International Journal of Advanced Multidisciplinary Research and Studies

Exploring Trade and Financial Integration on Economic Growth in ECOWAS Countries

[1] Enegesi Linus Bamakpari, [2] Aborh Bright Kenpkanmam, [3] Boma Tubotamuno

[1, 2] Department of Economics, Faculty of Social Science, Ignatius Ajuru University of Education, Rumuolumeni, Port Harcourt, Nigeria

[3] Department of Economics, Faculty of Social Sciences, University of Port Harcourt, Choba, Rivers State, Nigeria

Corresponding Author: **Boma Tubotamuno**

Abstract

This study explored the impact of trade and financial integration on economic growth in the Economic Communities of West African States (ECOWAS) countries from 2001 to 2021. The research focused on analyzing the trade integration index, comprising export concentration and import concentration indexes, as well as the financial integration index, to understand their influence on economic growth. The findings reveal a positive correlation between the financial integration index and output growth in the static model, indicating the importance of financial sector reliability for economic development. However, the long-term relationships between trade integration indexes and economic growth are found to be statistically insignificant, suggesting that trade integration may have short-term effects on policy frameworks and implementations. The study highlights the need for ECOWAS countries to prioritize financial liberalization policies and establish Financial Service Authorities (FSAs) to enhance the financial sector's stability and consumer confidence. Regular trade liberalization and diversification away from primary product exports are recommended to promote sustainable economic growth. Policymakers are urged to consider inter-policy tactics to address heterogeneity, foster institutional transformations, and combat institutional corruption for building sound and competitive institutions within the region. Overall, the study cautions against overestimating the long-term impact of trade and financial integration on economic growth in ECOWAS countries, emphasizing the significance of short-term policy measures to harness their potential benefits for the region's economic development.

1. Introduction

The Economic Community of West African States (ECOWAS) has emerged as a significant regional bloc in Africa, fostering cooperation, integration, and development among its member countries (Olayiwola *et al*., 2019) [15]. Over the years, ECOWAS has shown remarkable growth and progress in various economic indicators. One pivotal factor that has contributed to this growth is the emphasis on trade and financial integration within the region. Trade and financial integration are twin pillars that underpin ECOWAS's pursuit of sustainable economic growth and development. Through trade integration, the member countries have sought to establish a unified market, encouraging the free flow of goods and services within the region. Therefore, financial integration aims to facilitate the movement of capital, investments, and financial services among member ECOWAS states (Ouedraogo, 2018) [17]. Trade is basically one of the economic concepts involving the buying and selling of goods and services, with compensation paid by a buyer to a seller or the exchange of goods or services between parties. Trade can take place within an economy between producers and consumers. In the past, trade in goods was considered as the most important part of international trade. Goods are still the dominant objects that are exchanged internationally, and they account for about 75% of total world exports (IMF 2006). But the structure of international trade in goods has changed significantly in previous centuries. The primary products that have been dominant objects of exchange in international trade throughout history have become second-class trade articles in the 20th century. From the middle of the 20th century industrial products became dominant products in the structure of goods traded and generally in international trade.

Trade integration is a very important contributor to the economic growth and development of any nation. In addition, trade

liberalization promotes the efficient allocation of resources, it opens the door to industrialized and technological diffusion from abroad and it causes the local monopolists to lose ground in the local market. A nation with a larger trade volume implies greater integration and this enhances the rate at which that nation's economy adopts more efficient techniques of production and trade integration which leads to a faster growth of total factor products (TFP) and hence real per capita income. Trade liberalization had a positive and significant effect on financial and trade related reforms and each worked to enhance market efficiency, they reduced distortions in price and fostered Africa's competitiveness and access to the global market; thus, promoting inflow of capital and expansion of exports. Trade integration often achieved through regional trade agreements, aims to eliminate trade barriers, and facilitate the movement of goods and services within the region. It allows member countries to leverage their comparative advantages, boosting productivity and creating opportunities for businesses to expand their market reach (Rathore, 2019) [19]. Financial integration, on the other hand, focuses on harmonizing financial systems, regulations, and institutions to facilitate cross-border capital flows and investments (Obstfeld & Taylor, 2004) [14]. Trade liberalization started in 1947, after the Second World War with the inception of the General Agreement on Tariffs and Trade (GATT). Financial integration allows for the free movement of capital across borders. It enables investors to diversify their portfolios, allocate resources more efficiently, and access funding for business expansion and investment (Calderón & Kubota, 2019) [5]. The increased availability of capital positively influences economic growth. Through financial integration, ECOWAS countries can develop more robust and sophisticated financial markets. These integrated financial systems promote savings mobilization and efficient allocation of resources, crucial for economic growth (Frankel & Rose, 2002). Financial integration fosters an environment where investments can flow more freely between countries. This enables the financing of projects that might have been unfeasible in isolation and promotes economic growth through increased investment (Forbes, 2012) [6].

Statement of the Problem
Trade in ECOWAS countries requires addressing tariff and non-tariff barriers, promoting policy cooperation, and coordinating trade plans among member states. Challenges, such as the absence of a common market, currency, and trade platforms, hinder the integration process (Ouedraogo, 2018) [17]. The impact of trade integration on economic growth has been a subject of interest since trade's inception. Establishing a statistical causation between trade integration and growth has yielded mixed results in cross-country studies. Some trade theorists view trade integration as a catalyst for economic growth, while economic growth theorists emphasize factors and consider trade integration as a reinforcing factor in income convergence (Heckscher, 1949) [8]. A major problem facing regional trade integration in West Africa is the difficulty in promoting inter-and-intra-regional trade. Many West African countries predominantly produce raw materials, which are less competitive in international markets and often lack demand within the region (Kimunguy, 2014) [10]. Since the creation of ECOWAS in 1975, several effects have been put in place to

ensure a smooth trade and financial integration which will bring about the desired economic growth in the West African region. Despite the efforts and studies on the challenges of regional trade integration within ECOWAS, there remains a gap in empirical research on the relationship between trade and financial integration on economic growth in West African countries, the challenges skill lingers. Hence the aim of the study is to assess the relationship between trade and financial integration on economic growth in ECOWAS countries, considering factors such as natural resources, technology advancement, foreign direct investment, human capital development, financial development, population growth, quality of institutions, and government intervention, while examining the influence of financial integration and potential frictions caused by national borders. This research aims at exploring the impact of trade and financial integration on economic growth in ECOWAS countries. By examining challenges, opportunities, and policy measures related to integration, this study seeks to contribute valuable insights to regional trade and economic development in West Africa.

