Lapai Journal of Economics; Volume 5, No.2; 2021
Print ISSN: 2659-028X
Online ISSN: 2659-0271
Published by Department of Economics, IBB University Lapai, Niger State, Nigeria

Do Governance Matter for Economic Growth? Evidence from West Africa Countries

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DOI: 10.5281/zenodo.6349183

Abstract
The study examines the impact of governance on economic growth in selected West African countries namely Nigeria, Ghana, Benin and Niger republic from 1996 to 2020 using panel data. The study employed traditional panel data analysis which is pooled ordinary least square and random effect model as suggested by Hausman test. The result of the pooled least square indicates that, gross fixed capital had positive impact on economic growth and employment had positive but not statistically significant impact on economic growth, while control of corruption and political stability had a negative impact on economic growth but accountability and voice on the other hand have positive impact on economic growth. The result of the random effect model showed that gross fixed capital had positive impact on economic growth in West Africa. Employment had a positive but not statistically significance impact on economic growth, control of corruption had negative and not statistically significant impact on economic growth. Political stability had negative and statistically insignificant impact on economic growth in West African countries, while accountability and voice have positive impact on economic growth in West Africa. This study recommends that West African countries should address the issue of corruption so as to improve economic growth in the region and also create employment opportunities among youths to ascertain higher economic growth and good governance.

Keywords: Governance, Economic, Institutions, Political Stability, Accountability
JEL Classification: O24, E63, C23, O41

1. Introduction

Governance as a concept has been studied by many scholars, researchers and policy analyst in general but there is yet to be a satisfactory and precise definition of governance. The definition by Kaufmann and kray (2010) shows all the units of governance. In which their study described governance as authority working out through institutions and customs in a country. Mastruzzi Mehanna, Yazbeck and Sarieddine (2011) divide this definition of governance into three parts, namely:

process by which regimes are elected to check and substitute, potentialities of government to begin and put into action the define policies effectively, and finally to have social and economic interface among civilians and state in order to achieve respect for institutions. Chaudhry (2009) opined that Governance is the process of basic leadership and implementation and a tool for economic, political and administrative establishment to manage a nation's affairs to embrace stability. North (1981) stressed that institutions serve as a set of rules, procedures and ethical and moral behavioral norms which are shaped to restrict the actions of individuals to maximize utility of principals. According to United Nations development program (UNDP, 1997), governance means the implementation of administrative, economic and political authority to control the affairs of a country at each and every level, because all the institutions are considered responsible to perform their prescribed activities in order to fulfill the demand of common man. In addition, the international monetary fund (IMF) gives more importance to economic side of governance and which stimulate the quality of resources available to public, and make the activities of private sectors more efficient. For investment and growth, government institutions are important especially the ones that protect the property rights (Knack & Keefer, 1995). Kaufmann et al (2002) and Chaudhry et al (2009) argued that in order to achieve rapid economic growth, good governance plays effective role with the help of better and useful provisions of resources including both the capital and labour. Many West Africa countries have in recent decades experienced steady growth performance of their economies and there is an increase in the global focus of the continent as the world new palace for investment (Mduduzi & talents. 2015: Lawson, 2015).

In West African nations, poor governance has resulted to poor economic growth and it is manifested through corruption, political instability, ineffective rule of law and constitutions. However, this could happen if governance capacity was poor and non- sustainable therefore good governance necessitate and initiate economic growth (Makolo & Rester, 2005). The challenge for West Africa is to restructure governance strategy and learn from other countries viable governance strategies that would be suitable to their own conditions. Thus, the actual governance system does not sustain good growth performance (Khan, 2006). Corruption usually takes place when public officials break the laws to fulfill their own interest. The most common types of corruption are bribery and extortion as well as allocation of public resources to favour political benefits (Obadina, 2000). Therefore, in many African countries, corruption takes place as a rule based decisions. That is, public officials influence the economic decisions in detriment of the entire society. This results to inefficiency and high transaction cost as well as distortion of transparent and normal markets operations and thus, result in insecurity for investors. Typically, African countries have a weak tax base and the policy makers lack integrity thus, facilitating corruption. Corruption is strongly correlated to poor public governance. Despite the increase in aid flows and renewed emphasis and attention to improving the environment for effective aid. The experience with good economic growth within the developing countries remains deeply disappointing, with falling average per-capital incomes resulting to escalating poverty levels (Khomba, 2017). For African countries, since independence from the periods of

