The Assessment of Trade Openness, Foreign Direct Investment and Economic Growth in the West African Economic Monetary Union (WAEMU)

Jirbo Boniface Verr[1], Danladi Jonathan D.[2], Igbatayo Samuel[3], and Atayi Abraham Vincent[4]

[1,2,3,4]Department of Economics, Afe Babalola University Ado Ekiti, Nigeria

Abstract— The dynamic functions of trade and foreign direct investment (FDI) inflows have been connected to the growth performance of several countries. This study looks at the influence of trade openness and foreign direct investment on economic growth in the WAEMU countries from 1994 to 2019, in order to better understand the dynamic link between FDI, trade openness, and economic growth in the WAEMU. The long-run link between the variables was validated by the Kao and Pedroni cointegration tests. The openness of commerce was measured by the Composite trade share (CTS). The influence of FDI and trade openness on economic growth in the short and long run was estimated using the panel Auto-regressive Distributed Lags (ARDL) model. At the 5% significance level, ARDL findings show that FDI will enhance GDP per capita growth by 0.26 percent in the long run, whereas trade openness will lower GDP per capita growth by 2.39 percent. FDI has a favorable impact on GDP per capita growth in Burkina Faso, Guinea Bissau, Senegal, and Togo in the near term. In Benin, Cote d'Ivoire, Mali, and Niger, however, FDI has a negative and considerable impact on growth. In the short run, trade openness has favorable and significant benefits on GDP per capita growth in Benin, Burkina Faso, and Cote d'Ivoire, but has negative and significant effects in Mali, Niger, Senegal, and Togo. As a result, increased FDI inflow and trade openness are needed to improve growth in WAEMU countries by creating a favorable business environment and export diversification.

Keywords— Trade Openness, Foreign Direct Investment, Economic Growth, WAEMU, Composite Trade Share, GDP per capita.

1. INTRODUCTION

The countries of the West African Economic Monetary Union (WAEMU) have been wrestling with the realities of progress, not just politically and socially, but also economically. Agriculture was the mainstay of the region's economy and the largest source of foreign cash in the 1960s. Governments were able to carry out investment projects using domestic resources, agricultural export revenues, and international help (Ezike, et. al, 2012). In the instance of Nigeria, agricultural exports have remained stagnant since the discovery of oil. Unlike the period between 1960 and 1980, when agricultural and allied exports accounted for 60% of all exports in Nigeria, petroleum currently accounts for more than half of all products shipped to other nations (CBN, 2004). Nigeria's status as a major producer and exporter of palm oil, groundnut, cocoa, and rubber has been eroded as a result of this (CBN, 2006).

Furthermore, the debate over the relationship between trade openness, investment, and economic growth has piqued the interest of academics and economists alike. A trade-openness policy is intended to facilitate the free flow of products and services between countries, resulting in higher trade volume (exports and imports). When it comes to exports, a country's revenue grows in lockstep with its export rate, however when it comes to imports, the economy attracts and benefits from technical transfer in the form of both human and non-human capital, resulting in increased production capacity and greater growth rates. Overall, trade openness policy boosts the production of a wide range of goods, boosts the employment of production elements, generates high income, lowers the cost of goods and services, and raises people's living standards. Furthermore, in the global market, rich countries produce completed and capital goods at higher prices. As a result of these causes, the gap between developed and developing countries is expanding. Increased openness has a considerable positive influence on economic growth and real income in rich economies, but a significant negative impact in emerging economies, according to Kim (2011). Others, on the other hand, contend that higher economic growth does not inevitably equal greater openness (Funke and Gronwald 2009; Gries et al. 2008; Hassan and Islam 2005; Holland and Veiera 2005).

Benin's real GDP growth has dropped to 2.3 percent in 2020, after growing at 6.9 percent in 2019 and 6.7 percent in 2018. The WAEMU countries are not immune to these difficulties. The supply-side contraction reflects the poor performance of the agriculture, transportation, commerce, and hospitality sectors, which have been disproportionately impacted

by the COVID-19 outbreak. On the demand side, decreased investment and personal spending were blamed for the slump in 2020. Due to severe shocks in the transportation, tourist, construction, and trade sectors, Cabo Verde's GDP growth declined by 5.7 percent in 2019. The budget deficit will rise to 10.4 percent of GDP in 2020, up from 1.8 percent in 2019. This is due to revenue shortfalls. Following a 5.7 percent gain in 2019, Burkina Faso's real GDP declined by 0.2 percent in 2020. This was because to sluggish hotel, transit, and tourism activities, of course. Following rises of 5.9% in 2019 and 7% in 2018, Niger's real GDP climbed by 1.2 percent in 2020. (2018-2020 Africa Economic Outlook)