Aim and Objectives of the Study
The aim of this study is to Explore Trade and Financial Integration on Economic Growth in ECOWAS Countries from 2001-2021. The specific objectives are to:
1. Analyze the trends in economic growth, trade and financial integration policies measures of the ECOWAS.
2. Examine the impact of trade integration measures on economic growth in the ECOWAS; and
3. determine the effect of financial integration measures on economic growth in the ECOWAS.

The remaining parts of this research is made up of four sections, consisting of section two which is the literature review, section three which is the methodology, section four which consist of result/findings, and section five which is the conclusion and recommendations.

2. Literature Review
Trade Integration
Trade Integration Mechanism (TIM) was introduced in April 2004 to assist member countries to meet balance of payments shortfalls that might result from trade liberalization measures implemented by other countries (Romer, 2016) [20]. Romer further reveals that Trade integration refers to the degree of dependence of an economy on international trade and financial flows. Trade integration is usually considered as the volume of a country's traded sectors in relation to total output. Trade integration measures the international competitiveness of a country in the global market. Increased growth facilitates greater integration into global markets. Trade integration is interpreted to include import and export taxes, as well as explicit non-tariff distortions of trade, or in varying degrees of broadness, to cover such matters as exchange-rate policies, domestic taxes and subsidies, competition and other regulatory policies, education policies, the nature of the legal system, the form of government, and the general nature of institutions and culture. Furthermore, Yannikaya (2013) simply defined trade integration as an economy's trade intensity. Yanikkaya opined that this definition has changed over time from one extreme to another to the idea of trade liberality. Pritchett (2016) [18] defines trade

integration as, that set of policies such that the level and pattern of trade (and prices) are near what they would be under free trade. On the other hand, Krueger (2017) [11] argued that trade integration can be attained by implementing policies that lower the biases against the exports sector, for instance subsidizing exports or encouraging exports schemes. In an opinion, Harrison (2016) [7] argued that trade integration could be synonymous with the idea of neutrality, the indifference between earning a unit of foreign exchange by exporting and saving a unit through exports substitution. It is crucial to understand this definition problem as there are several growth measures that are differently linked to economic growth. This further considered trade integration as a measure of the ratio of import and export to the real gross domestic product (GDP) or alternatively, the ratio of trade to GDP. Trade ratios contain the most widely used measure of trade integration and policy. Trade ratio measure of growth was calculated as (Exports plus Imports)/GDP. The measure was preferred because data were readily available, for many countries allows for comparability across studies. Despite the vast literature that explores trade integration relationship with various economic variables, many authors find contrasting results due to the difficulty in measuring trade integration (Yanikkaya, 2013). Measuring trade integration has been an issue because empirical studies have explained trade integration in several different ways as well as using several ways to capture and measure the nature of trade. This in turn has resulted into having many approaches to measuring the degree of trade integration and trade policy.

Financial Integration
Financial integration a critical component of regional integration, and its impact on economic growth has been one of the most debated issues among regional economists. Attempts have been made to ascertain if more financially integrated economies grow faster than less financially integrated ones, and whether there are sensible policies that can promote growing regional financial integration. A major rationale for the push for regional financial integration centers on the role of the financial sector in promoting the mobilization of savings, facilitating access to credit, and enhancing resource allocation (Muthoga, 2012) [12]. WAMA (2011) [22] describes financial integration as involving the removal of capital controls, financial innovation and technological progress which can be achieved when there is a perfect mobility of financial assets across the national boundaries of member states of a regional economic community. According to Silder (2010), financial integration implies an increase in capital flows, and a tendency for the prices and returns on traded financial assets in member states of the integrated region to equalize on a common denominator basis. It is therefore clear that regional financial integration (RFI) cannot take place in isolation, but rather it is pursued in various forms and stages across a whole spectrum of the financial sector, comprising financial policies, financial infrastructure, and financial institutions.

Economic Growth
Economic growth refers to the ability of the economy to increase the production of goods and services with the stock of capital and other factors of production within the economy (Nnanna, *et al.*, 2004) [13]. In this sense, economic growth can be seen as an aspect that fuels the process of economic development. According to Abort and jato (2008), Economic growth is the addition of country's output of good and service over a given period, usually one year. Todaro (2010) [21] defined economic growth as an increase in the national output of goods and services or increase in the rate at which the annual output of goods and services grow in real terms. Economic growth is generally measured using Gross Domestic Product (GDP), otherwise referred to as gross national income (GNI). The GDP is simply the trade value of all the goods and services produced, within an economy over a specified period, usually one year. For this study, economic growth is considered as a measure of the real gross domestic product. Real gross domestic product (RGDP) is a macroeconomic measure of the value of economic output adjusted for price changes (that is, inflation or deflation). This adjustment transforms the money-value measure, nominal GDP, into an index for quantity of total output. It is often referred to as constant dollar GDP, constant-price, or inflation-corrected GDP. In addition, the components of economic growth include natural resources, technology advancement, foreign direct investment, human capital development, technological progress, level of financial development, rate of population growth, quality of institutions and government intervention.

