DIRECT INVESTMENT AND ECONOMIC GROWTH: EVIDENCE FROM ECOWAS SUB-REGION

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Abstract

This paper investigates the impact of foreign direct investment (FDI) on economic growth in Economic Community of West African States (ECOWAS) sub-region, using fixed effects and random effects models. The dataset analyzed stretched from 2007 to 2016 and were collected from the World Bank and UNCTAD archives. The empirical results reveal that foreign direct investment (FDI) is positively related to the growth rate of gross domestic product (GRGDP). Additionally, the coefficient of foreign direct investment (FDI) is invariably highly significant, passing the significance test at the 1 percent confidence level.

Therefore, the hypothesis of a significant positive relationship between foreign direct investment (FDI) and economic growth in ECOWAS sub-region is validated. The study recommends that the Heads of states and governments of the ECOWAS sub-region are to formulate macroeconomic and political policies capable of attracting foreign direct investment to the region to bridge the gap between domestic savings and investment level needed for the regional economy to strive.

Keywords: Foreign Direct Investment, Economic Growth, ECOWAS, Panel Data

1.0 Introduction

The importance of foreign direct investment (FDI) to the growth particularly of developing countries is well established in growth theories. Low level of savings in less developed economies(LDEs) emanating from low income levels engenders low investment, which in turn constitutes a drawback to the required level of growth of the economies. Solving the problem of growth facing LDEs requires bridging the saving-investment gap. Inflow of FDI has been identified by the dual theory postulated by Chenery & Strout (1966) as a veritable means of bridging the gap between savings and desired level of investment. FDI is presumed to have a positive impact on technical progress, productivity, employment and economic growth. It plays the critical roles of filling the development, foreign exchange, investment and tax revenue gaps in developing countries (Anyanwu, 2011). The motivation for this study is to examine the impacts of FDI on economic growth in ECOWAS sub region considering the low level of savings trailing in the sub-region.

In ECOWAS, domestic savings expressed as per cent of gross domestic product (2007, 0.26; 2010, 5.90; 2013, 6.18 & 2016, 5.39) have been so low (World Bank, 2018). The low level of savings in ECOWAS sub region can be linked to the level of real gross domestic product (GDP) per capital (2007, \$889.8933; 2010, \$1003.9831; 2013, \$1,251. 8486 & 2016, \$1,091.4987), which has been so low and worrisome (Madison, 2007). In attempts to close the savings-investment gap, most ECOWAS countries have been competing vigorously for FDI inflows towards attaining the required level of growth and sustainable economic development (Anyanwu, 2012). The increased competition for FDI inflows by ECOWAS countries in the past two decades has stimulated intense debate among economists about the role of FDI in the process of economic growth (Agrawal & Khan, 2011). Many scholars (Tomi, 2015; Ozekhome, 2016; Sane, 2016; Ozturk, 2007; Cheong & Junjun, 2018) concur about the positive influence of FDI on economic growth, given various incentives and appropriate policies. While others (Alege & Ogundipe, 2017) point out the potential downsides to include the negative impact on both balance of payments and unhealthy competition in the host economy.

The ECOWAS countries are mainly developing nations which are faced with different economic challenges. There is a serious need for international inflows of fund to enable the member states to overcome their various economic challenges. Considering some of the characteristics of ECOWAS countries such as low income, low savings, army of unemployed youth, rural-urban migration among others, the inflows of international resources in form of FDI to complement domestic savings cannot be overlooked. The importance of FDI as it affects the economic growth of the ECOWAS countries has prompted the member states to improve on their trade and macroeconomic policies in order to attract new foreign investment and to enhance the existing ones. (Ozakhome, 2016) The extant literature (Njoku, Okuruti & Bakwena, 2011; John, 2012; Sichei & Kinyondo, 2012; Ajide, 2014; Sane, 2017; Amimbola & Oludiran, 2018) on foreign direct investment has pointed out some determinants of FDI to the ECOWAS countries. Such factors include availability of natural resources, good macroeconomic policies, good governance, friendly investment environment and many others. The call for an accelerated speed of opening up to FDI has intensified the belief that this will bring not only more stable capital inflows but also greater technological know-how, higher-paying jobs, entrepreneurial and workplace skills and new export opportunities (Prasad, Rogoff, Shang-jin & Kosde, 2003).

