Infrastructure Deficiency and Economic Performance: A study Some Selected West African Countries

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Abstract

The study examines the effects of infrastructure deficiency on the economic performance of selected West African countries: Nigeria, Ghana, Gambia, Cote d lvoire and Senegal on panel data generated from World Bank development indicator. The motivation of the study is based on low budgetary allocation in some year's back by many developing countries of which Nigeria, Ghana, Gambia, Senegal and Cote d lvoire were inclusive, toward investment and rehabilitation of infrastructure in favour of conducive business environment and trade liberalization, for economic growth and development. The study adopted pooled ordinary least square econometric method on the panel data after ensuring stationarity properties of the variables used for the study analysis. Infrastructural variables used in the study basically are gross fixed capital formation and human capital development index, while real gross domestic product were used as a proxy for economic performance, and the study control for inflation and financial system.

The study find out that the deficiency in infrastructure have negative impacts on the economic performance due to increase in cost of doing business in the selected countries. It was also revealed that deficiency in infrastructure in this region was as a result of low government spending on the sectors relating to both physical and social infrastructure in the economy. The study therefore recommends that government of the selected countries should increase the budgetary allocation to physical infrastructural development to ease cost of doing business, so that economic activities can be stimulated hence economic growth.

Key Words: Infrastructure Deficiency, Economic Growth, RGDP, West African Countries

1. Introduction

The quest for a comprehensive strategy to promote sustainable inclusive economic growth and development by AFDB/UNDP/OECP (2014)'s report through ensuring macroeconomic variables stability, creating a favourable condition for doing business and providing adequate human capital and infrastructure investment corroborate the goals of every nation. The achievement of this goal is not automatic but required a macroeconomic policies and conducive environment for both private and public investment to survive. Infrastructural availability is among the key determinants factor government of any nation use in achieving this goal of sustainable economic growth. Infrastructure has been described as an internal facilities of a country that encourages various types of investment and makes business activities possible. It is an umbrella term for many activities usually referred to as "social overhead capital" by development economists. Adequate infrastructure triggers a country's success by encouraging investment, diversifying production, coping with population growth, reducing poverty, improving environmental conditions and so on. Efforts to address some of this economic situation has proven abortive given the state of infrastructure in the region. There is therefore no gainsaying the fact that socio-economic development cannot be achieved given proper infrastructural planning and implementation. Generally, theoretically infrastructure can be categorized into two major classes:

i.   Social Infrastructure (education, health, recreation, housing and so on): Boosts the quality of daily living with a ripple effect on the country's economy based on human capital. The improvement of human capital in this regards will ensure innovation, invention and enhancement of productivity in the economy. According to a recent World Bank survey, the quality of social infrastructure affects urbanization which is directly proportional to GDP.

ii.   Physical/Economic Infrastructure (roads, electricity, telecommunication and so on): These are public utilities that enables effective economic activities that grows GDP and per capital income. Where development of economic infrastructure has followed a rational, well-coordinated and harmonized path, growth and development has received a big boost. It is on this premise that most developing countries has decided to build a robust economic infrastructural system.

Infrastructure is said to be internal facilities because, one of its distinguishing feature is that while the demand-supply gap in case of other factors can be met by importing some of them, the deficiency of infrastructure cannot be made up through importation. The location-based need for relevant infrastructure facility can be met through development of its capacity in the domestic economy. For example, you cannot import power facility, roads, ports or railways as they have to be built up in the domestic economy.

Another distinctive features of infrastructural facilities are; first, the building of infrastructure requires large and lumpy investment and they contribute to output, after a long time that is their gestation period is quite long. Second, due to large overhead capital and lumpy investment, the significant economies of scale are found in most of them. Due to the significant economies of scale found in many infrastructural services, they have the characteristics of natural money. The third important feature of infrastructure facilities is they create externalities (Oseni & Pollitt 2013).

For example, building of rural roads will benefit agriculture as the farmers are able to sell their products in towns where they can get remunerative prices. Besides, they can get some inputs such as fertilizers, pesticides and other industrial products at relatively cheaper prices as their transport costs decline due to improved transportation. Power plants generate both positive and negative externalities. The construction of power plants produces electricity which is used for industrial helps production and commercial use and thereby helps in acceleration of economic growth.

It needs to be emphasized that good quality infrastructure is important not only for faster economic growth but also to ensure inclusive growth. By inclusive growth we mean that benefits of growth are shared by the majority of the people of a country. Thus the inclusive growth will lead to the alleviation of poverty and reduction in income inequality in the country.