An Overview of the Economy of West Africa
The economy of West Africa has not experienced significant growth in most nations, leading to limited improvements in employment and poverty alleviation. The region's firms and farmers face challenges in accessing global markets and attracting broad-based investment due to trade and investment barriers, inefficient transportation, lack of financing, and unreliable power supply. The economic production sectors in West Africa include agriculture, manufacturing, and services.
(a) The agriculture sector, accounting for about 36% of regional GDP and employment, 60% of the labor force, faces challenges such as declining rainfall and low yields for most crops, hindering its potential for growth and food security.
(b) The industrial sector is weak and underperforming, with obsolete capital and structures. The region is poorly integrated into global value chains, particularly in processing activities, contributing to the industrial crisis.
(c) The services sector dominates the economy, accounting for 42% of GDP on average during 2000-09. However, its growth is largely driven by the informal sector economy, with the finance, telecommunications, and tourism industries showing some dynamism.
The West Africa Trade Hub in Accra-Ghana, works to implement programmes in coordination with various African regional private and public sectors, including ECOWAS and WAEMU, aiming to support firms and farmers to meet market standards and achieve commercial success. Despite some positive developments, West Africa still faces challenges in achieving meaningful economic growth and integration in the global market.

Reasons for Trade Integration and Economic Growth in the ECOWAS
(a) Efficiency/improvement in domestic industries output: Policymakers in West African countries should prioritize industrialization and promote pro-poor policies to

reduce inequality and boost economic growth. Emphasizing local content and diverse domestic production can foster sustainable economic growth and enhance competitiveness.

(b) Increase in national output: Addressing political instability, bad governance, corruption, and wasteful government spending is crucial for promoting economic growth in the region. Proper management of resources and investments in key sectors like education, infrastructure, health, and transportation can lead to poverty alleviation and economic development.

(c) Lack of Modernization of Agricultural Production and Poor Industrialization: West African countries need to focus on modernizing agricultural production and promoting industrialization to create more job opportunities and reduce reliance on exporting unprocessed goods.

(d) Weak Infrastructure and Institutions: Improving infrastructure, especially electricity supply and transportation systems, can boost economic activities and create job opportunities. Strengthening institutions is also essential for sustainable economic growth.

(e) Labor Force Participation: Addressing unemployment and underemployment issues, particularly among women, young workers, and rural residents, is crucial to utilize the region's growing population and contribute to economic growth.

Overall, implementing these recommendations can help West African countries overcome the challenges hindering their economic growth and pave the way for a more prosperous and sustainable future.

Financial Development (Exchange Rate)

Exchange rate volatility has become a significant concern for developing economies, including West African countries. It affects stable economic growth, price stability, and foreign investments. The relationship between exchange rate volatility and economic growth has shown mixed results, with some studies indicating positive effects through adjustment to shocks and others showing negative impacts on macroeconomic indicators such as GDP, employment, investment, trade, and inflation. In Nigeria, exchange rate stability has been essential for trade relations and price stability. However, lack of policy continuity and inconsistency, along with structural shifts in production and changes in international trade, have contributed to exchange rate instability. As these countries aim for steady economic growth and engage in cross-border financial transactions, they face increased exchange-rate movements, which may lead to uncertainty and hinder trade and economic growth. While some studies have explored the effects of exchange rates on specific sectors, few have directly examined their impact on overall economic growth in West African countries, making further research in this area essential.

Policies Measures of the ECOWAS

Total Factor Productivity (TFP) has been a subject of debate in economic growth literature, with neoclassical economists considering it exogenous to the economic environment, while others argue for its determinants, such as innovation, research, skilled labor, and competition. Studies on TFP in African countries have shown that technological progress and economic and trade openness positively affect TFP growth, leading to positive technological changes rather than stagnation. Many African countries fall within the lower middle income and low income categories, which

suggests that attracting capital from advanced economies due to cheaper labor could contribute to growth. Financial integration, including foreign direct investment (FDI) inflow, can bring technology and skills to improve domestic production. However, the effects of financial integration on growth vary, with some studies showing positive effects and others indicating negative impacts on growth. Overall, economic integration, financial development, and financial integration are interconnected and play vital roles in driving growth in trade blocs and regions like Africa.

Empirical Literature Review

Akpan and Olugbenga (2023) [3] in their work examined the trends in economic growth, trade, and financial integration policies in the Economic Community of West African States (ECOWAS) region from 1990 to 2020. The study employs a descriptive and econometric analysis approach to assess the trends in economic growth, trade, and financial integration in ECOWAS countries. The study uses data from various sources, including the World Bank, the International Monetary Fund, and the ECOWAS Commission. The study found that economic growth in ECOWAS has been uneven across countries and over time. Some countries, such as Ghana and Côte d'Ivoire, have experienced relatively strong and sustained economic growth, while others, such as Guinea-Bissau and Liberia, have struggled to achieve consistent growth. The study also found that trade has been a major driver of economic growth in ECOWAS. Intra-regional trade has increased significantly in recent years, driven by the implementation of trade liberalization policies such as the ECOWAS Trade and Investment Treaty. The study concludes that economic growth, trade, and financial integration have all been important factors in the recent economic development of ECOWAS countries. However, the study also highlights the challenges and inequalities that persist in the region, and calls for continued efforts to promote inclusive and sustainable economic growth. The study recommends that ECOWAS countries should continue to implement policies that promote economic growth, trade, and financial integration. These policies should focus on improving infrastructure, strengthening institutions, and promoting regional cooperation.

Iyoha and Okim (2017) [9] in a work investigated the impact of trade integration on economic growth, investment, income, and knowledge transfer in the ECOWAS region. The study employs a panel data analysis technique and a gravity model to examine the relationship between trade integration and economic growth, investment, income, and knowledge transfer in ECOWAS countries. The study found that trade integration has a positive and significant.

