

THE ANALYSIS OF TRADE OPENNESS, FOREIGN DIRECT INVESTMENT AND ECONOMIC GROWTH IN ECONOMIC COMMUNITY OF WEST AFRICAN COUNTRIES (ECOWAS)

Jirbo, Boniface Verr, Jonathan Danladi D. (Ph.D) And Atayi, Abraham Vincent (Ph.D)

Department of Economics, Afe Babalola University Ado Ekiti, Nigeria.

Abstract: *The nature of the relationship between FDI, trade openness and economic growth has come under scrutiny as mixed evidences have been found in the literature and there have been loud dissenting voices claiming that trade openness would only hamper growth in developing countries. On this note, by examining the impact of trade openness and FDI on economic growth, this study shed more light on the dynamic connection between trade openness and economic growth in ECOWAS. Panel data spanning the period from 1994 to 2019 obtained from the World Bank development indicators was used. Trade openness was measured by Trade share (TS) and the Composites Trade Share (CTS). Economic growth was measured by GDP per capita (GPCR), while FDI was measured as the percentage share of FDI in GDP (FDI_GDP). Kao and Pedroni cointegration tests were used to analyze long-run relationship among the variables and it shows that there is a cointegration and long run relationship between the variables. Autoregressive Distributed Lag (ARDL) technique was used. The ARDL results of TS shows that in the long run FDI will increase growth by 0.087%, while TS has negative and insignificant effects on economic growth. The CTS model indicates that FDI and CTS will increase growth by 0.087% and 13.74% respectively. In the short run, FDI has positive effects on growth in Senegal, Cabo Verde, Liberia and Gambia and negative effect on growth in Benin, Ghana and Nigeria. The TS and CTS have positive effect on growth in Benin and Ghana, but negative effect in Senegal, Cabo Verde and Liberia. FDI and trade openness have positive effects on growth in the long-run, but the effect varies across ECOWAS countries in the short run. Thus, there is a need to encourage more FDI inflow and trade openness to boost growth by promoting a conducive business environment and export diversification.*

Keyword: Trade Openness, Composite Trade Share (CTS), ECOWAS, Foreign direct investment (FDI), Autoregressive Distributed Lag (ARDL)

JEL: F15, F18, O24

I. Introduction

It is well known that developing countries have enormous constraints in what they can bring to global trade and investment. Economic Community of Western African States (ECOWAS) export primary commodities that make them vulnerable to external shocks. Besides, inadequate infrastructure and the small size of their domestic markets often limit their access to foreign markets (Clark, Dollar and Micco, 2004; Gulati et al., 2007). Rising trade costs and limited access to technology and intermediate inputs for firms in developing countries constitute a barrier to entry into world markets, as well as participation in global value chains (Arvis et al, 2013). The relationship between trade liberalisation and economic growth has been extensively examined. Previous studies of economic growth theories have indicated that trade openness has the potential to boost economic growth in the long run (Edwards, 1993; Grossman and Helpman, 1991; Romer 1990). In his neoclassical model, Romer (1990) showed that free international trade can speed up growth. He also demonstrated that economies with large stock of human capital experience faster growth. The model helps explain why growth is not observed in countries with low levels of human capital and also shows that less developed economies can still benefit from globalisation. East Asian economies have achieved remarkable growth in manufacturing, human and physical capital and macroeconomic stability through the promotion of trade (World Bank, 1993). Stiglitz (1996) reveals that the impressive success of East Asian economies or the Asian miracle was imparting because of trade openness.

The prosperity achieved by East Asian economies encouraged other developing countries to embark on policies that would reduce export and import tariffs and other non-tariff barriers (Keho, 2017). However, the endogenous growth model asserts that the contribution of trade for economic growth rests on whether the force of comparative advantage orientates the economy's resources towards activities that generate long-run growth or away from such activities. The theory, therefore, suggests that technological and financial limitations do not allow developing countries to effectively adopt the new technologies of advanced economies (Zahongo, 2016). This means that the growth efforts of trade may differ according to an economy's level of development. Some theoretical studies note that trade openness may hamper long-run growth if the economy specialises in sectors with dynamic comparative disadvantage in terms of productivity growth or technological change (Hausmann, Hwang and Rodrik, 2007; Redding, 1999; Young, 1991; Lucas 1988). Developing countries export primary commodities which make them vulnerable to external shocks. Nevertheless, international trade is seen as an avenue that can boost economic development in a developing country.

The real gross domestic products (RGDP) growth of the ECOWAS region exceeded 5% from the onset of 2000 until 2014. This was mainly driven by the dynamism of the Nigerian economy, which accounts for about 70% of the region's GDP. The recent changes in the macroeconomic variables of the ECOWAS countries imply that high economic growth rate may be far from being achieved as growth, in recent time, continues to plummet. For instance, the real GDP growth in Benin fell from 6.9% in 2013 to 5.0% in 2016. Other nations like Burkina Faso (6.6% - 5.4%), Gambia (4.8% -2.3%), Ghana (7.3% -3.3%), Liberia 7.3%-2.0%), Sierra-Leone (20.1%-4.3%) and Niger (5.3%-4.6%) had a similar experience from 2013 to 2016 (ECOWAS 2019). Similarly, Nigeria had -1.7% and -2.06% growth rate in the first and second quarter of 2016(Ado, 2017). This indicated an economic recession with significant effect on the region's growth prospects, given that the protracted economic downturn in Nigeria could adversely affect other countries.

