments techniques. The results showed that institutional quality and economic growth in West Africa are inversely related. This implied that institutional quality indicators hampered the sub-region's progress. The discovery also highlighted the importance of capital, labour, foreign direct investment, and GDP per capita as development stimulators in West Africa. The study noted that to support long-term economic growth and development, the sub-region requires better institutions that can draw in larger amounts of investment.

Summarily, the majority of the literature reviewed on the subject matter in Africa appeared to be skewed to Sub-Saharan Africa with little attention paid to the Sub-region, West Africa (Hussen, 2023; Chomen,

2022; Agyei and Idan; 2022; Suhaibu, Andani & Anafo, 2022: Wandeda, Masai, and Nyandemo,2021). Although the few studies focused on the sub-region, West Africa was interested in growth from a broader perspective without inclusivity of growth as proxied in these studies (Degbedji, Akpa, Chabossou & Osabohien 2024; Olaniyi and Oladeji 2021; Ogbuabori, Orji, Manasseh & Anthony-Orji 2020). In addition, this study contributes to the debate on the influence of institutions on growth in West Africa by disaggregation of institutions as provided by the World Governance indicator by the World Bank's six dimensions namely; voice and accountability, political stability, lack of violence and terrorism, the efficacy of government, regulatory quality, rule of law, and corruption control as benchmarks for evaluating institutions as a whole. The result of the study would form a policy base for governments in West African countries and policymakers on the policies and reforms for which institutional indicators exert a great influence on growth in the sub-region, of West Africa. The paper filled this vacuum by investigating the impact of institutions on inclusive economic growth in West Africa utilizing sub-region countries' gross domestic per capita in place of inclusive growth. In addition, the paper updates the literature by using the pooled mean group estimation technique on balance panel data for the sixteen countries in West Africa.

3. Theoretical Framework and Models

The paper investigates the impact of institutions of inclusive economic growth in West Africa. Nigeria, Ivory Coast, Ghana, Mali, Niger, Senegal, Burkina Faso, Benin, Guinea, Sierra Leone, Togo, Mauritania, Liberia, Guinea-Bissau, Gambia, and Cape Verde are the sixteen (16) nations that make up the sub-region. The data for both dependent and independent variables namely, inclusive economic growth, institutions, trade openness, and corruption were obtained from World Governance Indices of the World Bank database (2023) and it spans from 1990 to 2022. GDP per capita proxy as (GDP_{it}), Institutions proxy as (INS_{it}), and trade openness (TOP_{it}) as the control variable respectively. In the spirit of Barro, 1991; Hussen, 2023; Chomen, 2022, the paper specifies the baseline model as follows in equation (1):

$$\log GDP_{it} = \beta + \alpha \times INS_{it} + TOP_{it} + u_{it} \tag{1}$$

GDP per capita in year t and nation i represent inclusive growth in sub-regional countries and t is the period. INS_{it} represents the institution variables, TOP_{it} and is the trade openness which is the control variable respectively. u_{it} represents the stochastic error term. However, institution indicators employed to measure the overall institutions in West Africa namely; corruption control (COC_{it}), lack of terrorism or violence (AVO_{it}), government efficiency (GEF_{it}), adherence to the law (ROL_{it}), regulatory quality (REQ_{it}), political stability (POS_{it}) respectively.

4. Results and Discussions

The paper described the study's variables beginning from the GDP per capita (GDP_{it}), the dependent variable, and the explanatory variables i.e. institutions and the indicators employed to measure the overall institutions in West Africa namely; corruption control (COC_{it}), absence of violence or terrorism (AVO_{it}), government efficiency (GEF_{it}), adherence to the law (ROL_{it}), quality of regulations (REQ_{it}), political steadiness (POS_{it}) respectively and the control variable, trade openness (TOP_{it}). The descriptive statistics provide the quantitative summary of the behaviour of the model's variables, which are displayed in Table 1. The reason for this is to show the level of disparity among the variables.

Table 1: Descriptive Statistics Result

Variables	Observations	\bar{X}	Std. Dev.	Min	Max
GDP_{it}	528	3.4339	0.3208	2.9587	4.4908
COC_{it}	528	32.4117	19.3386	0	84.0426

AVO _{it}	528	1.4823	0.2595	0.3979	1.8983
GEF _{it}	528	1.2845	0.3552	0.2099	1.8208
ROL _{it}	528	1.3393	0.4092	-0.3032	1.9133
REQ _{it}	528	1.3963	0.2662	0.2989	1.7843
POS _{it}	528	1.4006	0.4030	-0.0128	1.9565
TOP _{it}	528	6.1782	0.5569	5.3030	7.6872

Table 1 shows that between 1990 and 2022, the average gross domestic product per capita, (GDP_{it}), corruption control (COC_{it}), absence of violence or terrorism (AVO_{it}), government efficiency (GEF_{it}), adherence to the law (ROL_{it}), quality of regulations (REQ_{it}), political steadiness (POS_{it}) and trade openness (TOP_{it}) are 3.43, 32.41, 1.48, 1.28, 1.34, 1.40 and 6.18 respectively. This showed that the variables exhibit significant variation in their magnitude and by implication estimation at the level may introduce some bias in the results. The next is the determination of the dependency across cross-sections amongst the sub-region countries in West Africa. This is presented in Table 2.