Foreign direct investment (FDI) and trade interact through two ways. First, the more open a country is, the more foreign direct investment it attracts, with openness defined as the volume of trade (imports + exports) expressed as a percentage of GDP. Second, FDI has a wide range of effects on trade. Foreign investors usually bring machinery and equipment from outside the host country, resulting in a higher import bill for the host country. Similarly, one of multinational corporations' goals in investing in developing countries is to lower their production costs so that they can compete in adjacent countries. This agreement has the potential to promote exports in the host country (JAYAKUMAR, KANNAN, and ANBALAGAN, 2014). More trade openness, according to this opinion, allows for larger FDI inflows (Osabuohien, 2007)

For a long time, there has been a heated discussion about whether commerce promotes growth and development. While the traditional viewpoint argues that trade may and does serve as a growth engine, numerous opposing voices in the twentieth century asserted that trade can only serve to perpetuate poverty in developing countries. As a result, the literature has questioned the nature of the link between trade openness and economic growth. Trade openness, according to Adhikary (2011), Dar and Amirkhalkhali (2010), Hassan (2005), and Karras (2003), encourages the swift transfer of capital and technology through direct foreign investment and accelerates economic growth by enhancing specialization and labor productivity. They claim that trade openness boosts domestic and international competitiveness while also promoting efficient resource allocation through comparative advantage. Despite these persuasive arguments in favor of trade openness as a development driver, some studies have demonstrated that higher trade openness does not always lead to increased economic growth (Kim, 2011; Funke and Gronwald, 2009; Gries et al, 2008; Hassan and Islam, 2005; Holland and Veiera, 2005). According to these researchers, trade openness produces a disparity between developed and developing/underdeveloped countries. The current study investigated the true nature of the relationship between trade openness and economic growth in the WAEMU. This is accomplished by include FDI as an intervening factor in the trade-induced investment-led growth theory and disaggregating the impacts into short- and long-run empirical studies.

2. LITERATURE REVIEW
A. Trend of trade, FDI and growth in WAEMU
In 1994, the West African Economic and Monetary Union (WAEMU) was formed. One of the goals of WAEMU's creation was to create a similar customs union among member states in order to boost exports. Furthermore, it was a measure and endeavor to promote regional integration among the union's member countries. The WAEMU customs union allows for free movement of products between member nations as well as the imposition of a common external tariff (CET) on imports from other countries.
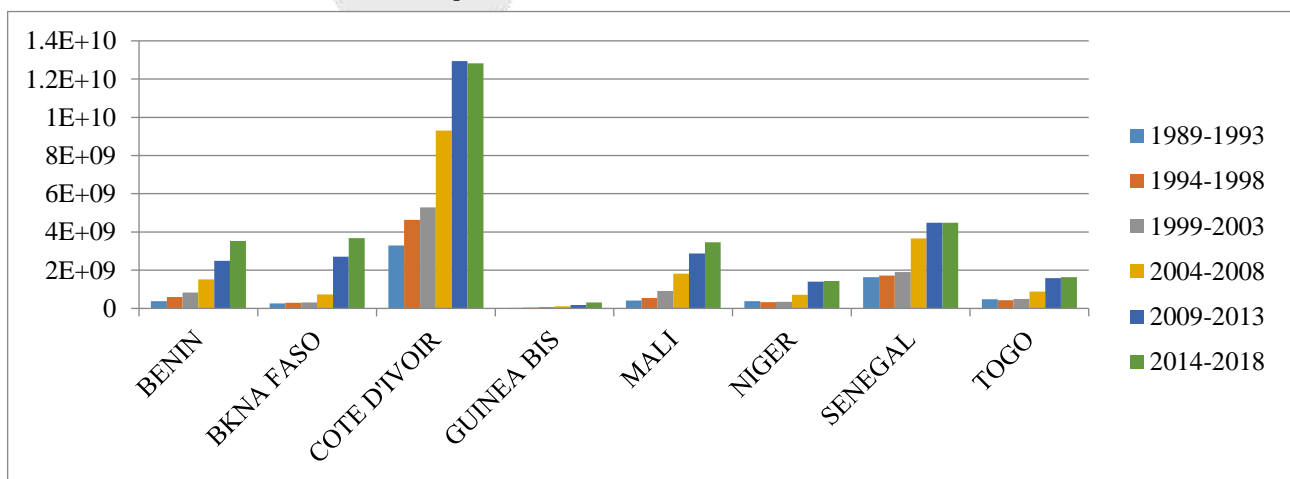

Figure 1: Exports of goods and services (current US$) for WAEMU countries
Source: World Development Indicators (WDI)