Many ECOWAS members continue to record high value of imports in manufacturing goods rather than in exports. In Sierra Leone, the decline in exports caused the current account deficit to widen to 15.6% of GDP from 13.5% in 2019. In Niger, the current account deficit rose to 12% of GDP in 2020 from an already high 12.5% of GDP in 2019, due to lower export earnings. The current account position was expected to remain in deficit at 3.7% of GDP, largely affected by the fall in oil revenues and limited external financial flows in Nigeria. The recession in Nigeria resulting from a blend of oil price effect and structural issues has been made worse by policy uncertainties, especially exchange rate policies.

From the foregoing, the ECOWAS growth contraction revolves around weak domestic and external demand for major exports, particularly crude oil and mineral resources. The decline in FDI and continuing saving-investment gap in the region and underperformance in external trade are critical for growth. There are key factors that have hampered the trade performance of most ECOWAS members. For instance, the United Nations Economic Commission for Africa (2015) recognises the major factors limiting Africa's trade as low production and low-value export base, and primary commodities, high level of tariff and non-tariff barriers to intra-African trade and low access to international market.

In the year 2017, commodity exports as a share of total merchandise exports were very high for many ECOWAS members. Niger had 60% of her commodity goods as a share of total exports, Benin (87%), Burkina Faso (96%). The Gambia, Sierra Leone and Liberia had 88%, 96% and 50% respectively. Efforts made by ECOWAS to accelerate growth are always affected by some structural factors. These factors include poor diversification and processing of primary commodities, due to overly rigid economic structures in the region, as well as poor production capacity, particularly in the manufacturing sector. The share of natural resources in ECOWAS's exports to the world was 68.5% and to Africa 15.8% compared to the 9.2% and 29.7% of manufacturing in export to the world and Africa. The ECOWAS region is the least industrialised region in terms of manufacturing to GDP (UNCTAD, 2013; 2019). This indicates that natural resources are the main export items of African countries, with mineral fuel as the leading product. This high reliance on natural resources trade makes Africa's exports sensitive to commodity price changes, causing fluctuations in foreign earnings and revenue.

The trade openness's indicators include the flow of international capital and technology, growth of international trade, foreign direct investment (FDI). Africa countries degree of openness at 48.3% was less than the world average of 53.5% in 2016. A high value of trade openness indicates greater dependence of economies on foreign markets (UNCTAD, 2019). An argument in favour of trade openness is that the more an economy is open to trade, the more its national income is likely to increase. This is because increased trade openness stimulates foreign direct investment (FDI), which in turn leads to increased growth in the long run (Klasra, 2011). In this view, it is believed that a higher degree of trade openness allows more FDI inflows (Osabuohien, 2007). Currently, for

countries to embrace more trade openness in their development process and improve their participation in the world economy, African leaders are set to establish African Continental Free Trade Area (AfCFTA). AfCFTA is a window of opportunity for African countries to promote intra-African trade, diversify and structurally transform the continent's economy as well as to achieve sustainable growth. The problems facing these countries in terms of contracted growth with all its negative consequences and the possibility of exploiting trade openness and FDI to spur economic growth have been highlighted. It is against this background that this study examines the extent to which trade openness and FDI affect the African economy given the unprecedented situation of the continent.

II. Literature Review

A. Overview of Trade share and Foreign direct investment and Economic Growth

The analysis of the growth of exports and imports gives an indication as to the extent of the openness of an economy. However, trade flow analysis provides the basis of robust empirical investigation of the openness of an economy. Empirically, openness can be measured by the share of trade (import plus export) in total output, measured by the Gross Domestic Product (GDP). This is a broad concept of openness; in the narrow context, the ratio of imports or exports to GDP can represent the degree of openness of an economy.

The broad measure of openness, total trade to GDP (TT/GDP) trade share (TS) declined gradually from 1994 to 1997. In 1998 TS increased, but at a decreasing rate to 2005 where it experienced fluctuations. Furthermore, TS dipped by 5.71 in 2015 due to economic recession, but sharply increased in 2016 to 8.79 as a result of the consistent implementation of adjustment measure (Figure 1). For instance, the most important factor responsible for the upsurge in the trade volume and the phenomenal increase in the openness index was the final removal of other restrictions on trade as a final measure of the Nigerian government in becoming a member of the World Trade Organisation (WTO) in 1995. This led to increased trade relations with other countries. While the economy has recorded remarkable progress in improving trade relations with other countries as reflected by the increasing rate of total trade to GDP, the rate of economic growth has remained sluggish. The low correlation depicted by the graph between the openness of the economy and the growth rate of the economy showed that openness has not contributed much to economic growth. Though, the above trend analysis is informative and indicative of the inverse relationship between economy growth and external trade in Nigeria, definite statements cannot be made without any empirical basis. Foreign Direct Investment (FDI) is an investment made to acquire a lasting management interest in a business enterprise operating in a country other than that of the investor (World Bank, 1996). Foreign direct investment (FDI) was steady from 1994 to 2005 and has since experienced fluctuations although there was a less drastic increase slightly in 2011 to 1.30. On the other hand, gross domestic product per capita (GPCP) has experienced a steady increase over the years. The situation further improved from 1995 when the index rose to about 17.0 because of a policy of deregulation that was re-introduced.

