



## Political Stability, Corruption, and Economic Development : Evidence from WAMZ Countries

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ABSTRACT

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The paper has analyzed the political stability, corruption and economic development in the West African Monetary Zone (WAMZ) countries for the period of 2000 to 2020. The common properties of the panel data were first checked to avoid misspecification bias and hence biased statistical results. Firstly, the CD test revealed no evidence/absence of cross sectional dependence among the countries which validates the use of traditional panel unit root that does not take account of cross-sectional dependence. The results of panel unit root test proposed by Levin et al (2002) revealed that the variables are integrated of order zero i.e.  $I(0)$ . Based on this, the paper explores within the panel VAR framework. Evidence from impulse response functions revealed that, political stability and rule of law are economic development promoters while corruption hampers economic development in the region. The results from variance decomposition indicate that the variables under study contribute or hinder economic development in the WAMZ countries. Based on the results the paper recommends that, transparency and accountability at all level of government affairs as well as respecting the constitution in these nations should be preserved in order to overcome all social and political injustice among the countries under study.

## INTRODUCTION

The pursuit for the good welfare and economic development for almost five decades had insignificant success in the African countries as inadequate basic needs such as good health facilities, basic amenities, nutritional problems, as well as coup d'états and bad governance, social and internal insecurity, religion and ethnicity crisis, civil wars, increase in poverty incidence, high level of unemployment, youth restiveness, increased corruption cases and political instability still dominate the region. The level of economic development determines the level of corruption and extent of political instability as developing countries tends to be more corrupt and political unstable compared to the developed countries (Helliwell, 1994; Mauro, 1995; Montinola & Jackman, 2002; Schumacher, 2013). There are widespread of political instability and the problem of underdevelopment in the African countries which are not unconnected with the high rate of corruption as need of politicians, political leaders and public servants illegally accumulation of wealth in the process of using public office for private gain. Also, Political instability and violence may reduce access to security, property right, reduce capital formation, encourage capital flight, discourage foreign direct investment, reduce capital inflow and therefore posed significant impediment to economic development on African economy.

Although a body of literature has established that corruption hurts economic development (Gyimah- Brempong, 2002; Scheifer and Vishny, 1993) and determine political instability (Abu et al, 2014; Mauro, 2004), some researchers have argued that political instability accounted for high level of corruption found in many countries (Campbell and Saha, 2013; Zhang et al., 2009). Other researchers maintained that corruption may be desirable economically because of efficient provision of government services by bypassing inefficient regulation through greasing the wheels hypothesis to solve the problem of unnecessary bureaucratic delay and red tapism which constitute formidable barrier to productive investment which lead to economic development (Meon and Sekkat, 2005). It has been posited that frequent change in government reduces development, low development may also increase the frequencies of a government change, hence the need to deal with the problem of endogeneity (Alesina et al., 1996).

Therefore, this paper deviate from the previous researches in the region by looking at the influence of political stability in promoting economic development as pointed out by Shabbir et al. (2016) that, political stability plays positive role in promoting economic

growth and development. The paper seeks to investigate the impact of political stability and corruption on economic development in the five West African Monetary Zone(WAMZ)namely: Gambia, Ghana, Guinea, Nigeria, and Sierra Leon.

### **LITERATURE REVIEW**

A plethora of the literature on Political Stability, Corruption and Economic Development are put forward around the globe in spite of this, the researchers are yet to have reached the final consensus. For instance, Adefeso (2018) examined the extent of the effect of control of corruption and political stability on economic development in African countries. The study employed System General Method of Moment (GMM)framework on recent pooled of data from thirty-seven African countries over a period of 1996 and2016.The study found evidence of political stability though not statistically significant and ineffective control of corruption in African countries. The study also found that simultaneous implementation of policies towards ensuring political stability and effective control of corruption are not complementary and has more negative impact on development in the region. Both policies are substitute in the context of African economy, and hence should be pursued through sequential reforms. This study also found that continuous implementation of the current policies towards having both political stability and effective corruption control may not have positive impact on development in Africa. The study strongly supports sequential policy reform in the region and also recommends review of the ongoing policies towards ensuring effective control of corruption in the region.

