

THE IMPACT OF FOREIGN DIRECT INVESTMENT ON ECONOMIC GROWTH OF WEST AFRICAN MEMBER STATE'S (A CASE STUDY OF ECOWAS) (2001 - 2015)

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ABSTRACT: *Economic Community of West African States (ECOWAS) has been programmed to fuel economic growth of all its member nations not only through trade liberalization and common customs union but through attracting FDI inflow as well. Since its inception, it has been undergoing a series of institutional reforms to achieve its stated objectives. Against this background, this research investigates the relationship between foreign direct investment and economic growth in the Economic Community of West African States (ECOWAS). This study shall use panel data spanning 2001 to 2015. In order to achieve this, the study shall conduct empirical analyses by panel unit root, heterogeneous panel co-integration, and SUR multiple regression. Research findings from Pedroni co-integration test show that there is a cognate relationship between all the factors under investigation concerning ECOWAS region. Co-integration analysis also indicates a positive and significant relationship between variables such as financial development, FDI, domestic trade, and trade openness, while unemployment and social unrest negatively relates to economic growth, though unemployment is not statistically significant. For the sake of caution, this study uses a SUR multiple regression for the robustness test. Empirical result shows FDI strongly relates to economic growth in ECOWAS nation. The results are in consonance with the previous theories on growth-FDI modeling. The research findings suggest that ECOWAS members should provide a conducive and enabling environment to attract a free flow of FDI into their economy.*

KEYWORDS: FDI, Economic growth, Heterogeneous panel cointegration, ECOWAS, SUR Multiple Regression.

INTRODUCTION

Economic growth and development in a country should not be overemphasized. Foreign direct investment (FDI) has proved important since 1980s. By the year 2000, FDI largely contributed to the external finance pool for the West Africa states and the inward stock by this year accumulated to approximately one-third of West African states GDP unlike 10% in the year 1998 (UNCTAD, 2006). Several works of literature have emphasized the significance of FDI as a capital creator for development projects in West Africa countries (Borensztein, et al., 1998; Acemoglu, et al., 2006). Countries, therefore, develop strategies to attract more FDI into their economies (Mengistus and Adams, 2007); To attract FDI inflows, developing countries have generated economic agendas such as tax concessions, provision of loans at low interest rates, grants, allocation of subsidies, increased investment on infrastructure, development of export processing zones and other concessions (Raheem and Oyinlola, 2013).

Akinlo (2004); identify that there are four reasons that make developing countries, mostly african, to think that FDI is the best driver for economical growth. Firstly, it facilitates crucial need for capital intended for investment. Secondly, it increases competence of industries in

host countries. Thirdly, it facilitates productivity of domestic firms through adoptions of relevant technology and the use of human labour and other physical assets. Finally, the nature of its ownership structure potentiates its relevance in propagation of growth and development. In line with this, FDI proves to be more stable as a source of investment capital and can be substantiated with other forms capital inflow. In other words, FDI enables a country to source for capital, generate employment, penetrate to the foreign markets, and allow local firms to benefit from technological efficiency. As shown by Addison and Mavrotas(2004); for example, FDI has the potential of transferring technology, capital, and knowledge to the host countries.

The Economic Community of West African States (ECOWAS) are keen at achieving higher rates of economic development and attract more capital investment from abroad. ECOWAS was formed in 1975 and has moved from Free Trade Area (FTA) to the Customs Union (CU) before becoming a Common Market (CM) and then an Economic Union (EU). It covers member nations, such as Burkina Faso, Benin, Cape Verde, Niger, Cote d'Ivoire, Togo, Gambia, Senegal, Ghana, Mali, Guinea, Liberia, Guinea-Bissau, Nigeria and Sierra Leone. ECOWAS is among the biggest economic blocks in Africa. Scholars believe that the economic growth among member of ECOWAS has resulted to the growth of its membership.

For decades, FDI has caused immense development in a significant number of countries through technological transfer, creation of employment opportunities and growth in industrial competition. FDI has also bridged trade gaps and provided managerial skills for economic development. Ahmed *et al.* (2003); denotes that many developing countries have executed important economic policy reforms and market-friendly incentives by the late 1980s. Such a significant move was in bid to encourage the accumulation of capital and efficient allocation of resources. This study employs compilation and analysis of literature from websites of organizations and agencies in order to analyse how FDI affect ECOWAS members economic growth by focusing on the period of 2001-2015.

The motivation for the study

According to (Andenyangtso, 2005); economic growth is a function of both domestic and foreign investment. Furthermore, the capacity foreign investment to a particular economy depends on economic growth rate (Fabayo, 2003); Although numerous researches focuses on showing the economic benefits of FDI, study on how FDI affects specific areas in the economy such as employment, technology, trade, and entrepreneurship still remain unfounded. Therefore, this paper will analyse the impact of FDI to the West African States to identify some factors that affects the economy. The study will seek to give answers to the following questions.

- 1) what impact does FDI exert on economic growth of ECOWAS member countries?
- 2) how does domestic investment impact economic growth of ECOWAS member countries?
- 3) Is there a long run relationship between FDI and economic growth?