However, despite the roles and importance of infrastructure to economic growth and development, most West African countries like many other Sub-Saharan African countries has been plagued with the inadequate or lack of functional infrastructure in order to grow their economies. This poor state of infrastructure has now engaged the attention of many African governments, especially in attracting foreign investments, as the development of infrastructural facilities is one of the determinants of foreign direct investments inflow into any economy. Most of this countries with vision of becoming one of the top 20 big economies by the year 2020 have a serious infrastructural deficiency most especially in physical infrastructures like energy road network and good water supply and rail transport.
Inadequate or deficiency in infrastructural facilities in most developing economy according to Odigan (2015) arises as a result of low budgetary allocation to capital component of government expenditure in favour of recurrent expenditure. The low or inadequate budgetary allocation of fund to capital expenditure results into low or inadequate fund for generating, building, construction and rehabilitation of worn-out infrastructural facilities most especially physical infrastructures, which are the main determinant factor for creating conducive business environment.
More so, Adenikinju (2005) also observed that infrastructure is one of the most critical factors for economic development because it interacts with the economy through the production processes and changes in the quality of infrastructure available for production will greatly impact the production and performance of an organization's levels of output, income, profits and employment creation in the economy. This is because of its direct link with the productivity. Despite the direct link between the availability and quality of infrastructure – electricity, portable water and road network maintenance to economic development (Oseni & Pollitt 2013) – the availability of infrastructure in most developing countries especially in the sub-Saharan African region leaves much to be desired (World Bank 2013,

2014). The gap in the availability of infrastructure in most West African countries has greatly negatively impacted on the production processes in the manufacturing sector and in the cost of doing business generally which constitute part of economy backwardness of this region.

Given the benefits and importance of availability of quality infrastructural facilities to economic performance on one hand and low budget allocation or cut in expenditure on infrastructures by most government of this region, which create adverse business environment hence reduction investment both foreign and local on the other hand, the study therefore examines the impacts of deficiency or inadequate spending on infrastructural facilities on economic performance in west African sub-Region.

2. Literature Review

Infrastructural development in developing countries has not been generally given adequate attention by successive government in Africa, most especially West African countries. While there are varying opinion and contrasting empirical findings among researchers about the link between infrastructure and growth, the preponderance of evidence seems to show that inadequate supply of infrastructure or the unreliability of infrastructure services may constrain investments of productive capital and lead to a restriction or reduction of output, which at long run reduce economic growth and development.

Many scholars have carried out studies regarding the impact of quality infrastructural facility (especially public infrastructure) on either any of macroeconomics variable indicators or economic growth at large. Their findings indicates that, there is a link between provision of quality infrastructural facilities and economic performance, among them are Richard et al. (1999), Wei (2000), Asiedu (2000), Sekkat et al. (2004). These scholars argued that infrastructural development is a necessary condition for foreign investors to operate successfully as poor infrastructural development increase costs for firms. Infrastructure should therefore improve the investment climate for Foreign Direct Investment (FDI) by subsidizing the costs of investment by foreign investors and increase their (ROI) return on investment. As the availability of good infrastructures like roads, railways, highways, ports, communication networks and electricity with a stable polity would increase productivity and thereby attract higher levels of FDI. Wei (2000) opined that, "location with good infrastructure is more attractive than the others". Asiedu (2002) analyzed some countries (34) infrastructure development and concluded that with good infrastructural development the countries were rewarded with more investments.

Studies also show that deficiencies in infrastructure could be a critical development constraint. The ADB (2007) finds that poor infrastructure and lack of investment in infrastructure have constrained growth. Poor infrastructure, a major factor for increasing the cost of doing business, has significant adverse impact on the perceived competitiveness and attractiveness of the Philippines as an investment destination. The facts that there is a critical link between infrastructure and regional growth has been indicated in the causality tests showing that the direction of causation runs from infrastructure to economic growth, and that regional imbalance in infrastructure availability has a negative impact on a region's economic growth prospects (Llanto, 2007a; Llanto, 2007b). Differences in availability of infrastructure have led to differences in regional growth in the Philippines (Basilio and Gundaya, 1997; Llanto, 2007b; Manasan and Chatterjee, 2003). There is evidence that infrastructure could be a key variable in regional convergence (Llanto 2007a; Cuenca 2004).