Figure 1 shows that WAEMU countries' exports of products and services are expanding at an alarming rate, with Cote D'Ivoire having the highest values in each year. Between 1989 and 2003, both Burkina Faso and Niger had practically consistent exports, but they thereafter picked up, with the exception of Guinea Bissau, which had a sluggish export pace. This growth in exports for the WAEMU zone could be due to recent trade initiatives that have created both possibilities and obstacles. A WAEMU-wide customs union, for example, might increase trade between the WAEMU and its West African neighbors. Aside from that, an Economic Partnership Agreement (EPA) with the European Union (EU) might result in far-reaching trade liberalization between the WAEMU and the EU. However, trade in the WAEMU, with the exception of Cote D'Ivoire, has experienced severe shocks both locally and globally in recent years. If not for this

negative trend, these countries' export rates might have been higher in recent years than before. The CFA franc's appreciation against the US dollar as a result of the CFA's fixed parity with the Euro, a sharp rise in oil prices, and a drop in the profitability of main export commodities are among these shocks. As a result, the region's trade deficit has steadily increased. Senegal is particularly troubled, with a trade deficit of about 20% of GDP in the phosphate and fisheries industries. Because Cote d'Ivoire is the WAEMU's only oil exporter, it was the only member country to benefit from the recent surge in oil prices, while other oil-importing member countries were severely impacted. Aside from that, some of the region's primary export industries are losing money. As a result of the lack of diversification in WAEMU exports, the region's trade performance is vulnerable to significant terms of trade and other shocks.
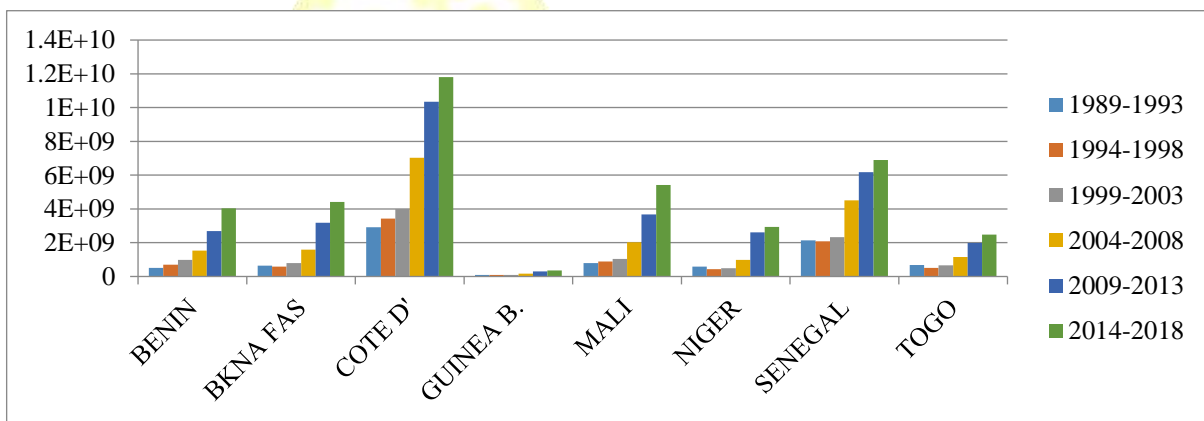

Figure 2: *Import of goods and services (current US$) for WAEMU countries.*
Source: World Development Indicators (WDI).

With the exception of Guinea Bissau, practically all WAEMU member countries acknowledged an increase in imports, as seen in Figure 2. Meanwhile, it has been observed that the rate of their imports is expanding at an alarming rate year after year. The rise in their imports can be linked to a number of variables, but the fundamental reason is that these countries engage in primary production and have abundant agricultural potential. It's worth noting that the industrial sector in WAEMU member countries is small, and those with light industries don't have access to power to boost productivity. Again, in most of these nations, the lack of reliable, clean, and affordable energy is a significant impediment to industrialization and diversification. In Burkina Faso, Guinea Bissau, and Niger, less than 6% of rural residents have access to power, according to an investigation. Only Senegal and Togo have significantly expanded rural population access to electricity, reaching 28 percent and 33 percent, respectively, close to Cote d'Ivoire's level. Apart from that, most of these countries have quite high inflation rates. We all know that when a

country's inflation rate is rather high, domestic households and businesses are more likely to purchase a considerable amount of imported items.

Cote d'Ivoire is the WAEMU's largest economy, accounting for more than 40% of the union's GDP. The country struggled throughout the 1980s, and by the end of the 1990s, it entered a period of political instability and civil war. However, the country, which is known for being the world's largest producer of cocoa beans, has been essentially at peace since 2011, with some of the greatest GDP growth rates in the world. Agriculture, of course, continues to be the country's economic engine. On the back of GDP growth averaging 9% per year between 2012 and 2016, Cote d'Ivoire's GDP per capita increased to $1662 in 2017. (World Development Indicator). As a result, the country's economy has been among the world's fastest-growing in recent years (2014-2018), yet its GDP per capita ranks 142nd. Squali and Wilson created Composite Trade Shares (CTS), a sort of trade openness measurement (2011). CTS offers

the advantage of being able to capture the multi-dimensional nature of trade openness, allowing for a better understanding of the country's trade openness situation. Figure 3 shows that from 1994 to 2008, composite trade share (CTS) was constant, increasing quickly to 0.58 in 2008, peaked at 0.61 in 2013, and then