Existing literature identifies three main channels through which FDI can bring about economic growth. The first is its complementing role on domestic savings. In this case, foreign direct investment augments domestic savings in the process of capital accumulation. Second, FDI is the main channel through which technology transfer takes place. The transfers of technology and technological spillovers lead to an increase in factor productivity and efficiency in the utilization of resources, which leads to growth. Third, FDI leads to increases in exports as a result of increased capacity and competitiveness in domestic production. Empirical analysis of the positive relationship between FDI and growth is often said to

depend on another factor, called "absorptive capacity", which includes the level of human capital development, type of trade regimes and the degree of openness (Borensztein, De Gregorio, & Lee, 1998).

The overall economic performance in ECOWAS as reflected in annual growth rates of per capita income (see table 1), has on the average been rather weak during the past decades. The lackluster growth performance may have reflected the low level of investment, particularly foreign direct investment inflows into ECOWAS countries (Ozekhome, 2016). Adamu, Ighodaro & Iyoha, (2012) find that there is a divergence between the level of FDI flows into ECOWAS countries and the heavy volume going to Asian countries. Considering the potentials of FDI in enhancing economic growth in ECOWAS, there is a need to empirically re-examine the relationship between economic growth and FDI inflows.

The remainder of the report will be arranged as follows: section two presents an overview of the ECOWAS sub-region economy considering the growth rate of real per capital income and FDI inflows. Section three reviews selected theoretical works and empirical literature on FDI and growth. Section four presents the methodology and specifies the model of the study, section five presents the scope of the study and sources of data, section six presents empirical results of data analysis and section seven summarizes, concludes and makes recommendations.

2.0 An Overview of ECOWAS Economic Performance

The economic performance of ECOWAS is discussed here with focus on GDP per capital growth rates and inflows of FDI into ECOWAS countries.

2.1 Economic Community of West African State Growth Rate (1992-2016)

Average growth rates of real GDP per capital of most of the countries in the sub-region were generally low within the period under review. The table 1 below shows the growth rates of annual real GDP per capital of ECOWAS sub-region.

Table	Table 1- ECOWAS annual real GDT per capital growth rate (period average).1.20								
YEA	RGDPG	YEA	RGDPG	YEA	RGDPG	YEA	RGDPG	YEA	RGDPG
R	R	R	R	R	R	R	R	R	R
1992	-5.28102	1997	2.302474	2002	1.059044	2007	2.806655	2012	3.205587
1993	-2.98833	1998	1.538418	2003	0.142374	2008	2.648061	2013	3.354786
1994	-0.40337	1999	2.058148	2004	3.237903	2009	0.291839	2014	1.668683
1995	0.658296	2000	2.316424	2005	1.370949	2010	2.257448	2015	-0.12005
1996	3.572611	2001	0.957065	2006	1.724007	2011	1.524901	2016	1.995111

Table 1- ECOWAS annual real GDP per capital growth rate (period average):1.28

Source: Author's calculations using World Bank's World Development Indicators data (2018).

Cabo Verde, Ghana and Nigeria, recorded average economic growth rates not less than 3%. Liberia and Guinea had negative growth rates following the impact of Ebola epidemic and Investors aversion (World Bank, 2015). The average growth rate of Cabo Verde particularly between 1992 and 2016 could be partly linked to diversified exports as the country is one of the most diversified in the sub-region whose top export includes processed and manufactured goods (UNCTAD, 2016). The country's growth dropped sharply in 2014 as a result of outbreak of Ebola epidemic and fall in commodity prices (IMF, 2016). Growth rate of real GDP per capita for the entire sub-region between 1992 and 2016 ranged between 0.37% and 8.32%, and averaged 1.28%. The low averaged growth rate of the entire region can be linked to the negative growth rates in Nigeria in 2015 and 2016 as Nigeria accounts for over 50% of economic activities in the region. And the negative growth rates in Nigeria in 2015 and 2016 can be linked to a fall in FDI inflows from \$8,914.89(m) in 2011 to \$3,064.17(m) in 2015 and \$4,448.73(m) in 2016(UNCTAD, 2018).