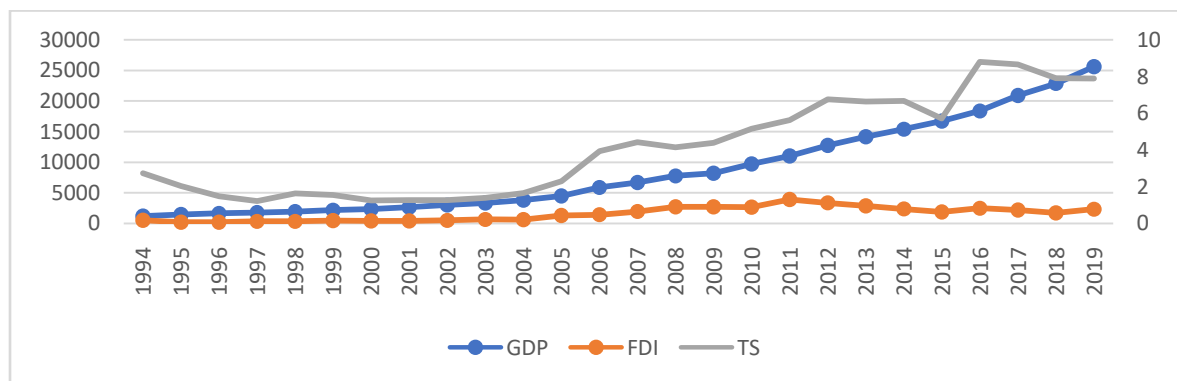


Figure 1: Trend analysis of trade share and foreign direct investment and economic growth

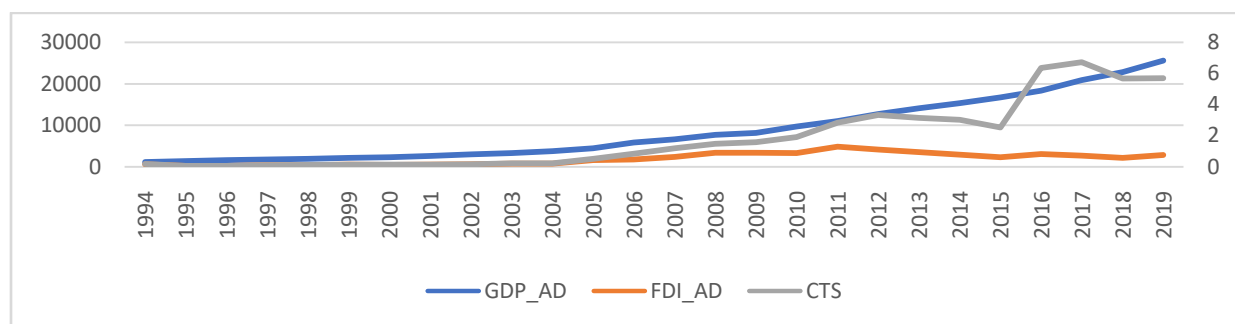


Figure 2: Trend analysis of composite trade share and foreign direct investment and economic growth.

As shown in Figure 2, composite score (CTS) maintained a stable score from 1994 to 2008 where it increased sharply to 0.58 and to 2.22 in 2012. In 2015, CTS dipped to 1.92 and peaked in 2016 to 5.54 and 5.99 in 2017. Foreign direct investment (FDI) was steady from 1994 to 2011 where it peaked to 1.30 and declined gradually to 0.62 in 2015. Gross domestic product (GDP) has experienced a steady increase over the years as seen in Figure 2.

B. Empirical Review

Kim (2011) used the instrumental variable threshold approach to investigate whether trade openness contributes to long run economic growth. The results indicated that higher trade openness leads to higher economic growth for developed economies. El-Khoury and Savvides (2006) investigated the relationship between openness (in services) and economic growth for a group of countries at different stages of economic development. The authors observed a positive and significant relationship between openness and economic growth. Edoumiekumo and Opukri (2013) examined the contributions of international trade (proxy with export and import values) to economic growth in Nigeria measured by real gross domestic product (RGDP). Time-series data obtained for a period of 27 years were analysed using Augmented Dickey-Fuller (ADF) test, Ordinary Least Square (OLS) statistical technique, Johansen Cointegration test and Granger Causality test. The results showed that positive relationship exists between the variables and there is cointegration among the variables. The Granger Causality test revealed a unidirectional relationship, showing that RGDP Granger causes export and import Granger causes RGDP and export. Saleem, Naanwaab and Yeboah (2012), in their study, used a Cobb-Douglas production function as in Miller and Upadhyay (2000) to estimate the impact of FDI, exchange rate, capital-labour ratio and trade openness on GDP for 38 African countries from 1980 to 2008. Data were transformed to natural logs and estimated, using alternative panel models which included one- or-two-way fixed or random effects models. The results showed that trade openness has a positive relationship with GDP. Omope P.C (2010) investigated the causal relationship among financial development, trade openness and economic growth in Nigeria and discovered that trade openness and financial developments have causal impact on economic growth in the country. Conversely, growth has causal impact on trade and financial development, implying support for growth-led trade but no support for trade-led growth.

C. Theoretical Framework

The controversy surrounding the link between trade openness, investment and economic growth has continued to generate interest among scholars and economists alike. Some scholars argue that open trade policies are very crucial in long term economic growth. Thus, it is believed that a policy of trade openness allows for free movement of goods and services between countries, leading to increase in volume of trade (exports and imports). In the case of exports, a country generates higher revenue and incomes as its exports volume expands. On the import side, the economy is able to attract and benefit from technological transfer in form of human and non-human capital, resulting in the expansion of production capacity which in turn facilitates higher growth rates. Overall, open trade policy increases production of variety (and high quality) of goods, raises employment of factors of production and generates high income, lowers prices of goods and services, and improve the standard of living of the people. In fact, the World Bank report (2002) showed that more globalised (open) economies experienced larger growth rates compared to less globalised economies. The bank argued further that more open economies have been able to reduce poverty substantially compared to less open ones. Examining this proposition, Alcalá and Ciccone (2003), Chang et al, (2005), El-Khoury and Savvides (2006), Billmeier and Nannicini (2009), Mallick (2008), Yucel (2009) and Bekaert et al, (2011) showed that more openness raises economic growth.