decreased to 0.49 in 2019. Foreign direct investment (FDI) increased steadily from 1994 to 2011, peaking at 0.53 in 2011, before progressively declining to 0.49 in 2019. As can be seen, the gross domestic product (GDP) has steadily increased over the years, rising from 1920 in 1994 to 24969 in 2019.
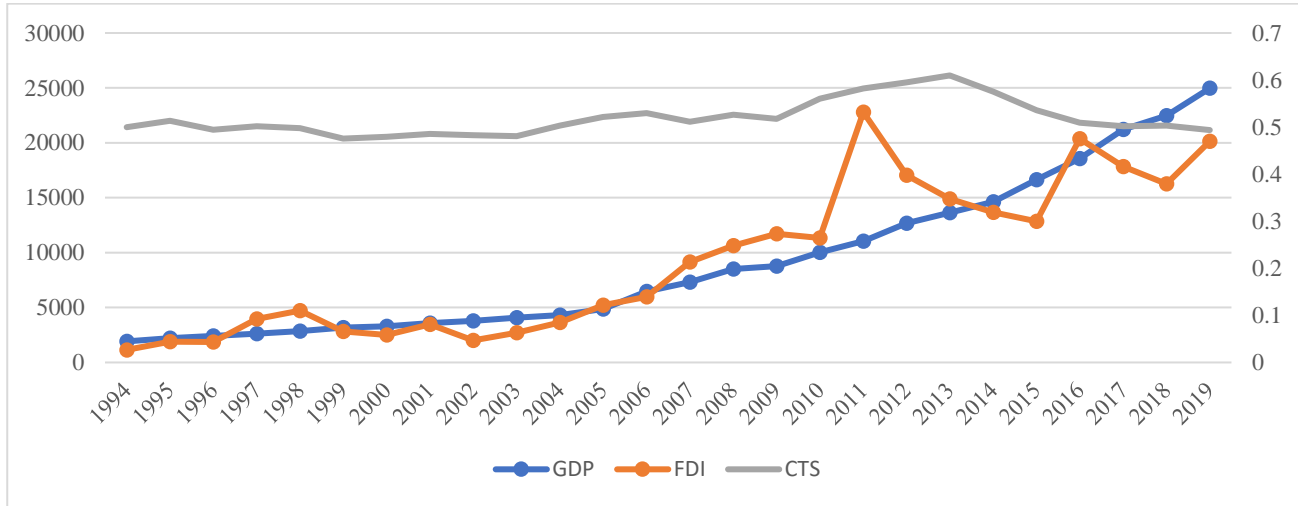

Figure 3: *Trend Analysis of Trade Openness and Foreign Direct Investment on Economic Growth in WAEMU Countries.*
Source: World Development Indicators (WDI).

B. Theoretical framework and Empirical Literature

The endogenous growth theory has sparked a renewed interest in the elements that determine long-term growth. To this goal, many models and their endogenization of economic growth rates have been developed and compared. Heckscher-Ohlin Trade Model, Accelerator Model of Investment, Keynesian Model of Investment, Schumpeterian Growth Innovation Model, and Ricardian Trade-to-Endogenous Growth Model are some of the trade and investment related theories that have been employed and refined in numerous endogenous growths. Heckscher-Ohlin (1919) produced models of world equilibria (many nations) with international commerce in commodities (or intermediate goods) and economic growth based on disparities in factor abundance, whereas Ricardian (1817) trade-growth models are based on technological comparative advantage. These models have a lot to offer in terms of tying trade openness, investment, and growth together. Empirical research on whether trade promotes growth has been claimed to be dependent on how trade is modelled as well as the sources of growth, which are either learning or doing as opposed to innovation (Schumpeterian). The Ricardian model, unlike the Heckscher-Ohlin model, allows for variances in savings rates and produces richer comparative static data. It also demonstrates endogenous growth, which is determined by all countries' investment decisions. Each country will specialize in a subset of accessible goods, affecting their prices, according to a model with Ricardian elements.

As a result, each country's terms of trade will be endogenous, meaning they will be determined by how quickly it acquires capital. This study's theoretical framework is based on the Ricardian trade-growth endogenous model.

Using cointegration and the panel least square estimate technique, Lloyd, Ogundipe, and Ojeaga (2014) evaluated the impact of export diversification and composition on GDP growth and GDP per capita in the ECOWAS area from 1975 to 2007. Export diversification and the manufacturing value-added index had a favorable and considerable impact on per capita growth, they discovered. They also discovered that what matters is not how much is exported, but what is exported, with regions with less specialisation and more diverse exports experiencing greater economic growth rates. Similarly, Nowbutsing (2014) used Fully Modified Ordinary Least Square to find a positive association between trade openness and economic growth for Indian Ocean Rim countries from 1997 to 2011. Using panel data from 1990 to 2016, Maiga and Salifou (2019) investigate the Granger causality and long-run link between foreign direct investment and trade (imports, exports, and trade openness) in the West African economic and monetary union (WAEMU). Foreign direct investment has been found to have a beneficial long-run influence on imports and contributes to greater trade openness in the WAEMU. Furthermore, the long-term forecast implies that FDI leads to