EMPIRICAL LITERATURE REVIEW

The FDI impact on economy has been a focal point for many researchers. In bid to develop a link, such studies have focused on reviewing remarkable evidence of the matter in question in

different states. The previous studies have obtained different results. FDI has contributed to a major part in several regions' economies. Among the policymakers, there is an extensive belief that FDI boosts host countries productivity as well as improving development. Some of the studies have found out the causality between the two variables. Due to the different methodology used, researchers have generated divergent opinions. Some researchers, for example, Nasreen et al. (2011) investigate this matter empirically for the period 1983-2008 using the independent larson panel study which show a co-integration of FDI and economic growth.

Khan and Khan (2010) over the period 1981-2008, employed both Granger causality test and co-integration test in Pakistan to investigate an observable co-relation between industry-specific FDI and output. The result of the study supports the evidence that a stable relationship exists between FDI and output, especially in the long run, while in the short run, other studies prove a two-way causality between FDI and GDP.

Igbal et al. (2013) investigated the data from India and China. And found out that, FDI critically caused increased per capita income in these two economies as the GDP growth rate increased. Similar studies by Lian and Mu (2013) that employs time series data in Western China analyzes the causal relationship between FDI and economic growth from 1986-2010. The research is steered using time series estimation of ADF unit root test, error correction analysis, co-integration test, and Granger causality test. The findings alludes that FDI is quite insignificant in matters of economic growth, and imply that FDI may have crowded-out foreign investment rather than augmenting domestic market, Thus it can be conclusively asserted that there is lack of consensus among scholars on relationship between FDI and economic growth. However, it can be viewed that different countries have different economic systems. While some economic systems encourage and give space to FDI, some are actually dormant in this regard. Since many studies provide evidence of relationship, hypothetically, those states in which FDI do not influence their economic growth probably are silent in addressing FDI.

Investigations by One (2012) on Nigerian GDP within the period 1986-2007 caves out that it is lowly or insignificantly influenced by FDI. A similar study conducted by Ekeria *et al.*, (2015) utilizing time series data examines the effect of fiscal policy on Nigerian economy growth. The data which was collected between 1960-2012 proves that fiscal policy is directly related to growth. *Sichei and Kinyonde (2012)* also show that since 2000, the Africa-wide environment has been favourable to FDI.

Anyanwu (2011) shows that market size, trade openness, higher government consumption expenditure, and agglomeration are positively related to FDI in Africa, while higher financial development produced an adverse effect on FDI inflow into the African continent. *Bang et al.*, (2007) study the FDI effect on economic growth of China and Vietnam using FDI inflows sectoral data. The outcomes shows that for the two developing-transition economies, FDI has a statistically substantial positive impact on economic growth operating directly and through its labor interactions. Similar studies conducted by *Garge et al.*, (2012) found FDI an important factor affecting India's level of economic growth.

Adeniyi et al. (2012) investigated the causal relationship between FDI and economic growth in few West African nations using a vector error correction model (VECM) and found that financial sophistication proxy by financial development matters a lot in attracting FDI to West Africa's economic growth. Campos and Kinoshita (2002) investigates FDI impact on economic

growth in 25 Central and Eastern Europe and former Soviet Union transition economies between 1990-1998 and FDI was found to have a positive effect on economic growth.

In addition, Imodu (2012) investigates the FDI and economic growth relationship in Nigeria between 1980-2009 by application of Johansson co-integrated techniques and Vector Error Correction method in which various components of FDI are disaggregated. The study result shows that the disaggregated FDI impact on the Nigeria's real growth namely Mining, Agriculture, manufacturing, and petroleum sector is minimal except in the telecommunication sector which has a hopeful future.

Awe (2013) examines the FDI impact on the Nigeria's economic growth amid the period 1979-2006. As revealed by the study, a negative relationship between economic growth and FDI was the result due to insufficient FDI into the Nigerian economy.

Sadik et al. (2013) studies the rapport's nature between FDI and economic growth using a Pakistan data that spanned from 1981 to 2010. The investigation results reveals that Pakistan's economic performance is negatively impacted by foreign investment while its domestic investment has benefitted its economy.

Jyun and Chin (2006) further analyze whether the FDI improve economic development by utilizing threshold regression analysis. They find that FDI solely plays an uncertain part in economic growth contribution based on 62 nations sampled during the period 1975 to 2000. Further, GDP and human capital are significant factors in FDI explanation. Furthermore, FDI usually have a significant positive effect on host nations especially when they have increased human capital and GDP.

Nazhat (2009) examines the effect of FDI on economic growth of Pakistan using data from 1980-2000. He adopts endogenous growth theory and applies regression analysis in his study. According to his findings, there is no positivity as well as statistically significant relationship between FDI inflows and GDP.

Ajayi (2016) argues that FDI created externalities through new technology and investment in physical infrastructures like roads and factories. It implies that FDI improved overall economic growth by promoting competition in the domestic input market and leads domestic firms in adopting more efficient methods for their production process. With the FDI inflows new source like the new technology, knowledge, capital, managerial skills and physical capital, are introduce to host country's economy. FDI is brough by large corporations which are experienced in skills and superior in technology and this additional value can be one of the reason FDI infloe enhances growth of economy.