In a related study by Edun et al (2013) on the effects of infrastructural development on economic growth in Nigeria, using simple model of an economy with foreign investment and public infrastructure with a diversified equilibrium. Their study find out that provision of infrastructural facilities in an economy enhance labour productivity, hence increase in output and it also create avenue for foreign direct investment (FDI). Similarly, Olatudun (2011) also observed that, lack of investment on infrastructures or infrastructure deficiencies significantly curtails productivities of firms. As a result of poor public infrastructures, many firms have invested in complimentary capital rather than productive capital. This is contained in their study "Infrastructure deficiencies and investment in manufacturing firms". The study concluded and recommended that government should channel more resources towards the efficient provision of infrastructure.

Some scholars have also attempted to measure the productivity of public infrastructure on economic performance and these includes, Odongo and Kalu (2016), Cohen and Paul (2004), Delorme et al, (1999) and Egert,et al (2009). All these scholars have found a positive relationship between public infrastructure and economic growth. Cohen and Paul (2004) have attempted to measure the contribution of public infrastructure in Swedish economy, Kim (1998) examined the effect of infrastructure investment on Korean economy and concluded that infrastructure investment has resulted in economic growth and inflation, Delorme et al (1999) have attempted to measure the impact of infrastructure on Mexican GDP and concluded that availability of quality infrastructure increase enhance economic growth.

Odongo and Kalu (2016), examines the impact of public infrastructure on economic growth in Sub-Saharan African region using system of GMM to estimates a model of economic growth augmented by an infrastructural variables for 45 countries, over a period of 2000-2011. Their study find out that, it is the spending on infrastructure and increments in the access to infrastructure that influence economic growth and development in Sub-Saharan Africa. Interestingly, these significant associations, especially those of infrastructure spending, are more important for lesser developed economies of the region than for the relatively more developed economies, which uncommonly have better than near-zero access to infrastructure. In addition to these robust direct links between the target variables, their study found importantly that infrastructure access, and quality, also relate to economic growth indirectly via export diversification (trade competitiveness), and cross-border capital flows and trade competitiveness, respectively. The study recommends among other important policy derivatives that, efforts aimed at reversing Africa's pervasive infrastructure deficit, in ways that enable economic growth and development.

Egert,et al (2009) has shown that public infrastructure investment can lead to sizeable increase in GDP. Boisso et al, (2000) attempt to measure the impact of changes in public infrastructure provision on slowing down of the U.S productivity. Lin (2001) examines the impact of public infrastructure provision on economic development in some regions in China. Moreno et al,(2002) have attempted to distinguish between short and long run effects of public infrastructure, Salinas-Jimenez (2004) has considered the impact of infrastructure investment on productivity efficiency in Spanish regions, by estimating a translog cost function. Teruel and Kuronda, (2005) have attempted to measure the contribution of public infrastructure in Philippines agricultural sector; they concluded that by reducing cost of production, public infrastructure has enhanced the productivity in Philippines agricultural sector.

Thorat, and Fan. 2007 gave an excellent summary of the existing literature, which suggests that reduction in congestion and adequate maintenance contribute to greater benefits from public infrastructure, by making use of the Greek data, they have shown that public infrastructure and private capital are complementary. Similarly, Reinikka and Svensson (2002) have shown that poor public capital significantly reduces the complementary private investment, argues that due to negative spillover effects, public infrastructure investment can lead to growth in one sector at the expense of the other. Manasan, and Chatterjee. (2003). have examined the impact of public infrastructure on production and input demand in 12 OECD countries, and they discovered that increased spending on infrastructure is associated with higher levels of production, and a positive relationship between the demand for inputs and the supply of infrastructure was discovered.

Fan, and Zhang. (2004), argued that public infrastructure makes significant contribution to the private sector, and also examined the impact of public infrastructure on Canadian manufacturing industries. Canning, and Pedroni, (2004)., in his work, considered the welfare effect of competition for foreign investment and, empirically examines the link between the supply of public infrastructure and capital inflows, by making use of fairly disaggregated cross sectional data and concluded that there is a positive relationship between supply of public infrastructure and capital inflow.

On rural infrastructure and the impact on agricultural productivity, Andersen and Shimokawa (2007) observed that deficiencies in transportation, energy, telecommunications, and related infrastructure translate into poorly functioning domestic markets with little spatial and temporal integration, low price transmission, and weak international competitiveness. The failure to invest in rural infrastructure would be a critical bottleneck for future growth in agricultural and economic output and poverty alleviation in developing countries. Indeed, severe rural infrastructure deficiencies undermine the huge potential of the agriculture sector in developing countries to contribute to growth and poverty reduction. Improved rural infrastructure will reduce poverty through improved agricultural productivity and through improved wages and non-farm employment.

