GOVERNANCE AND ECONOMIC DEVELOPMENT IN THE 21ST CENTURY: EMPIRICAL EVIDENCE FROM SELECTED WEST AFRICAN COUNTRIES

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Abstract. In this paper, we examined the influence of governance indicators on economic development within the West African sub-region. A total of ten West African countries were examined, and the study covered a period of 2002 – 2019. The study engaged the 'Random Effect Model' and the autoregressive distributed lag (ARDL) technique – a dynamic panel regression analysis. The Random Effect Model discovered that 'rule of law' exerted 'a negative and substantial effect' in the development potential of the West African sub-region. Meanwhile, voice and accountability had a positive and significant effect on West Africa's economic development. From the ARDL model, it was observed that 'regulatory quality' exerted 'a negative and substantial effect on economic development' of the sub-region; while the rule of law exerted a negative but insignificant effect. Conversely, control of corruption, political stability and absence of violence and terrorism; and voice and accountability exerted a positive and substantial long-run effect on 'economic development' of the West African sub-region. In the short-run, none of the governance indices exerted any significant effect on the sub-region's development; but most of them portrayed a negative effect. The paper concludes that governance is a key issue of concern in the West African sub-region. As such, there is need for a moral rejuvenation on the part of the leaders, to bring the desired outcome of governance to the citizens.

Keywords: rule of law; government effective; West Africa; development; corruption.

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INTRODUCTION

It has been opined that certain fundamental institutions are prerequisites to the growth of an economy (Rodrik and Subramanian, 2003; Acemoglu and Robinson, 2010; and Acemoglu and Robinson, 2012). Such essential institutions encompass well-defined property rights, impartial contract enforcement, a low knowledge gap between buyers and sellers, and stable macroeconomic conditions (Samarasinghe, 2018). These features have been generally regarded as the by-product of 'governance'. The term has been stated to mean "a set of traditions and institutions that can be applied to exercise the power of authority" (Kaufmann, Kraay and Mastruzzi, 2010).

"Governance covers the whole method in which public officials and institutions acquire and utilize their power to make public policy and provide public goods and services," write de Ferranti, Jacinto, Ody, and Ramshaw (2009). It is defined as "the whole level of citizen-government contact, including responsiveness, efficiency, honesty, and quality" (de Ferranti, et al., 2009). Similarly, the United Nations (UN) defined governance as "the process of making choices and the mechanism by which decisions are executed (or not implemented)" (Economic and Social Commission for Asia and the Pacific of the United Nations (UNESCAP), 2009).

The UN (UNESCAP, 2009) also established features of 'good governance' practices as a worldwide norm to be followed by countries that accept their assistance. Governance entails adequate participation, consensus-building, being accountable, transparent, responsive, effective and efficient, equity and inclusion, and adherence to the rule of law. These criteria are frequently used by International Organizations (IOs) and recipient countries to measure how well their governments perform in governance (Mimicopoulos, Kyi, and Sormani, 2007). Furthermore, IOs have claimed that effective governance improves the quality of government work, how services are delivered to residents, and how programs are implemented (Agere, 2002; Mimicopoulos et al., 2007).

International donors utilize good governance qualities presented by International Organisations to evaluate the feat of recipient governments as they attempt to make the best use of aid to promote growth in receiving nations' economies. Although scholars and politicians have debated the feasibility of using the good governance characteristics introduced by International Organisations as a benchmark for measuring governing quality (Poluha and Rosendahl, 2002), good governance characteristics have unquestionably gained credibility among IOs and politicians, along with – most importantly – in academic research (Albassam, 2012). Furthermore, in many situations, these qualities significantly influence the acceptance of loans or direct aid by foreign donors to impoverished nations (Mimicopoulos, et al., 2007).

The breakdown of these indices has been summarised by Khan (2007) as follows:

1. Accountability and Voice: Measuring political, civil, and human rights;
2. Political Instability and Violence: Assessing the probability of violent threats to government or changes in government, including terrorism;
3. Government Effectiveness: Assessing the bureaucracy's competency and the quality of public service delivery;
4. Regulatory Burden: Calculating the incidence of market-disruptive policies;
5. Rule of Law: assessing the effectiveness of contract enforcement, law enforcement, and the courts, along with the possibility of crime and violence; and
6. Corruption Control: Assessing the deployment of public authority for private benefit, including petty and

grand corruption, along with state capture.

Even though human capital build-up, physical capital build-up, and technological headway are imperative for economic growth in the major growth models (Acemoglu, 2009), Hall and Jones (1999) argued that 'social infrastructure' and government policies are also important determinants of economic growth. Although theories, such as the Solow model and new growth theory, give some explanation for economic growth within a geographic boundary, our knowledge of economic growth remains inadequate (Romer, 2001 cited in Samarasinghe, 2018). Furthermore, present growth models do not comprehensively explain cross-country growth disparities (Romer, 2001 cited in Samarasinghe, 2018). In the early 1990s, the importance of governance to economic growth was emphasized (The World Bank, 1994; Perkins, Radelet, and Lindauer, 2006).

