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Original Paper

Institutions and Economic Growth: Evidence from Ecowas

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Abstract

This study examines institutions and economic growth: evidence from ECOWAS for 2000-2018. We use eight alternative variables to evaluate institutions and economic growth: gross domestic product, gross fixed capital formation, population growth, and foreign direct investment, control of corruption, government effectiveness, political stability & absence of violence/terrorism, and rule and law. Then, we adopted the combined OLS model, the fixed effects model, the random effects model, the difference-GMM, and the system-GMM model. The results show that different measures of institutional indicators significantly impact the economic growth of ECOWAS. However, the institution's quality has nothing to do with the financial results expected by ECOWAS. In most cases, foreign direct investment, gross fixed capital formation, and population growth positively impact the economic development of ECOWAS, while political stability, rule and law, control of corruption, and effectiveness of government harm the economic growth of ECOWAS. Therefore, decision-makers and competent authorities should reduce the organization's quality through appropriate development strategies such as derivatives.

Keywords

ECOWAS, INSTITUTION, ECONOMIC GROWTH, POLITICAL INSTITUTION

1. Introduction

The economic and social circumstance in the Economic Community of West African States (ECOWAS) has remained delicate and unprotected from domestic and external shocks Ulku (2004). Some African countries appear from civil wars and armed conflicts that affect economic growth. According to Ulku (2004) and Nkurunziza and Bates (2003), armed bumps, coupled with impoverished weather circumstances and trade damage, have caused a loss in economic angular momentum in Africa. For a clear understanding, even though ECOWAS is given natural resources, it is one of the poorest areas in the world. To shed light on this argument, we compare the trend of GDP per capita in developing regions from 2000 to 2018.

What these specific policies are and the possible consequences are largely unclear. Expected systems and economic growth may also be diverse and depend on specific circumstances because dictators have motivations to suppress the population and other potential components of the political elite. Still, they also have strong motivations to protect the quality of the basic system. And to a certain extent, freedom of speech and media freedom Egorov et al. (2009); Boudreaux and Holcombe (2013). In most cases, the successful implementation of new policies or institutional reforms after the coup means that certain obstacles in existing political or judicial obstacles must be eliminated. However, in other cases, it is undoubtedly a more effective strategy for the new regime to increase certain barriers to protect the regime, policies, and systems.

In this article, we focus on the impact on the quality of the institutions and economic growth evidence from ECOWAS. We hypothesize that when members of the current political elite carry out a coup, they may remove barriers to change. In contrast, coup makers outside the ruling elite are more likely to take the opposite action to protect themselves from the influence of the elite system. In addition, the alternative government type may affect the system. However, all coup makers may be interested in the benefits of the group or department they represent. Recent growth models indicate that economic institutions, such as macroeconomic stability agencies, property rights, social insurance institutions, regulatory institutions, conflict management institutions, etc., are the main sources of economic growth in the northern countries North (1990).

According to Penalosa (2006), institutions with culture, knowledge, and technology jointly determine the economic movements among multiple equilibriums of the state of development.

The general meaning here is that the quality of ECOWAS institutions is very low. Undoubtedly, there is no clear consensus on the reasons for the poor economic performance of the Economic Community of West African states. However, some studies, such as Sachs and Warner (1997) and Hoeffler (2002), believe that the poor performance of the African economy can be used to explain the rational variables of growth performance. In other developing countries and promoting growth in Africa, attention should be paid to basic factors such as physical capital investment, human capital, population growth, and access to modern technology. Other studies have pointed out that the accumulation of factors may be affected by institutional characteristics, such as the distribution of political and civil rights, the quality of the legal system, and government effectiveness. It is worth nothing traditional growth models, including Koopman (1965) and Cass (1965), explain the differences in factor accumulation in per capita income.

Similarly, Lucas (1988) and Romer (1986) emphasized that material and human capital accumulation can persuade sustained and stable economic growth. However, North and Thomas (1973) argued that although innovations and factor accumulation can promote economic growth, the fundamental explanation for the comparative economic growth of countries is institutional differences. The quality of institutions, such as political stability, control of corruption, government effectiveness, and quality of the rule of law, can greatly affect investment in material and human capital, technology, and industrial

production, leading to economic growth. In this context, this article examines the impact of institutional factors, namely control of corruption, government effectiveness, political stability, and the rule of law, on economic growth in ECOWAS.