Uddin et al. (2017) examined the effect of political stability on economic growth by taking 120 developing countries over the period of 1996–2014. The study applied relatively advanced dynamic two step system-GMM and quintile regression. Political stability was found to be a key determinant of economic growth according to the result of the study. More importantly, political instability (or risk) is found to be higher in the OIC countries and is a deterrent to economic growth. Also, for the lower and middle income OIC countries, political instability appears to affect economic growth more severely perhaps due to the absence of strong economic and political institutions. Moreover, political instability is also found to be significantly higher in the oil-dependent OIC countries. Notably, political instability is likely to affect growth through the channels of investment and human capital accumulation in the developing countries. Finally, the impact of political stability and political instability on growth is found to be equally

distributed across the OIC countries with higher or lower growth level. Therefore, the development of political and economic institutions along with human capital development is recommended for all the developing countries in general and the OIC countries in particular.

Coorayet al. (2017) has studied the role of political institutions, democracy, political rights, and civil liberties on trade openness and labor force participation rate in Africa. Their results tend to indicate that improved political institutions enhance labor force participation rate (LFPR) which in turn boost a country's economic development. In other words, political stability may affect growth through various channels. Political stability creates a favorable environment for business to flourish, attracts domestic and foreign investment, creates employment opportunities and migration into the cities which increase aggregate demand and stimulate economic growth.

Saha and Ali (2017) examined the impact of Corruption and Economic Development, the study applied linear and non-linear effects in analyzing the data of the study. The result reveals that interactive relationship between economic and political freedoms and government size leads to a reduction in corruption. Furthermore, the results indicate robust support and also suggest that an increase in income increase corruption on natural resources of rich countries. Overall the findings provide some relevant policy implications to Mena countries

Shabbir et al. (2016) examined the Corruption, Political Stability, and Economic Growth in developing eight muslim countries. The study investigated whether conditional liaison between corruption and political stability matters or not. The empirical findings indicated that investment, population and political stability play positive role in promoting economic growth, While Corruption not only impact growth but also influenced by the institutional quality that a nation experiences. Corruption acts as sands in the wheels of the nations that have higher degree of political stability, and greases the wheels in less politically stable countries such as Nigeria and Pakistan. Thus, political stability is conducive to growth, as it reduces the social unrests, political turmoil, encourages investment, and there by economic growth.

d'Agostino et al. (2016) investigated the effects of corruption on components of government spending, namely military and investment spending of panel of 106 countries and the results show that the interactions between corruption and investment and corruption and military spending have strong negative impacts on economic growth. The

results also indicate important complementarities between corruption and military spending, the study suggested that combating corruption will not only have direct positive effects, but is also likely to have positive indirect effects, through reducing the size of the negative impact of the military burden. They are also found to be robust across different measures of corruption, levels of economic development and groupings of countries. This suggests that policies to reduce corruption, combined with those to reduce military burdens, such as regional security agreements, would have a considerable impact on economic growth.

## **METHODOLOGY**

This section presents and discusses the econometric methodology used in the paper. The section begins by discussing the source and features of the data used for the purpose of this paper. It also discusses the variables and how they were constructed. The section goes further to discuss the pre-estimation as well as post estimation statistical tests used in the paper. The pre-estimation tests include CD tests out to ascertain the appropriate unit root test to be carried out and panel Unit Root tests. The unit root tests were carried out to ascertain order of integration of the series and to avoid statistical misspecification of the model.

### **Sources of Data**

The data for this research is mainly secondary obtained from the world development indicators and world governance indicators (2020). The period of the study covers from 2000 to 2020 and it is panel data of five countries in the West African Monetary Zone (WAMZ). The countries are Gambia, Ghana Nigeria, Guinea, and Sierra Leone. The variables are Per-Capita GDP proxy for Economic Development (GDP\_P), Political Stability (PS) by Political Stability and Absence of Violence/Terrorism: Estimate, Rule of Law (RL) and Corruption (COR) proxy by Control of Corruption: Estimate. In order to reduce the disparity among the data, the data Per-Capita GDP proxy for economic development is transformed in to logarithm form.