Apergiset et al. (2014) use panel data set involving 27 transitional economies over the period 1991 to 2000 to study the relation direction between FDI and the economic growth. The result shows that FDI has a significant positive relationship between economic growths of all nations.

Kherfi and Soliman (2005) examine the effect of FDI on economic growth of 23 countries from two regions, six nations from the Middle East and North Africa (MENA) while 17 countries from Central and Eastern Europe (CEE) by using data mean from four periods 1979-2002. Their major findings suggest that FDI on growth in both countries is harmful.

Chowdhury and Mavrotas (2005) produce empirical evidence on the relationship between FDI and economic growth using single and simultaneous equation estimates for 140 countries using

macroeconomic variables. The results outlay a positive and statistically significant FDI and economic growth.

FDI improved overall economic growth by promoting competition in the domestic input markets and led the domestic firms to adopt a more efficient method of their production process (Adam, 2015). The dependency theorists argue that reliance on investment is likely to hurt economic growth and the allocation of income. Johnson (2006) finds that FDI should have a positive effect on economic growth as a result of technology spill-over and substantial capital inflows. The results show that FDI inflows improve the economic growth of developing economies, but not in underdeveloped economies.

Conversely, Adeniyi *et al.*, (2012) investigate the impact of FDI on economic growth using data onto East African countries spanning between 1990 and 2005. The result shows that FDI induced growth of Ghana, Sierra Leon and Gambia but no short or long run relationship is found for Nigeria. Conversely, Jibir *et al.*, (2015) examines the relationship between FDI and output using Nigerian data; and reveals that there is a definite connection between FDI and GDP.

Rehman (2016) examines the nexus between FDI and economic growth using a Pakistan dataset. The result reveals that there is unidirectional causality between FDI and economic growth running from economic growth to FDI.

Adil and Mohammad (2014) examine causalities among FDI, economic growth and financial development proxies by both equity market size and bank credit to private sectors using a structural co-integration model with a vector error correction (VEC) mechanism to test for the short-term dynamics of the model. The findings reveal that developed financial markets are an essential precondition for the positive impact on FDI on economic growth, reflecting host countries ability to exploit FDI more efficiently.

Sackey *et al.* (2012) investigate the effect of FDI on economic growth of Ghana and test the present long-run linear relationship between FDI inflows and economic growth. Their finding reveals long-run relationships exist among the variables. They further conclude that a positive relationship between the variables.

Insah (2013) investigated the relationship between foreign direct investment and economic growth in Ghana using Dynamic ordinary least squares. He found out that, FDI had a positive effect on economic growth. However, the effect of a three year lag of FDI economic growth had an adverse effect.

Tsen (2010) used the Granger Causality on time series data spanning 1978-2002 for China. The results indicate that there is a bi-directional Causality among the variables. The results confirm that China's economic growth has had an impact on its exports and domestic demand. In other studies, Lamine and Yang (2010) applied Granger causality test on Guinea republic's data. They found that FDI level is still too low to promote the growth and conclude that, if GDP in Guinea increased, FDI would also increase. Deductions from these two studies clearly indicate that the relationship between FDI and GDP is dependant on the host country.

Despite a considerable number of researches on FDI and its impact on economic growth of the host nations, the pragmatic outcomes still deliver an unclear picture of this relationship (Adeniyi *et al.*, 2012; Rehman 2016; Kherfi and Soliman 2005; Nazhat 2009). However, most works of literature accepts FDI as a sustainable growth vehicle and its positive spillover effects

like employment opportunities, skills transfer, technology advancements, raising competition and improving human capital in the host nation (Chowdhury & Mavrotas 2005; Ajayi 2016)

Given the above literature, it is evident that FDI effects on economic growth on the host countries can be positive, negative or inconclusive based on the recipient countries economic condition. In the same vein various studies are carried out at an individual country level on the nexus between economic growth and FDI (Lamine & Yang 2010; Tsen 2010; Insah 2013; Nazhat 2009 among others). Also at the continental and regional level (Adeniyi *et al.*, 2012; Chowdhury and Mavrotas 2005; Kherfi and Soliman 2005; Jyun & Chin (2006) among others. Among all the works of literature reviewed, there is no single study conducted on the West African continent with regards to ECOWAS. This leaves a lacuna for study so as to embrace the impact of foreign direct investment on West African State economic growth, a board data of 15 West African State in the period of 2001-2015.

To achieve the purpose of this study, the study has been organized into six section. Section 1 present introduction to the study, section 2 Review of literature 3) Research Methodology 4) Discussion of Result. 5)Conclusion and Recommendation.

RESEARCH METHODOLOGY

The paper employed static panel regression analysis to determine the level of FDI impact on economic growth in the West African States. The paper used panel data to ascertain the implications of FDI on economic growth within the period of study. The primary sources of these data were the World Bank National accounts data, OECD National data files, International Financial Statistics, International Labour Organization and World Bank International Debt.