This article also considers the importance of structural factors such as foreign direct investment, gross domestic product, population growth, and gross fixed capital formation in explaining the economic growth of ECOWAS. This article uses the per capita GDP growth rate as a good indicator to measure economic growth.

The paper is structured as follows: The introduction emphasizes the study's background in section one. Section two is a review of the literature and theory. Section three presents a description of the empirical study's methodology. In section four, discussions and findings are presented. Finally, in section five, the conclusion and implications are discussed, and the limitations of the research are provided.

2. Literature Review

Traditional growth theory emphasizes the importance of human capital, technological diffusion, and public infrastructure or innovation in explaining differences in cross-national growth (see Lucas, 1988; Barro, 1990; Romer, 1990). However, in recent years, people have paid more and more attention to the role of institutions and governance in economic growth. According to Acemoglu et al. (2005), they are showing that the system is the fundamental cause of economic growth. Similarly, North and Thomas (1973) believe that institutions are the source of differences in economic growth among countries. In addition, according to Acemoglu et al. (2005), institutions play a key role in development by influencing investments and production organizations. Rodrik (2000) emphasized that the system not only directly impacts economic growth but also affects other growth determinants, such as material and human capital, investment, and technological changes, which lead to economic growth. Giavazzi and Tabellini (2005) conducted an empirical study further to reveal the importance of institutions in economic growth. Roll and Talbott (2002) and Person (2005) generally believe that there is a positive correlation between democracy and economic growth.

Similarly, Tavares and Wacziarg (2001) revealed that democracy, in terms of credibility and political stability, could promote growth by raising the level of education and influencing the rate of tangible capital accumulation. This means that in countries with greater political turmoil, economic growth tends to be lower. In a similar analysis, Mauro (1995) found that corruption significantly negatively impacts investment and growth. He also shows that efficient bureaucracies and the rule of law positively influence growth. He also showed that effective bureaucracy and the rule of law positively impact growth. Hall and Jones (1999) showed that institutions promote growth. Although the system is of great significance in explaining economic growth, the growth outlook of the system is still inconclusive, and it is still worthless to invite traditional and opinion-given growth concepts to debate. Understandably, the grant view holds that natural resources determine productivity and technology in production. However, some studies, such as Mcguire and Olson (1996), point out that most economic

activities are separated from the determinants of economic performance.

Nevertheless, Kormendi and Meguire (1985) estimated the correlation between institutions and growth for 47 countries from 1950 to 1977 and found that institutions had no significant effect on economic growth. In addition, Barro and Lee (1993) revealed a statistically insignificant relationship between democracy and growth. In general, few studies have empirically examined the growth impact of institutions on economic growth. In many international economic discussion forums, Institutions and growth have recently become important topics because many believe that it is an effective solution to the problem of poverty and war, which is common in many countries around the world. In addition, these studies show that the impact of institutions on economic growth differs from country to country. Therefore, this article adds to the debate by empirically studying the impact of institutional quality on economic growth in ECOWAS, taking into account the influence of traditional or fundamental variables. In this study, information has been provided to capture various aspects of the organization's quality. These include government effectiveness, politics and the absence of violence/terrorism, control of corruption, and the rule of law.

3. Data and Methodology

This study examines the institutions and economic growth: evidence from ECOWAS for 2000-2018. This article covers fifteen (15) western African countries. The country is selected based on the data availability of all variables in the estimation model. were selected based on the availability of data for all the variable included in estimation model. We used World Bank Development (WDI) data and Worldwide Governance Indicators (WGI). We considered several reasons for this sample and data cycle. First, our research follows a series of previous studies on institutions and economic growth. Elsner (2017) links the theory of institutional change with game theory in evolution and institutional interpretation so that more in-depth analysis can be carried out to reveal the institution. The value is basic of game theory, tools, and etiquette asymmetry. Secondly, there is no doubt about what causes the poor performance of the African economy. Although there is no clear consensus, studies such as Sachs and Warner (1997) and Hoeffler (2002) believe that the same variable of economic growth can explain the poor performance of the African economy. To explain. Other developing countries' growth performance and promoting growth in Africa should pay attention to basic factors such as investment in physical capital, human capital, population growth, and access to modern technology. As a result, our research used unbalanced panel data from fifteen (15) countries in West Africa from 2000 to 2018.