Within the West African sub-region, the perception of the governance level has not been encouraging over the years. An insight towards data portrays a greater degree of negativity in the various indices of measuring governance. The average of the six indicators throughout 2002 to 2019 is given in Table 1 as follows. The perception ranges from +2.5 to -2.5.

Table 1

Average Governance Scores in Selected West African Countries, 2002 – 2019

Country	Voice and Accountability	Political Stability and Absence of Violence and Terrorism	Government Effectiveness	Regulatory Quality	Control of Corruption	Rule of Law
Benin Republic	0.231	0.263	-0.517	-0.448	-0.586	-0.554
Burkina Faso	-0.249	-0.401	-0.612	-0.274	-0.254	-0.443
Ghana	0.423	0.017	-0.103	-0.080	-0.137	0.026
Guinea Republic	-1.044	-1.259	-1.063	-1.004	-1.027	-1.321
Gambia	-0.911	0.064	-0.658	-0.443	-0.606	-0.463
Liberia	-0.386	-0.921	-1.332	-1.202	-0.814	-1.081
Mali	-0.005	-0.763	-0.842	-0.492	-0.645	-0.482
Nigeria	-0.572	-1.936	-1.036	-0.881	-1.144	-1.123
Senegal	0.089	-0.168	-0.332	-0.204	-0.193	-0.186
Togo	-0.949	-0.408	-1.312	-0.817	-0.892	-0.853

Source: Author Computation from World Governance Indicators.

It is portrayed in Table 1 that all the selected West African countries exhibits negative degree of 'government effectiveness', 'control of corruption', and 'regulatory quality'. Considering 'rule of law', only Ghana exhibits a positive value of 0.026, which in itself is weak. Taking 'political stability, and absence of violence and terrorism', Benin Republic, Ghana and Gambia exhibited a positive value; while other countries were on the negative. Likewise, Benin Republic, Ghana, and Senegal exhibits a positive perception on 'voice and accountability'. It is worrisome that Nigeria, being regarded as a giant of Africa, exhibited negative values in all the governance indices over the review period.

Since governance encapsulate the institution that ensures a flawless 'property rights', unprejudiced contract

administrations, 'low information gap between buyers and sellers', and unwavering macroeconomic circumstances (Samarasinghe, 2018), we can say that such an institution can impact the growth of the economy, and then development, of a nation. Samarasinghe (2018) has put forward dual means through which this can be made attainable. At the first instance, 'good governance' establishes critical institutions that boost the efficiency of 'human and physical capital' and entice investment in 'human and physical capital development'. With respect to the 'Solow model and new growth theory', this procedure eventually boosts economic growth and development. Secondly, improved governance, under 'social infrastructure theory', enhances the country's main institutions and provides the appropriate 'government policies' that will propel an economy's growth. Enhanced institutions and 'government policies' provide an environment that encourages massive investment in 'human and physical capital development', resulting in 'economic growth' (Samarasinghe, 2018).

As observed above, governance is linked to development. It becomes pertinent to ask whether these negative perceptions could have any effect on the 'development of the economy' of the sub-region. This study is therefore geared towards ascertaining the influence of 'governance on the development' of West Africa. Specifically, the study seeks to:

1. Examine the 'influence of governance on economic development' of West Africa.
2. Detect the country specific 'effects of the governance indices' on 'economic development' of West African countries.
3. To investigate the short-run and long-run 'effects of the governance indices' on 'economic development' of West Africa.

The paper is designed in five divisions. Following this section one is section two which captures the literature review. In section three, the methodology of the research is presented; while section four deliberates on the empirical findings. In the last section, conclusion based on the findings of the study is made.

Literature Review

High governance attributes include 'political stability', the 'absence of terrorism and violence', competent government policy development and execution, better regulatory systems, decreased corruption, and maintaining 'the rule of law' (Kaufmann et al., 2010). The delivery of effective governance leads to improvements in the aforementioned institutions. The 'Solow model', 'new growth theory', and 'social infrastructure' perspective may all be used to explain the rise in economic growth as a result of high-quality institutions, both directly and indirectly (Samarasinghe, 2018).

By intensifying the 'availability of technology', higher-quality institutions can add to the 'Solow model' (Samarasinghe, 2018). Any type of poor administration, such as excessive 'political violence', 'terrorism', and pervasive corruption, clearly harms citizens' mental and physical well-being by reducing their productivity. Then, it's logical to infer that improved governance eliminates these physical and psychological restrictions, resulting in increased labour productivity. As Romer (2001) argues, the Solow model does not precisely describe the conditions of technical progress, thus this increase in 'labour productivity' is subject to the same connotation as the Solow model's technological advancement. Then, due to this technical advancement, 'economic growth' is boosted by 'capital accumulation' (Romer, 2001 cited in Samarasinghe, 2018).