1970s to the late 1990s can in general be considered lost decades. This period has been characterized by a combination of serious governance. Low and sub- optimal investment in health, education and in other social services; significant macroeconomic imbalance; poor infrastructure; and structural trade deficits (Bhorat & Naidoo, 2014). Some elements of governance requires the capacity to design and implement effective polices and to regulate effectively and efficiently, and has the political will to eliminate negative elements such as corruption and political instability that serve only to enrich political elites in low- income countries which leads to incompetent governances (Khomba, 2017).

Despite the 2013 growth rates recorded in Africa, there is a renewed concern regarding the long term sustainability of Africans rapid economic expansion and importantly, whether the growth at the country level can be translated into achieving key good governance, such as political stability, corruption control, accountability, equitable distribution of income, and enhanced gross capital accumulation. The derivers of economic growth are critical to understanding whether the growth is likely to be sustainable and more importantly inclusive (Alomaisi, Schormacker & Shmeaileh, 2016; Bayer, 2016). Although a large number of studies around the subject unveils that, governance has positive impact on economic growth focusing on the following indicators; violence/terrorism, regulatory quality, government effectiveness and the rule of law (Afolabi, 2019; liu, Tang, Zhou & Liang, 2018; Apaza 2009). Yet there is a noticeable shortfall of empirical researches that specifically pay attention to the impact of these governance indicators (political stability, corruption control and accountability voices). The implication of this paper is that holistic relationship between dependent and independent variables may be blurred and incomplete. Realizing these gaps in the extant literature. This paper seeks to investigate the impact of governance on economic growth using political stability, corruption control, accountability voice and gross capital formation. The significance of this study lies in its contribution to knowledge as it integrates within a single framework, the relationship between governance and economic growth in West African countries. In addition to this introductory section, this study will be discussed under four other sections. Section 2 considers the review of literature; the methodological framework is put forward in Section 3 while Section 4 discusses results, and Section 5 concludes the study.

2 Literature Review

Governance is a broad concept with great complexity to its major pillars (Kaufmann, Kray &Mastruzzi, 2010) and (Emara & Chiu, 2016) defined Governance as a set of traditions and institutions that can be used to exercise the power of authority. The basic dimension of the governance include political stability and absence of violence/ terrorism, voice and accountability, government effectiveness, regulatory quality, control of corruption and the rule of law. Contrary to this, Lin (2014) stressed that good governance means strong government capacity in such a way that, local government has enough resources, such as manpower and financial resources, to improve the capital market and investment climate, to keep the bureaucratic system stable and maintain bureaucratic

professionalization, to develop a good economic power structure and political power structure to promote system reform in all fields like science and technology, and to provide public services like medical treatment and education which facilitates industrial upgrading and economic growth. Governance is broad and multi-facet concept; it shows the way that state power is exercised to manage its economic and social component (World Bank, 1994). The way in which the state exhibits its power has a link to a set of institutions that serves as enhancement keys to economic growth, Political stability, the absence of terrorism and violence, proficient government policy formulation and implementation, improved regulatory mechanism, minimized corruption and ensuring the rule of law can be regarded as high government qualities. It is expected that the provision of accomplished governance leads to improvement in the institutions (Samarassinghe, 2018).