In relation to methodological issues, the massive ensuing literature on the output impact of infrastructure has employed a variety of data, empirical methods and infrastructure measures. The most popular approaches include the estimation of an aggregate production function (or its dual, the cost function) and empirical growth regressions. Infrastructure is variously measured in terms of physical stocks, spending flows, or capital stocks constructed accumulating the latter. A majority of this literature finds a positive long-run effect of infrastructure on output, productivity, or their growth rate. More specifically, this is the case with almost all of the studies using physical indicators of infrastructure stocks, but results are more mixed among the growth studies using measures of public capital stocks or infrastructure spending flows (Fedderke,Garlick, 2008).

Another strand of recent literature has examined the effects of infrastructure on income inequality. The rationale is that infrastructure provision may have a disproportionate effect on the income and welfare of the poor by raising the value of the assets they hold (such as land or human capital), or by lowering the transaction costs (e.g., transport and logistic costs) they incur to access the markets for their inputs and outputs. These effects may occur through a variety of mechanisms documented in the empirical literature; see for example Estache (2003), and Calderón and Servén (2008). Of course, for infrastructure development to reduce income inequality, the key ingredient is that it must help expand access by the poor, as argued for example by Estache (2003)

Few empirical studies have tackled directly the inequality impact of infrastructure at the macroeconomic level. Among them are those of López (2004) and Calderón and Servén (2008), both of which use cross-country panel data. López uses telephone density to proxy for infrastructure, while Calderón and Servén employ synthetic indices of infrastructure quantity and quality. In both cases, the finding is that, other things equal, infrastructure development is associated with reduced income inequality. Combined with the finding that infrastructure also appears to raise growth, the implication is that, in the right conditions, infrastructure development can be a powerful tool for poverty reduction.

A strand of recent papers has focused on the development impact of infrastructure in Africa. Ndulu (2006) offers an overview of the big issues, and Ayogu (2007) surveys the empirical literature. Most of the latter deals with the growth and productivity effects of infrastructure development. For example, Estache, Speciale and Veredas (2005) present pooled OLS growth regressions based on an augmented Solow model including a variety of infrastructure indicators, one at a time. Their main conclusion is that roads, power and telecommunications infrastructure – but not water and sanitation -- contribute significantly to long-run growth in Africa. Other studies follow a production function approach. Ayogu (1999) applies it to regional panel data from Nigeria, finding a strong association between infrastructure and output. Ndulu (2006) uses data from African countries to calculate various dynamic panel estimates of the effects of infrastructure in an aggregate production function augmented with indicators of the quality of macroeconomic policy.

 Boopen (2006) likewise presents panel estimates of the output contribution of transport infrastructure using similar data. South Africa (along with Nigeria) has attracted special attention in this literature, partly reflecting the significantly better quality of its data relative to that of other countries in the region. Perkins, Fedderke and Luiz (2005) use a detailed database on infrastructure investment and capital stocks, spanning as long as a hundred years, to test for the existence of a long-run relation between different infrastructure measures and GDP. Their results suggest a bi-directional relation in most cases. Kularatne (2005) explores the effects of infrastructure investment (as well as social spending on health and education) on GDP. He also finds bi-directional effects, although the impact of infrastructure investment appears to occur indirectly through private investment. Dinkelman (2008) finds a significant impact of household electrification on employment in South Africa's rural labor markets.

On the basis of forgoing, it is clear that several empirical studies regarding infrastructure has been carried in developing countries both at individual country level, or at Sub-Saharah African or at African region at large, but there is no such study at West African sub-region. Also, most available empirical studies uses either GMM model or OLS econometric method or probit model for cross section data generated over the survey carried and consider infrastructural variable as a stock variable. The study intend to fill this gaps by looking at the effects of infrastructure deficiency on economic performance in West African sub-region using panel OLS econometric model and considered infrastructure as a flow variable that is expenditure on infrastructural variables.

3. Methodology

3.1 Data and Data Sources

Basically there are two category of infrastructure; physical infrastructure and social infrastructure and they affect economic growth directly and indirectly respectively. The study make of both physical and social infrastructure because it create employment opportunity, it reduce poverty and it affect economic growth directly. Annual data on infrastructural facilities variables basically consisting of aggregate expenditure on infrastructure proxied by fixed capital formation, human capital development proxied by average total expenditure on education (flow variables) and sets of control variables that includes exchange rate and financial system from World Bank data indicator and central bank of selected country's statistical bulletin were collected from 1981 to 2017 for the study analysis.. The study control for inflation which is a measure of price stability as used by Barro (1990) and financial system. The study makes use of real gross domestic product (RGDP) per capita growth annually gotten from central bank (CB) (2015, 2016 and 2017) of each country as a proxy for economic performance.