Improved institutions, conversely, provide a favourable setting for investors. Given this argument, increased investment in 'physical and human capital development' is made. 'Human capital development' refers to the knowledge, talents, and skills that an individual worker acquires via the 'learning process' and resulting in an upsurge in production per worker (Romer, 2001). Conversely, increased physical capital investments increase 'capital per worker' compared to the starting situation. Thus, via the route of 'capital accumulation', these techniques in the end add to 'economic growth' (Romer, 2001 cited in Samarasinghe, 2018).

The prominence of 'technology' as an impetus for economic progress is identified in the 'new growth theory' (Mankiw and Ball, 2011). The degree of 'knowledge' acquisition rises in lockstep with technological development. Consistent with this paradigm, 'research and development creates knowledge' (Samarasinghe, 2018), and favourable institutions, like 'property rights', encourage investment in R&D and hence add to 'economic growth'. Remarking on the Solow model, Hall and Jones (1999) suggested that 'physical capital accumulation' and worker learning accomplishments can only explain a portion of production per worker. Policy and institutional variations between nations account for a large portion of the remaining cross-country variances in per-worker production (Samarasinghe, 2018).

From different viewpoints, Acemoglu and Robinson (2008, 2010 & 2012) all discuss 'the role of institutions and government policies in economic growth'. In line with this idea, better governance produces 'constructive institutions and government policies' that stimulate investment and output. 'Economic growth' is fuelled by increased investment in people and physical resources. Enhanced institutions and 'government policies', alternatively, direct a country's precious resources toward output rather than diversion.

Romer (2001), as quoted by Samarasinghe (2018), suggested two routes that must be addressed in the analysis of economic growth: long-term growth and regional disparity. The 'Solow model' and 'new growth theory' can explain long-term growth. However, conventional neoclassical growth models fall short of describing global regional disparities. Although the notion of 'social infrastructure' has a greater potential to explain regional variations, there aren't many high-quality studies in this field (Romer, 2001). However, as previously said, greater governance may provide 'favourable economic conditions' for technical advancement, as well as the 'human and physical capital formation necessary for economic growth' (Samarasinghe, 2018).

Zhuang, de Dios, and Lagman-Martin (2010) conducted a thorough review of the literature on the links between governance, 'economic growth', and inequality, along with addressing questions of causation. Acemoglu and Robinson (2012) compared localities close to each other along the US–Mexico border to investigate why and how governance matters. They rejected simple explanations for variations in geography and culture favouring a complex institutional analysis based on differences in governance modalities. According to them, 'the growth of incentive structures' and state-market linkages are essential in determining city success.

Other authors have delved into definite facets of how government matters. Goncalves (2013) highlighted particular governance systems and 'human development' components. Gerring, Kingstone, Lange, and Sinha (2011) explored the many socioeconomic and political pathways through which democratic governance influences economic growth. As Oster (2009) pointed out on the political front, people's access to governance processes is inextricably

connected to development performance. Similarly, Kumar (2013) observes that biased governance methods might contribute to low growth. Blaydes and Kayser (2011) investigate the connections between democratic government, distribution, and standard of living.

Although the argument over the connection between the kind of governance regime and 'economic performance' appeared to imply no substantial connection between the two, new research suggests otherwise. According to the previous viewpoint, democracies and autocracies do similarly well on average, while democracies may be less unpredictable (Doucouliagos and Ulubasoglu 2006, Mulligan, Gil and Sala-i-Martin, 2004). Previous researches also argued that democracies could find it extra challenging to begin unpleasant but essential economic reforms (Dornbusch and Edwards, 1991; Kohli, 2004; Leftwich, 2005). However, the new corpus of work refutes this viewpoint. It discovered that when the regime history of a nation is included, there is a direct and robust link between democratic governance features and economic development (Gerring et al., 2005; Persson and Tabellini 2006).

AlBassam (2013) investigated 'whether the substantial connection between 'governance' and 'growth' occurs just during 'non-crisis periods'. The study's findings revealed that the universal economic crisis had a little impact on the connection amid 'governance' and 'economic development'. During times of crisis, however, the study discovered that different degrees of development of nations impact the connection amid 'governance' and 'growth' in diverse ways. Thus, the findings revealed the volatility in the link amid 'governance' and 'economic growth' during the economic downturn. This volatility reflects the prerequisite for long-term initiatives to develop universal and nation-wide 'good governance' approaches which are not negatively impacted by crises.