The concept of Institutions has been defined and perceived in several ways in the literatures, institutions are universally self-explanatory, though the concept's abstract nature requires it to be unbundled in order to ease comprehension. The mostly widely conceptualized concept is that of North (1990) who argued that; institutions are the rules of the game in a society, institutions are the boundaries and means by which human activity is regulated and as institutions changes the society "evolve". He is more explicit in his conviction that institutions shape economic performance, hence his emphasis on framework to understanding the complexity of institutions apply to the society. North (1997) differentiated among institutions; informal and formal institutions, informal institutions constituting norms, traditions and moral, while formal institutions shaping laws and property rights. Another useful distinction is made by (Cole, 2011), who conceptualizes institutions of governance as subjected to the institutional environment, thus it frames the theoretical assumption in this paper i.e. institutions matter. Indeed the assumption necessity for economic performance is accepted as a corner stone to growth. The importance of institutions is unmistaken. As (Okeke 2005) agued, the "Rule structure" of institutions needs to be understood as they shape everyday life.

According to (Otuballa, 2011) and (Olubusoye et.al (2016) they sees economic growth as the increase in the value of goods and services produced by an economy and how it is conventionally measured as the percent of increase in real GDP). Similarly, Johson (2000) defined economic growth as that part of economic theory that explains the rate at which a country's economy grows over time. It is usually measured as the annual percentage rate growth of the country major national income. Accounting aggregates, such as the gross national product (GNP) or the gross domestic product (GDP) with appropriate. Shahabad (2014) and Kandil (2009) stated that, economic growth focuses on the expansion of productive capacity over time. The expansion of productive capacity requires an increase in natural resources, human resources, capital and technology. Thus, economic growth is due to growth in inputs, such as labour and technological improvement. Jhimghan (2003), Mo (2011) and Jagadish (2018) viewed economic growth as an increase in the real GDP per capital of a nation, while the encyclopedia of earth defined economic growth as an increase in real gross domestic product (GDP).

Furthermore, Economic growth occurs when an economy's productive capacity increase which. In turn is sued to produce more goods and services.

Governance Indicators

Several governance indictors has been highlighted in the literature, which are discussed below: Annan (1998), Corruption means selling of organizations resources, excusive information and decision making power by a governmental party to a non-governmental party. In corruption action, there is a supply arising from government party and a demand arising from the government party. It is argued that, people have a different understanding of the impact of government on economic growth. One group believes (sender) that corruption has a negative effect on economic growth because it increases the transaction cost and the production cost. Most importantly, (Aidt, 2009). Corruption decreases the consumer confidence and investor confidence and degenerate the trust of the society. The higher corruption causes a reduction in the overall institutional quality of a particular society. Another group thinks that corruption brings an improvement in economic performance by removing bureaucratic bottlenecks such as delays in decision making regarding the issuing of license permits, approval and the enforcement of contract. The under development of Africa and the wide spread political instability in the continent were connected to the high rate of corruption as its politicians, leaders and public servants illegally collect wealth using public office for private gains. Corruption persists in the contents as long as a large proportion of the population engages in it and less benefit goes to the few honest Africans, this problem may persists in the continent as long as the governance system is perpetrated by dictators and the system remains weak without institutional checks and balances (Oweye & Bissessar, 2014).

In the same vein, Control of corruption is another governance indicator which reflects perceptions of the extent to which public power is exercised for private gain. This includes both petty and grand forms of corruption, as well as capture of the state by elite and private investors. It is one of the sick dimension of the world wide governance indicators (World Bank, 2016). Several studies have looked into the relationship between corruption and economic growth. However, this relationship varies from study to study and different studies show completely different results. Mo (2001), Pere (2015) and Al-amin, Kazi & kabir (2017) all found an insignificant relationship between control of corruption and economic growth. The result concludes that, there is a 0.72% reduction in growth rate, per 1 % increase in the level of corruption. While Barro, (2003), Mo, (2001) and Andrews (2008) concluded that the impact of corruption varies from country to country in accordance with the prevailing political regime. They argued that the influence of corruption is more harmful for the countries that have sound political institutions while the negative effects of corruption are reduced in the countries with a corrupt political regime. It was concluded that corruption has a link to the social economic, cultural and judicial system of a country.