### **Model specification**

The model of this paper is specified as:

$$GDP\_P = f(PS, COR, RL)$$

Where

*GDP\_P*=Per-Capita GDP proxy for Economic Development

*PS*= Political Stability proxy by Political Stability and Absence of Violence/Terrorism: Estimate

*COR*= Corruption proxy by corruption perception index

*RL*= Rule of Law: Estimate

The econometric model is specified as:

$$GDP\_P_t = \alpha_0 + \beta_1 PS_{it} + \beta_2 COR_{it} + \beta_3 RL_{it} + \epsilon_{it}$$

Where  $\beta_1$ ,  $\beta_2$ , and  $\beta_3$  are the coefficient of the variables,  $\alpha_0$  is the vector of constant, and  $\epsilon_{it}$  is a white noise disturbance. The prior expectation of the parameters is  $\beta_1$  and  $\beta_3 > 0$  that is positive relationship with economic development, while  $\beta_2 < 0$  that is negative relationship with economic growth

## TECHNIQUES OF DATA ANALYSIS

### The Pre- Estimation Tests

#### *Cross-sectional Dependency Test*

Pesaran (2004) developed the cross-section dependence test. It is the principal test before to investigate, at the order of integration of the series; the most concern is to test the cross-sectional dependence of the arrangement. Hence, it is the first analysis to choose the fitting unit root series. The failure to consider about cross-sectional dependence between the series may bring about bias results (Breusch & Pagan, 1980; Pesaran, 2004). The suggested test of the ordinary least squares (OLS) residual from the panel regressions are:

$$Z_{i,t} = \gamma_i + \delta_i y_{it} + \theta_{it} \dots \dots \dots 1$$

Where  $\gamma_i$  and  $\delta_i$  are the intercepts and slope,  $i = 1, 2, 3, \dots, N$  is an indexes of the cross section dimension and  $t = 1, 2, 3, \dots, Q$  is the time series dimension. For each  $i$ ,  $\theta_{it} \sim iid(0, \sigma_{\theta}^2)$  and for all  $t$ , while they could be cross sectional interrelated. The dependence of  $\theta_{it}$  across  $i$  could arise in a various ways. It could be due to unobserved common components of  $\theta_{it}$  and  $\theta_{ij}$  for  $i \neq j$ . the regressors could have lagged values of  $Z_{it}$ , be either stationary or non-stationary. The CD test is as follows:

$$CD = \sqrt{\frac{2Q}{N(N-1)} \sum_{i=1}^{N-1} \sum_{j=i+1}^N \check{R}_{ij}} \dots \dots 2$$

**Unit Root**

Panel unit root test: the panel unit root test presented in this paper are Levin and Lin(LL thereafter) test proposed in Levin and Lin (1992, 1993) and Levin, Lin, and Chu (2002) thereafter (LLC 2002). LLC created a method for testing the hypothesis that each time series includes a unit root against the alternate assumption that each time series is stationary. Hence, LLC assumes a homogeneous coefficient of autoregression between individuals. The LLC structure may be laid down as follows:

$$Z_{it} = \delta_i y_{i,t-1} + q'_{it} \gamma + \theta_{it} \dots \dots 3$$

Where  $q'_{it}$  are the deterministic variables,  $\theta_{it} \text{ is iid}(0, \sigma_{i\theta}^2)$  and  $\delta_i = \delta$

**Model Estimation: A Panel VAR**

We consider a  $k$ -variate homogeneous panel VAR of order  $p$  with panel-specific fixed effects represented by the following system of linear equations,

$$Y_{it} = Y_{it-1}A_1 + Y_{it-2}A_2 + \dots + Y_{it-p+1}A_{p-1} + Y_{it-p}A_p + X_{it}B + u_i + e_{it} \dots \dots 4$$