Han, Khan, and Zhuang (2014) investigated whether nations with better governance expanded quicker than those with poor governance. It investigates whether a nation with a governance "surplus" in a certain base year (1998) expanded faster on average in the ensuing period (1998-2011) than a state having governance "deficit". In line with the study, government effectiveness, political stability, 'corruption control', and 'regulatory quality' all positively influence country growth performance than 'voice and accountability' and 'rule of law'. "Developing Asian countries having surplus in 'government effectiveness', 'regulatory quality', and 'corruption control' grow up to 2% faster than those with a deficit in these indicators," according to the report, while "Middle Eastern and North African countries with a surplus in political stability, 'government effectiveness', and 'corruption control' grow up to 2 percent faster than those with a deficiency in these indicators" (Han et al., 2014).

The effect of 'governance' on 'economic growth' was investigated by Samarasinghe (2018). In the study, data of 145 nations was utilized covering the period 2002-2014. In a 'balanced panel', the 'fixed effects' and 'random effect's approaches were used. Given the study, 'corruption control' is a crucial element for 'economic growth', with each unit improvement in 'corruption control' causing a 6.9% rise in 'economic growth'. However, to attain better 'economic growth', it is critical to successfully succeed in both 'corruption control' and 'political stability' and the 'absence of violence/terrorism' indicators. All other areas, with the exception of the 'Middle East and North Africa', have substantially lower 'economic growth' rates than the 'European Union countries and North American countries'. High-income countries had a 20 percent faster pace of economic development than middle-income ones. Low-income nations, alternatively, expand at a rate that is 23.5

percent slower than middle-income ones. As a result, so as to increase 'economic growth', governments must strengthen 'political stability' and 'corruption control'.

Nonetheless, the probable causal links between regime history, economic policy, and performance are unknown. Since causal pathways are sometimes difficult to define and verify empirically, the arguments put forward tend to be extremely speculative (Bohara, Mitchell, and Mittendor, 2004; Kapstein and Converse, 2008; Keefer, 2003; Lederman, Loayza, and Soares, 2005; Montinola and Jackman, 2002). This paper offers empirical proof to present the contributions of 'governance' on 'economic development' of West African countries.

Methodology

1. Research Design

This investigation uses a panel technique to investigate the impact of 'governance' variables on the 'economic development of West African countries. The study utilized secondary data gotten through secondary sources that covers the period 2002 to 2019. The study examined ten West African countries, including Benin Republic, Burkina Faso, Ghana, Guinea Republic, Gambia, Liberia, Mali, Nigeria, Senegal, and Togo.

2. Model Specification

In an effort to look at the effect of 'governance' indices on the 'development' of West Africa's economy, six key governance indicators were utilized. This include 'government effectiveness', 'voice and accountability', 'political stability' and 'absence violence and terrorism', 'control of corruption', 'rule of law', and 'regulatory quality'. These variables are in the range of -2.5 to +2.5. The governance performance is between -2.5 (weak) and +2.5 (strong) (see Kaufmann *et al*. (2010) for details). Economic development is represented as per capita GDP growth rates. This index is suitable because it captures the standard of living in the West African countries. The study's model is developed in consonance with the work conducted by Han, Khan, and Zhuang (2014), and is specified as follows:

$$EDV_{it} = f(X'_{it}) \quad (1)$$

Where
EDV_{it} measures economic development and X'_{it} captures governance indicators. Equation (1) specifies that economic development in country i at time t is a function of governance indicators; where X_{it} is a vector of governance indices given as follows:

$$X'_{it} = [CC, PSAVT, RL, GE, RQ, VA] \quad (2)$$

Where:

CC = Control of Corruption,

PSAVT = Political Stability and Absence of Violence and Terrorism,

RL = Rule of Law,

GE = Government Effectiveness,

RQ = Regulatory Quality, and

VA = Voice and Accountability.

Transforming Equation (1) to reflect all the governance performance indices, and representing it in an estimable form:

$$EDV_{it} = \xi_0 + \xi_1 CC_{it} + \xi_2 PSAVT_{it} + \xi_3 RL_{it} + \xi_4 GE_{it} + \xi_5 RQ_{it} + \xi_6 VA_{it} + \mu_{it} \quad (3)$$

Where ξ_0 is the constant of the regression equation; ξ_1 to ξ_6 are the parameters to be estimated; μ is the stochastic error term; i represents country cross-section; while t represents the time.

2.1. Description of Governance Variables

Control of Corruption: This index captures the perception on the utilization of public power to secure private benefits.

Government Effectiveness: This captures the perception about the quality of public administration or the public service. The index measures the discernment of the government's trustworthiness through the trust given to its administration.

Political Stability and Absence Violence and Terrorism: This encapsulates the discernment of possible subversion of the political era via elections or violence.

Rule of Law: This captures the view of the nationals of the rules that governs the society and the extent of compliance with such rules. The index measures the judgement of the efficiency and impartiality of the judiciary and reverence for binding contracts and pacts.

Regulatory Quality: This index permits the evaluation of the business environment for foreign investors. It measures some variables which are favourable or unfavourable to a free enterprise economy, including the financial system, anti-liberal interventionist policies, like price legislations, external trade, etc.