Table 2: Dependency across Cross-Sections Test Result

Cross-sectional Test Type	Coefficient	Probability Value
Cross-sectional independence test by Pesaran	2.012	0.0442
Cross-sectional independence test by Friedman	46.929	0.0000
Cross-sectional independence test by Frees	2.685	0.0000

Source: Researchers’ computation using Stata version 17.

The results of the cross-sectional dependency test between the West African cross-sectional nations are shown in Table 2. The probability values for the Pesaran, Friedman, and Frees cross-sectional independence tests are 0.04, 0.00, and 0.00, respectively, which is less than a 5% threshold of significance. This implies discarding the null hypothesis and concluding that the cross-sectional countries are independent of each other.

Table 3: Harris Stationary Test Result

Variables	Level	1 st Difference	Order of Integration	Remarks
GDP _{it}	0.7449	-0.2014	I(1)	Stationary
Z	1.1889	27.7887		
P-value	(0.1172)	(0.0000)		
COC _{it}	0.8178	-0.0261	I(1)	Stationary
Z	0.9339	-22.8208		
P-value	(0.8248)	(0.0000)		
AVO _{it}	0.7830	0.1186	I(1)	Stationary
Z	-0.0802	-18.7217		
P-value	(0.4681)	(0.0000)		
GEF _{it}	0.8399	-0.0194	I(1)	Stationary
Z	1.5777	-22.6321		
P-value	(0.9427)	(0.0000)		
ROL _{it}	0.8006	-0.0025	I(1)	Stationary
Z	0.4340	-22.1538		
P-value	(0.6679)	(0.0000)		
REQ _{it}	0.7678	-0.0456	I(1)	Stationary
Z	-0.5220	-23.3737		
P-value	(0.3008)	(0.0000)		

POS _{it}	0.7871	-0.0199	I(1)	Stationary
Z	0.0394	-21.5191		
P-value	(0.5157)	(0.0000)		
TOP _{it}	0.6881	-	I(0)	Stationary
Z	-2.8418	-		
P-value	(0.0022)	-		

Table 3 presents the unit root test result using Harris Tzavalis and it shows that all the variables that are gross domestic product per capita, (GDP_{it}), corruption control (COC_{it}), absence of violence or terrorism (AVO_{it}), government effectiveness (GEF_{it}), adherence to the law (ROL_{it}), quality of regulations (REQ_{it}), political steadiness (POS_{it}) have unit roots at level except trade openness (TOP_{it}) that is stationary at level. The mixture of the order of integration justifies not only the adoption of the panel autoregressive distributed lag approach but also warrants the test for panel co-integration amongst the variables. The study tests for slope heterogeneity to ascertain whether the slopes are homogeneous or heterogeneous. This is presented in Table 4.

Table 4: Results of the Slope Heterogeneity Test

	Delta	P-value
	15.859	0.000
Adj.	18.596	0.000

Table 4 presents the slope heterogeneity test result and it shows that the slope coefficients are not homogeneous because the probability values are 0.00 and 0.00 which are all less than a 5% level of significance and by implication, a conclusion that the slope coefficients are heterogeneous and a rejection of the null hypothesis. To determine if the variables employed in the model have a long-term connection, the following step is to test for panel co-integration. Table 5 displays the outcome.

Table 5: Results of the Panel Long-run Relation Test

Co-integration test by Kao	Statistic	P-value
MDF t	-2.3532	0.0093
DF t	-2.6604	0.0039
ADF t	-1.3497	0.0886
Unadj. MDF t	-2.6314	0.0043
Unadj. DF t	-2.7839	0.0027
Co-integration test by Pedroni		
MPP t	3.3348	0.0004
PP t	-2.4459	0.0072
ADF t	-2.9803	0.0014

Table 5 presents panel co-integration test results using the Kao and Pedroni test for co-integration. The results show that for the Kao test, the probability values for three versions of the Dickey-Fuller t: modified, unadjusted modified, and unadjusted Dickey-Fuller t are less than 5% level of significance except for the augmented Dickey-Fuller t. This implied rejection null hypothesis and concluded that co-integration exists among the studied variables. In addition, the Pedroni test result also supported this as the modified Phillips-Perron (MPP) t, Phillips-Perron (PP) t, and augmented Dickey-Fuller (ADF) t are also less than a 5% level of significance. The study then carries out the panel estimations properly using the pooled mean group (PMG), mean group (MG), and augmented mean group (AMG) respectively.