Similarly, the political stability of the country both democratic regimes and the multiple party systems combine to reduce political stability and thereby reduce economic growth (Younis, Lin, harahiliand & Selvarathinam, 2008). Political

stability is defined as the potentials for maintaining a stable government without faceting from constitutional or unconstitutional changes.(Alesina, Ozler, Roubininand & Swagel,1996). The government or the political regime may change due to the voting power of the people within the constitutional framework of the country. In some countries, the political regime may change due to unconstitutional actions such as civil wars and unrest (Shahabad, 2014). The political stability of a country may shift due to regular government changes and irregular government change. In this view, regular government changes are similar to institutional changes. When there is political stability, stable political environment of the country increases; human capital and physical capital accumulation are also enhanced thereby increasing the growth process. (Younis et al, 2008).

The need to improve transparency and accountability in the management of natural resources becomes an important part of the global governance agenda (Derby, 2010). The voice and accountability variables link with the political system of the country. The participation of people in governance process are high in democratic system in comparison with more authoritarian system. Higher levels of democracy means increased levels of voice and accountability, which in turn allow the rise of multiple political parties. Economic reforms are more difficult under multiple political parties because the reforms create a heightened political risk for the next period office for the existing ruling party. Decisions of the political elites are based on the self-interest and uncertainty. The political system of a country may be democratic or authoritarian or combine parts of both. Under a democratic system, public participation is important in the selection process of political leaders. Voice and accountability describes the public participation in governance. This dimension of governance is directly related to democracy and transparency. Democracy in a country allows people to choose their rulers by votes (Afolabi, 2019).

Empirical Literature

Several studies have been conducted on the impact of governance on economic growth, using different measures or proxies for governance (see Kaufmann & Kray 2002; Chang 2012; Pere 2015). The results also indicated that economic growth influence institutional quality. Although their findings shows that policies which attempt to improve the state institutional quality by securing property right, controlling corruption and limiting ascertain need considerable time to achieve the desired goal, these policies are important for economic growth. In addition, such a study has shown that institutional reform has high influence on economic growth especially for poor countries. Majority of the empirical findings indicate that there is a statistical relationship between good governance and economic growth. Moreover, the positive relation between good governance and economic growth is consistent for different good governance indicators.

The evidence for a positive relationship between good governance and economic growth of emerging economies has also been recorded (Hna, Khan & Zhaung 2014; Emara & Jhonsa 2014; Ju Huang 2015; Shuaibu, Ekeria & Ogedengbe 2015; Elbargathi & Al-Asaaf 2019; Afolabi 2019). Other studies obtained a negative relationship between both variables (Ahmed et al 2012; Singh 2014; Sanarge, Fidrmuc & Ghosh 2015; Arcand, Berkes, & Panizza 2015; Demestraide & Roussau

2016). There is also evidence indicating that good governance is a significant predictor of cross-country differences in economic growth (see Zhan et .a l 2009; Ugar & Dasgupata 2011; Iwasaki &Suzuki, 2012; Park 2013; Campbell & Saha, 2013,; Bentzen, 2014; Okafor; Smith & Ujah, 2014; Billger &Goel, 2016).

On the theoretical preposition, the institution augmented Solow model is adopted for this study. The model is a modified version of the Solow (1956) model. It implies that goods produced using a constant return to scale (CRS) technology in a market is characterized by a perfect competition. Institutions are assumed to play a central role in determining factors productivity and technology adoption, so output (Y) is produced using the following production function.

$Y = fA(T,t), K(T, t), L(T, t)$ …….. 1

Where L denotes labour , A>1 is an index denoting the level of state of the art technology, K is capital, T is an index denoting he quality of institutions and t I the time. The institutional augmented Solow growth model shows that differences in the quality of institutions precludes convergences and determines both the level and growth rate of output per worker. The model also shows that poor institutions induced poverty traps and the income gap between rich and poor countries will increase if poor countries institutions do not improve relatively to their counterparts the extended modified model also predict the poor institutions induced club convergence. Consider a case in which shows two economies (R and P) have identical , n, g, savings rate (s), technology (A), initial stock of capital (k) and institutions, which implies that income per worker in these economies are also equal.