3.1 Description of Variables

We can also use eight (8) variables to measure institutional and economic growth variables, which are widely used in previous studies (Elsner, 2007; Sachs & Warner, 1997; Hoeffler, 2002), that is, annual per capita GDP growth rate, gross fixed capital formation, foreign direct investment, population growth, political stability & absence of violence/terrorism, the rule of law, control of corruption and government effectiveness. Table 1 gives a detailed description of all variables.

Table 1. Definition of the Variable and Source of the Data

Variables	Definition	Source	Exp. Sign.
GDP Growth	Gross Domestic Product per capita, currency US dollars	WDI. 2019	$\beta_1 > 0$
FDI	Foreign Direct Investment (FDI to GDP ratio)	WDI, 2019	$\beta_2 > 0$
GFCF	Gross Fixed Capital Formation (% of GDP)	WDI, 2019	$\beta_3 > 0$
POPULATION	Population (annual growth rate)	WDI, 2019	$\beta_4 > 0$
Political Stability	Awareness of the possibility of political and/or politically motivated violence including terrorism.	WGI, 2019	$\gamma_1 > 0$
Effectiveness of Government	Understanding of public services, the quality of the civil servants, and their degree of independence from political pressure.	WGI, 2019	$\gamma_2 > 0$
Rule and Law	The degree to which the agent has confidence in and abides by social rules.	WGI, 2019	$\gamma_3 > 0$
Control of Corruption	Awareness of the extent to which public power is exercised for personal gain, including small-scale and serious forms of corruption.	WGI, 2019	$\gamma_4 > 0$

3.2 Model Specification and Empirical Procedures

3.2.1 Model Specification

In this section, we first use the dynamic Solow model. The model is based on previous empirical research, using an enhanced Solow growth model Romer and Weil (1992) and considering the problem of non-stationary variables:

$$Y_{it} - Y_{it-1} = \alpha_1 Y_{it-1} + \beta X_{it-\tau,t-1} + \gamma_1 I_{it-\tau,t-1} + n_i + \mu_t + \varepsilon_{it} \quad (1)$$

Among them, Y_{it} and $Y_{it-\tau}$ are real GDPs per capita at time T and T-r; $X_{it-\tau,t-i}$ a row vector includes the measure of the steady-state determinants in the augmented Solow model. The

population growth rate of t-r and T-1 in each period. The share of FDI and GFFC during each period is in the final element $X_{it-r.t-i}$. $I_{it-r.t-1}$ is institutional quality.

The possible endogeneity of the institutions and economic growth variables provides an appropriate tool strategy for analyzing the impact of ECOWAS institutions and economic growth. This research uses panel data estimation techniques. However, GMM estimation uses a sample that only includes the Economic Community of West African States countries. Therefore, we used a broad sample of countries to point out the impact of the institutions on economic growth in ECOWAS. Consider the following equation:

$$Y_{it} - Y_{it-1} = (\alpha - 1)Y_{it-1} + \beta.X_{it} + \gamma.INS_{it} + \mu_i + \varepsilon_{it}$$

Y_{it} is the actual per capita GDP, $\Delta Y_{it} = Y_{it} - Y_{it-1}$ is the growth rate of per capita GDP, Y_{it-1} is the initial level of per capita GDP, X_{it} represents a vector of the structure INS_{it} Represents the institutions and governance variables vector. Where μ_i is a country/region-specific effect that has not been observed, ε_{it} is an error term. $\alpha - 1$, β, γ are unknown parameters to be estimated. In addition, the subscripts i and t represent countries and periods, respectively. Equation 2 could also be determined from its past value, as shown below:

$$Y_{it} = \alpha Y_{it-1} + \beta.X_{it} + \gamma.INS_{it} + \mu_i + \varepsilon_{it}$$