Figure 1 is the graphical representation of the data presented in Table 1. This is done to show a picture of the trends of economic growth rates in ECOWAS sub-region.

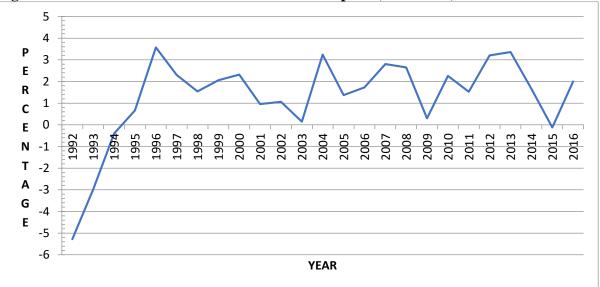


Figure 1: ECOWAS Growth Rates of GDP Per Capital (1992-2016)

Source: Author's calculations using World Bank's World Development Indicators data (2018).

The economic performance and growth rates of the sub-region have been quite unimpressive (Iyoha & Okim, 2017). This substantiates the classification of the countries of the ECOWAS region as low income countries (World Bank, 2013). It can be seen from the above figure that the growth rates of the sub-region in the period under consideration were largely unstable. The instability could be attributed partly to the fact that most of the countries in the sub-region rely mainly on primary products exports whose prices in the international market are

also unstable, and this culminates into poor export earnings, fall in government revenue and poor economic growth.

2.2 FDI Inflow to Economic Community of West African State (1992-2016)

The table (2) below shows the net inflows of foreign direct investment into ECOWAS countries from 1992 to 2016; which includes the period of this study.

Country	Period	Net FDI Inflow	% Received
Benin	1992-2016	1,890,303,526.00	1.11
Burkina Faso	1992-2016	2,364,021,996.00	1.39
Cabo Verde	1992-2016	1,874,779,615.00	1.10
Cote d'viore	1992-2016	7,616,267,722.00	4.49
Gambia	1992-2016	779,530,590.00	0.46
Ghana	1992-2016	31,279,186,618.00	18.43
Guinea	1992-2016	4,372,966,454.00	2.58
Guinea Bissau	1992-2016	247,875,959.00	0.15
Liberia	1992-2016	6,705,125,061.00	3.95
Mali	1992-2016	4,249,664,368.00	2.50
Niger	1992-2016	6,310,694,558.00	3.72
Nigeria	1992-2016	90,911,110,399.00	53.57
Senegal	1992-2016	4,954,540,675.00	2.92
Serria Leone	1992-2016	3,638,552,385.00	2.14
Togo	1992-2016	2,506,721,288.00	1.48
TOTAL	25 Years	169,701,341,241.90	100

Table 2 : FDI Inflows to ECOWAS Sub-Region 1992-2016

Source: Author's calculations using World Bank's World Development Indicators data (2018)

The table 2 above indicates the net inflows of foreign direct investment (FDI) into ECOWAS sub-region from 1992 to 2016. A total of \$169, 701,341,241.90 (M) was received. The inflows were measured in US dollar for each of the countries in the sub-region. Nigeria received about 54 per cent, Ghana received about 18 per cent, Cote d'viole, Liberia and Niger received about 4 per cent each of the total amount of net foreign direct investment into ECOWAS sub-region. Guinea, Mali and Senegal received about 3 per cent each of the amount of foreign direct investment into ECOWAS region. Serra Leon received about 2 per cent of the total FDI into ECOWAS from 1992 to 2016. Benin, Burkina Faso, Cabo Verde and Togo received about 1 per cent each of the total FDI inflow into ECOWAS during the period under consideration- 1992 to 2016. Gambia and Guinea Bissau received less than 1 per cent each. The facts indicate that most investor's choice for location of investment is Nigeria while their least choice is Guinea Bissau.