Model Specification

To examine the impact of FDI on the economic growth of ECOWAS member countries, the study adopts a static panel regression model specification. This study utilizes a heterogeneous panel cointegration test and long-run form of the pooled data. Newly-developed method of panel unit root is utilized to arrive at a robust estimate. The model for this study is an adaptation of Otene and Richard (2012) in their analysis of capital flight and Nigeria's economy. The functional representation of the model for this study is as follows.

$$RGDP = F(FDI, DI, FD, TO, UEM, Dummy)$$

The above functional relation can be written in equation as below;

$$\ln Rgdp_{it} = \gamma_0 + \gamma_1 \ln fdi_{it} + \gamma_2 \ln fd_{it} + \gamma_3 \ln di_{it} + \gamma_4 \ln unem_{it} + \gamma_5 \ln dum_{it} + \gamma_6 \ln to_{it} + \varepsilon_{it} \dots \dots \dots 1)$$

Where:

$\ln rgdp$ is the natural logarithm of real gdp of individual country at time t

$\ln fdi$ is the natural logarithm of foreign direct investment

$\ln di$ is the natural logarithm of domestic investment

L_{nunem} is the natural logarithm of unemployment

L_{ndum} is the natural logarithm of civil unrest

L_{nto} is the natural logarithm of trade openness

$(\gamma_0 - \gamma_6)$ are the parameters of regression to be estimated

ε_{it} is the uncorrelated disturbance term.

From the foregoing model, the long run model based on the individual effect of real GDP on each independent variable is computed as well as pairwise Granger causality test. In the absence of long-run causality, the research investigates the short run causality among the variables under consideration.

ESTIMATION TECHNIQUES

Panel Unit Root

Recent development in the field of applied econometrics suggests that panel-based unit root test tends to be more powerful and robust than time series individual unit.

One special feature of the Fisher-type test as observed by Whitehead (2002) is that it considers a unit root test on each panel's series separately, then combine the p-values to obtain an overall test of whether the panel series contains unit root by utilizing the Choi (2001) methods. It has an advantage over Lm, Pesaran, and Shin in that it doesn't require a balanced panel, it can also use different lag length in the individual ADF regressions. Consider a separate ADF regression specify for each cross section below,

$$y_{it} = \alpha y_{t-1} + \sum_{j=1}^{p_i} \beta_{ij} \Delta y_{t-j} + X_{it}^{\circ} \delta + \varepsilon_{it} \dots \dots \dots (2)$$

The null hypothesis for the above test can be written as; $H_0: \alpha_i = 0$ for all i while the alternative hypothesis is given by $\begin{cases} \alpha_i = 0 \text{ for all } i = 1, 2, 3, \dots \dots N \\ \alpha_i < 0 \text{ for } i = N + 1, N + 2 \dots N \end{cases}$

If we define φ_i as the p -value from any individual unit root test for cross-section, then under the null of unit root for all N cross-sections, we have the asymptotic result that

$$-2 \sum_{i=1}^N \log(\varphi_i) \rightarrow \chi_{2N}^2 \dots \dots \dots (3)$$

In addition, Choi demonstrate that

$$\frac{1}{\sqrt{N}} \sum_{i=1}^N \Phi^{-1} \varphi_i \rightarrow N(0,1) \dots \dots \dots (4)$$

Where Φ^{-1} is the inverse of the standard normal cumulative distribution function

The second test considered by this research is Hadri test of panel stationarity, Hadri test is similar to KPSS unit root test and has a null hypothesis of no unit root in any of the series in the panel. The test considers the residual from an individual regression of series under investigation. Consider the equation below.

$$y_{it} = \delta_i + \eta_i t + \varepsilon_{it} \dots \dots \dots 5)$$

Given the residual ε from the individual regressions, LM can be form which can later be integrated in Z statistics

$$LM = \frac{1}{N} \left(\sum_{i=1}^N \left(\frac{\sum s_{it}^2}{T^2} \right) \right) / f_0 \dots \dots \dots 6)$$

Where s_{it}^2 the cumulative sums of the residuals, from the above Hadri for, mulated the following Z-statistics

$$Z = \frac{\sqrt{N(LM-\xi)}}{\zeta} \rightarrow N(0,1) \quad (7)$$

Where $\xi = 1/6$ and $\zeta = 1/45$

Heterogeneous Panel Cointegration Test

The cointegration approach in time series analysis, in which regression of variables of the same order of integration can produce stationary series can be extended to panel series, as observed by researchers recently, although, the coefficients and other related statistical tests are totally different from those of times series cointegration models. In panel data alike there can be a long-run relationship among macroeconomic variables under panel investigation. See Pedroni (2000, 2004). Baltagi (2005) is of the view that panel cointegration models are directed towards finding the sound long-run economic relationships typically encountered in macroeconomic variables. Such relationships are explained by the economic theory, through the estimation of regression coefficients and testing them against theoretical restrictions. 1. Pedroni tests for cointegration allow for heterogeneous intercepts and trend coefficients across cross-sections. 2. It is newly developed compare to Johansen (1989), Kao (1999), Engle and Granger (1987), meanwhile, Pedroni (2004) 3. It considers seven different test statistics to ascertain cointegration among variables. 4. It uses both parametric and non-parametric estimation of long-run variance.