Voice and Accountability: This captures the inclinations of political process, political rights, civil liberties, and independence of the media. The responsibility is that of citizens who take part in political life via elections, and public decisions. It is "measured by the extent to which a country's citizens are able to participate in selecting their government as well as freedom of expression, association, and the press" (Han, Khan, and Zhuang, 2014).

3. Data and Sources

Data for the study spans through 2002 to 2019 covering ten (10) West African countries of Benin Republic, Burkina Faso, Ghana, Guinea Republic, Gambia, Liberia, Mali, Nigeria, Senegal, and Togo. The data utilized in the study include performance of governance and economic development. Data on governance performance were acquired from the 'World Governance Indicators'; while data on economic development was obtained from the 'World Development Indicators'.

4. Diagnostic Test

The study utilized *unit root test* constructed by Levin, Lin and Chu (2002) for panel data with respect to common sample and that of *Im, Pesaran and Shin (2003)* for the *individual unit root processes*. In a general form, the equation for the test is specified as:

$$\Delta Y_{it} = \alpha_i + \delta t_i + \beta_i Y_{i,t-1} + \sum_{j=1}^{k} \gamma_{ij} \Delta Y_{i,t-j} + \mu_{it} \quad (4)$$

Where Δ denotes the first difference operator, Y_{it} is the variable of interest to be tested for the existence of a *unit root*, μ_{it} is the stochastic term (which is assumed to be white-noise); i = 1, 2, 3, …, N represents country and t = 1, 2, 3, …, T for time. The null hypothesis (H_0) and alternative hypothesis (H_1) for the stationarity of the panel data set from Equation (4) is given as:

$$\begin{cases} H_0: \beta_i = 0 \\ H_1: \beta_i < 0 \end{cases}$$

Where the alternative hypothesis imply that Y_{it} is stationary. In this study, the accepted level of significance is 5% and 1% only.

5. Technique of Analysis

The technique of analysis utilized for the study include the random effect panel regression analysis, cointegration test and ARDL error correction mechanism. The test for cointegration is done using the Augmented Dickey-Fuller (ADF) test for cointegration. Where the one-period lag of error terms so obtained are tested for stationarity at level. If the one-period lag of the *error term* is stationary at level, then cointegration exists, otherwise it does not. This is specified in the equation below:

$$\Delta\varepsilon_t = \alpha_i + \gamma t + \beta_1\varepsilon_{t-1} + \sum_{i=1}^{k}\vartheta_i\Delta\varepsilon_{t-i} + \mu_t \quad (5)$$

Where ε_t is the residual obtained.

The error correction mechanism (ECM) captures the speed of adjustment from the short run disequilibrium to equilibrium in the long run. The use of the autoregressive distributive lag (ARDL) approach makes the process easier as it produces both the short run and long run coefficients simultaneously. The model for the error correction mechanism in its general form is stated as:

$$\begin{aligned} \Delta EDV_{it} = {} & \alpha_{i,j} + \sum_{i=0}^{m}\beta_{i,j}\Delta CC_{t-i} + \sum_{i=0}^{m}\gamma_{i,j}\Delta PSAVT_{t-i} + \sum_{i=0}^{m}\delta_{i,j}\Delta RL_{t-i} \\ & + \sum_{i=0}^{m}\varphi_{i,j}\Delta GE_{t-i} + \sum_{i=0}^{m}\Phi_{i,j}\Delta RQ_{t-i} + \sum_{i=0}^{m}\psi_{i,j}\Delta VA_{t-i} + \delta ECM_{t-1} + \varepsilon_t \end{aligned} \quad (6)$$

Where Δ connotes the difference operator; $\alpha_{i,j}$ (j, k = 1, 2, …, N) represents the random country effect; i (i = 1, …, m) is lag length determined by the Schwarz information Criterion (SIC); ECM_{t-1} is the error correction mechanism (ECM) resulting from the long-run cointegrating relationship; and δ is the adjustment coefficient.

The random effect model is specified as follows:

$$y_{ijk} = \mu + \alpha_i + \beta_j + \alpha\beta_{ij} + \epsilon_{ijk} \quad (7)$$

From Equation (7), $\alpha_i s$ are random variables that follows a N(0, σ_α^2) distribution; and $\beta_j s$ follows N(0, σ_β^2) as well. The *random effect model* has two key advantages over the fixed effect model: (i) *the leeway of estimating shrunken residuals, and (ii) the likelihood of accounting for differential school effectiveness through the random coefficient models* (Clarke *et al.*, 2010).

EMPIRICAL FINDINGS

1. Correlation Analysis

The correlation analysis is thought to represent the link between governance metrics and economic progress of selected West African countries. The result is obtainable in a correlation matrix captured in Table 2.