To solve the problem of simultaneity deviation and endogeneity (this is a well-known problem in growth regression) and eliminate the country-specific effect, equation 3 can be converted into the first difference equation as follows:

$$Y_{it} - Y_{it-1} = \tau(Y_{it-1} - Y_{it-2}) + \gamma(INS_{it} - INS_{it-1}) + \varepsilon_{it} - \varepsilon_{it-1})$$

$$\Delta Y_{it} = \tau\Delta Y_{it-1} + \gamma\Delta INS_{it} + \varepsilon_{it}$$

However, using the lagged dependent variable, $Y_{it-1} - Y_{it-2}$ to construct a new error term $\varepsilon_{it} - \varepsilon_{it-i}$ can correct the endogeneity of the variable Levine et al. (2000), R. Santos Alimi (2015).

Use the formula for the GMM panel estimator:

$$E[Y_{it} - S(\varepsilon_{it} - \varepsilon_{it-1})] = 0 \text{ for } S \geq 2; t = 3, \ldots T$$

$$E[X_{it} - S(\varepsilon_{it} - \varepsilon_{it-1})] = 0 \text{ for } S \geq 2; t = 3, \ldots T$$

$$E[W_{it} - S(\varepsilon_{it} - \varepsilon_{it-1})] = 0 \text{ for } S \geq 2; t = 3, \ldots T$$

The time condition estimation above equation may suffer from sample deviation, especially when the time series persists and the lag value conveys little information about its future changes, making the lag value a weak tool. Intuitively, GMM considers the data's time series dimension and the unobservable impact of specific countries/regions. It also considers the possibility that the explanatory variables include lagged dependent variables and that all explanatory variables are endogenous Bond et al. (2001).

However, as Alonso-Borrego and Arellano (1996) and Blundell and Bond (1998), the statistical flaw of this estimator is that when the regression variables persist over time, the lag level of these variables is a weak tool for the regression equation of the difference equation.

3.2.2 Empirical Procedure

First, our empirical analysis starts with descriptive statistics and correlation analysis to avoid multicollinearity problems between variables. As a result, we removed the highly correlated variables from the model before regression analysis. Secondly, we estimate the equation by considering various econometric techniques and selecting the most suitable model from the ordinary least squares model (Pooled OLS) while ignoring country-specific effects, the fixed effect model, and the random effects model. The fixed effects model assumes that the specific characteristics of each country are related to the independent variables. Unlike the random effect model, the group average is constant in the fixed effects model. The random effect model assumes no correlation between country-specific effects and independent variables. Therefore, an appropriate model was selected based on the test developed by Husman (1978). The Hausman test determined the best model between the combined OLS and fixed

effect models. The null hypothesis assumes that a single effect is equal to zero, that is, the most convenient is the aggregate OLS model (POLS). The alternative hypothesis suggests that the fixed effects model is better. The Hausman test is used to select a suitable and effective model between the random effect model is the most suitable model. Breusch and Pagan Lagrangian Multiplier (LM test) check for random effects. The LM test is implemented under the null hypothesis that the variance of the specific effect is equal to zero; POLS is the most suitable model. Alternative hypotheses indicate that random effects models are better. Then, estimate and select in the test (POOLED OLS, fixed or random effects model), and report its robust standard error for autocorrelation and heteroscedasticity analysis within panel units. The interpretations of the results are based on the selected model.

Next, we estimated the dynamic model and conducted a further analysis based on empirical literature. We used the generalized methods of moments (GMM) to solve the endogeneity problem caused by the lagged dependent variables as regression. In particular, we used the Arellano and Bond (1991) difference GMM and Arellano and Bover's (1995) system GMM to explore other analyses. Difference GMM uses the first difference to transform all independent variables, thereby eliminating time-invariant fixed effects. Similarly, the difference GMM constructs instruments a tool for endogenous independent variables that must be uncorrelated with error term but strongly correlated with the main independent variables. However, the system GMM is an alternative estimator that eliminates the potential tool imperfections in the difference GMM by adding a new set of tools. System GMM creates an equation system by combining horizontal equations with different equations to create effective tools to solve endogenous problems.