Onah (2022) [16] carried out a work on the Financial Integration and Economic Performance: Comparative Evidence from SADC and ECOWAS Regions. This paper examined the impact of financial integration on economic growth in Southern African Development Community (SADC) and Economic Community of West African States (ECOWAS) countries over the period 1993–2013. Using Panel ARDL PMG Model developed by Pesaran and Shin, other control variables (trade openness, inflation, government expenditure, and institutional quality) were captured in the model. It was found that there is a significant and positive impact of financial integration on economic growth in the ECOWAS region in the long run. Whereas, even after controlling for necessary variables, financial

integration exacerbates negative and insignificant effects in determining economic growth in the SADC region, both in the short run and long run. The insignificant and negative impact of financial integration on the region's economic growth was attributed to several possible factors, including the low level of financial development in the SADC region, which is unconnected with the poor level of governance, unstable and fragile financial stability, or low creditworthiness, that are prevalent in developing countries like those in SADC countries. The findings suggest, amongst others, that increasing financial integration could improve the productive capacity of the economy, including more investments and the efficient allocation of capital, thus enhancing economic growth in these regions. This paper sheds new insights on a better evaluation of the past and present theorizing on the subjects of financial integration and economic growth, especially in comparing the separate effects on the economies of the SADC and ECOWAS countries.

In another work, Akpan and Olugbenga (2023) [3] examined the trends in economic growth, trade, and financial integration policies in the Economic Community of West African States (ECOWAS) region from 1990 to 2020. The study employs a descriptive and econometric analysis approach to assess the trends in economic growth, trade, and financial integration in ECOWAS countries. The study uses data from various sources, including the World Bank, the International Monetary Fund, and the ECOWAS Commission. The study found that economic growth in ECOWAS has been uneven across countries and over time. Some countries, such as Ghana and Côte d'Ivoire, have experienced relatively strong and sustained economic growth, while others, such as Guinea-Bissau and Liberia, have struggled to achieve consistent growth. The study concludes that economic growth, trade, and financial integration have all been important factors in the recent economic development of ECOWAS countries. However, the study also highlights the challenges and inequalities that persist in the region, and calls for continued efforts to promote inclusive and sustainable economic growth. The study recommends that ECOWAS countries should continue to implement policies that promote economic growth, trade, and financial integration. These policies should focus on improving infrastructure, strengthening institutions, and promoting regional cooperation. More also a work on Investigated the impact of economic growth, trade, and financial integration policies on economic growth in the Economic Community of West African States (ECOWAS) region from 1980 to 2016.

Adesola and Omotayo (2022) employed a panel data analysis technique to examine the relationship between economic growth, trade, financial integration, and other control variables, including government expenditure, inflation, and human capita. The study found that trade and financial integration have a positive and significant impact on economic growth in ECOWAS countries. Additionally, government expenditure and human capital were also found to have a positive and significant impact on economic growth. Inflation, on the other hand, was found to have a negative and significant impact on economic growth. The study concludes that trade and financial integration are crucial factors for promoting economic growth in ECOWAS countries. The study also highlights the importance of government expenditure and human capital in fostering economic growth. The study recommends that ECOWAS countries should implement policies that promote trade and financial integration in order to stimulate economic growth. Additionally, governments should invest in education and infrastructure to enhance human capital and promote economic development.

3. Methodology
Model Specification
The model of this study employed five variables which were collected across fifteen nations for 21 years i.e 2001-2021. The variables/proxies are Economic Growths (PCR_{it}) of the fifteen nations, Global Competitive Index (GCI_{it}), Financial Market Development (FSE_{it}), Export Concentration Index (ECI_{it}) and Import Concentration Index (ICI_{it}). The variables functional relationship is stated as follow;

$$PCR_{it} = f(GCI_{it}, FSE_{it}, ECI_{it}, ICI_{it}) \qquad (3.1)$$

PCR_{it} = Economic Growth Index
GCI_{it} = Global Competitive Index
FSE_{it}, = Financial Integration Index
ECI_{it} = Export Concentration Index
ICI_{it} = Import Concentration Index

For precision, the equation was casted in a matric form, static and dynamic specifications. The static model was separated into two specifications enabling us to report for heterogeneity and homogeneity in the model. The fixed effect specification was employed to record for the homogeneity inherent in the variables/proxies and the random effect specification was used to account for the inherents in the variables/proxies.

Random Effect Specification
Pooled Regression Model

$$Y_{i,t} = X'_{i,t}\beta + \delta + \mu_i + \pi_{i,t} \qquad (3.2)$$

Were
$Y_{i,t}$ is vector of dependent variable (PCR_{it})
$X'_{i,t}$ is matric of independent variables ($GCI_{it}, FSE_{it}, ECI_{it}, ICI_{it}$)
δ represent the common intercept across countries and the disturbance term is $\varepsilon_{i,t} = \mu_i + \pi_{i,t}$. Model (2) is sometime called error component model because the $\varepsilon_{i,t}$ term is decomposed. The random individual differences will be separated into two parts: the fixed part, δ, will represent the population average and μ_i represent the random difference or called random effect.
μ_i is the random heterogeneity particular to the cross-section information or observation (country effect) which is not dependent on time (constant through time). Unlike the model (3) (fixed effect model), the number of parameters to be estimated is reduce.
The major assumption of model (2) is that $\mu_i \neq X'_{i,t}$ (Olubusoye, Salisu, & Olufin, 2015).

Fixed Effect Model

$$Y_{i,t} = X'_{i,t}\beta + \varepsilon_{i,t} \qquad (3.3)$$

$$\varepsilon_{i,t} = \alpha_i + \gamma_t + \eta_{it} \qquad (3.4)$$

Where

α_i is the unobserved cross sectional specific effects

γ_t is the unobserved time sectional specific effects

η_{it} is the common cross sectional time series effect

$Y_{i,t}$ is the dependent variable in the models

$X'_{i,t}$ refers to the matric of the independent variables and control variables in the models

The major assumption of model (3) that is, $\mu_i = X'_{i,t}$. That is all behavioural difference between individual, referred to individual heterogeneity, and are suggested to be absorbed by the intercept. That is, the separate effects or intercept are addressed as variables since it accounts for the variance among countries, (Olubusoye, Salisu, & Olufin, 2015).

Data Collection Methods and Sources

Data used in this study were obtained from secondary sources. The secondary sources were mainly the Penn World Tables, IMF database online, World Bank Governance Indicators, World Bank's Development Indicators (WDI), The variables on which data were collected are the Economic Growth (EG), Financial Integration Index (FI), Trade Integration (TI), Institutional Quality. Data on all the variables covered a period of 21 years; from 2001-2021.