Table 2

Correlation Matrix

	EDV	CC	GE	PSAVT	RL	RQ	VAC
EDV	1.00						
CC	0.141	1.00					
GE	0.166	0.789	1.00				
PSAVT	0.059	0.603	0.547	1.00			
RL	0.118	0.863	0.829	0.697	1.00		
RQ	0.157	0.806	0.840	0.592	0.870	1.00	
VAC	0.211	0.688	0.661	0.434	0.708	0.597	1.00

Source: Author's Computation

Within the West African region, all the governance indices are observed to have weak correlation with economic development. None of the correlation coefficients is up to 0.5 to portray even a fairly high correlation between the variable. Take for example, the connection between 'economic development' and 'corruption control' is captured by the coefficient of correlation being 0.141 only. Likewise, 'political stability' and 'absence of violence and terrorism' has a very weak positive correlation with 'economic development' as captured by the coefficient of correlation being 0.059. It is worth noting that the indices of governance possess some form of high positive correlation with each other. This points out the presence of interdependence in the governance indicators. A region free from corruption is likely to give full credence to the rule of law, achieve government effectiveness, and express regulatory quality. Meanwhile, the coefficients of correlations among the governance indices does not portray perfect linear combination. As such, the problem of multicollinearity is ruled out.

2. Panel Random Effect

The outcome of the panel regression analysis, under the random effect model, is presented in Table 3.

Table 3.

Random Effect Regression Result

Variable	Coefficient	Standard Error	t-Statistic	Probability
C	1.1147	2.5479	0.4375	0.6623
PSAVT	0.7933	0.7004	1.1325	0.2591
RL	-4.1336	2.4598	-1.6804	0.0948*
RQ	0.0063	2.0310	0.0031	0.9975
VAC	5.2032	1.4804	3.5147	0.0006***
CC	0.8857	2.2978	0.3854	0.7004
C	2.7907	1.8482	1.5099	0.1330
Country Specific Effect				
COUNTRY	**EFFECT**			
BEN	-3.9732			
BFA	0.6239			
GHA	-0.9372			
GUI	3.0202			
GAM	1.5002			
LBR	-2.6732			
MAL	-1.2220			
NGA	2.1348			
SEN	-1.4029			
TOG	2.9294			

Source: Author's Computation

*Note: * and *** signifies significance at 10% and 1% respectively.*

From the result in Table 3, it is observed that rule of law exerts an undesirable and substantial effect on the development of West African economies over the study period This negative effect portrays the weak presence of adherence to the 'rule of law' within the west African sub-region. Such leads to a 4.13% decline in the development of the West African sub-region. Other governance indicators exert a direct effect on 'economic development', though most of them are statistically insignificant except for 'voice and accountability'. The stated variable exerts a positive and significant effect on the 'economic development' of the West African sub-region at the 1% significant level. A unit percentage increase in it tends to increase economic development by 5.20%.

Looking at the country specific effect, Benin Republic, Ghana, Liberia, Mali, and Senegal experienced a negative level of development if the governance indicators were held constant. Meanwhile, Burkina Faso, Guinea Republic, Gambia, Nigeria, and Togo experienced a positive effect. The country with the greatest negative effect is observed to be Benin Republic; while the country with the least negative effect is Ghana. On the contrary, Guinea experienced the greatest positive effect while Burkina Faso experienced the least positive effect.

An examination of the short-run and long-run effect of these governance indices will give us a clearer picture of any possible adjustment in the model for equilibrium to be achieved over time. This necessitates the test for unit root and subsequent test for the existence of long-run relationship in the model.

3. Unit Root Test

The unit root test is conducted on the basis of 'common unit root process' and 'individual unit root process'. The result is depicted in Table 4. The values in the brackets represents the probabilities of accepting the null hypothesis.

Table 4

Unit Root Test Result

Common Unit Root Process (Levin, Lin & Chu t*)				Individual Unit Root Process (Im, Pesaran and Shin W-stat)		
Variables	Level	First Difference	Order of Integration	Level	First Difference	Order of Integration
CC	-1.82985 (0.0336)**	--------	I(0)	-1.70517 (0.0441)**	-------	I(0)
EDV	-5.65893 (0.0000)***	---------	I(0)	-4.34202 (0.0000)***	--------	I(0)
GE	-2.02143 (0.0216)**	---------	I(0)	-2.26510 (0.0118)**	-------	I(0)
PSAVT	-1.2148 (0.1122)	-6.05729 (0.0000)***	I(1)	-1.04816 (0.1473)	-6.66762 (0.0000)***	I(1)
RL	-2.12162 (0.0169)**	--------	I(0)	-1.49366 (0.0676)*	-4.56911 (0.0000)***	I(1)
RQ	-0.41592 (0.3387)	-3.98584 (0.0000)***	I(1)	-0.07836 (0.4688)	-3.96417 (0.0000)***	I(1)
VAC	-2.78866 (0.0026)***	---------	I(0)	-1.07514 (0.1412)	-5.54718 (0.0000)***	I(1)