Consider the following panel regression adopted and modified from Kao and Chiang (2000)

$$y_{it} = x_{it} \delta + z_{it} \emptyset + \varepsilon_{it} \quad (8)$$

Where y_{it} are 1×1 , δ is a $k \times 1$ vector of slope parameters, z_{it} is the deterministic component and ε_{it} are the stationarity disturbance terms, x_{it} are $k \times 1$ integrated processes of order one for all i where;

$$x_{it} = x_{it-1} + \varepsilon_{it} \quad (9)$$

The assumption of cross-sectional independence is maintained under these specifications, equation 7 describes a system of cointegrated regressions, y_{it} is cointegrated with x_{it} .

DISCUSSION OF RESULT

The section contains a brief introduction, panel unit root test, Pedroni panel cointegration to determine the long run relationship or otherwise, follow by the long run estimate using fully modified OLS and dynamic OLS, the result of Granger causality was also presented.

Panel Unit Root Test

TABLE 1 below depicts the result of the panel unit root test to ascertain whether the series under consideration are stationary at the level or after taking the first difference. Data of each variable was converted to log base ten. The famous fisher's ADF and PP test as well as had panel unit root test are used, and the result obtained is depicted below.

Table 5.1 Unit Root Test Results

Variables	ADF		HADRI
	Fisher	Choi	
<i>lnrgdp</i>	32.1221 (0.1420)	0.45412 (0.6751)	-0.5191 (0.0000)
Δ <i>lnrgdp</i>	54.4535 (0.0000)	-4.4832 (0.0000)	6.50412 (0.6981)
<i>lnfdi</i>	38.7353 (0.9210)	-1.0626 (0.1440)	4.73128 (0.0000)
Δ <i>lnfdi</i>	68.2520 (0.0000)	-5.1488 (0.000)	7.97889 (0.06102)
<i>lnto</i>	30.2052 (0.2592)	-0.6852 (0.2466)	3.70457 (0.1101)

Table .1

Variables	ADF	HADRI	
<i>lnto</i>	63.0517 (0.0001)	-4.4635 (0.0000)	5.94635 (0.0000)
<i>lnunemp</i>	43.8184 (0.2901)	-1.5765 (0.0575)	-2.9195 (0.0018)
Δ <i>lnunemp</i>	141.983 (0.0000)	-8.4815 (0.0000)	-0.46207 (0.6780)
<i>lnfdi</i>	30.2052 (0.2592)	-0.6852 (0.2466)	2.0927 (0.0182)
Δ <i>lnfdi</i>	63.0517 (0.0001)	-4.4683 (0.000)	5.94635 (0.0647)
<i>lnfd</i>	2.03677 (0.9163)	1.15777 (0.8765)	1.58369 (0.0566)
Δ <i>lnfd</i>	2.54261 (0.0063)	0.17810 (0.0052)	0.34904 (0.3635)
<i>lndum</i>	29.4139	-0.4224	2.10013

	(0.2926)	(0.3364)	(0.0179)
$\Delta \ln dum$	61.4043 (0.0001)	-4.3266 (0.0000)	6.35336 (0.2456)

Source: Author's Computation. Values in parenthesis are probability values that led to rejection or otherwise of the null hypothesis at 1% and 5% respectively. Δ signifies the first difference of a series.

The null hypothesis under fisher's ADF states that a series has a unit root (meaning that it is not stationary), while the reverse is the case under Hadri panel unit root test. However, rejection or otherwise of the null hypothesis is based on 1% and 5% level of significance. In this regard, probability value appearing in parenthesis is utilized to make a decision on whether a particular series is stationary or not. Real GDP is not stationary at a level under both tests because the null hypothesis of a unit root in ADF test cannot be rejected. When the null hypothesis in Hadri panel test is rejected (after taking the first difference), it becomes stationary. Hence, real GDP is an integrate of order one. FDI is not stationary at a level going by both tests, but its first difference becomes stationary at 1%. In the same vein, trade openness is integrated of order one because its original form has a unit root but the first difference is stationary. In a nutshell, unemployment, domestic investment, financial development, and social and civil unrest are all stationary only after first difference, conclusion resulting from unit root test shows that all the series under investigation are integrated of another one.