4. Empirical Results and Discussion

4.1 Descriptive Statistics

Panel data presents the results of the Institutions and Economic growth variable: Evidence from ECOWAS. The number of observations is 361 for the whole variables from 2000-2018. The mean value of GDP, FDI, GFCF, and population growth is 3.632, 3.551, 18.7, and 1.57, respectively, showing that on the average gross domestic product, foreign direct investment, gross fixed capital formation, and population growth have increased by 3.63%, 3.55%, 18.7%, and 1.57% respectively, over the period 2000-2018. The results also show the mean value of political stability, government effectiveness, rule and law, and control of corruption is -0.58, -0.838, -0.77, and -0.776, respectively, showing that institution variables have declined by 58%, 83%, 77%, and 78% respectively over period 2000-2018. The results also show a significant variation in political stability absence and violence/terrorism (71%), government effectiveness (42%), rule and law (47%), and control of corruption (0.42), as described by a value of their standard deviation. GDP ranges from -36.5 (a loss) to 56.78, whereas the maximum value of control of corruption was 0.17, political stability, government effectiveness, and rule and law 0.82, 0.16, and 0.23, respectively.

Table 2. Descriptive Statistics

Variables	Obs	Mean	Std. Dev.	Min	Max
GDP	361	3.632	6.203	-36.5	56.78
FDI	361	3.551	9.826	-8.07	103.33
GFCF	361	18.7	126.02	-43.0	2357.67
POPULATION	361	1.57e+07	3.44e+07	0.25	1.96e+08
POLITICAL	361	-0.518	0.7102	-2.4	0.82
GOV EFFECT	361	-0.838	0.4299	-1.7	0.16
RULE & LAW	361	-0.77	0.479	-2.00	0.23
CONTR of CORR	361	-0.776	0.429	-1.8	0.17

4.2 Correlation Analysis

This table shows the results of the correlation levels between the variables. We found that, in most cases, population growth, foreign direct investment, and gross fixed capital formation variables negatively correlate with political stability and absence of violence/terrorism, government effectiveness, rule and law, and control of corruption at a 5% level. Besides, gross domestic product (GDP) is positive and significant at the10% level.

Table 3. Correlation Matrix between Variables

Variables	GDP	FDI	GFCF	POP	POLI	GOV EFF	RULE & LAW	CONTR OF CORR
GDP	1.0000							
FDI	0.0375	1.0000						
GFCF	0.0289	0.0194	1.0000					
POPULATION	0.1164	-0.0411	-0.0424	1.0000				
POLITICAL	0.0217	-0.0286	-0.0799	-0.4530	1.0000			
GOV EFFECT	0.1483	-0.1423	-0.0860	0.1646	0.3131	1.0000		
RULE & LAW	0.1467	-0.0412	-0.0784	-0.0572	0.5289	0.8125	1.0000	
CONTR OF CORR	0.1938	0.0403	-0.0290	-0.0691	0.3496	0.8058	0.8560	1.0000

Note. GDP= gross domestic product, FDI= foreign direct investment, GFCF= gross fixed capital formation, POP= population growth, POLI= political stability and absence of violence/terrorism, GOV EFF= government effectiveness, CONTR OF CORR= control of corruption.

$^{***}p < 0.01$, $^{**}p < 0.05$, and $^{*}p < 0.1$.

4.3 Results of the Regression Analysis

This section describes the estimation result using the models introduced in the methodology section. The following table shows the results of Institutions and economic growth results: Evidence from ECOWAS from 2000-2018. We considered the pooled OLS model, the fixed effects model, and the random effects model to estimate the models (1), (2), (3), (4), and (5). However, different tests developed by Hausman (1978) and Breusch and Pagan (1980) show that the results of pooled OLS estimators are the most appropriate. The statistics of these tests are very important and significant. Our interpretations are based on the results of the pooled OLS, which are corrected using the robust standard error corrected for autocorrelation and heteroscedasticity within panel units. Therefore, column (1) results show that the degree of FDI, GFCF, and Population growth has significant adverse effects on economic growth, respectively, 10% and 5%.