3.2 Model Specification framework

Theoretically, the literature has proposed several plausible theoretical explanations of infrastructure's impacts on economic growth. One school of thought regards infrastructure as part of a country's physical stock of capital and therefore a factor of production (e.g., Aschauer, 1993; Gramlich, 1994). Proponents of this school argue that infrastructure stock changes impact national output and directly induce economic growth. The second viewpoint is that infrastructure complements other factors of production: the argument here is that infrastructure may improve total factor productivity by lowering input costs or by expanding the production frontier or the set of profitable investment opportunities (e.g., Barro, 1990). In the third school of thought, infrastructure is believed to stimulate the accumulation of factors of production. Advocates of this view argue that accumulation and productivity of a factor (e.g., labor) is incentivized by infrastructure (e.g., educational and health facilities and roads to access those facilities) (Fedderke and Garlick, 2008). In this sense, infrastructure indirectly affects economic growth. Furthermore, it has also been argued that infrastructure investment can affect economic growth by stimulating aggregate demand or by directing industrial policy toward a desired path. Our postulation in this paper aligns with the first views on the nature of relations between infrastructure and economic growth. This view is particularly more germane for less developed regions, such as West African countries, where traditional antecedents of economic growth are either significantly inadequate or lacking.

As a result of deficiency of diminishing marginal return to capital in neoclassical growth model which necessitate most recent study to adopt endogenous growth theory in economic growth studies, therefore, the study is anchoring on endogenous growth theory. Barro (1990), argues that the government's contribution to current production is driven by its flow of productive (infrastructure) expenditure, which can prevent diminishing private-sector capital returns, raise the marginal product of private-sector capital, and these in turn raise the rate of output growth. In other to appreciate the effect of infrastructure development/investment on economic growth, an endogenous economic growth model of the form are formulated as follow;

$$Y_t = \alpha + \beta X_t + \varepsilon \text{---(1)}$$

Where Y_t is real GDP per capita of all the selected country

$\quad\quad X_t$ is the vector of infrastructural development variables proxied by gross fixed capital

$\quad\quad\quad$ formation and human capital development index proxied by total average expenditure

$\quad\quad\quad$ on education of each selected countries and inflation rate and financial system which

$\quad\quad\quad$ serve as control variable

$\quad\quad \varepsilon_t$ is the error term

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When infrastructure variables broken down into components, i.e vector $X_t = $ *Gross Fixed Capital formation* (GFC), *Human Capital Development* (HCD), *and control*

variables Inflation Rate (INF) *and financial system* $FIN.SYSTM$). Yt which reprensent output in production function measured economic performance proxied by real gross Domestic Product (RGDP). Then, equation (1) becomes;

$$RGDP_t = \alpha + \beta_1 GFC_t + \beta_2 HCF_t + \beta_3 INF_t + \beta_4 FINST_t + \varepsilon \text{---(2)}$$

From the above equation, the study estimated the effect of infrastructural spending on economic performance of the selected countries using pool ordinary least square regression model after providing the descriptive statistics and correlation matrix of the variable used. Random and fixed effect were also estimated because of variation and peculiarity of each country in terms of macroeconomic environment and policies. Two years data are missing in Gambia financial system, specifically in 2015 and 2016 and they were improvised using 4 years moving average.

4. Results and Discussion

Table 4.1 Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Rgdp	185	10.79982	3.501428	-0.42579	13.74163
Gfc	185	25.71409	16.02031	3.568734	89.38613
Eduexp	185	19.27622	1.755727	15.49174	22.26464
Finsystm	185	14.90268	8.84986	1.542268	42.2638
Infrate	185	13.02216	17.11674	-5.96912	134.0359

Table 4.2 Correlation Matrix

	rgdp	Gfc	eduexp	Finsystm	infrate
Rgdp	1.0000				
Gfc	0.3610	1.0000			
Eduexp	0.2450	0.2956	1.0000		
Finsystm	0.5144	0.3039	0.2435	1.0000	
Infrate	-0.4602	-0.0102	-0.0858	-0.3973	1.0000

The table 4.1 shows the descriptive statistics of the variable used. It indicated that all the variables are normally distributed except inflation rate which is relatively skewed to the right. This indicates that the behaviours of most of the variable in all the country are similar. Specifically, the average RGDP of all the selected countries is 10.799 and the maximum GDP is 13.74 which indicate that all the study countries have a relatively the same growth rate of GDP. The same thing applicable to gross fixed capital formation and human capital development variable with average of

25.714 and 19.276 respectively. The skewness of the inflation rate to the right shows that almost all the countries selected for analysis are experiencing increase in inflation rate.