Table 2. Pedroni Panel Cointegration Test

Test statistics	Values	Probability
Panel v-STATISTICS	-0.608990	0.0287
Panel rho-statistics	4.061046	0.0230
Panel PP-statistics	-7.348279	0.0457
Panel ADF-statistics	-5.381968	0.0560
Group rho-statistics	5.875751	0.0170
Group PP-statistics	-9.884459	0.0000
Group-ADF-statistics	-4.885202	0.0000

Table 2 above presents the result of Pedroni panel cointegration test. Precondition for applying Johansen (1989), Engle and Granger, Pedroni (2000) test of cointegration requires that all series under investigation should be integrated of order one, meaning that they should be stationary only after first difference not second, although Paseran and shin (2001) refuted that assumption and believe that mixture of I(1) and I(0) can still be cointegrated. The result from unit root test in table 1 indicates that all the series under investigation are integrate of order one. This allows for Pedroni test for panel cointegration. Pedroni test as depicted above reports seven statistics to ascertain cointegration, for each test, the null hypothesis is either be rejected or otherwise, as appears in the table, all the test statistics reject the null hypothesis of no long-run relationship. By Pedroni approach, the long run relationship between economic growth, FDI, financial development, domestic investment, unemployment, trade openness, and social unrest is found. Economic implication of such long-run relationship exerts a considerable influence on one another. The movement produces a causal effect and distortion which can be corrected through adjustment mechanism. In the long-run, the effect identified is pooled data of the whole region, however, the co-movement of the variables affect the individual economy in ECOWAS nations.

Table 3 below depicts the panel long-run estimators using fully modified ordinary least square and dynamic OLS, this help in identifying the direction and magnitude of the relationship established earlier. Economic growth proxy by real GDP is the dependent variable, while FDI, financial development, domestic investment, trade openness, unemployment, and dummy are the regressors.

Table 3. Panel long run estimators

VARIABLES	FMOLS		DOLS	
	Coefficients	Probability	Coefficients	Probability
<i>lnfdi</i>	0.014429	0.0432	0.256726	0.0586
<i>lnunemp</i>	-0.016007	0.9286	-0.073644	0.7098
<i>lnfd</i>	0.105987	0.0180	0.231937	0.0075
<i>lnfdi</i>	0.540895	0.0000	0.457845	0.02547
<i>lnto</i>	0.432015	0.0234	0.754678	0.00245
<i>lndum</i>	-0.55462	0.1239	-0.245787	0.06412

There is a positive and significant relationship between economic growth proxy by real GDP and foreign direct investment at 5% significance level. A 1% increase in FDI will approximately raise growth by 0.014% in ECOWAS countries. A similar result was recorded for dynamic OLS though the significant level is 10%. Unemployment is negatively related to economic growth though not statistically significant. This is in line with theories that allude to a natural rate of unemployment even if there is full employment. Therefore, with unemployment in the ECOWAS region, economic growth can still be achieved because it is natural that unemployment will exist be it voluntary or involuntary unemployment. Financial development is positively related to economic growth (0.105987) and significant in explaining the growth in ECOWAS countries. A percentage raise in financial development will increase growth by 0.11% in the region, To some considerable extent, financial development has impacted on the economy of the region. There is a positive and significant relationship between domestic investment and economic growth. In dynamic regression, a percentage rise in domestic investment will increase growth by 0.46%. The magnitude of domestic investment is larger than that of FDI as expected. Domestic investment has really impacted on the economy of ECOWAS countries. This is unconnected with the entrepreneurship spirit in the region in which individuals are striving to detach themselves from a government job. Financial development has also helped in this regard. Trade openness exerts a positive influence on economic growth and is statistically significant at 1% level. This is consistent with a priori expectation as well as trade liberalization policy of the integration. Social unrest is negatively and significantly related to economic growth. This is true going by the violence and terrorist activities currently in the region.

PANEL GRANGER CAUSALITY TEST

Table 4. Panel Granger Causality Test Results

Null Hypothesis:	Obs	F-Stat	Prob.
LNDI does not Granger Cause LNGDPG	182	1.03200	0.3584
LNGDPG does not Granger Cause LNDI		3.52651	0.0315
LNFD does not Granger Cause LNGDPG	182	3.63062	0.0285
LNGDPG does not Granger Cause LNFD		0.03419	0.9664
LNFDI does not Granger Cause LNGDPG	182	0.22110	0.0019

LNGDPG does not Granger Cause LNFDI		0.41449	0.6613
LNGDPG does not Granger Cause LNTO		0.40399	0.6683
LNUNEM does not Granger Cause LNGDPG	182	2.20860	0.1129
LNGDPG does not Granger Cause LNUNEM		3.34116	0.0376
LNFD does not Granger Cause LNFI	182	0.50263	0.6058
LNFI does not Granger Cause LNFD		5.53350	0.0047
LNFDI does not Granger Cause LNFI	182	0.51318	0.5995
LNFI does not Granger Cause LNFDI		1.65133	0.1947
LNTO does not Granger Cause LNFI	182	20.8393	7.E-09
LNFI does not Granger Cause LNTO		1.40056	0.2492
LNUNEM does not Granger Cause LNFI	182	7.32138	0.0009
LNFI does not Granger Cause LNUNEM		2.13919	0.1208
LNFDI does not Granger Cause LNFD	182	0.54191	0.5826
LNFD does not Granger Cause LNFDI		1.02669	0.3603
LNTO does not Granger Cause LNFD	182	2.46592	0.0878
LNFD does not Granger Cause LNTO		12.0277	1.E-05
LNUNEM does not Granger Cause LNFD	182	0.86613	0.4224
LNFD does not Granger Cause LNUNEM		8.12970	0.0004
LNTO does not Granger Cause LNFDI	182	0.98542	0.3753
LNFDI does not Granger Cause LNTO		3.69207	0.0269
LNUNEM does not Granger Cause LNFDI	182	1.88355	0.1551
LNFDI does not Granger Cause LNUNEM		9.32349	0.0001
LNUNEM does not Granger Cause LNTO	182	10.3863	5.E-05
LNTO does not Granger Cause LNUNEM		5.63986	0.0042