Table 4. The Effect of the Institution and Economic Growth

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Y(-1)		0.261374	0.36813	0.296638	0.226531
		(0,3578)	(0.03575)	(0.0354)	(0.3507)
FDI	0.025***	0.001***	0.036***	0.029***	0.022***
	(0.035)	(0.002)	(0.035)	(0.035)	(0.035)
GFCF	0.001***	0.001***	0.001***	0.001***	0.001***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
POPULATION	1.91e***	2.74e***	1.39***	2.11e***	2.23e**
	(1.35e)	(1.47e)	(1.37e)	(1.35e)	(1.32e)
Political		0.861*			
Stability		(0.594)			
Gov EFFECT			2.731***		
			(0.929)		
Rule & Law				2.591***	
				(0.813)	
Contr of Corr					3.629***
					(0.897)
Constant	3.213***	3.517***	5.533***	5.148***	5.981***
	(0.533)	(0.576)	(0.955)	(0.813)	(0.861)
R2 (within)	0.30	0.34	0.30	0.32	0.31
R2 (between)	0.50	0.52	0.50	0.53	0.51

Note. POLS denotes pooled OLS whereas robust indicates that we use standard errors corrected for autocorrelation and heteroscedasticity. The numbers in parentheses are the robust standard errors. $^{***}p < 0.01$, $^{**}p < 0.05$, and $^{*}p < 0.1$.

For example, a 1% increase in the degree of FDI, GFCF, and Population growth significantly increased by approximately 0.26% and by 0.001%, respectively. In contrast, a similar increase in population growth significantly increased by about 1.91%.

Columns (2), (3), (4), and (5) of the tables summarize the analysis of the relationship between variables. The results are similar to the previous findings. In addition, the significance of Wald tests shows that these variables indicators collectively positively impact economic growth at the 1%, 5%, and 10% levels. The diagnostic test's significance shows that the aggregate OLS results are better than those from the fixed effects (FE) and Random effects (RE) models reported in table 5.

Table 5. Fixed Effect Regression

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Y(-1)					
FDI	0.017***	0.033***	0.030***	0.020***	0.005*
	(0.080)	(0.083)	(0.083)	(0.080)	(0.079)
GFCF	0.011***	0.010***	0.015***	0.014***	0.015**
	(0.016)	(0.016)	(0.017)	(0.016)	(0.016)
POPULATION	2.51e***	3.38e***	2.32e***	2.67e***	2.70e***
	(1.41e)	(1.74e)	(1.44e)	(1.41e)	(1.38e)
Political		0.951***			
stability		(1.098)			
Gov Effect			1.241*		
			(0.761)		
Rule & Law				1.320*	
				(1.265)	
Contr of Corr					1.805*
					(1.389)
Year effect	Yes	Yes	Yes	Yes	Yes
Country effect	Yes	Yes	Yes	Yes	Yes

Note. POLS and FE represent the pooled OLS model and fixed effect model, respectively. $^{***}p < 0.01$, $^{**}p < 0.05$, and $^{*}p < 0.1$.

4.4 Results of the Dynamic Panel Models

This section presents the results of the dynamic approach of Institutions and economic growth. This table shows the results of using the GMM difference developed by Arellano and Bond (1991) on FDI, GFCF, and the effect of population growth on GDP. Therefore, when foreign direct investment increases by 1%, GFCF drops significantly, and population growth decreases by 0.7% and 0.02%, respectively. Columns (2) to (5) significantly negatively impact GDP, but FDI and population growth positively impact GDP.

Table 6. Results of the Difference-Generalized Method of Moments GMM

Variables	Model 1	Model 2	Model 3	Model 4	Model 5
Y(-1)	0.983686	0.0965946	0.0939182	0.0962213	0.0846702
	(0.046)	(0.0462)	(0.0458)	(0.4628)	(0.0460)
FDI	0.071***	0.0715***	0.084***	0.070***	0.066***
	(0.024)	(0.028)	(0.024)	(0.024)	(0.025)
GFCF	0.010***	-0.009***	-0.002***	-0.010***	-0.013***
	(0.024)	(0.0144)	(0.014)	(0.014)	(0.014)
POPULATION	1.85e***	2.34e***	1.08e***	1.69e***	1.75e***
	(6.85e)	(8.22e)	(7.10e)	(7.02e)	(7.00e)
Political variable		0.727*** (0.443)			
Gov Effect			2.718*** (0.727)		
Rule & Law				1.898*** (0.626)	
Contr of Corr					3.163*** (0.687)
N	341	341	341	341	341
No. of IVs	17	18	18	18	18
Number of groups	19	19	19	19	19
AR(-2) test	0.893	0.931	0.936	0.962	0.974
Hansen test	0.448	0.360	0.303	0.359	0.346