Source: Author's Computation

*Note: *, ** and *** signifies significance at 10%, 5%, and 1% respectively.*

Under the 'common unit root process', VAC, CC, EDV, RL, and GE are stationary at level. That is, they are I(0) variables. Meanwhile, PSAVT and RQ are stationary at first difference. hence, they are I(1) variables. Under the 'individual unit root process', CC, EDV and GE are all stationary at level; while PSAVT, VA, RQ, and RL are

stationary at first difference. This mixed order of integration at level and first difference calls for a test for the existence of a long-run link among the variables. This is done using Augmented Dickey-Fuller (ADF) test for cointegration.

4. Augmented Dickey-Fuller (ADF) Test for Cointegration

The result of the ADF test for cointegration is presented in Equation (4.1). The result is obtained by testing a one-period lag of the residuals for stationarity.

$$\begin{cases} \Delta\varepsilon_t = -1.17686\varepsilon_{t-1} \\ \tau = -11.496 *** \\ Levin, Lin\ \ Chu\ t* = -6.7939(0.0000) *** \end{cases} \quad (8)$$

From Equation (8), the tau (τ) statistic of -11.496 is statistically significant at the 1% level of significance. This implies that the residuals are stationary – they do not contain unit root. This portrays that the variables are co-integrated. Hence, we examined the short-run and long-run estimates of the model.

5. Long Run and Short-Run Dynamics

The long-run estimates of the model is presented in the upper segment of Table 5; while the short-run estimates is presented in the lower segment.

Table 5

Long-Run and Short-Run ARDL Result

Variable	Coefficient	Standard Error	t-Statistic	Probability
Long Run Equation				
CC	2.4345	1.0948	2.2236	0.0286**
GE	0.5348	1.0578	0.5055	0.6143
PSAVT	1.4520	0.5396	2.6906	0.0084**
RL	-1.9812	1.3551	-1.4620	0.1471
RQ	-2.6029	1.2775	-2.0373	0.0444**
VAC	4.1967	1.1109	3.7775	0.0003**
Short Run Equation				
COINTEQ01	-0.8184	0.1459	-5.6088	0.0000***
D(CC)	-1.9594	3.5492	-0.5520	0.5822
D(GE)	-4.3314	6.4173	-0.6749	0.5014
D(PSAVT)	-0.0136	1.3175	-0.0103	0.9917
D(RL)	0.8774	3.2402	0.2708	0.7871
D(RQ)	-0.9387	3.2769	-0.2864	0.7752
D(VAC)	0.7171	2.7800	0.2579	0.7970
C	2.6135	0.7802	3.3495	0.0012**

Source: Author's Computation

*Note: ** and *** signifies significance at 5% and 1% respectively.*

Following the ARDL approach of estimation, the long-run equation depicted that Control of Corruption, PSAVT, and voice and accountability exert a positive and substantial effect on the economic development of West African countries. A unit percent increase in corruption control will leads to an average of 2.43% increase in economic development; while a unit increase PSAVT will lead to a 1.45% increase in 'economic development'. Also, a unit percent increase in voice and accountability will yield a 4.20% increase in economic development of these West African countries. Government effectiveness also has an affirmative effect on 'economic development' of West African countries, though such effect is not

statistically substantial. Following the coefficients, it is observed that VA has the greatest effect positive effect on 'economic development' (the coefficient being 4.1967), followed by CC (2.4545). Conversely, RL and RQ exerted an adverse effect on 'economic development' of West Africa. Though the effect of the RL is not substantial, that of RQ is substantial at the 5% level. It follows from the coefficient of regulatory quality (-2.6029) that a unit percentage increase in RQ leads to a 2.60% decrease in economic development of the sub-region. This portrays the weak and enormous failed policies of the countries within the sub-region. For equilibrium to be restored in the log-run, the error correction term indicated that 81.84% of the short-run disequilibrium is corrected annually.

In the short-run, none of the governance indicators exerts any significant effect on the economic development of West Africa. However, the key issue that can be raised from the short-run estimates is the fact that most of the governance indices works against the development of the West African countries. For example, the RL and VAC has a positive short-run effect on economic development of West Africa. Corruption control has negative effect followed by government effectiveness, PSAVT, and regulatory quality. This can be seen from the widespread corruption and political instability terrorism in some countries in the West African region; poor policy posture of the government, and poor delivery of the dividends of democracy by government of the West African region. With this, development is bound to be impeded within the West African region. Looking at the country specific short-run and long-run effect can give more details on the activities of the government in the region.

6. Cross Section Short Run Coefficients

The short-run coefficients for the respective countries is presented in Table 6.