The theory explains two issues in the theory of comparative advantage: the factors that determine comparative advantage of countries and, the effects of trade on factor income in the trading countries. On the assumption of equal or similar technology and tastes, Heckscher's Ohlin Theory focuses on the differences in relative factor endowments and factor prices between nations as the most determinants of trade. The model identifies the

difference in pre-trade product prices between nations as the basis for trade. The theory assumes two countries, two commodities and two factors. There is perfect competition in both factor and product market. It assumes that factor inputs (labour and capital in the two countries) are homogeneous. Production function also exhibits constant return to scale. Production possibility curve is concave to the origin. The model suggests that the less developed countries that are labour abundant should specialise in the production of primary product especially agricultural product because the labour requirement of agricultural products is high except in the mechanised form of farming. On the other hand, the less developed countries should import capital-intensive products from developed countries. Heckscher's Ohlin Theory concludes that trade increases total world output, all countries gain from trade, and trade enables countries to secure capital and consumption of goods from other parts of the world. Thus, trade stimulates economic growth (Nageri, Ajayi, Olodo, and Abina, 2013).

III. Methodology

This research seeks to examine the impact of trade openness and foreign direct investment on economic growth in ECOWAS. The study covers the period of 26 years (1994 to 2019). The data for this study were obtained from the secondary sources and they are sourced from World Bank publication of its World Development Indicators (WDI). These data include trade openness, gross domestic product per capita, gross fixed capital formation, consumer price index, life expectancy at birth and exchange rate. This period was chosen because it was marked with a series of economic policies and interventions, relating to regional as well as international trade from various member governments. Besides, the period witnessed the onset of unprecedented global financial crisis, which had significant impact on trade and investment activities across the world. As a result of this, this present study was carried out on selected ECOWAS countries (Francophone and Anglophone African countries). The Anglophone countries are Liberia, Gambia, Ghana and Nigeria, while the Francophone countries are Benin and Senegal for the Francophone countries. Within the scope of the study is one Lusophone African country which is Cabo-Verde. All the countries were selected to capture the effects of trade openness and foreign direct investment on economic growth in ECOWAS as a region and in those member countries. The key variables for the subsequent econometric analyses are trade openness, investment and GDP in ECOWAS region. In analysing the equations, the panel Autoregressive Distributed Lag (ARDL) was employed.

Model Specification

The economic intuition derived from this framework provides the platform to express the link between the aforementioned variables of interest in implicit and explicit functional forms. Based on the definition and measurement of trade, openness as two models are presented. The first model captures trade openness as Trade share (TS) and the second model captures trade openness as Composites Trade Share (CTS). Accordingly, Trade Share captures only the domestic dimension, while CTS share is the combination of Trade Share and World Trade Share (WTS), which covers the global dimensions. By combining Trade Share and World Trade share into a single measurement, CTS has the advantage of capturing the multi-dimensional of trade openness and, hence, is able to provide a better understanding of trade openness condition of the nation. Thus, the model specification of the link between trade openness, foreign direct investment and economic growth in ECOWAS countries is expressed in term of TS and CTS models as follows for the long run:

Trade Share (TS) and Composite Trade Share (CTS) Models

$$GDP = f(FDI_GDP, TS, EXR, GFCF, POP, LEB, CPI) \quad (1)$$

$$GDP = f(FDI_GDP, CTS, EXR, GFCF, POP, CPI, LEB) \quad (2)$$

F(.) represents the a priori sign expectations of the respective variables as serially identified in the functional (f) representation in equation (1 and 2). Notably, in this present study, a panel data used by Pesaran, Shin, and Smith (1999) that are employed. This is a dataset in which the behaviours of entities are observed across time. The functional relationship model of growth in equation (1 and 2) are estimated with the general autoregressive distributed lag (ARDL) (p, q) specification that includes both lagged dependent variables and lagged selected independent variables

Long run Trade Share (TS) Model

$$\begin{aligned} \Delta GPCR_{i,t} = & \psi_{0i} + \psi_{1i} FDI_GDP + \psi_{2i} EXR_{i,t} + \psi_{3i} TS_{i,t} + \psi_{4i} \ln GFCF_{i,t} + \psi_{5i} \ln POP_{i,t} + \psi_{6i} LEB_{i,t} + \\ & \psi_{7i} \ln CPI_{i,t} + \sum_{j=1}^{N1} \lambda_{1ij} \Delta GPCR_{i,t-j} + \sum_{j=1}^{N2} \lambda_{2ij} \Delta FDI_GDP_{i,t-j} + \sum_{j=1}^{N3} \lambda_{3ij} \Delta EXR_{i,t-j} + \sum_{j=1}^{N5} \lambda_{4ij} \Delta TS_{i,t-j} + \\ & \sum_{j=1}^{N6} \lambda_{5ij} \Delta \ln GFCF_{i,t-j} + \sum_{j=1}^{N7} \lambda_{6ij} \Delta \ln POP_{i,t-j} + \sum_{j=1}^{N8} \lambda_{7ij} \Delta CPI_{i,t-j} + \sum_{j=1}^{N8} \lambda_{7ij} \Delta LEB_{i,t-j} \varphi_i + \eta_{i,t} \end{aligned} \quad (3)$$