Nigeria got the highest inflows of foreign direct investment (FDI) in ECOWAS sub-region during the period of this study. Nigeria has remained the hub of business and economic activities in the ECOWAS sub region (Enisan 2017). Enisan(2017) identifies GDP growth, macro instability, financial development, exchange rate, inflation and discount rate as main determinants of foreign direct investment flows into Nigeria. As to buttress the position of Enisan, the large population of Nigeria and her vast natural resources especially crude oil product serve as strong attractions to foreign investors. Guinea Bissau got the least foreign direct invest during the same period. Guinea Bissau has a very small population. The Africa Development Bank (2014) estimated the population of Guinea Bissau to be 1.7 million, of which about 53 per cent of the population was for women. The economy of Guinea Bissau mainly depends on agriculture and fishing. Guinea Bissau produces cashew nut for export while rice and horticulture crops are being produced for consumption. Guinea Bissau has not been a good attraction or choice of foreign direct investment location because of its small population and limited natural resources (ADB, 2016).

3.0 Review of Literature

This section of the paper presents the related works reviewed during the course of the study. The works are presented under theoretical and empirical sub headings. The theoretical literature presents the relevant foreign direct investment and economic growth theories whiles the empirical literature presents the empirical worked reviewed.

3.1 Theoretical Literature Theories of Foreign Direct Investment

There are several theories of foreign direct invest in the literature. However, this study has reviewed the internalization, eclectic, market-seeking and resource-seeking FDI theories because of their relevance to the geographical scope of the study.

Buckley &Casson(1976) developed the internalization theory of FDI. It was developed by Coase (1937) in a national context, and Hymer (1976) developed same in international context. The international theory of FDI holds that transnational companies organize their internal activities so as to develop specific advantages which they will exploit. The transnational firms develop those specific advantages to enable them have dominion over other firms in the international market. Hymer (1976) identified two major determinants of FDI. One was the removal of competition. The other was the advantages which some firms possess in a particular activity (firm-specific advantage) . Internalization theory is considered very important also by Dunning, who uses it in the eclectic theory, but also argues that this explains only part of FDI flows. Hymer is the author of the concept of firm-specific advantages and demonstrates that FDI take place only if the benefits of exploiting firm-specific advantages outweigh the relative costs of the operations abroad.

Dunny(1973, 1980, 1988) developed the eclectic theory of FDI, which is a mix of three different theories of direct foreign investments (O-L-I). "O" stands for ownership advantages; "L" represents location advantages while "I" denotes internalization (firm-specific) advantages. The ownership advantages refer to intangible assets, which are, at least for a while exclusive possess of the company and may be transferred within transnational companies at low costs, resulting either in higher incomes or reduced costs. Location advantages determine which country would be the host of foreign direct investment. These advantages anchor on the economic, political and social wellbeing of the host country. Country with favorable location advantages attracts higher FDI. Supposing the first two conditions are met, it must be profitable for the company the use of these advantages, in collaboration with at least some factors outside the country of origin. Dunny's idea of the eclectic theory of foreign direct investment emanated from the internalization theory of Buckley &Casson(1976).

According to Rummel & Heenan (1978) market-seeking FDI attempts to secure market share and sales growth in the targeted foreign market. Apart from market size and the prospects for market growth, the reasons for market-seeking FDI include situation in which (a) the firm's main suppliers or customers have set foreign productive activities abroad and the firm need to follow them overseas; (b) the firm's product need to be adapted to local tastes or needs, and to indigenous resources and capabilities; (c) the firm considers it necessary as part of its global marketing and strategy to maintain a physical presence in the leading markets served by its competitors. Market-seeking theory of FDI is horizontal in nature; where multinational firms enter foreign markets and produce similar products produced at home. The purpose is to dominate local markets and to serve the host country demand for good.

According to Kinoshita & Campos (2002), resources-seeking FDI attempts to acquires particular resource in the host country at a lower real cost than could be obtained in the domestic country. Resource-seeking FDI can be grouped into three groups: those seeking physical resources, those seeking cheap and/or skilled labour and those seeking technological, organizational and managerial skill. Resource-seeking FDI are virtually vertical FDI in nature, which can be categorized into backward vertical FDI and forward vertical FDI. Backward vertical FDI produces intermediate goods for the production of final goods in the home country industry. Such firms are seen in oil and gas sector in ECOWAS sub region, which extract crude oil and move it for refining in their home country. Forward vertical FDI get intermediate good from the home firm to produce final good in the host country (Krugman, Obstfeld & Melitz, 2012).