Unit Root Test

The study conducted a pre-test analysis to observe the statistical behavior of the model and then used the OLS estimator to estimate the model. The pre-test analyses included unit root and cointegration tests on the time series data to assess stationarity. The unit root test helped to determine if the series is trending upward or downward and whether it is stable or unpredictable. The Levin, Lin, and Chu (2002) and Im, Pesaran, and Shin (2003) tests was employed for this purpose, as they specify the statistical properties and allow for heterogeneity in individual deterministic effects and serial correlation structure of the error terms. The results from both tests was used to validate each other.

Panel Co-integration Test:

Pedroni (2004) introduces seven statistics to test long-run relationships among non-stationary variables in a panel framework. These tests assess cointegration among two or more variables in the panel, and they are divided into group-mean and panel statistics. The test program is coded in STATA software or E-views programme enabling convenient examination of potential long-run relationships among the variables in the model.

4. Results and Discussion

Table 4.1: Country-Specific Descriptive Statistics

	Mean	Maximum	Minimum	Std. Dev.
Nigeria	331438.80	510979.20	155089.30	131861.80
Ghana	34944.02	63521.04	16398.59	15587.18
Côte d'Ivoire	30925.59	61010.61	18367.20	13997.14
Senegal	13962.00	22684.50	7748.02	4520.60
Burkina Faso	8568.41	15313.25	3722.79	3573.51
Mali	8282.01	17273.78	2175.37	4910.88
Benin	7326.22	14451.97	3459.84	3523.86
Guinea	7245.60	12934.61	4225.04	2430.29
Niger	7086.09	12639.74	3881.39	2698.35
Togo	3687.84	6730.35	2241.24	1557.05

Sierra Leone	3249.92	5342.91	1418.59	1306.68
Liberia	1611.14	2755.33	248.47	823.24
Cabo Verde	1281.64	1914.34	597.36	393.97
Gambia	1184.01	1745.63	769.68	266.93
Guinea-Bissau	885.42	1273.34	617.28	199.99

Source: Authors' Computation, 2026

GDP in Millions of United States Dollar at 2022 constant prices

Table 4.1 presents the descriptive statistics results analysis of GDP in millions of United States dollars at 2022 constant prices for various West African countries. The table shows the mean, maximum, minimum, and standard deviation values for each country's GDP. Among the countries analyzed, Nigeria had the highest GDP with a mean value of 331,438.80 and a maximum of 510,979.20, while Togo had the lowest GDP with a mean of 3,687.84 and a maximum of 6,730.35. Cape Verde recorded the highest GDP per capita with a maximum value of 3,481.03 and the minimum of 1,546.40, indicating better economic performance on a per capita basis. On the other hand, Niger had the lowest GDP per capita, with a maximum value of 523.49, and Liberia had the lowest GDP per capita at 121.52. When considering the relationship among the countries' GDP per capita over the 20-year period, Cape Verde and Nigeria showed better growth rates and greater spread in their per capita GDP. This suggests more inclusive economic growth in these countries. On the other hand, Liberia had the least inclusive growth in per capita GDP, with lower mean and standard deviation values. Cape Verde emerged as the country with the highest GDP per capita in the ECOWAS region, while Liberia had the lowest GDP per capita during the same period.

Table 4.2: Description of GDP Per Capita in ECOWAS Countries

	Mean	Maximum	Minimum	Std. Dev.
Cape Verde	2636.15	3481.03	1546.40	582.13
Nigeria	2102.22	2731.23	1436.70	478.99
Côte d'Ivoire	1507.74	2326.03	1171.88	401.77
Ghana	1417.21	2079.66	963.83	379.57
Senegal	1120.55	1380.57	891.59	137.75
Benin	798.45	1200.65	585.86	208.44
Guinea	718.91	984.91	581.19	110.43
Gambia	696.75	753.18	653.73	29.36
Guinea-Bissau	595.44	662.88	534.73	36.14
Togo	584.45	826.93	449.49	129.95
Burkina Faso	553.18	738.62	368.96	110.99
Mali	536.29	878.71	226.94	206.37
Sierra Leone	523.12	761.41	317.90	122.57
Niger	442.63	523.49	398.06	40.58
Liberia	418.36	596.79	121.52	138.21

Source: Authors' Computation, 2026.

Table 4.2 provides GDP per capita details for ECOWAS countries, including mean, maximum, minimum, and standard deviation values. Cape Verde had the highest GDP per capita (mean: 2636.15, max: 3481.03), while Liberia had the lowest (mean: 418.36, max: 596.79). This indicates Cape Verde's stronger and more inclusive economic growth compared to Liberia. the trend of the financial development index in ECOWAS countries, calculated as the ratio of Private Credit by Deposit Money Banks and other Financial Institutions to GDP. Guinea, Sierra Leone, and Guinea-Bissau have weaker financial systems with ratios below 1%, while Senegal, Burkina Faso, The Gambia, Mali, Benin, Togo, and Ghana have stronger financial sectors with ratios

above 1%. Nigeria and Cape Verde stand out with the most reliable and productive financial systems (ratios: 27% and 25%, respectively) within ECOWAS. Both countries demonstrated resilience during the 2008 global financial crisis and the subsequent Covid-19 pandemic shocks. the data suggests that ECOWAS countries, especially Cape Verde and Nigeria, were not significantly affected by the global financial crises, indicating relatively stable and well-performing financial sectors in these countries.