Long run Composite Trade Share (CTS) Model

$$\Delta GPCR_{i,t} = \psi_{0i} + \psi_{1i} FDI_{GDP} + \psi_{2i} EXR_{i,t} + \psi_{3i} CTS_{i,t} + \psi_{4i} \ln GFCF_{i,t} + \psi_{5i} \ln POP_{i,t} + \psi_{6i} LEB_{i,t} + \psi_{7i} \ln CPI_{i,t} + \sum_{j=1}^{N1} \lambda_{1ij} \Delta GPCR_{i,t-j} + \sum_{j=1}^{N2} \lambda_{2ij} \Delta FDI_GDP_{i,t-j} + \sum_{j=1}^{N3} \lambda_{3ij} \Delta EXR_{i,t-j} + \sum_{j=1}^{N5} \lambda_{4ij} \Delta CTS_{i,t-j} + \sum_{j=1}^{N6} \lambda_{5ij} \Delta \ln GFCF_{i,t-j} + \sum_{j=1}^{N7} \lambda_{6ij} \Delta \ln POP_{i,t-j} + \sum_{j=1}^{N8} \lambda_{7ij} \Delta \ln CPI_{i,t-j} + \sum_{j=1}^{N8} \lambda_{7ij} \Delta LEB_{i,t-j} \varphi_i + \eta_{i,t}$$

(4)

Where;

ψ_0 captures the intercept of the model; $\psi_i - \psi_6$ denotes the coefficients of the explanatory variables in determining the long-run effect; $\lambda_1 - \lambda_7$ captures the short-run dynamics in the model; φ_i is the country specific effect; $\eta_{i,t}$ denotes the error term, i is the sampled units; and t is the number of periods; $GPCR_{i,t}$ is the GDP per capita for each country i over a period of time t ; $TS_{i,t}$ and $CTS_{i,t}$ represents the first and second measures of trade openness for each country i over a period of time t ; $FDI_GDP_{i,t}$ denotes foreign direct investment per gross domestic product for each country i over a period of time t ; $\ln POP_{i,t}$ is the growth rate of population for each country i over a period of time t ; $EXR_{i,t}$ is the nominal exchange rate for each country i over a period of time t ; $\ln CPI$ denotes inflation rate for each country i over a period of time t .

Short Run Effects Model

The short-run estimates for the growth model equation (5 and 6) can be re-specified to take account of an error correction term as follows:

Trade Share (TS)

$$\Delta GPCR_{i,t} = \sum_{j=1}^{N1} \lambda_{1ij} \Delta GPCR_{i,t-j} + \sum_{j=1}^{N2} \lambda_{2ij} \Delta FDI_GDP_{i,t-j} + \sum_{j=1}^{N3} \lambda_{3ij} \Delta EXR_{i,t-j} + \sum_{j=1}^{N5} \lambda_{4ij} \Delta TS_{i,t-j} + \sum_{j=1}^{N6} \lambda_{5ij} \Delta \ln GFCF_{i,t-j} + \sum_{j=1}^{N7} \lambda_{6ij} \Delta \ln POP_{i,t-j} + \sum_{j=1}^{N8} \lambda_{7ij} \Delta \ln CPI_{i,t-j} + \sum_{j=1}^{N8} \lambda_{7ij} \Delta LEB_{i,t-j} \varphi_i + \eta_{i,t}$$

(5)

The Composite Trade Share (CTS)

$$\Delta GPCR_{i,t} = \sum_{j=1}^{N1} \lambda_{1ij} \Delta GPCR_{i,t-j} + \sum_{j=1}^{N2} \lambda_{2ij} \Delta FDI_GDP_{i,t-j} + \sum_{j=1}^{N3} \lambda_{3ij} \Delta EXR_{i,t-j} + \sum_{j=1}^{N5} \lambda_{4ij} \Delta CTS_{i,t-j} + \sum_{j=1}^{N6} \lambda_{5ij} \Delta \ln GFCF_{i,t-j} + \sum_{j=1}^{N7} \lambda_{6ij} \Delta \ln POP_{i,t-j} + \sum_{j=1}^{N8} \lambda_{7ij} \Delta \ln CPI_{i,t-j} + \sum_{j=1}^{N8} \lambda_{7ij} \Delta LEB_{i,t-j} \varphi_i + \eta_{i,t}$$

(6)

Where,

$\lambda_1 - \lambda_7$ captures the short-run dynamics in the model; φ_i is the country specific effect; $\eta_{i,t}$ denotes the error term, δ_i is the error-correcting speed of adjustment term for each country; i is the sampled units; and t is the number of periods.

IV. Results and Discussion of Findings

The basic statistical summary of the series under consideration includes the observation, mean, minimum, maximum, standard deviation and observations which are summarized in Table 1. The results show that the mean GPCR is 4.53 with the standard deviation of 1.72. This indicates that the value is close to the mean. The mean value of FDI_GDP is 12.0026 and the standard deviation is 5.60. The mean value of GFCF is 15.54 and the standard deviation is 6.23 which indicates that the value does not seem to show any evidence of wide variability. Also, the mean value of EXR is 2042.33 and the standard deviation of 1091.89. The mean value of POPGR is 40805.51 and the standard deviation is 21779.21. The mean value of TS is 0.4291552 and the standard deviation of 0.134715. Also, the mean value of CTS is 0.4285174 and the standard deviation is less than the mean with a value of 0.138332. This indicates that the value is close to the mean. Lastly, the mean value of CPI is 5.789836 and the standard deviation is 5.330051. This indicates that the value seems to show some evidence of low variability.

Table 1: Summary Statistics

Variable	Mean	Std. Dev.	Observations
GPCR	4.52907	1.71077	N = 390
FDI_GDP	12.0026	5.6019	N = 390
LGFCF	15.5441	6.23105	N = 390
EXR	2042.33	1091.89	N = 390
LPOP	40805.5	21779.2	N = 390
TS	0.42916	0.13472	N = 390

THE ANALYSIS OF TRADE OPENNESS, FOREIGN DIRECT INVESTMENT...