Table 6

Cross Section Short-Run Estimates

Country	ΔCC	ΔGE	ΔPSAVT	ΔRL	ΔRQ	ΔVA
BEN	-0.7298 (0.9514)	4.4613 (0.8124)	-3.3651 (0.6957)	12.9994 (0.7194)	2.9165 (0.8538)	-1.1352 (0.9170)
BFA	-9.8234 (0.7607)	1.5889 (08960)	0.0154 (0.9973)	-9.1401 (0.7124)	-0.2710 (0.9900)	-0.6101 (0.9739)
GHA	-2.1060 (0.9704)	5.8273 (0.9037)	6.7334 (0.8920)	4.1278 (0.9585)	3.5275 (0.9532)	-11.9613 (0.8767)
GUI	-5.3028 (0.9318)	4.1000 (0.9287)	-3.6886 (0.5861)	0.6926 (0.9954)	8.0993 (0.9665)	-0.3570 (0.9937)
GAM	-3.5437 (0.9622)	-6.3931 (0.9415)	1.0534 (0.9295)	-5.6029 (0.8933)	-0.5639 (0.9959)	1.9825 (0.9100)
LBR	28.5401 (0.9123)	-61.0964 (0.9028)	7.3638 (0.9379)	-18.739 (0.9425)	-15.0359 (0.9770)	20.4917 (0.8248)
MAL	-8.3150 (0.7663)	5.8476 (0.7300)	-1.1594 (0.6703)	15.2178 (0.2470)	-23.7655 (0.4472)	6.1829 (0.7112)
NGA	-8.7223 (0.8275)	-1.0460 (0.9752)	-4.4162 (0.7942)	4.3727 (0.9345)	3.5565 (0.7367)	-1.1789 (0.6997)
SEN	-1.3150 (0.7406)	3.4502 (0.2185)	-3.0991 (0.1509)	6.7573 (0.5531)	3.7296 (0.6423)	-9.1595 (0.0892)*
TOG	-8.2764 (0.6617)	-0.0549 (0.9974)	0.4256 (0.5603)	-1.9108 (0.8883)	8.4195 (0.4662)	2.9163 (0.8572)

Source: Author's Computation

*Note: * signifies significance at 10% and 1% respectively.*

The short-run result presented in Table 6 shows that none of the governance indices exerted a significant effect on any of West African countries, except VAC in Senegal. In Benin Republic, CC, PSAVT, and VA exerted a negative short-run effect on the 'economic development' of the country; while government effectiveness, rule of law, and regulatory quality exerted a positive effect.

In Burkina Faso, the only variables that exerted a positive effect are government effectiveness and PSAVT. All other variables exerted a negative effect. Ghana experienced a positive effect of government effectiveness, PSAVT and rule of law; while others remained negative. In Nigeria, corruption, government ineffectiveness, PSAVT, and negligence of voice and accountability are seen to drive the economy to a lower level in her development pursuit. Only rule of law and regulatory quality exerts a positive effect on her economic development.

CONCLUSION

In this study, the influence of six key governance indicators – 'control of corruption'; 'government effectiveness'; 'political stability and absence of violence and terrorism'; 'rule of law'; 'regulatory quality'; and 'voice and accountability', on the 'economic development' of the West African sub-region was examined. Using the 'random effect' panel regression analysis, we observed that rule of law exerted a positive and significant effect on economic development in the region, reducing development by 4.13%. Meanwhile, voice and accountability also exerted a positive and substantial effect on 'economic development; of the sub-region, increasing her development by about 5.20%. The study moved ahead to ascertain the long-run and short-run effect of the various governance indicators on the region's development. In the long-run, it is observed that control of corruption exerted a positive effect on the development of the sub-region, increasing the development of the sub-region by about 2.43%. Similarly, 'political stability', 'absence of violence and terrorism' and 'voice and accountability' both exerted a positive and substantial effect on the 'economic development' of the sub-region. They increase 'economic development' of the sub-region by 1.45% and 4.20% respectively. Conversely, regulatory framework worked against the development of the region in the long-run, accounting for a 2.60% decrease in 'economic development'.

In the short-run, none of the 'governance indicators' exerted a significant effect on the 'economic development' of the West African sub-region; with only 'rule of law' and 'voice and accountability' accounting for a positive effect. Given this scenario, this paper concludes that governance is a key issue of concern in the West African sub-region. These findings imply that governance is important for development - good governance corresponds with quicker growth and higher income levels, but its link with development varies among governance dimensions and a country's stage of development. In terms of policy, this suggests that governance reform objectives will most likely be country-specific. Countries are more likely to succeed in their governance reform initiatives if they focus on the most significant barriers to growth and development. There is need for a moral rejuvenation on the part of the leaders, to bring the desired outcome of governance to the citizens. There should be increased fight against corruption, and instability and terrorism within the region. These two variables are critical in the achievement of other key indices such as 'government effectiveness', 'rule of law', and 'regulatory quality'.

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