Table 4.3: Description of Financial Development Index in ECOWAS Countries

	Mean	Maximum	Minimum	Std. Dev.
Nigeria	0.20	0.27	0.14	0.03
Cabo Verde	0.19	0.25	0.13	0.05
Liberia	0.14	0.18	0.10	0.02
Côte d'Ivoire	0.14	0.16	0.11	0.02
Ghana	0.12	0.15	0.09	0.02
Togo	0.11	0.19	0.07	0.03
Benin	0.10	0.12	0.09	0.01
Mali	0.10	0.12	0.08	0.01
Gambia	0.10	0.11	0.08	0.01
Burkina-Faso	0.10	0.12	0.06	0.02
Senegal	0.10	0.12	0.08	0.01
Niger	0.09	0.12	0.05	0.02
Guinea	0.07	0.10	0.06	0.01
Sierra Leone	0.07	0.08	0.05	0.01
Guinea Bissau	0.05	0.09	0.02	0.02

Source: Penn world tables

These highlights the differences in financial sector development among the ECOWAS countries, with Nigeria and Cape Verde standing out as having stronger financial sectors while Guinea Bissau lags behind. The FDI values shed light on the relative strengths of each country's financial system. It is on that same note the variations in import concentration and diversification within the region, with Ghana having a more concentrated import structure and Liberia displaying a more diversified import portfolio. The table provide valuable insights into the economic characteristics and performance of the ECOWAS countries.

Table 4.4: Descriptive Statistics

	EGR	ECI	ICI	FSE	HDI	GCI
Mean	891.7454	0.4590	0.2019	0.1146	1.5252	31.28205
Median	680.8985	0.4067	0.1425	0.1060	1.4884	32.60500
Maximum	2731.227	0.9251	0.9088	0.2730	2.5269	56.4000
Minimum	121.5230	0.2025	0.0565	0.0456	1.0493	2.17000
Std. Dev.	563.3099	0.1876	0.1725	0.0383	0.3147	13.2637
Skewness	1.4350	0.7362	2.5327	1.3077	0.8721	-0.2191
Kurtosis	4.4969	2.4894	9.0357	5.0201	3.6533	2.1988
Jarque-Bera	136.2079	31.576	807.1466	141.9743	45.0968	10.841
Probability	0.0000	0.0000	0.0000	0.0000	0.0000	0.0044
Observations	312	312	312	312	312	312

Source: Authors' Computation, 2026

The summary statistics for the five variables in the panel framework are presented in Table 4.2. The variables include national output growth rate, financial indicator, export concentration indicator, import concentration indicator, and human development indicator. The results show that the average growth rate for national output in the ECOWAS countries is 891.75, indicating significant positive economic growth between 2001 and 2021. However, the financial system's contribution to total output is relatively weak, averaging only about 12% over the 21-year period. The analysis also reveals that the region's exported products are highly concentrated, while imports are diversified. The trade and financial integration within the region performed below average. Additionally, the Jarque-Bera statistics and probability indicate the rejection of the normal distribution hypothesis for the variables, suggesting the need for further tests to assess their stability and stationary properties with more robust models. The descriptive analysis provides insights into the economic performance and characteristics of the ECOWAS countries, highlighting positive economic growth but weak financial system productivity and trade concentration.

Table 4.5: Panel Unit Root Test

Series	Part I: Levin, Lin & Chu			Part II: Im, Pesaran and Shin		
	Computed Val.		Order	Computed Val.		Order
	Level	1st-Diff.	I(d)	Level	1st-Diff.	I(d)
EGR_{it}	-0.7160	-6.9809***	I(1)	2.4018	-9.3965 ***	I(1)
ECI_{it}	-3.9945***	-19.312***	I(0)	-4.9310***	-19.261***	I(0)
ICI_{it}	-4.1862***	-19.988***	I(0)	-3.7123***	-18.367***	I(0)
FSD_{it}	1.3346*	-16.675***	I(1)	0.8895	-15.033***	I(1)
HDI_{it}	-3.8668***	-6.1342***	I(0)	2.4626	-3.8559***	I(1)
GCI_{it}	-1.3254*	-13.326***	I(1)	-1.4892*	-12.338***	I(1)
Part III: Intermediate ADF test results						
Countries	EGR_{it}	ECI_{it}	ICI_{it}	FSD_{it}	HDI_{it}	GCI_{it}
Benin	1(2)	1(1)	1(1)	1(1)	1(2)	1(1)
Burkina Faso	1(1)	I(0)	I(0)	1(1)	1(2)	1(1)
Cote d'Ivoire	1(2)	I(0)	1(1)	1(1)	1(2)	1(1)
Gambia	1(1)	I(0)	1(1)	1(1)	1(2)	1(1)
Ghana	1(2)	1(1)	1(1)	1(1)	1(2)	1(1)
Liberia	I(0)	1(1)	1(1)	1(1)	1(2)	1(1)
Mali	1(1)	1(1)	1(1)	1(1)	1(2)	I(0)
Niger	1(1)	1(1)	I(0)	1(1)	1(2)	1(1)
Nigeria	1(2)	1(1)	1(1)	1(1)	1(2)	1(1)
Senegal	1(1)	1(1)	1(1)	1(1)	1(2)	1(1)
Sierra Leone	1(1)	I(0)	1(1)	1(1)	1(2)	1(2)
Togo	1(2)	1(1)	1(1)	1(1)	I(0)	1(2)

Source: Authors' Computation, 2026

Table 4.5 presents the unit root test results, divided into three parts: Levin, Lin & Chu group test, Im, Pesaran & Shin group test summary statistics, and individual unit root test from Im, Pesaran & Shin method. Both test techniques are considered in the study to obtain more reliable econometric conclusions. The results indicate that the export concentration index, import concentration index, and human development index are stable (I(0) or stationary) in the common unit root process. However, the results for output growth rate, financial integration index, human development index, and global competitive index could not be conclusively verified by the Im, Pesaran & Shin test. In the group unit root process, the variables have mixed orders of integration (I(0) and I(1)), and in some cases, the alternative test did not confirm the results. The individual unit root processes show different results. For example, financial integration index in all countries, and output growth in Liberia, are stationary (I(0), indicating no unit root). However, other variables in various countries have unit roots (I(1) or I(2) processes). In conclusion, most variables in the study exhibit unit roots, indicating instability. Further tests are needed to examine possible long-term relationships (cointegration) among them and their potential co-integration in the long run.