Table 4 above depicts the panel Granger causality test. There is one-way causality running from GDP growth rate to domestic investment. This implies that GDP growth is causing domestic investment and not vice versa. Financial development is causing GDP growth or economic growth and not contrary and is statistically significant at 5%. FDI is Granger causing the economic growth of the table above, and FDI causes economic growth and not vice versa and is significant at 5% level. There is unidirectional causality running from trade openness to growth rate of GDP. There exists unidirectional causality running from unemployment to GDP growth rate and is statistically significant at 5%. Financial development does granger cause domestic investment and not vice versa. There is no causality between foreign direct investment and domestic investment. Likewise, between trade openness and domestic investment, the result is indeterminate. There is unidirectional causality running from unemployment to domestic investment. There is no causality between FDI and financial development. Also, there is no causality between trade openness and financial development. There is one-way causality running from unemployment to financial development. There is also one-way causality running from foreign direct investment to trade openness, while there is unidirectional causality running from FDI to unemployment. The result also reveals that trade openness does granger cause unemployment but not vice versa at 1% level of significance. Meanwhile, going by the result of the Granger causality test, the multivariate regression can be conducted through seemingly unrelated regression(SUR).

Table 5. Seemingly Unrelated Multivariate Regression Result (RGDP as the dependent variable)

Variables	Coefficients	Standard error	t-statistics	probability
LNDI	0.013675	0.003706	3.689498	0.0003
LNFD	0.126202	0.004328	29.16082	0.0000
LNFDI	0.155637	0.003957	39.32809	0.0000
LNT0	0.105890	0.002070	51.16006	0.0000
LNUNEM	-0.185707	0.005257	-35.32622	0.0000
C	-0.456299	0.020407	-22.35938	0.0000
R-squared	0.929900			
Adj R-squared	0.928182			
S.E. of reg	1.001374			
F-statistic	541.2234			
Prob(F-statistic)	0.000000			
D-W statistics	1.994846			
Jaquebera stat	5.990050 (0.08249)			

Table 5 above shows the result of multivariate regression computed using level data by adopting seemingly unrelated regression. The data is in log form and there is a positive and significant relationship between GDP growth rate and domestic investment. A unit raised in domestic investment will enhance economic growth in ECOWAS countries by 0.013675. As expected domestic investment has positively and significantly impacted on the economies under investigation. Financial development impacted positively on the economic growth of the countries and statistically significant at 5% level of significance. There is a positive and statistically significant relationship between foreign direct investment and growth rate of GDP in ECOWAS. This is in line with the economic theory that the inflow of the foreign direct investment has significantly improved economic performance in the region. In the same vein, there is a definite and statistically significant relationship between trade openness and economic growth. Opening borders for member counties has significantly impacted on economic growth of the member nations. There exists a negative and significant economic relationship between unemployment and economic growth. This makes unemployment a peculiar phenomenon to any economy, whether developed or developing.

To determine the adequacy of the regression model, coefficient of determination, otherwise known as R squared, the R-square value is checked. R square value explains the variation independent variable resulting from independent variables. From our estimate 0.929900 or 93% variation in growth rate of GDP in ECOWAS countries was explained by domestic investment, financial development, foreign direct investment, trade openness, and unemployment, therefore as expected the R-square is high. The overall adequacy of the model was measured by F-statistics as revealed. The model is legitimate because the probability value is less than 5%. Durbin-Watson statistics shows that the residual of the model is free from autocorrelation as the statistics approach 2. Jaquebera statistics shows that the residuals were normally distributed although at 10% level of significance.

CONCLUSION

Based on the empirical analysis it can be inferred that the level of foreign direct investment in the selected ECOWAS member country has significantly influenced the level of their economic growths. Whereas the determinants of their economic growths were the volume of domestic investment, financial development, trade openness, unemployment rate and the presence of civil and political unrest exert a significant impact.

As found in the empirical analysis, economic growth responds negatively to changes in financial development in the respective countries. It indicates that the financial system of these countries is not developed enough to enhance the economic growth of the countries. It further explains that the volume of domestic investment in the respective countries has driven some of the economies' growth. Majority of these economies have limited number of multinational companies, so a more significant percentage of the economic activities have been undertaken by local investors and nationals of the economies.

The unemployment rate has been found to be negatively affecting the economic growth of ECOWAS member countries. This finding is not contrary to the a priori expectation. Increasing level of unemployment increases the rate of dependency on the economy, and aggregate economic growth reduces. Thus, the level of economic growth is likely to reduce.