LEB	5.36457	58.8391	N = 390
CTS	0.42852	0.13833	N = 390
CPI	5.78984	5.33005	N = 390

Source: Computation based on data from World Development Indicator (WDI)

To avoid estimating a spurious regression, the unit root tests are presented in table 2 so that the stationary condition of the series could be achieved before further estimation is carried out. The FisherPhillip Perron (PP) unit root test result shows that GPCR, LGFCF, LEXR, LPOP, TS, LEB, CTS and CPI are stationary but with exception of FDI_GDP. The Fisher Augmented Dickey Fuller (ADF) unit root test result shows that GPCR, LGFCF, LEXR, LPOP, TS, LEB, CTS and CPI are stationary with exception to FDI_GDP. The Levin Lin Chu (LLC) test indicates that GPCR, FDI_GDP, LGFCF, LEXR, LPOP, TS, LEB, CTS and CPI are stationary. Lastly, from the Im-Pesaran-Shin (IPS) test it can be observed that GPCR, FDI_GDP and LPOP are not stationary, but LGFCF, LEXR, TS, LEB, CTS and CPI are stationary. In summary, all the variables are stationary and I(0) except FDI_GDP which is stationary at first difference and I(1). Also, in table 2, to determine the existence of cointegration among the variables, Kao and Pedroni cointegration tests were conducted to analyse the long-run relationship between foreign direct investment, trade openness and economic growth. The Pedroni test results shows that the null hypothesis of no cointegration in a group panel can be rejected at 1% level of significance, while the heterogenous panel can be rejected for ADF statistics for both TS and CTS models. The Kao test reveals that there is cointegration and long-run relationship between all the variables in the TS and CTS models. The null hypothesis of no cointegration is rejected at the 1 percent level of significance.

Table 2: Unit root test and Co-integration

Variable	Fisher PP	LLC	IPS	Remark	
GPCR	52.9(0.006)	-2.9(0.002)	1.1(0.862)	I(0)	
FDI_GDP	39.6(0.114)	-4.7(0.000)	-0.8(0.208)	I(1)	
LGFCF	132.5(0.000)	-12.9(0.000)	-4.9(0.000)	I(0)	
EXR	71.7(0.000)	-3.8(0.000)	-2.2(0.015)	I(0)	
LPOP	123.5 (0.000)	-2.5(0.006)	4.1(1.000)	I(0)	
TS	86.1 (0.000)	-83.8(0.000)	-23.6(0.000)	I(0)	
LEB	172.4 (0.000)	-4.5(0.000)	-1.8(0.036)	I(0)	
CTS	86.2 (0.000)	-81.1(0.000)	-23.1(0.000)	I(0)	
CPI	126.3 (0.000)	-9.7(0.000)	-5.8(0.000)	I(0)	
Cointegration Test for the TS and CTS Models					
KAO Cointegration Test	ADF Statistics	Panel Statistics	PP- Group Statistic	PP- Panel ADF-Statistic	Group ADF-Statistic
TS	-4.29222 (0.0000)	1.001094 (0.8440)	-8.10194 (0.000)	-2.31013 (0.010)	-5.72963 (0.000)
CTS	-4.29394 (0.000)	2.98732 (0.0766)	-3.24326 (0.0006)	-3.58263 (0.0401)	-2.09833 (0.0179)

Source: Computation based on data from World Development Indicator (WDI)

Table 3 depicts the long-run dynamics of the relationship between real GDP (GPCR) and other explanatory variables such as FDI GDP, exchange rate (EXR), trade share (TS), gross capital formation (LGFCF), population (LPOP), consumer price index (CPI), and life expectancy at birth (LEB). According to the trade share (TS) model

results, FDI GDP has a positive and significant effect on GPCR at the 5% level of significance, as a unit increase in FDI GDP increases GPCR by 0.09%. However, TS is negative and insignificant. Furthermore, LPOP has a positive and significant effect on GPCR, with a percentage increase in LPOP increasing GPCR by 104.1%. In the same vein, CPI and LEB have positive and significant effects on GPCR, with a unit increase in CPI and LEB increasing GPCR by 0.43% and 167%, respectively, at 1% level of significance. The exchange rate, on the other hand, has a negative and significant effect on GPCR at 1% significance level with a decrease of 7.4% in GPCR. gross capital formation (LGFCF) has a negative and insignificant effect on GPCR. According to the results of the composite trade share (CTS) model, FDI GDP increases GDP per capita growth by 0.0871%. Similarly, EXR increases GPCR by 7.43%, CTS increases GPCR by 13.74%, and LPOP increases GPCR by 104.67%. Furthermore, a one-year increase in LEB increases GPCR by 167.34 percent, whereas a one-year increase in CPI reduces GDP per capita growth by 0.42%. gross capital formation (LGFCF) has a negative but insignificant effect on GDP per capita. Overall, FDI has a positive impact on GDP per capita growth rates in both the TS and CTS models. While TS remains insignificant, CTS has a long run positive and significant impact on GPCR.