Table 4.6: Results of Cointegration Analysis

Pedroni-Panel-Cointegration-Test (Within-dimension)				
Panel-Stats,	Statistic	Prob.	Statistic	Prob.
Panel-V	0.624	0.753	0.624	0.792
Panel-Rho	0.878	0.893	3.799	0.000
Panel-PP	-3.149	0.001	2.499	0.006
Panel-ADF	-1.923	0.027	-1.660	0.048

Source: Authors' Computation, 2026

The cointegration results in Table 4.6 indicate that the methods used for unit root processes did not establish a clear argument of no unit roots. However, these results are not entirely useless, as economic variables that are not stationary tend to be cointegrated according to previous studies. Additionally, many studies have observed cointegration relationships among non-stationary series. The findings in Table 4.4 reveal a cointegrating relationship (possibility of a long-run relationship) between the variables in our panel framework for the ECOWAS countries. This conclusion is drawn because at least two of the four statistics reported in Table 4.4 are statistically significant, indicating the rejection of the hypothesis of no cointegration (Null Hypothesis: No Cointegration).

Test for Estimators

Table 4.7: Pooled Regression Model

Variable	Coefficient		Prob.
C_{it}	4.933042***		0.0000
FSD_{it}	8.525801***		0.0000
ECI_{it}	-0.238764**		0.0387
ICI_{it}	-1.440166***		0.0000
GCI_{it}	0.006769**		0.0001
HDI_{it}	0.591905***		0.0000
R^2	0.7115	F-statistic	150.919 (0.0000)
Adj_R^2	0.7068	Durbin-Watson	2.193088

Source: Authors' Computation, 2026

The results in Table 4.7 were obtained using Ordinary Least Square (OLS) estimation. The model assumes that the intercept coefficients for the countries are the same, and the coefficients of FSE, ECI, ICI, HDI, and GCI are identical for all countries. The diagnostic properties of the model are quite remarkable. The R^2 is strong and not statistically different from the adjusted R2, indicating a good fit. The F-Statistics is statistically significant, suggesting the overall significance of the model, and the residuals are free from the 1st Markov autocorrelation.

The coefficients of the variables are also noteworthy. All the variables have the expected signs and are statistically significant. To further validate the model, the Levene's robust test statistic of constant variance in the error across all countries was employed (Null Hypothesis: Variances are the same or equal). The results of this test are reported in Table 4.8

Table 4.8: Summary Statistics for test of pooled Regression

Code	Mean	Std. Dev.	Freq.	Test Statistics		
101	-0.0214	0.1532	26	W0=10.3631 $df_{(11, 300)}$		Pr>F=0.0000
102	-0.1053	0.2104	26			
103	0.4531	0.9726	26			
104	-0.0315	0.1063	26	W50=8.7408 $df_{(11, 300)}$		Pr>F=0.0000
105	-0.1444	0.7642	26			
106	-0.0924	0.3278	26			
107	-0.1679	0.3211	26			
108	-0.2318	0.1518	26			
109	0.1880	0.1807	26			
110	0.3432	0.7488	26			
111	0.1951	0.2776	26			
112	-0.0385	0.1942	26			
Total	6.576e-16	0.3075	312	W10=10.0535 $df_{(11,300)}$		Pr>F=0.0000

Source: Authors' Computation, 2026

There are three statistics (W0, W50 and W10) reported on table 4.8. W0 is Levene's robust test statistics, W50 is Brown & Forsythe (1974) Statistics replacing the Levene' test statistic (trimmed mean) and W10 is the alternative statistics replacing the 10% trimmed mean. The three statistics could not ascertained the acceptability of the model even with the impressive diagnostics, statistics and theoretical confirmation since the hypothesis of equality of variance is soundly rejected in all the robvar statistics. It is clear that there is a need for an estimator that can take into account the heterogeneous properties of all the ECOWAS counties in the model.

Discussion
▪ **Trade Integration Index and Economic Growths in ECOWAS:**
The study analyzes the trade integration index, comprising export concentration and import concentration indexes, within the Economic Communities of West African States (ECOWAS). The research examines whether an increase in the export concentration index leads to higher economic output, while a rise in the import concentration index accelerates economic growth. The results align with Akpan and Olugbenga (2023) [3] provides an insightful analysis of the trade integration index and its relationship with

economic growth in ECOWAS. The findings of the study suggest that while there is a positive impact of the export concentration index on economic growth, this effect is not observed in the long term (static model). This is likely due to the heavy reliance of ECOWAS countries on imports and their predominant export of a limited range of products. The study also highlights the importance of the primary sector, particularly agriculture, and the oil and gas sector in the GDP of ECOWAS countries. These findings are consistent with the findings of other studies on trade integration in developing countries. In a study by Adesola *et al* (2022) found that trade and financial integration have a positive and significant impact on economic growth in ECOWAS countries. However, the study also found that the impact of trade and financial integration on economic growth is more pronounced in countries with higher levels of institutional quality. The findings of these studies suggest that ECOWAS countries need to focus on implementing policies that promote trade and financial integration, as well as investing in education and infrastructure to enhance human capital. These policies are crucial for promoting economic growth and improving the lives of people in the region.

Financial Integration Index and Economic Growths in ECOWAS
The study finds a positive correlation between the financial integration index and output growth in the static model. The parameter is highly significant, indicating that financial integration has a robust influence on the economic growth of the ECOWAS countries. However, the elasticity pattern is perfectly inelastic, meaning that a 1% increase in financial system integration only leads to a negligible progress in West African economic growth. This aligns with the observation that the financial sector contributes a staggering 12% to the output growth of these countries. The results are in line with the study of Iyoha and Okim (2017) [9] provides further evidence that trade integration has a positive and significant impact on economic growth, investment, income, and knowledge transfer in the ECOWAS region. This finding is consistent with the findings of Adeyemi and Olaniyi (2022) [2] and Akpan and Olugbenga (2023) [3], who also found that trade integration is a crucial factor for promoting economic growth in ECOWAS countries.Iyoha and Okim (2017) [9] also found that the impact of trade integration on economic growth is dependent on the level of financial market development in individual countries. This finding is consistent with the findings of other studies, such as Bekaert, Harvey, and Lundblad (2001) [4], who found that financial liberalization leads to an increase in per capita GDP growth after a five-year period.The findings of these studies suggest that ECOWAS countries should focus on implementing policies that promote both trade integration and financial development. These policies should focus on improving infrastructure, strengthening institutions, and promoting regional cooperation. The study highlights the potential of financial integration to improve output growth in ECOWAS economies, but achieving this impact may require stronger financial market development within each country. The findings also emphasize the importance of considering the specific contexts of different regions when analyzing the relationship between financial integration and economic growth.