Trade openness has been found to be one of the factors enhancing the economic growth of the selected West Africans Countries. This is economically logical, given the backward nature of these economies regarding technological advancement. Considering the positive impacts on international trade, it is expected that economies which are more open to international trade should grow faster economically as their transfer of human, natural and economic resources and goods and services.

RECOMMENDATION

Based on the findings of this study, some policy suggestions are proposed as follows

- i. The Government of each of these ECOWAS member countries and their respective financial authorities should put in place appropriate policies and an environment conducive enough to increase the level capital inflow and reduce capital outflow in their economies. These policies could be the adoption of business-friendly interest rate, rehabilitation of dilapidated infrastructures, and provision of regular power supply among others.
- ii. The governments in ECOWAS member states should develop policies that improve the database management of the economic sector, identify strategies to curb capital flight, increase the technological efficiency of the sector for proper monitoring and control of funds from FDI.
- iii. In general, ECOWAS member countries need to collectively put measures in place to enhance foreign direct investments as a way of strengthening regional economic development and to use collective efforts to bring regional economic growth to a sustainable level as it has been seen in other regions such as the European Union.

REFERENCES

- [1] Alege, P.O. and Ogundipe, A.A, (2005). Foreign Direct Investment and Economic Growth in ECOWAS: A system GMM approach. *Covernebt Journal of Business and Social Science(CJBSS)* Vol 5, No 1, 1-3.
- [2] A, U. Waheed (2012) Foreign Direct Investment and Monetary Union in ECOWAS Sub-Region: Lessons from Abroad, a journal of Applied Finance&Banking.Vol 2, No4,pp186-189.
- [3] Asiedu, E. (2002). On the determinants of foreign direct investment to Developing Countries: Is Africa Different? *World Development*, 30(1), 107-130.
- [4] Baba Insah (2013) Foreign Direct Investment Inflows and Economic Growth in Ghana: *International Journal of Economic Practices and Theories*, Vol 3, pp 115-117.
- [5] Borenstein E., De Gregorio J. and Lee J. (1998) How does Foreign Direct Investment Affect Economic Growth? *Journal of International Economics*, vol 45, pp 115-135.
- [6] Eli, A, and Isitua, K.O (2006) Determinant of Foreign Direct Investment and economic growth in the West African Monetary Zone; A system Equations Approach, University of Ibadan, pp 10-16.
- [7] Emmanuel, S. Ikena, D. (2016) Econometric Analysis of Foreign Direct Investment and Nigeria's Economic Performance: *Journal of Econometrics and sustainable development*, Vol 7, pp 90-91.
- [8] Imodu, E.C (2012). An empirical analysis on the Contribution of Foreign Direct Investment on Nigeria's Economic Growth 1980-2009: *International Journal of Business and Social Science* vol. 3 pp30-35.
- [9] Ibrahim, D.R. and Mutiu A, O. (2013) Foreign Direct Investment, Government and Economic Growth Trilogy: New Evidence from ECOWAS Countries. Vol 1, Issue 2, pp5-7
- [10] John C. and Nadege, Y. What Drives Foreign Direct Investments into West Africa? An Empirical Investigation: *African Development Bank Group*, pp3-5.
- [11] Kudaisi B, V. (2014). An empirical determinant of Foreign Direct Investment in West Africa: *International Journal of Development and Economic Sustainability*; vol2, pp 19-23.
- [12] Muhammad S. (2014) Relationship between Foreign Direct Investment Inflow and Economic Growth: A Review, *Singaporean Journal of Business Economics, and Management Studies*, Vol2, No 9, pp 67-71.
- [13] Moran, E. Graham and M Blamestorm, Does FDI promote Development? Washington, DC: Institute of International Economics.
- [14] Muhammad S. (2014). Relationship between Foreign Direct Investment inflows and economic Growth; *Journal of Business Economics, and Management Studies*, vol2; A review 9, 68-70.
- [15] Njoku, C. Okuru, F.N and Bakwena, M. (2011) Factors Influence Foreign Direct Investment in Economic Community of West African State (ECOWAS): *International economics and finance journal*, vol 6, No 2, pp188-191.
- [16] Okeke, R, C. Ezebasili, V. Nwakoby, C, N. (2013) Foreign Direct Investment and economic growth in Nigeria: *Anambra State University*, pp 31-34.
- [17] Onyeagn, A.N, Okeiyinka, K.O, (2013) Investigation the Interaction between FDI and Human Capital on Growth: Evidence from Nigeria, *Asian Economic, and Financial*, pp 1138-1142.

- [18] Shuaibu, I.M, DaninaE, Imoagene I, Pogoson O.O, (2015) the impact of Foreign Direct Investment on the growth of Nigerian economy: International journal of research in Business Studies and Management, vol2, pp38-41.
- [19] Saqib, N. Masnoon, M. and Rafiqu, N. (2013). Impact of Foreign Direct Investment on Economic Growth of Pakistan. Advance Management and Applied Economics, vol, 3, pp35.
- [20] UCTAD (2010), World Investment Report2010, UNCTAD, New York & Geneva.
- [21] UNCTAD (2015). United Nations Conference on trade and development, FDI inflow and stock. (Accessed, 12.04 2015).