The study finds the pooled mean group result more appealing and revealing and therefore is presented in Table 6.

Table 6: Panel Mean Group Test Result with Disaggregate Institutions Indicators

Dependent Variable- GDP Per-Capita (GDP_{it})				
Long-run Test Result				
Variables	Coefficients	Std. Error	Z-Statistic	P-value
COC _{it}	0.0011	0.1167	0.95	0.343
AVO _{it}	0.0960	0.0812	1.18	0.237
GEF _{it}	-0.2246**	0.1028	-2.19	0.029
ROL _{it}	0.1279	0.0854	1.50	0.135
REQ _{it}	0.2714**	0.1023	2.65	0.008
POS _{it}	-0.3002**	0.0648	- 4.63	0.000
TOP _{it}	0.9041**	0.1024	8.63	0.000
Short-run Test Result				
CONSTANT _{it}	-0.1202**	0.0304	-3.95	0.000
COC _{it}	-0.0003	0.0002	-1.35	0.178
AVO _{it}	0.0354	0.0322	1.10	0.272
GEF _{it}	0.0409**	0.0204	2.01	0.045
ROL _{it}	-0.0228	0.0236	-0.96	0.335
REQ _{it}	0.0263	0.0174	1.51	0.131
POS _{it}	0.0128*	0.0066	1.94	0.052
TOP _{it}	-0.1404	0.1053	-1.33	0.182
ECT _{it}	-0.0702**	0.0240	-2.92	0.003

Note: *, **, and *** represent 1%, 5%, and 10% significance level respectively.

Table 6 presents the pooled mean group estimation result and it shows both the long and short-run results. GDP per capita (GDP_{it}) proxy for inclusive growth in West Africa is the explained variable and in the long term, the results show that three institutional variables namely, corruption control (COC_{it}), lack of terrorism or violence (AVO_{it}), and adherence to the law (ROL_{it}) were not statistically significant at 5% level. These mean that corruption control, absence of violence or terrorism, and adherence to the law in West Africa and the studied period are not significant in the contribution of inclusive expansion of the sub-region’s economy. On the other hand, the remaining three institutional indicators namely; government efficiency (GEF_{it}), quality of regulations (REQ_{it}), political stability (POS_{it}), and the control variable, trade openness (TOP_{it}) at the 5% threshold of statistical significance influence inclusive economic growth in West African countries.

The short-term results, however, show that none of the variables were statistically significant in influencing inclusive economic growth in West Africa except government effectiveness (GEF_{it}) and political stability (POS_{it}) at 5% and 1% respectively. This may be so because, in the short-term, the institutional indicators do significantly influence the inclusivity of expansion within the sub-region. The finding conforms to the studies of Degbedji, Akpa, Chabossou & Osabohien, 2024; Hussen, 2023; Wandeda, Masai, and Nyandemo (2021) and Mehmood, Din, Aman-Ullah, Khan & Fareed, 2021.

The panel error correction term coefficient (ECT_{it}) has a value of -0.0702. This shows that the rate at which short-term disequilibrium changes into long-term equilibrium is correctly signed with a negative value and at the 5% level, it is statistically significant. This means that convergence towards equilibrium in the long run with a speed of about 7%. Indicating institutional variables—corruption control, lack of terrorism or violence, rule of law, the efficacy of government, quality of regulations, political stability, and trade openness have a long-term causal relationship with inclusive economic growth in West Africa.

5. Conclusion

This study investigates the influence of institutions of inclusive growth in West Africa. The pooled mean group estimation techniques were used and the results showed that three institutional indicators, political stability, quality of regulation, efficacy of government and control, trade openness, are statistically significant at a 5% level in determining the influence of inclusive economic growth in West African nations. Conversely, however, corruption control, the lack of terrorism or acts of violence, as well as adherence to the law in West Africa considering the studied period were not significant in the influence of growth in the region's economy that is inclusive. From the discoveries of the study, we can conclude that institutions influence West African inclusive economic growth but the level of influence differs across countries. Therefore, these policy implications are provided;

- i. The governments in the nations of West Africa should continue to execute regulations, programs, and reforms that would strengthen the institutions of their various countries to not only ensure respect for the rule of laws of their various lands but also combat corruption as these two institutional variables do not support inclusivity of growth in West Africa.
- ii. The governments of West African countries should also intensify their fight against violence or terrorism specifically in the region through their security agencies as these do not support growth nor inclusivity of growth in West Africa.

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Data Availability Statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

Disclosure statement

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