The influence of institutions on output per worker originates not only from its impact on transitional and the steady state technological efficiency, but also from its impacts on capital accumulation. Institutions affect the marginal product of capital and therefore, has impact on investments and capital accumulations. In particular, given that the ratio Y/k is constant round the steady state. Therefore, the model implies that, the growth rate of the output per worker is not only determined by technological change, but also affected by the quality of institutions. An economy may have access to state of art technology, but its poor institutions may hinder the adoption of available technologies and diminish the productivity of factors of production, which impede economic growth. This implies that a country with poor institutions will be unable to fully benefit from the potential productivity gains generated by available technologies.

$Y = A^{(t-1)} K^{\alpha T} (AL)^{1-\alpha T}$…….. 2

Incorporating the impact of institutions on output in a traditional Solow production function. Since T is a normalize measure of institutional quality ranging from zero to one, an economy with the relative best institutions (T=1) should have a production function identical to the one used in the standard Solow model.

Therefore from the reviewed literatures, one can conclude that the effect of governance on economic growth in West Africa might be positive, negative or neutral, finally, the different conclusion raises important policy in questions. In

spite of that, one empirical fact is that nations can improve economic growth by adopting appropriate policies. Therefore, the main objective of this paper is to measure the association between governance, economic growth and good governance indicators among West African countries and to suggest appropriate policies for the countries. One major significant shortfall in the empirical literature is the lack of consensus on the empirical front. As most of the studies failed to include other variables that influence economic growth such as regulatory quality, absence of violence/ terrorism, government effectiveness and the rule of law in line with the world governance indicators of governance measurement. This creates a missing link for a more detailed impact of governance on economic growth in West Africa. To this end, this paper seek to fill in this gap by using a panel series up to 2020, this is important given the fact that the sub-region had experienced and are still experiencing leadership tussle in recent time. Thus assessing the impact of governance on economic growth will provide a greener light in evaluating the viability of these reforms in the sub-region.

3. Methodology

The study adopts panel data estimation for the period of 1996 to 2020 using secondary data. The choice of duration is informed by data availability especially for the governance variable and the fundamental governance changes which occurred within the study period. The data obtained are from publicly acknowledged sources. Including the World Bank development indicators data base (World Bank, 2020), governance indicators (World Bank, 2020). The governance indicators utilized in order to avoid multi-collinearity are political stability, accountability and voice and control of corruption. They are part of the data on the six governance indicators (WGI) published by World Bank. The six governance indicator comprises; voice accountability, political stability, absence of violence, and government effectiveness. The quality of regulations, rule of law and control of corruption. Kaufmann, Kraay and Mastruzzi (2010) present the methodology for constructing these variables which are considered to have a great ability to positively influence the business environment and lead to low risk in the country. As earlier mentioned, they take the values of -2.5 to 2.5, with higher levels indicating better governance.

In line with the theoretical framework, this paper adopts institutional argument Solow model. The econometric analysis is based on panel model both cross sectional and time series components (panel data). Growth is conceptualized refers to the breaking down the rate of growth of total output of an economy into contribution from the growth of such inputs as capital, labour and technological growth. This model considered that the rate of growth is determined by the traditional factor and institutions that influence the growth of the economy**.** The study adopts the Afolabi (2019) model as specified below:

$$GDP = F(POLST, ACCTV, CONTRC) \quad \ldots\ldots 3$$

Where GDP = Gross Domestic Product, POLST = Political Stability, ACCTV= Accountability and Voice, CONTRLC = Control of Corruption. The model is

modified by adding growth fixed capital formation and employment proxy to labour. The model Is further modified as:

GDP =f (*GCF, LAB, POLST, ACCTV AND CONTRC*) …… 4

Where the main variables of interest are economic growth (GDP) and governance as indicated and controlling for the conventional growth determinants (capital and labour).In line with the objectives of the study, three governance indicators were employed in the study namely (a) political stability (b) accountability and voice and (c) control of corruption. Due to the discrete values that the governance indicators takes (values o -2.5 to 2.5, with higher levels indicating greater effects for good governance) the risk of multi-collinearity is high if all three indicators were to be employed in the regression model. The econometric model is re specified as thus: GDP_{it}= α +$\beta_1 GCF_{it}$ +$\beta_2 EMP_{it}$ +$\beta_3 POLST_{it}$ + $\beta_4 ACCTV_{it}$ + $\beta_5 CONTRC_{it}$ +EMP_{it} +ε_{it} ……...…… 5

Where GDP = Gross Domestic Product, EMP = Employment, GCE = Gross Fixed Capital, POLST= political stability, ACCTV = Accountability and Voice and CONTRC = Control of Corruption

The study used panel data estimation techniques this has series of advantages over the cross section and time series data set. The techniques have a greater degree of freedom and less multicollineraity leading to more efficient and robust estimates, and it gives greater flexibility in modeling difference in behavior across countries which enable us to control for unobserved heterogeneity (Sheng, 2008). Due to the relative short term period investigated, the dynamics of the panel series was not explored. Consequently, the fixed effects model (FEM) and Random effect model (REM) will be implemented**.** An alternative method of estimating a model is the random effect model. The difference between the fixed effects and the random effects method is that the later handles the constant for each section not as fixed, but as random parameters**.** Some advantages of the random effect model is that it has fewer parameters to estimate compared to the fixed effect method (ii) it allows for additional explanatory variables that have equal value for all observation within a group (i.e it allows us to use dummies). Hence, variability of the constant for each section comes from the fact that

Y_{it} = α +$\beta_1 X_{it}$ +$\beta_2 X_{it}$ +U_i +ε_{it}…….…. 6

To test whether the pooled or random model is appropriate, the langrage multiplier test was employed. The null hypothesis stated as H_0: δ_2=0. If the calculated probability of chi square value is less than 0.001, 0.005 or 0.10 levels of significance, we reject the null hypothesis and conclude that random effect model is appropriate. Having established the presence of individual specific effect in the model, this necessitate the need for fixed model. The fixed effect model assumes that the individual specific effects are fixed across entities. The cross sectional effects are captured by the dummy which represent the countries. The fixed effect assumes that each country differs in its intercept term whereas random effect model assumed that each country differs in error term. Hausman test (1978), is employed to choose which of the model is appropriate between random and fixed model. The

test assumes the null hypothesis of no correlation, that is, both ordinary least squares (OLS) and generalized least squares (GLS) are consistent and OLS is inefficient, while alternative hypothesis of the OLS is consistent but GLS is not. For robust checks, the pooled ordinary least squares regression is implemented and the results were compared to the fixed and random effect models.

4. **Results**

Table 1: Descriptive Statistics

Statistics	LGDP	LGFC	LEMP	LCONTR	POLST	ACCTV
Mean	10.2800	9.5845	0.3180	1.3980	-0.4682	-0.1200
Std. Dev.	0.7025	0.7409	0.3289	0.3273	0.8632	0.4869
Skewness	0.6773	0.3368	-0.0475	-2.0255	-0.6762	-0.6882
Kurtosis	2.3218	2.0204	1.3134	1.9697	2.2147	3.0828
Observations	94`	94	94	94	94	94

Source: Author's Computation

The above Table 1 presents the descriptive statistics of the variables. The statistics shows that the standard deviation of the variables employed are not far away from their mean. The result of skewness shows a positive value and greater than zero in gross domestic product and gross fixed capital, this means that the variables are positively skewed and normally distributed. While employment, control of corruption, political stability and accountability indicates negative and less than one. This implies that variables are not normally distributed. Kurtosis shows the peakedness and flatness of the distribution in the series. The result shows that the variables are normally distributed because their kurtosis are less than or equal to three.