Note. GMM denotes the generalized method of moments whereas robust indicates that we use standard error corrected for autocorrelation and heteroscedasticity problems. ***$p < 0.01$, ** $p < 0.05$, and * $p < 0.1$.

Finally, the table shows the institutional and economic growth results using the one-step system-GMM in Arellano and Bover (1995). In most cases, the results are similar to those in difference-GMM. FDI, GFCF, and population growth simultaneously positively impact 1% of GDP. These results show that the ECOWAS countries have achieved economic liberalization, and the inflow of foreign direct investment is a higher economic growth rate. Equally important, for ECOWAS, the economy seems to grow with gross fixed capital formation. Interestingly, population growth seems to impact the economy of ECOWAS positively.

All in all. The impact of the institution's quality revealed by this research aligns with expectations. Policies that improve the quality of institutions may promote economic growth. Indeed, to track the rapid economic growth, the peoples of ECOWAS need to have more voices and political leaders accountable to the people of ECOWAS. Our results seem to indicate that rule and law have a direct impact on governance. This is consistent with research showing that political institutions have contingent effects on other dimensions of the institutional matrix (Aidt et al., 2008; Flachaire et al., 2014; Salesman et al., 2015). Specifically, our results show that rules and laws will drive growth only when the supporting institutions are of sufficient quality. The control of corruption, political stability and absence of violence/terrorism, and government effectiveness with positive and significantly reduced business costs have promoted the growth of ECOWAS countries.

Our research contributes to the empirical literature by providing new insights into institutions and economic growth: evidence from ECOWAS. Few studies have considered such a survey in ECOWAS or elsewhere. In addition, we used eight (8) alternative proxies of the institution and economic growth as well as 15 countries used in previous studies. Finally, we used several econometric techniques to verify our results: the pooled OLS model, fixed effects model, random effects model, the difference GMM and the system-GMM models. Our findings indicate that the political institution is extremely attractive to the economic growth of ECOWAS.

5. Conclusion

This study examined institutions and economic growth: evidence from ECOWAS for 2000-2018. We used eight (8) substitute variables widely used in institutional and economic growth in previous research, namely, GDP per capita; gross fixed capital formation; foreign direct investment; population growth; government effectiveness; political stability & absence of violence/terrorism; the rule of law and control of corruption.

First, we adopted the test developed by Hausman (1978) and Breusch and Pagan (1980) to select the best model among the pooled ordinary least squares model, the fixed effects model, and the random effect model. These tests show POLS is the suitable model after correcting for intra-country autocorrelation and heteroscedasticity and having reliable standard errors. Second, we use a dynamic framework to study the relationship between institutions and economic growth with a result between the difference GMM model and the system GMM model to confirm our findings. However, the

elasticity is slightly different from the previous results. We conclude from the GMM results that institutions are essential to promote the growth of ECOWAS. The empirical results of our four institutions and governance indicators have been found to have a greater impact on the economic growth of ECOWAS during the period 2000-2018. Other important economic growth factors in West Africa include gross fixed capital formation, foreign direct investment, and population growth. In contrast, it is found that the ratio of certain economic growth factors has a very small or significant impact on per capita GDP growth. Based on the finding of this study, the following recommendations are made. The existence of political turmoil, widespread corruption, and overall poor governance may have gone a long way in explaining the economic growth of ECOWAS. ECOWAS should formulate and implement a policy reform aimed at reducing the space for greed and improving the efficiency of public investment. Strengthening the institutions in terms of strengthening political stability, rule and law, democracy, and controlling corruption will be an important part of ensuring peace and political stability, but also an essential element for ensuring the healthy and smooth operation of inclusive economic development.

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