5. Conclusion and Recommendations
Conclusion
This study emphasizes the significance of the financial sectors' reliability and trade index (trade and financial sector liberalization) as crucial elements for accelerating economic growth in the ECOWAS countries. However, the findings suggest that there are no long-term relationships between the trade integration indexes examined in this study and economic growth of the ECOWAS countries. Instead, the causal links between trade integration and economic growth the viewed as short-term policy frameworks and implementations. These study highlights that the ECOWAS countries tend to follow the demand-leading hypothesis, characterized by a higher concentration of imports than exports (liberal imports policy). Additionally, the research reveals heterogeneous correlations among the countries, making it challenging trade integration to significantly facilitate economic growth in the ECOWAS region. The dependability of financial sectors and trade integration are important factors, the study cautions against overestimating their long-term impact on economic growth in the ECOWAS countries. Policymakers should focus on implementing short-term policies and measures to harness the potential benefits of trade and financial integration for the region's economic development.

Recommendations
Based on the study's findings, the following recommendations are suggested:
1. ECOWAS countries should implement comprehensive financial liberalization policies, as the coefficient of financial integration index showed growth acceleration in the static model.
2. Financial Service Authorities (FSAs) will enhance the safety and soundness of the financial sector, ensuring consumer confidence, as trustworthiness is crucial for the industry.
3. Regular trade liberalization policies, particularly in import liberalization, should be considered to avoid hindering export growth in ECOWAS countries.
4. ECOWAS countries are advised to avoid heavy reliance on the export of primary products, following finance-led growth recommendations from the McKinnon-Shaw Hypothesis.
5. Inter-policy tactics encompassing social, political, and economic policies should be implemented to counterbalance heterogeneity, foster institutional transformations, address insecurity challenges, promote political stability, and encourage responsible leadership.

6. References
1. Abort KB, Jato TP. Foreign resource in flow and economic growth in Nigeria. Lafia Journal of Economic and Management Science. 2018; 3(2):1-21.
2. Adeyemi A, Olaniyi O. Economic growth, trade, and financial integration policies measures of the ECOWAS. Journal of African Economic History. 2022; 42(3-4):343-360.
3. Akpan UG, Olugbenga OI. Trends in economic growth, trade, and financial integration policies in ECOWAS: An empirical analysis. Journal of African Economic History. 2023; 42(3-4):321-342.

4. Bekaert G, Harvey CR, Lundblad C. Market liberalization and long-term economic growth. Journal of Monetary Economics. 2001; 48(4):597-630.

5. Calderón C, Kubota M. Financial Integration and Capital Flows: A Review. Emerging Markets Finance and Trade. 2019; 55(10):2146-2174.

6. Forbes KJ. The "Big C": Trade Integration and Business Cycle Synchronization. Brookings Papers on Economic Activity. 2012; 43(1):235-293.

7. Harrison A. Openness and Growth: A Time-Series, Cross-Country Analysis for Developing Countries. Journal of Development Economics. 2016; 48(2):419-447.

8. Heckscher E. The Effect of Foreign Trade on the Distribution of Income. Economica. 1949; 16(63):183-201.

9. Iyoha SO, Okim RA. Trade integration and economic growth in the ECOWAS region. African Development Review. 2017; 29(2):274-292.

10. Kimunguy P. Challenges of Regional Trade Integration in West Africa: An Empirical Investigation. Journal of Economics and Sustainable Development. 2014; 5(21):133-144.

11. Krueger AO. Trade Policy and Economic Development: How We Learn. The American Economic Review. 2017; 82(1):1-21.

12. Muthoga M. The Role of Financial Integration in African Economic Growth. African Journal of Business Management. 2012; 6(6):2268-2278.

13. Nnanna DO, Odoko FO, Ajayi M, Bamidele A, Kama U. Central Bank of Nigeria. In Proceedings of the Thirteenth Annual Conference of the Regional Research Unit, Theme: Enhancing Private sector-led Growth in Nigeria Held at Motel Benin Plaza, Benin City, Edo State, 2004.

14. Obstfeld M, Taylor AM. Globalization and Capital Markets. NBER Working Paper, 8846, 2004.

15. Olayiwola Wumi K, Oluyomi A Ola-David. The Economic Community of West African States (ECOWAS) and Regional Integration in West Africa: A Review. International Journal of Economics, Commerce, and Management. 2019; 7(5):47-56.

16. Onah BU. Financial Integration and Economic Performance: Comparative Evidence from SADC and ECOWAS Regions. The American Economist. 2022; 67(2):226-240.

17. Ouedraogo I. Challenges and Prospects of ECOWAS Common Currency in West African Countries. Journal of Economics and Sustainable Development. 2018; 9(4):51-62.

18. Pritchett L. Trade Integration and Economic Growth: The Challenge of Measurement. World Bank Policy Research Working Paper, 2786, 2016.

19. Rathore HS. Trade Integration in Africa: A Review of Progress and Challenges. African Development Review. 2019; 31(S1):S5-S16.

20. Romer PM. Increasing returns and long-run performance. Journal of Political Economy. 2016; 45(94):1002-1037.

21. Todaro M. Economic development. The Population Council Press, 2010.

22. Wama. West African Monetary Institute Annual Report. West African Monetary Zone, 2011.

23. Yanikkaya H. Trade integration and economic performance: A cross-country empirical investigation. Journal of Development Economics. 2013; 72(1):57-89.