Table 2: Pooled Least Square Results

Variables	Coefficients	Std. error	z- statistics	Prob.
Lgfc	0.8829	0.0542	16.28	0.000
Lemp	0.1259	0.0710	1.77	0.076
Lcontr	-0.0954	0.0659	-1.45	0.148
Polst	-0.0241	0.0427	-0.56	0.573
Acct	0.0401	0.0510	0.79	0.431
Cons	1.9101	0.5250	3.64	0.000
Prob.chi2	0.0000			

Source: Authors Computation

The result of the pooled least squares estimates of the variables is presented in Table 2, the result shows that gross fixed capital has a positive and statistically significant impact on economic growth in Nigeria, Ghana, Benin and Niger while employment which is proxy to labour has positive and statistically significant effect on economic growth in Nigeria, Ghana, Benin and Niger. This is in line with economic theory which states that gross fixed capital and employment influence economic growth positively. Control of corruption shows a negative relationship but not statistically significant to economic growth in Nigeria. For Ghana, Benin and Niger, political stability has a negative relationship and statistically not significant to economic growth. This is in line with apriori expectation which

shows that high corruption and political instability affects the economic growth negatively. Accountability and voice has a positive relationship with economic growth in Nigeria, Ghana, Benin and Niger. The result also shows that chi-square probability value is less than 5%, this implies that all the independent variables have 100% significant influence to the dependent variable (GDP). It also implies that the model is robust.

Table 3: Random and Fixed Effect Model Result

	Random effect	Fixed effect
Variables	Coefficient	Coefficient
Lgfc	0.8829	0.7437
Lemp	0.1259	0.3336
Lcontrc	-0.0954	-0.2576
Polst	-0.0241	-0.0090
Acctv	0.0401	-0.0242
Hausman test	0.1079	
Prob. Chi 2	0.0000	

Source: Authors' Computation

The result of the random effect of the variables under investigation in the selected West African countries is presented in Table 3, the result shows that gross fixed capital depicts positive and statistically significant impact with economic growth in Nigeria. Ghana, Benin and Niger. Meaning that gross fixed capital impact positively on economic growth in the study area, higher economic growth will be as a result of increase in gross fixed capital. Employment indicates positive but statically insignificant impact on economic growth. This implies that when there is employment opportunities in Nigeria, Ghana, Benin and Niger there will be an increase in economic growth. Control of corruption shows negative and statistically not significant to economic growth. This means that, control of corruption has no effect in Nigeria. Ghana, Benin and Niger. This counter the apriori expectation which assume a positive relationship between control of corruption and economic growth. The negative findings is similar with findings of Shuaibu eta al (2015), Gyimah-Brempong (2012) and Ugar & Dasgupta (2011) which counter the findings of Han, Khan and Zhaung (2014). Political stability shows negative and statically insignificant effects on economic growth in Nigeria, Ghana and Niger. The negative finding is in line with the finding of Asien Veiga (2013) which is contrary to Beyar (2016) and Han, Khan and Zhaung (2014). Accountability and voice has positive relationship on economic growth in Nigeria., Ghana, Benin and Niger. This implies that accurate record and truthfulness in public and private sector in the study will boast economic growth. The positive finding is similar to the findings of Afolabi (2019), Bayar (2016) and Han, Khan and Zhuang (2014). The result above shows that Hausman test which premised this model, estimated the probability value of the chi-square as greater than 5% which necessitates the study to adopt the random effect model. The result also indicates that chi-square probability value is less than 5% which implies that all the independent variables have 100% significant

influence on the dependent variable (GDP). It is further indicates that, the model is robust.

Diagnostic Test

The diagnostic test conducted to check the consistency and reliability of the estimated coefficient included in the model. Test such as multicollinearity, heteroskescticity and serial correlation were conducted and finally a robust standard error was conducted to clear out the above mention problems.