increased trade openness in the WAEMU. Furthermore, the data shows that export and import have a long-term positive and considerable impact on foreign direct investment. Furthermore, trade openness appears to have a beneficial and considerable impact on attracting more foreign investment in the WAEMU, according to the estimates. For the period 1972 to 2009, SIDDIQI, ALI, and CHANI (2014) evaluated the relationship between trade liberalization, economic progress, and import demand. They discovered cointegration between the model's variables, but they did not discover a causal relationship between the variables. Oloyede, Osabuohien, and Ejemeyovwi (2021) investigate the relationship between trade openness and the macroeconomic outlook of Africa's regional economic communities (RECs), with an emphasis on the Economic Community of West African States (ECOWAS) and the Southern African Development Community (SADC) (SADC). In both the combined simulated ECOWAS and SADC and the individual RECs, the results demonstrate a positive but insignificant connection between economic growth rate and trade openness.

$$GPCR = f(CTS, FDI\_GDP, GFCF, LEB, POP, EXR, CPI,) \tag{1}$$

Long run Composite Trade Share (CTS) Model

$$\Delta GPCR_{i,t} = \psi_{0i} + \psi_{1i}FDI\_GDP + \psi_{2i}EXR_{i,t} + \psi_{3i}CTS_{i,t} + \psi_{4i}in\,GFCF_{i,t} + \psi_{5i}InPOP_{i,t} + \psi_{6i}LEB + \psi_{7i}lnCPI + \sum_{j=1}^{N1}\lambda_{1ij}\Delta GPCR_{i,t-j} + \sum_{j=1}^{N2}\lambda_{2ij}\Delta FDI\_GDP_{i,t-j} + \sum_{j=1}^{N3}\lambda_{3ij}\Delta EXR_{i,t-j} + \sum_{j=1}^{N5}\lambda_{4ij}\Delta CTS_{i,t-j} + \sum_{j=1}^{N6}\lambda_{5ij}\Delta lnGFCF_{i,t-j} + \sum_{j=1}^{N7}\lambda_{6ij}\Delta lNPOP_{i,t-j} + \sum_{j=1}^{N8}\lambda_{7ij}\Delta lnCPI_{i,t-j} + \sum_{j=1}^{N8}\lambda_{7ij}\Delta LEB_{i,t-j}\,\varphi_i + \eta_{i,t} \tag{2}$$

Short Run Effects Model

The short-run estimates for the growth model equation (3) can be re-specified to take account of an error correction term as follows:

$$\Delta GPCR_{i,t} = \sum_{j=1}^{N1}\lambda_{1ij}\Delta lnGPCR_{i,t-j} + \sum_{j=1}^{N2}\lambda_{2ij}\Delta FDI\_GDP_{i,t-j} + \sum_{j=1}^{N3}\lambda_{3ij}\Delta EXR_{i,t-j} + \sum_{j=1}^{N5}\lambda_{4ij}\Delta CTS_{i,t-j} + \sum_{j=1}^{N6}\lambda_{5ij}\Delta lnGFCF_{i,t-j} + \sum_{j=1}^{N7}\lambda_{6ij}\Delta lNPOP_{i,t-j} + \sum_{j=1}^{N8}\lambda_{7ij}\Delta lnCPI_{i,t-j} + \sum_{j=1}^{N8}\lambda_{7ij}\Delta LEB_{i,t-j}\,\varphi_i + \eta_{i,t} \tag{3}$$

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 natural log of gross domestic product 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; $lnFDI\_GDP_{i,t}$ is the natural log of real gross domestic capital formation for each country i over a period of time t; $LEB_{i,t}$ denotes life expectancy at birth, a proxy for human capital for each country i over a period of time t; $POP_{i,t}$ is the growth rate of population for each country

3. METHODOLOGY

The research spans a 26-year timeframe (1994 to 2020). This time period was chosen because it was distinguished by a series of economic initiatives and interventions from various member states linked to regional and international trade. In addition, the time saw the start of an unprecedented worldwide financial crisis, which had a substantial impact on global trade and investment activities. As a result, all WAEMU countries Benin, Burkina Faso, Guinea, Cote d'Ivoire, Niger, Mali, Senegal, and Togo were included in this study. The information was gathered from the World Bank's World Development Index (WDI). The unit root and cointegration tests were used to see if the data series were stationary and if there was a long-term link between the variables. The panel Auto-regressive Distributed Lag (ARDL) was used to analyze equations 2 and 3. According to Pesaran, Shin, and Smith (1999), the following is the relationship between trade openness, foreign direct investment, and economic growth in WAEMU countries:

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; CPI denotes inflation rate for each country i over a period of time t.

4. Results and Discussion of Findings

The Fisher Philip Perron (PP) and Augmented Dickey Fuller (ADF) unit root tests result shows that GPCR, LGFCF, LEXR, LPOP, LEB and CPI are stationary at 1% level, while FDI_GDP, and CTS are not. From table 1, The Levin Lin Chu (LLC) unit root test shows that GPCR and the independent variables like FDI_GDP, LGFCF, LEXR, LEB, CTS and CPI are stationary at 1% levels with exception to the independent variable LPOP, which is significant at 10%. Lastly, from the Im-Pesaran Shin (IPS) unit root test, GPCR and FDI_GDP, LPOP,

LEB and CTS are not stationary at any level. On the contrary, LGFCF, LEXR and CPI are significant at 1%, 10% and 1% level respectively. Overall, the unit root test result shows that GPCR, LGFCF, EXR, LPOP, LEB, CTS and CPI are stationary at level while FDI_GDP is at first differences.