The correlation matrix of the variables in table 4.2 shows that all the variables are positively related to real gross domestic product except inflation rate. This implies that all the variable are rightly signed and are very appropriate for the study analysis. The table 4.3 below presents the summary of the estimation results.

Table 4.3 summary of the results estimates

Dependent variable: rgdp

Variable	OLS	FIXED EFFECT	RANDOM EFFECT	HAUSMAN
Gfc	.0543938*	.0164345*	.0543938*	
eduexp	.1447549	.9057467*	.1447549	
finsystm	.1135731*	.0308009*	.1135731*	χ^2=157.38
Inf rate	-.069009*	.0012847	-.069009*	(0.0000)
_cons	5.816909**	-7.557897*	5.816909**	
Adj. R^2	0.40	0.50	0.20	
F	31.34*	42.45*	125.35*	

Note: *, ** indicate significance at 1% and 5% respectively

The estimation result on table 4.3 using pooled OLS and Random effect shows that all the infrastructural variables including the control variables are rightly signed and they are statistically significant at 1%. Except expenditure on education. Specifically, gross fixed capital formation (GFC) which is one the proxy for infrastructure is positively related to economic growth which implies that one percentage change in GFC will produce about 5% increase in economic growth and this effect is statistically significant at 1% (P-value 0.000). the same result is obtained for human capital development which is the second proxy for infrastructure, except that the effect is not statistically significant. the result indicate that a one percent rise in education expenditure will lead to about 14% increase in economic growth proxied by real gross domestic product. For the control variables, financial system proxied by credit giving to private investors, a one percent point change in this variable will increase economic growth by about 11% and the inflation rate which is expected to relate to economic growth negatively is also rightly siged, a one percentage rise in inflation will reduce economic growth by about 6%. All the variables used conformed with a priori expectation.

For the robustness of the result, the study carried out multcollinearity test and found out that thde variables used does not suffer from multicollinearity. The hausman test for both random and fixed effect were also carried out to determine which among the two estimate matches the pooled OLS. The hausman result shows that random effect estimate corresponds to the result of regression that is, all the infrastructural variables are positively related economic performance and they are statistically significanta at 1%, except total average expenditure on education.

The result generally shows that the effect of government spending on infrastructure is positive and statistically significant at 1%, which implies that increase in government expenditure on education will enhance economic performance in all the selected countries. This result differs from other study such as Edun et al (2013), on the ground that rather than using access to infrastructure as a determinant of economic growth, the study used spending on infrastructure which is more important to less developed economy. These finding is similar to result obtained by Kondogo and Kalu (2016), Kuma (2012) and Calderon and Serven (2010). The policy implication of this findings is that, since it has been established that increase in government spending on infrastructure enhance and stimulate economic growth and development and most West African countries specifically the selected countries for the study analysis, are characterized with low spending on infrastructure which causes deficiency in infrastructure availability

and development hence poor economic performance. This according to Kondogo and Kalu (2016), explain the reasons why some developing countries still remain underdeveloped.

5 Conclusion and Recommendations

The study examine the effect of infrastructural deficiency on economic performance of the some selected countries in West African covering period from 1981 to 2017. West African countries are characterized with underdeveloped economy and one of the major causes of being underdeveloped economy is as a result of lack of conducive business environment inform of deficiency in infrastructural facility such as road network, water, electricity supply, ICT communication etc. Deficiency in infrastructure in this part of the region according to the literature was as result huge or larger percentage of budgetary allocation to recurrent expenditure at expense or low budgetary allocation to sectors related to the infrastructure such as capital expenditure on physical and social projects, which have negative effect on economic growth.

Based on the findings of this study that, an increase in the expenditure on infrastructure stimulate economic performance, the study therefore recommends that, government of this region should intensify effort to increase their budgetary allocation to capital expenditure and cut down or reduce expenditure on recurrent which account for about (50-60%) of the total budget of the most countries under this region. government should also adopts policy measure such as Private partnership policy (PPP) measure that will motivate and encourage private participation in the investment on infrastructures to ease the cost of doing business. This can be inform of reduction in interest rate and cut in taxes to encourage private investors.

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