Table 4: Diagnostic Test

Variables	VIF	1/VIF
M2	3.20	0.3120
OPN	3.20	0.3120
INFL	1.15	0.8733
INTR	1.13	0.8865
Ex rate	1.01	0.9908
Mean VIF	1.94	

Source: Authors' Computation

Multi-colliearity problem is checked throughout the models, through the evidence of the variance inflation factor (VIF). Based on the Table 4 and result of the VIF values is 10 which confirm that these observations are free from the multicollinearity.

Table 5: Wald test

Calculated value x2	p- value	Test
8528.42	0.0000	Ho ; rejected

Source: Authors' Computation

Heteroskedasticity test was conducted using the modified Wald test to check whether there is element of heteroskedasticity problem. The null hypothesis indicates that the observations are homoscedastic. However, based on the result of X^2 probability, H_O was rejected and it was concluded that the heteroskesascity problem exists.

Table 6: Wooldridge Test

Calculated F value	p- value	Test
142.928	0.0013	Ho : rejected

Source: Authors' Computation

A Wooldridge test is to check whether there is a serial autocorrelation problem among the observations, where Ho indicates no problems of auto correlation. Equally, having tested the probabilities, we rejected Ho and concluded that these observations also have serial correlation problems, but robust estimation was used to solve it.

Discussion of Findings

West African countries have to work on corruption in order to have positive economic growth in the region, because high level of corruption will retard growth, no country will achieve higher economic growth with high level of corruption. The negative findings is similar with findings of Shuaibu et al. (2015), and Ugur & Dasgupta (2011) which counter the finding of Han, Khan and Zhuang (2014). The negative impact of political stability on economic growth in Nigeria, Ghana, Benin and Niger means that, an increase in political instability will bring about decrease in economic growth. The negative finding is in line with the findings of Asien Veiga (2013) while a contrary result was discovered by Bayer (2016) and Han, Khan and Zhuang (2014). West African countries have to make a review on employment opportunities and political system in order to have a speedy economic growth. Accountability and voice have a positive relationship with economic growth in Nigeria, Ghana, Benin and Niger. The positive relationship is similar with the findings of Afolabi (2019), Bayer (2016) and Han, khan & Zhaung (2014). This suggests that West African countries should maintain their proper record of governance as it has positive impact on economic growth in their regions.

5 Conclusion and Recommendations

This paper examines the impact of governance on economic growth in West Africa between 1996- 2020, Variables employed include gross domestic product, gross fixed capital, employment, control of corruption, political stability and accountability and voice. The study employed pooled least square; the result indicates that gross fixed capital has positive and statistically significant impact on economic growth in Nigeria, Ghana, Benin, and Niger while employment has a positive but statistically insignificant effect with economic growth in Nigeria, Ghana Benin and Niger. Control of corruption shows a negative relationship and statically insignificant on economic growth in Nigeria, Ghana, Benin and Niger and also political stability has negative relationship but not statistically significant to economic growth. Accountability and voice has positive relationship on economic growth in Nigeria, Benin Ghana and Niger. This result also indicates that chi-square probability value is less than 5% which implies that all the independent variables have 100% significant influence on the dependent variable (GDP, it also implies that the model is robust.

The random effect result shows that the gross fixed capital depicts positive and statistically significant impact on economic growth in West African countries; employment indicates a positive but no significant impact on economic growth, control of corruption shows negative and no significant impact on economic growth. Political stability shows negative and no significance impact on economic growth in Niger, Ghana, Benin, and Niger while accountability and voice has positive relationship on economic growth in Nigeria, Ghana, Benin and Niger. The result also indicates that chi-square probability value is less than 5%, this implies that all the independent variables have 100% significant influence on the dependent

variable (GDP). It also implies that the model is robust. Haussmann test in the study suggest the adoption of random effects model. On the whole, it is clear that good governance enhances economy in West African countries. Hence, the study recommends that west African especially Nigeria, Ghana, Benin and Niger should properly check their means of fighting corruption and apply new strategy in controlling corruption so as to have positive and steady economic growth in their regions.

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