The Kao cointegration test shows that there is cointegration and long-run relationship between all the variables in the model and the null hypothesis of no cointegration is rejected at the 1% level of significance as shown in table 2. The Pedroni results for WAEMU show that there is cointegration among the variables based on the panel ADF statistics.

Table 1: Unit root Analysis

Variable	Fisher PP	Fisher ADF	LLC (statistics)	IPS (statistics)	Remarks
GPCR	42.6406 (0.0003)	42.6406 (0.0003)	-3.642(0)	-0.528 (0.2987)	I(0)
FDI_GDP	17.4516 (0.3570)	17.4516 (0.3570)	-2.457 (0.007)	0.068 (0.5272)	I(1)
LGFCF	34.2129 (0.0051)	34.2129 (0.0051)	-5.516(0)	-1.445(0.0743)	I(0)
EXR	48.9585 (0.0000)	48.9585 (0.0000)	-6.321(0)	-3.736 (0.0001)	I(0)
LPOP	90.9950 (0.0000)	90.9950 (0.0000)	-1.362 (0.087)	2.177 (0.9853)	I(0)
LEB	90.0971 (0.0000)	90.0971 (0.0000)	-1.783 (0.037)	2.184 (0.9855)	I(0)
CTS	5.4279 (0.9932)	5.4279 (0.9932)	-1.656 (0.049)	1.803 (0.9643)	I(0)
CPI	92.3660 (0.0000)	92.3660 (0.0000)	-9.707(0)	-6.194(0)	I(0)

Source: The researcher's computation based on the data sourced from the World Development Indicator (WDI) database

Table 2: Cointegration Test for the Trade Share Model

KAO Test	Pedroni Test			
ADF Statistics	Panel PP-Statistics	Group PP-Statistics	Panel ADF Statistics	Group ADF Statistics
-4.757588 (0.0000)	1.958402 (0.9749)	-0.899543 (0.1842)	-1.721004 (0.0426)	-0.226606 (0.4104)

Source: Researcher's computation based on the data from the World Development Indicator (WDI) database

The ARDL Long Run Effect of FDI, CTS on Economic Growth in WAEMU

The heterogeneous ARDL analysis was conducted to better understand the long and short term dynamic effects of trade openness and foreign direct investment on economic growth, and the results are provided in table 3. Long-run dynamics exist between GDP per capita (GPCR), foreign direct investment (FDI GDP), and trade openness as measured by composite trade share (CTS). At a 10% level of significance, the data demonstrates that a unit increase in FDI GDP increases GPCR by 0.26 percent in the long run.

This indicates that foreign direct investment has a favorable impact on GPCR. Similarly, at a 5% significance level, a unit rise in CTS reduces GPCR by 2.39 percent, suggesting that trade openness has a long-

term negative and significant effect on GDP per capita. When other control variables are taken into account, a 1% increase in gross fixed capital formation (LGFCF) raises GDP per capita by 3.56 percent at a 1% significance level. This demonstrates that as investment levels rise, so does GDP per capita. At the 1% significance level, the results also reveal that the population growth rate (LPOP) and life expectancy at birth (LEB) have positive and significant effects on GDP per capita. A one percent rise in LPOP raises GDP per capita by 92.1 percent, while a unit increase in the LEB per 1000 people raises GDP per capita by 147 percent. Furthermore, an increase in the exchange rate (EXR) of one unit will result in an increase of 11.8 percent in GDP per capita, demonstrating that EXR is a positive driver of GDP per capita. Finally, the rate of inflation (CPI) has a small but favorable impact on GDP

per capita. Recent discoveries (Elijah and Musa, 2019; Keho, 2019) support these findings (2017). In Cote d'Ivoire, Keho (2017) found that trade openness has a long-term favorable impact on economic growth. In Nigeria, on the other hand, trade openness has a detrimental influence on the economy (Elijah and Musa 2019). Furthermore, empirical evidence on the effects of foreign direct investment on economic growth reveals a variety of outcomes. FDI inflow has a beneficial impact on economic growth in the Gambia but a negative impact on growth in Nigeria, according to Shoaga, Amaefule, Ibeabuchi, and Manfred (2021). Foreign direct investment has a favorable effect on economic growth in WAEMU countries, according to Ndiaye and Xu (2016). This research also shows that FDI has a beneficial impact on GDP per capita in WAEMU nations, whereas trade openness has a negative impact in the long run.