Table 3: Long run effect of TS and CTS model

	TS model	CTS model
FDI_GDP	0.000874 (1.8)	0.000871(1.8)
EXR	-0.074282 (-3.16)	0.074312(3.16)
TS	-0.038208 (-0.58)	
CTS		0.1374(2.08)
LGFCF	-0.001265 (-0.08)	-0.001309(-0.08)
LPOP	1.046765 (8.94)	1.046776(8.94)
CPI	0.004258 (3.52)	-0.004259(-3.52)
LEB	1.673153 (4.76)	1.673424(4.76)

Source: Computation based on data from World Development Indicator (WDI)
Z-statistics is in the parenthesis

The short run analysis of the effect of trade share (TS) and FDI on GDP per capita (GPCR) in individual country is presented in *table 4*. The result presents the error correction term (ECT), which represents the speed of adjustment to equilibrium. The ECT values for all countries are negative and significant at 1% level of significance based on the Z-statistics which is greater than 2. This indicates convergence to equilibrium and that the short run inconsistencies are being corrected and incorporated into the long run relationship. On one hand, the TS model indicates that FDI_GDP and TS have positive and significant effects on GPCR in Benin, Ghana and Nigeria, while reverse is the case in Gambia and Senegal. In Cabo Verde, while TS has negative effect, FDI_GDP has positive effect on GPCR. Contrarily, TS has positive impact on GPCR, whereas FDI_GDP is negative in Liberia. On the other hand, the composite trade share (CTS) model's results indicate that FDI_GDP has positive and significant effects on GPCR in Burkina Faso, Gambia and Liberia, while reverse is the case in Benin, Ghana, Nigeria and Senegal. CTS has positive and significant effects on GPCR in Benin, Ghana, Nigeria, while the effect is negative in Cabo Verde, Gambia, Liberia and Senegal. However, both FDI_GDP and CTS have negative impact on GPCR in Senegal and positive impact in Burkina Faso. This analysis indicate that the effects of foreign direct investment and trade openness vary among countries in ECOWAS.

Table 4: Short run effect using TS and CTS model

TS MODEL								
Countries	ECT	D (FDI_GDP)	D(EXR)	DLOG(TS)	D (LGFCF)	D (LPOP)	D(CPI)	D (LEB)
Benin	-0.20 (-202.6)	0.002 (1347.5)	0.018 (65.5)	0.08 (443.6)	-0.05 (-266.6)	35.34 (0.9)	-0.002 (-14561)	8.07 (-4)
Cabo Verde	0.046 (-116.286)	0.003 (-1555.2)	-0.062 (-26.5)	-0.049 (-59.48)	-0.016 (-18.39)	-16.524 (-0.54)	0.008 (3545.84)	-12.24 (-0.17)
The Gambia	-0.249 (-30.6)	-0.008 (-144.6)	0.324 (17.14)	-0.216 (-21.99)	-0.041 (-15.76)	13.27 (0.056)	-0.012 (-211.3)	36.403 (0.17)

THE ANALYSIS OF TRADE OPENNESS, FOREIGN DIRECT INVESTMENT...

Ghana	-0.104 (-73.6)	0.006 (355.137)	-0.086 (-26.39)	0.069 (11.87)	-0.018 (-29.87)	-3.534 (-0.04)	-0.001 (-385.61)	-52.44 (-0.45)
Nigeria	-0.151 (-146.5)	-0.005 (- 582.18)	0.026 (45.57)	0.026 (143.93)	0.086 (232.99)	-0.78 (-0.03)	-0.004 (-1675.2)	0.738 (0.05)
Senegal	-0.457 (-63.01)	-0.044 (-246.621)	0.103 (73.23)	-0.231 (-39.37)	-0.234 (-164.55)	74.744 (0.165)	-0.001(- 2055.68)	8.812 (0.48)
Liberia	-0.003 (-165.02)	0(14147.4)	0.081 (43.76)	-0.352 (-246.76)	0.293 (414.81)	-1.267 (-0.65)	0.001 (5666.42)	3.214 (0.37)
CTS MODEL								
Countries	ECT	D (FDI GDP)	D(EXR)	DLOG(TS)	D (LGFCF)	D (LPOP)	D(CPI)	D (LEB)
Benin	-0.103 (-60.66)	-0.004 (-1464.7)	0.001 (-4813.04)	0.194 (410.25)	-0.038 (-124.65)	-0.114 (-0.04)	0.001 (350.56)	1.368 (0.56)
Burkina Faso	-0.004 (-4.86)	0.001 (54.67)	0.002 (-10076)	0.135 (51.48)	-0.007 (-2.81)	2.56 (15.22)	0.001 (2244.01)	-3.42 (-0.87)
The Gambia	-0.051 (-35.61)	0(5.89)	0.008 (297.48)	-0.21 (-15.22)	0.011 (3.363)	-5.29 (-0.39)	-0.007 (-110.1)	35.98 (0.15)
Ghana	-0.071 (-19.53)	0.002 (-11.48)	-0.026 (-22.5)	0.256 (17.27)	-0.033 (-29.51)	12.6 (0.17)	0.002 (925.14)	-55.34 (-0.18)
Nigeria	-0.035 (-52.09)	-0.001 (-27.25)	0.002(- 11234.9)	0.009 (14.33)	0.119 (77.77)	-5.942 (-1.03)	-0.002(- 2478.53)	17.17 (1.09)
Senegal	-0.15 (-27.59)	-0.017 (-65.46)	0.003 (14840).2	-0.015 (-1.038)	-0.131 (-61.41)	0.401 (0.072)	0.001 (793.46)	-3.29 (-0.65)
Liberia	0.01 (1.61)	0.01 (3782.24)	0.002 (4420.8)	-0.35 (-144.8)	0.286 (195.17)	-0.151 (-0.32)	0.001 (5359.06)	1.135 (0.28)

Source: Computation based on data from World Development Indicator (WDI)