For all  $i \in \{1, 2, \dots, N\}$ ,  $t \in \{1, 2, \dots, T_i\}$

where  $Y_{it}$  is a  $(1 \times k)$  vector of dependent variables,  $X_{it}$  is a  $(1 \times l)$  vector of exogenous covariates, and  $u_i$  and  $e_{it}$  are  $(1 \times k)$  vectors of dependent variable-specific panel fixed effects and idiosyncratic errors, respectively. The  $(k \times k)$  matrices  $A_1, A_2, \dots, A_{p-1}, A_p$  and the  $(l \times k)$  matrix  $B$  are parameters to be estimated. We assume that the innovations have the following characteristics:  $E(e_{it}) = 0, E(e_{it}^j e_{it}) = \Sigma$ , and  $E(e_{it}^j e_{is}) = 0$  for all  $t > s$

Similar to Holtz-Eakin, Newey, and Rosen (1988), we assume that the cross-sectional units share the same underlying data generating process, with the reduced-form parameters  $A_1, A_2, \dots, A_{p-1}, A_p$ , and  $B$  to be common among them. Systematic cross-sectional heterogeneity is modeled as panel-specific fixed effects. This setup contrasts with time-series VAR, where by construction; the parameters are specific to the unit being studied, or with random-coefficient panel VAR, where the parameters are estimated as a distribution. The parameters above may be estimated jointly with the fixed effects or, alternatively, with ordinary least squares (OLS) but with the fixed effects removed after some transformation on the variables. After the estimate the PVAR is subjected to stability test in order to find out whether the PVAR result is stable

## RESULTS AND DISCUSSION

### Cross-Sectional Dependence Test (CD Test)

Cross-sectional dependence test was conducted in order to examine the contagious effects of shocks within the cross-sections (Pesaran & Yamagata, 2008). Table 1 presents three Cross Sectional Dependency Tests, which include: The Breusch-Pagan LM test, the Pesaran Scaled LM test and the Pesaran CD tests of cross-sectional dependence. Based on the results, all the variables indicate no presence of common factor affecting the cross sectional units which paved way to use the first generation panel unit root test.

Test	Statistic	d.f.	Prob.
Breusch-Pagan LM	29.5862	28	0.4023
Pesaran scaled LM	11.03605		0.1325
Pesaran CD	40.009508		0.1501

Source: Author's Computation 2021

### Panel Unit Root Test

The panel unit root test conducted in this paper is Levin et al. unit root test proposed by Levin, Lin, and Chu (2002). The test was estimated at level as presented in Table 2 below:

**Table 2: Levin et al Panel Unit Root Test**

variable	Panel Unit Root at level	
	t-Statistic	Probability
LGDP_P	-1.76828	0.0385**
PS	-8.66136	0.0000*
RL	-2.75364	0.0029*
COR	-7.19479	0.0000*

Note: \* & \*\* are statistically significant at 1% and 5% level of significance

Source: Author's Computation 2021

Table 2 shows the Levin et al unit root test both with trend and intercept. The result reveals that, all the variables were stationary at level with different level of significant. For example, PS, RL and COR were stationary at 1% statistically level of significant while, LGDP\_P was statistically significant at 5% level of significant. This means that, the variables are integrated of order zero I(0).

### Panel VAR estimation

In order to find the response of economic development (GDP\_P) due to the shocks of Political stability (PS), Rule of Law (RL) and Corruption (COR) the paper estimates the PVAR and thereafter deduces Impulse response function and factor error variance decomposition in order to achieve the desire objectives of the paper. Therefore, before estimation of impulse response function and factor error variance decomposition the stability of the PVAR must to be checked to avoid unbiased estimation. Table 3 shows the result of stability test and the PVAR satisfies the stability condition since all the eigenvalues lie inside the unit circle.