Table 3: Long Run Effect of FDI, CTS on GDP Per Capita in WAEMU Countries

Dependent Variable: GPCR				
Variables	Coefficient	Std. Error	Z-Statistic	Prob.
EXR	0.118032	0.055740	2.117549	0.0368**
FDI_GDP	0.002597	0.001451	1.790071	0.0766*
CTS	-0.023905	0.011516	-2.08	0.027**
LGFCF	0.035655	0.004366	8.165625	0.0000***
LPOP	0.920670	0.123701	7.442679	0.0000***
CPI	0.000818	0.001354	0.604223	0.5471
LEB	1.471471	0.393595	3.738544	0.0003***

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

Short Run Effect of FDI and trade openness on Economic Growth in WAEMU Countries

Table 4 shows a short-run examination of the effects of trade openness and FDI on economic development in each country. The error correction term (ECT), which reflects the rate of equilibrium adjustment, is presented in the results. Based on the Z-statistics, which are high and over 2, the ECT values for all countries are negative and significant at a 1% level of significance.

This shows that the short run discrepancies have been addressed and incorporated into the long run relationship, indicating convergence to equilibrium. Foreign direct investment has a positive and considerable impact on GDP per capita growth in Burkina Faso, Guinea Bissau, Senegal, and Togo, according to the findings. In Benin, Cote d'Ivoire, Mali, and Niger, however, foreign direct investment (FDI GDP) has a negative and considerable impact on GDP per capita growth. In the short run, the composite trade share (CTS) has positive and substantial effects on GDP per capita growth in Benin and Burkina Faso, as well as Cote d'Ivoire, whereas it has negative and significant effects in Mali, Niger, Senegal, and Togo.

In the near run, the effects of FDI and trade openness on growth vary per country due to their sizes and geographical contexts, as described by CTS, therefore FDI and trade openness could yield significant advantages for some WAEMU countries.

Table 4. ARDL Short Run Effect of FDI, and CTS on GDP per capita Growth

Countries	ECT	D(FDI_GDP)	D(EXR)	DLOG(CTS)	D(LGFCF)	D(LPOP)	D(CPI)	D(LEB)
Benin	-0.127(-58.9)	-0.003(-200.8)	0(-21647.1)	0.104 (62.2)	0.011 (6.3)	3.956 (3.2)	0(556.7)	1.368 (0.6)
Burkina Faso	-0.518(-105.4)	0.00 3(2487.9)	0(-113588.8)	0.074 (136.1)	-0.141(-219.2)	3.785 (0.8)	0.001 (8439.1)	-3.421 (-0.9)
Cote d'Ivoire	-0.345(-170.7)	-0.001(-67.8)	0(-29042)	0.035 (2652.9)	0.03 (156.5)	16.951 (9.0)	-0.005(-5935.2)	-5.954(-1.5)
Guinea Bissau	-0.307(-65.9)	0.011 (568.3)	0(-21822.6)	0.112 (48.9)	-0.097(-110.4)	4.567 (1.9)	0.003 (2704.8)	-10.016(-0.2)
Mali	-0.189(-88.6)	-0.005(-2668.005)	0(75897.9)	-0.293(-213.0)	0.177 (334.6)	-0.469(-1.0)	0.001 (3041.4)	-2.08(-0.6)
Niger	-0.852(-27.2)	-0.01(-1936.5)	-0.001(-28462.2)	-0.004(-1.296)	0.128 (85.4)	-2.143(-0.277)	-0.004(-3287.9)	-0.237(-0.1)
Senegal	-0.253(-27.3)	0.014(141.9)	0(-2773.9)	-0.07(-3.9)	-0.069(-68.6)	6.961(1.335)	0(-165.6)	-3.297(-0.6)
Togo	-0.308(-14.7)	0(575.0)	0(-261.9)	-0.027(-6.8)	0.093(59.0)	-0.31(-0.1)	0(-268.5)	16.526(1.4)

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

Note Z statistics in parenthesis

5. CONCLUSION AND RECOMMENDATIONS

The long and short term effects of FDI and trade openness on WAEMU economic growth were examined in this study. The study found that FDI has a positive and significant long-run influence on GDP per capita growth, but that trade openness and FDI effects on growth differ between nations in the near term. On this note, the report suggests that countries such as Benin, Cote d'Ivoire, Mali, and Niger adopt strategies to attract more foreign direct investment into their respective countries. Creating a favorable business climate and adopting macroeconomic policies that promote economic openness and important sectors development through industrialization as a channel for expanding semi-finished and final product exports are among these tactics. Furthermore, if FDI inflows are redistributed in favor of productive activities like investment and export, their effectiveness can be improved.

Trade openness has a long-term detrimental influence on growth, according to this study. This could be due to the fact that the export structure has remained essentially undiversified in recent decades, resulting in considerable and sustained losses in their global export market shares. The marginal percentage of WAEMU countries' exports to Africa and the rest of the world is a good indicator of their global trade share. As a result, in order to strengthen their international competitiveness, WAEMU countries should strive for more openness. They should improve their global trade competitiveness by increasing manufacturing export intensity and decreasing commodity exports as a percentage of overall exports. Trade policies that support the export of goods and services must also be implemented. This is due to the fact that enhanced exports are critical for a country's economic competitiveness, which in turn stimulates growth.