Economic Growth Theories

The neoclassical growth theories postulated by Domar (1946) and Solow (1956) have a great deal of expositions on the determinants of growth. Domar's theory was the first mathematical proposition on the process of economic growth. Domar looked at the relationship between

capital accumulation and full employment. The axiom put forward by Domar was that an economy will be in equilibrium when its productive capacity is equal to its national income.

Domar adopted a classical doctrine where the labour force and its productivity were key to the economic growth paradigm. His postulate was based on the assumption that the growth rate of national income was a combined effect of the growth of labour and its productivity. Domar developed his theory in the context of a closed economy disregarding the possibility of having external economies. Solow's model was developed to address the weaknesses of Domar's model. Solow's model looked beyond a closed economy and remedy the assumption of Domar that once the system diverted from its equilibrium path, it would continue being in a disequilibrium position. Solow proposed the combination of capital and labour in varying proportions against Domar proposition of capital and labour in fixed proportion. The neoclassical growth theories believe that growth is exogenously generated and growth is dependent on capital and labour in the economy. In the exogenous growth tradition, the marginal returns to production inputs diminish at both micro and macro level and technological progress is assumed to be exogenously determined.

The dependence of growth on exogenous technological progress in the neoclassical growth model and the apparent inconsistency of the "unconditional convergence" hypothesis led to repeated research for alternative models that can generate economic growth endogenously. In the mid-1980s, a group of growth theorists became increasingly dissatisfied with exogenous factor determining the long run growth. They therefore favored a model that replaced the exogenous growth variable (unexplained technical progress) with a model in which the key determinants of growth were determined within the model .Thus, according to these growth theorists, either the savings rate or, the allocation of resources among production technologies results in increased capital accumulation (Romer, 1986; Lucas, 1998). Others believe that the financial system through the rate of technological innovation may modify steady-state growth Romer (1990), Grossman & Helpman (1991), and Aghion & Howitt (1992). Growth in these models was due to indefinite investment in human capital which had spillover effect on economy and reduces diminishing return to capital accumulation. The endogenous growth theorists postulated that growth in the system is endogenously determined, and it is a function of capital (K), labour (L) and technical progress (A). Technical progress (A) is a function of economic activities (investment, trade, R& D, government expenditure) which enhance productivity increase.

3.4 Empirical Literature

Cheong & Junjun (2018) examined the effect of foreign direct investment (FDI) on economic growth in ECOWAS Countries during the period of 1995 to 2015 using panel data approach-fixed effect and random effect models. The empirical results showed that foreign direct investment was statistically significant and had positive relationship with economic growth in ECOWAS sub-region. Sane (2016) investigated the determinants of foreign direct investment

inflow into ECOWAS through panel data modeling and estimation over the period 1985-2015. The findings showed that stabilization of the macroeconomic environment, government consumption expenditures, domestic credit to the private sector, interest rate, gross fixed capital formation, exchange rate, economic freedom index, as well as natural resources and market size were the main FDI driving factors in ECOWAS. Ozekhome (2016) investigates the impact of trade openness and investment on economic growth in the Economic Community of West African States (ECOWAS) region, using dynamic panel data methodology in the period 2000-2013. The empirical results reveal that trade openness; foreign direct investment, real gross domestic capital formation, human capital and lagged real GDP (a measure of previous market size) are the principal drivers of economic growth in ECOWAS countries.

Tomi (2015) examined the long run relationship and the causality between the growth of GDP per capita and FDI in WAEMU countries. He also measured the impact of FDI on Total Factor Productivity (TFP) in the short and long run for different values of the depreciation of capital stock using observation between 1970 and 2012. The econometric analysis provided three key results. First, there was a strong evidence of long run relationship between the growth of GDP per capita and the ratio of FDI inflows. Second, there was bidirectional causality between the two variables. Third, there was a positive and significant effect of FDI on TFP in the long run, conditional on low level of depreciation of capital stock.

Alege & Ogundipe (2013) investigated the relationship between foreign direct investment (FDI) and economic growth in ECOWAS using the System-GMM panel estimation technique covering the period of 1970 to 2011. The results of the study showed that the contribution of FDI was insignificant and impacted negatively on growth in ECOWAS despite the control of the role of human capital and quality of institutions in the model. Freckleton, Wright & Craigwell (2010) examined the relationship between foreign direct investments, corruption and economic growth in forty two developing countries using panel dynamic ordinary least squares. The results suggested that corruption had a significant influence on per capita GDP in the short run but was not significant in the long run. It was also found that lower levels of corruption enhanced the impact of foreign direct investment on economic growth.