**Table 3 PVAR Stability Test**

Eigenvalue		
Real	Imaginary	Modulus
0.9737421	0	0.9737421
0.9551442	0	0.9551442
0.8437632	0	0.8437632
-0.0639611	0	0.0639611

All the eigenvalues lie inside the unit circle.

pVAR satisfies stability condition.

Source: Author's Computation 2021

Since the PVAR is stable, our main concern is to generate Impulse Responses function and Forecast Error Variance Decomposition from the PVAR estimate. The results of PVAR impulse responses is presented in Appendix 1 and our objective is to look into the response of GDP\_P due to a unit shocks on these variables namely PS, RL and COR in the WAMZ countries.

The results of the impulse responses in Table 4 shows one unit shocks of GDP\_P account for positive response on itself throughout the 8 periods. Also, a unit shock of PS and RL account for a positive response of Economic Development throughout the 8 periods, while one unit shocks of COR account for a negative response to GDP\_P in the WAMZ countries throughout the 8 periods under study. This implies that political stability and rule of law have positive shocks/impact on economic development and corruption has a negative shock/impact on economic development among the countries under study in the West African Monetary Zone.

**Table 4 Impulse Response Functions**

Response of GDP_P				
Periods	LGDP_P	PS	RL	COR
1	82198.13	381.8325	13159.26	-10477.3
2	88745.7	6065.982	12263.23	-9057.381
3	94643.36	9028.904	12974.93	-12403.46
4	102082.6	11209.28	13711.71	-13804.98
5	110123.9	12525.62	16116.17	-13158.48
6	118908.6	13532.88	17176.84	-13160.72
7	128444	14450.37	18355.57	-14199.42
8	138771.3	15397.67	19196.05	-15093.93

Source: Author's Computation 2021

**Variance Decomposition**

The impulse response functions trace the effects of a shock to one endogenous variable on the other variables in the PVAR; while, the variance decomposition provides information about the relative importance of each random innovation in affecting the variables in the PVAR. Table 4 presents the PVAR Forecast Error Variance Decomposition with specific focuses on Proportions of forecast error in GDP\_P accounted by itself, PS, RL and COR under study. The results indicate that GDP\_P account for more than 65% variation on itself at the end of the period even though at the first and second periods it accounts for 100% and 90% variation for itself respectively. It is also reveals from the Table 4 that PS accounting for more than 14% variation of GDP\_P at the end of the period, RL account for more than 15% variation at the end of period. While COR account for less than 6% variation of GDP\_P in the WAMZ countries over the period under study.

**Table 4 Forecast Error Variance Decomposition**  
**Dependent Variable GDP\_P**

Periods	LGDP_P	PS	RL	COR
1	1	0	0	0
2	0.9016714	0.0437178	0.0200793	0.0344432
3	0.8304957	0.0944309	0.0345726	0.0493832
4	0.7877016	0.1128525	0.0655152	0.0450978
5	0.7583863	0.1247904	0.088235	0.0462572
6	0.7180174	0.1289214	0.1121342	0.051003
7	0.684165	0.1357962	0.1336702	0.0513256
8	0.6557841	0.1420193	0.1545747	0.0500405

Source: Author's Computation 2021

## CONCLUSION AND RECOMMENDATIONS

The paper has analyzed the political stability, corruption, and economic development in the West African Monetary Zone (WAMZ) countries for over period of 2000 to 2020. The common properties of the panel data were first checked to avoid misspecification bias and the CD test showed the presence of cross sectional independence among the countries under study which paved way to use the first generation panel unit root test. The results of panel unit root test proposed by Levin et al (2002) revealed that the variables are integrated of order zero i.e.  $I(0)$ . Based on this, the paper explores within the panel VAR framework that political and rule of law are the economic development promoters while corruption hampers economic development in the region. The results from variance decomposition indicate that the variables under study contribute or hinder the economic development in the WAMZ countries.

Based on the results the paper recommends that, transparency, accountability in all government affairs, as well as respecting the constitution in these nations should be preserve to overcome all social and political injustice among the countries under study.

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