REFERENCES

[1] Adhikary, B.K. (2011), "FDI, Trade Openness, Capital Formation, and Economic Growth in Bangladesh: A Linkage Analysis", International Journal of Business and Management, 6(1), 16-28.

[2] Breusch, T. S. (1978). Testing for autocorrelation in dynamic linear models. Australian Economic Papers, 17(31), 334–355.

[3] Breusch, T. S., & Pagan, A. R. 1979. A simple test for heteroskedasticity and random coefficient variation. Econometrica, 47(5), 1287–1294.

[4] Dar, A. and S. Amirkhalkhali (2003), "On the Impact of Trade Openness on Growth: Further Evidence from OECD Countries", Applied Economics, 35(16), 1761-1766

[5] Elijah, S., & Musa, A. B. (2019). Dynamic impact of trade openness on the economic growth in Nigeria. International Journal of Engineering and Advanced Technology, 8(5C), 609-616

[6] Exportcontent matter? International Journal of Business and Social Science, 5(10), 71

[7] Ezike, J. E., Ikpesu, F., and Amah, P. (2012). "Macroeconomic Impact of Trade on the Nigerian Growth: An empirical Evaluation". Research Journal of Business Management and Accounting, Vol. 1 (4), PP.079-083

[8] Funke, M., & Gronwald, M. (2009). A convex hull approach to counterfactual analysis of trade openness and growth. CESIFO Working Paper, 2692.

[9] Granger, C. W. J., & Engel, R. F. (1987). Co-integration and error-correction: Representation, estimation, and testing. Econometrica, 55(2), 251-276.

[10] Gries, T., Kraft M., &Meierrieks, D. (2008). Financial deepening, trade openness and economic Growth in Latin American countries.CIE Working Paper Series, 10.

[11] Hassan, A.F.M. (2005), "Trade Openness and Economic Growth: Search for a Causal Relationship", South Asian Journal of Management, 12(4), 38- 51.

[12] Heckscher, E. (1919). The effect of foreign trade on the distribution of income. Ekonomisk Integrated Trade Solution. international trade, 272-300 (Philadelphia: Blakiston) with a translation in H. Flam & M. J. Flanders (Eds.). 1991. Heckscher-Ohlin Trade Theory 43-69. Cambridge: MIT Press.

[13] Holland, M., & Vieira, F. B. (2005). Foreign liquidity, economic opening and economic growth in Latin American Economies. RBE 59(2), 267-289.

[14] Jayakumar, A., L. Kannan and G. Anbalagan (2014): Impact of Foreign Direct Investment, Imports and Exports, International Review of Research in Emerging Markets and the Global Economy (IRREM) 1(1), 51–58.

[15] Karras, G. (2003). Trade openness and economic growth: Can we estimate the precise effect?

[16] Applied Econometrics and International Development, 3(1), 07–26.

[17] Keho, Y. (2017). The impact of trade openness on economic growth: The case of Cote d'Ivoire. Cogent Economics & Finance, 5(1), 01-14.

[18] Kim, D. H. (2011). Trade growth and income. Journal of International Trade & Economic Development, 20(5), 677-709.

[19] Lloyd, A., Ogundipe, A.A., &Ojeaga, P. (2014). Transnational trade on ECOWAS: Does Exportcontent matter? International Journal of Business and Social Science, 5(10), 71 -82.

[20] Maiga, O. A., Oumarou, I., & Coulibaly, S. K. (2019). Foreign Direct Investment and International Trade in WAEMU-Panel Causality and Long-term Relationship Analysis. Review of Economics, 70(2), 193-212.

[21] Ndiaye, G., & Xu, H. (2016). Impact of foreign direct investment (FDI) on economic growth in WAEMU from 1990 to 2012. International Journal of Financial Research, 7(4), 33–43

[22] Nowbutsing, B. M. (2014). The impact of openness on economic growth: Case of Indian ocean rim countries. Journal of Economics and Development Studies, 2(2), 407–427.

[23] Oloyede, B. M., Osabuohien, E. S., & Ejemeyovwi, J. O. (2021). Trade openness and economic growth in Africa's regional economic communities: empirical evidence from ECOWAS and SADC. Heliyon, 7(5), e06996.

[24] SIDDIQI, M. W., A. ALI and M. I. CHANI (2014): Import Demand, Economic Development and Trade Liberalization in Pakistan: An Empirical Analysis, Bulletin of Business and Economics 3(2), 131–141.

[25] Shoaga, A.C, Amaefule, Ibeabuchi I J, Manfred I (2021). External Financing Inflow, Growth, and Trade in the Gambia and Nigeria. American Journal of Economics

[26] Squalli, J. and Wilson, K. (2011), "A new measure of trade openness", The World Economy, Vol.34 No. 10, pp. 1745-1770

[27] World Bank (2018). World development indicators. Various issues. Washington, D.C. World.