From the foregoing, the empirical findings on the impact of FDI on economic growth in ECOWAS are mixed. Alege & Ogundipe found a negative and insignificant impact and others found positive impact. Based on these mixed findings, and the inability of any of the previous studies to demonstrate with stylized facts the need for FDI to complement low level of domestic savings in ECOWAS, makes it imperative to re-examine FDI and economic growth nexus in the region.

4.0 Theoretical Framework, Model Specification and Empirical Methodology **4.1** Theoretical Framework and Model Specification

This study is based on the endogenous growth model. The motivation for the use of the endogenous growth model emanates from its ability to explain the intrinsic characteristics of economies that cause them to grow over extended period of time. The endogenous production function is specified as:

The model in equations (1) above is endogenous growth model, as the residual component, A, which is a measure of technological progress and human capital accumulation, is endogenized (Ozakhome 2016). In empirical specifications, the endogenous growth model incorporates foreign direct investment (FDI), investment in human and physical capital and other policy variables such as trade openness and inflation as critical components of growth. Population is also included based on eclectic theory of FDI. Having incorporated these relevant variables into equation (1), the following specification for the determinants of economic growth in ECOWAS countries is obtained:

GRGDP=f(TOPN,FDI, INV, SCHL,INF, POP) - - - - (2)

Equation (2) shows that economic growth in ECOWAS is a function of TOPN, FDI, INV, SCHE, POP, and INFL.

Where:

GRGDP= Growth rate of real GDP

TOPN= trade openness

FDI= foreign direct investment

INV= real gross domestic capital formation

SCHE= enrolment in secondary institutions as a measure of human capital accumulation INF= inflation rate

POP= Population (population is included in the model based on eclectic theory of FDI) The empirical specification of the model to be estimated is therefore:

 $GRGDP =, \alpha_0 + \alpha_1 TOPN + \alpha_2 FDI + \alpha_3 INV + \alpha_4 SCHL + \alpha_5 POP + \alpha_6 INFL + U - (3)$

Due to the fact that this study covers fourteen ECOWAS countries (exclusion of Liberia), this study intends to estimate a panel regression model that traces the effect of foreign direct investment on economic growth in the ECOWAS countries. The panel regression model is specified below:

$$GRGDP_{it} = \alpha_0 + \alpha_1 FDI_{it} + \alpha_2 INV_{it} + \alpha_3 TOPN_{it} + \alpha_4 SCHE_{it} + \alpha_5 POP + \alpha_6 INFL_{it} + Uit - -(4)$$

Where i represent the countries in ECOWAS sub-region and t stands for the time horizon (2007 -2016) of this study. U is the stochastic term while GRGDP, FDI, INV, TOPN POP, and INFL are as earlier defined. The a priori expectation of the parameters estimates are: α_1 - $\alpha_5 > 0$ and $\alpha_6 < 0$

4.2 Empirical Methodology

The above specified model will be estimated using fixed and random effects panel estimation methodology. The fixed and random effects models will be estimated with the Eview 9 application. The Hausman test will be carried out to determine the appropriateness of the fixed and random effects models for the study.

1.0 Scope of the study and Sources of Data

The data for this study are secondary data obtained from the World Bank and UNCTAD archives. The data covered fourteen ECOWAS countries- Benin, Burkina Faso, Cape Verde, Cote d'Ivoire, Gambia, Ghana, Guinea, Guinea Bissau, Mali, Niger, Nigeria, Senegal, Sierra Leone and Togo. The data stretched from 2007 to 2016. Liberia was not included in the analysis because it has incomplete data for the period of the study. The study period was selected based on the availability of data for the selected ECOWAS countries. The Fixed Effects and Random Effects Models were estimated in this study.