Z-statistics is in the parenthesis

V. Conclusion and Recommendations

This research has shed light on the long- and short-term effects of foreign direct investment, trade share, and composite trade share in ECOWAS. Based on the findings, the study came to the following conclusions: In the long run, foreign direct investment has a positive and significant impact on ECOWAS GDP per capita growth. Trade share has a negative impact on growth as a measure of trade openness, whereas composite trade share, another measure of trade openness, has a positive and significant impact on economic growth. Foreign direct investment has a positive and significant effect on GPCR in Burkina Faso, Gambia, and Liberia in the short run, while the opposite is true in Benin, Ghana, Nigeria, and Senegal. Trade openness, as measured by CTS, has a positive and significant effect on GPCR in Benin, Ghana, and Nigeria, but has a negative effect in Cabo Verde, Gambia, Liberia, and Senegal. As a result, policies that promote a conducive business environment and attract capital goods and intermediate products are needed to encourage more FDI inflows into these countries. Such an influx would bring knowledge, on which long-term growth will be heavily reliant. This step, however, should be accompanied by adequate export diversification of the member's economy in order to embrace high export intensities in manufacturing goods while reducing primary or raw commodity exports. The Africa Continental Free Trade Area (AfCFTA) provides an opportunity for all ECOWAS countries to promote intra-African trade, diversify and structurally transform the continent's economy, and pursue important trade openness and other trade-related goals through the creation of new export opportunities. However, achieving this feat will necessitate the synchronization of ECOWAS priorities across the country, as well as strong political will, resolve, and coordination efforts from political and economic leaders.

References

- [1]. Alcalá, F., & Ciccone, A. (2003) Trade, extent of the market and economic growth 1960-1996. UPF Economics and Business Working Paper, 765.
- [2]. Bekaert, G., Harvey, C. R., & Lundblad, C. (2011). Financial openness and productivity. *World Development*, 39(1), 1-19.
- [3]. Billmeier, A., & Nannicini, T. (2009). Trade openness and growth: Pursuing empirical glasnost. *IMF Staff Papers*, 56(3), 447-475.
- [4]. Chang, R., Kaltani, L., & Loayza, N. (2005). Openness can be good for growth: The role of countries. *Journal of Economic Literature*, 31(3), 1358–1393. *Economic Growth*, 12(1), 01–25. *Economic Growth, and International Trade*, Mexico City
- [5]. Clark, X., Dollar, D., & Micco, A. (2004). Port efficiency, maritime transport costs and bilateral trade. *Journal of Development Economics*, 75(2), 417–450.
- [6]. Edoumiekumo, S. G., & Opukri, C. O. (2013). Economic growth factor in Nigeria: the role of global trade. *American Journal of Humanities and Social Sciences*, 1(2), 51-55.
- [7]. Edwards, S. (1993). Openness, trade liberalization, and growth in developing countries. *Journal of Economic Literature*, 31(3), 1358–1393
- [8]. El Khoury, A. C., & Savvides, A. (2006). Openness in services trade and economic growth. *Economics Letters*, 92(2), 277-283
- [9]. Gulati, A., Minot, N., Delgado, C., & Bora, S. (2007). Growth in high-value agriculture in Asia and the emergence of vertical links with farmers', in J.F.M. Swinnen (ed.), *Global supply chains, standards & poor: Grossman, G.M., & Helpman, E. (1991a). Innovation and economic growth in the global economy*, MIT press, Cambridge, MA.
- [10]. Hausmann, R., Hwang, J., & Rodrik, D., 2007, 'What you export matters. *Journal of Economic Growth*, 12(1), 01–25.
- [11]. Keho, Y. (2017). The impact of trade openness on economic growth: The case of Cote d'Ivoire.
- [12]. Kim, D. H. (2011). Trade growth and income. *Journal of International Trade & Economic Development*, 20(5), 677-709.
- [13]. Lucas, R.E. (1988). On the mechanic of economic development. *Journal of Monetary Economics*, 46(1), 167–182.
- [14]. Mallick, H. (2008). Government spending, trade openness and economic growth in India: A time series analysis. *CDS Working Paper*, 403.
- [15]. Nageri, K. I., Ajayi, O., Olodo, H. B., & Abina, B. M. (2013). An empirical study of growth through trade: Nigeria evidence. *Arabian Journal of Business and Management Review (OMAN Chapter)*, 3(5), 1.
- [16]. Observer, 11(2), 151–177.
- [17]. Omoke, P. C. (2009). The causal relationship among financial development, trade openness and economic growth in Nigeria. *Trade Openness and Economic Growth in Nigeria (December 30, 2009)*.
- [18]. Osabuohien, E.S.C. (2007). Trade openness and economic performance of ECOWAS members *Oxford Economic Papers*, 51(1), 15–39. policy complementarities, *DEGIT Conference Papers 010021*, *DEGIT, Dynamics, Quarterly Journal of Economics*, 2(106), 369–405.
- [19]. Redding, S. (1999). Dynamic comparative advantage and the welfare effects of trade reflections from Ghana and Nigeria. *African Journal of Business and Economic Research*, 2(2&3), 57– 73.
- [20]. Romer, P. (1990). Endogenous technological change. *Journal of Political Economy*, 98(5), S71–S102. *Saharan Africa. Journal of African Trade*, 3(1–2), 41–56.
- [21]. Stiglitz, J.E. (1996). Some lessons from the East Asian miracle. *The World Bank Research*.
- [22]. Yeboah, O. A., Naanwaab, C. B., Saleem, S., & Akuffo, A. S. (2012). *Effects of trade openness on economic growth: The case of African countries* (No. 1372-2016-109007).
- [23]. Young, A. (1991). Learning by doing and the dynamic effects of international trade. *The Quarterly Journal of Economics*, 2(106), 369–405.
- [24]. Yucel, F. (2009). Causal relationship between financial development, trade openness and economic growth: The case of Turkey. *Journal of Social Science*, 5(1), 33-42.
- [25]. Zahanogo, P. (2016). Trade and economic growth in developing countries: Evidence from sub-trade. *Journal of Development Economics*, 75(2), 417–450