6.0 Presentation of Empirical Results and Interpretation

Table 5: Hausinan Test Kesuit				
Test Summary	Chi. Sq. Statistic	Chi. Sq. d.f	Prob.	
Cross-Section Random	6.629064	7	0.4685	

Table 3: Hausman Test Result

H₀: Random Effects Model is appropriate

H₁: Fixed Effects Model is appropriate

The study estimated both the Fixed Effects and Random Effects Models in the course of data analysis. The Hausman test was carried out in order to determine the appropriateness of each of the two models. The null hypothesis "Random Effects Model is appropriate" against the alternative hypothesis "Fixed Effects Model is appropriate" was tested. The null hypothesis was not rejected based on the probability value which stood at 0.4685; the test result was not statistically significant. As a result of the above, the study made use of the estimates of the Random Effects Model in its discussions and recommendations. In addition, the study used random effect models instead of fixed effect because random effects model has less variability when the number of units is small (Clark & Linzer, 2015)

Dependent Variable: RGGDP					
Variable	Estimated	t-statistics	p-value		
	Coefficient				
FDI	0.06573	4.8685***	0.0000		
GDSAV	-0.0892	-0.6788	0.4988		
INDOPT	0.0640	2.7863***	0.0064		
SCHEROL	3.0192	2.7058***	0.0080		
TOPN	-0.0045	-1.6163*	0.1091		
INFL	-2.3445	-1.3490	0.1803		
POP	0.0136	4.5502***	0.0000		
С	470.1806	4.3583***	0.0000		

Table 4: Result of Fixed Effects Model

*** Statistically significant at the 1% level

* Statistically significant at the 10 % level

Table 5: Result of Random Effect Model

Dependent Variable: RGGDP						
Variable	Estimated	t- statistics	p- value			
	Coefficient					
FDI	0.0662	4.9295***	0.0000			
GDSAV	-0.0109	-0.7655	0.4456			
INDOPT	0.0741	3.3823***	0.0010			
SCHEROL	3.2843	2.9825***	0.0035			
TOPN	-0.005625	-2.1265**	0.0359			
INFL	-2.3408	-1.3476	0.1805			
POP	0.0118	4.3313***	0.0000			
С	492.1052	1.7075	0.0905			

*** Statistically significant at the 1% level

** Statistically significant at the 5% level

From the above results obtained from the Random Effects Model, all the explanatory variables except trade openness are rightly signed. Foreign direct investment (FDI), which is the leading independent variable for the study, is positively related to the growth rate of gross domestic product (GRGDP) in ECOWAS. Additionally, the coefficient of foreign direct investment (FDI) is invariably highly significant, passing the significance test at the 1 percent level. Therefore, the hypothesis of a significant positive relationship FDI and economic growth in ECOWAS countries is validated. The finding of this study agrees with Cheong &Junjun(2018) and Ozhekome (2016) and disagrees with the findings of Alege & Ogundipe (2013).

Industrial output (INDOPT), Human capital (SCHEROL), trade openness (TOPN) and population (POP) are also significant in determining economic growth in ECOWAS. Industrial output, secondary school enrolment and population are highly significant at the I percent level, while trade openness is significant at the 5 percent level. The hypotheses of a positive relationship between economic growth and industrial output, human capital and population are validated. Trade openness has a negative sign. The hypothesis of a positive relationship between economic growth and trade openness is not validated. Gross domestic savings and inflation are not significant in determining economic growth in ECOWAS. The policy implication of the results is that FDI is a viable policy instrument which the government can use to boost economic growth in ECOWAS sub region.

7.0 Summary of Findings, Recommendations and Conclusion

The study empirically investigates the impact of foreign direct investment (FDI) on economic growth in ECOWAS countries from 2007 to 2016. FDI, the principal variable for the study, has a positive relationship with economic growth in ECOWAS countries. The regression coefficient of FDI is positive and significantly different from zero at the 1 percent significance level. In sum, foreign direct investment is a key driver of growth in the ECOWAS sub-region. Inflation rate which is a measure of macroeconomic policy is found to be negatively related with economic growth, though is not statistically significant even at the 10 per cent level.

Given the empirical findings that FDI is a principal determinant of growth in ECOWAS, it is recommended that policy makers should formulate and implement economic and political policies to attract more foreign direct investment to ECOWAS sub-region. Economic policies that attract FDI are particularly warranted to bridge the wide gap between domestic saving and investment level needed for economic growth and development.

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