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IMPACT OF REGIONAL TRADE AGREEMENTS ON ECONOMIC GROWTH IN WEST AFRICA

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Abstract
With a focus on two important indicators the export concentration index and import concentration trends this research examines the relationship between trade integration and economic growth within the Economic Community of West African States (ECOWAS). The study looks at how different trade integration strategies affect economic production in ECOWAS states using a static model. The results show that although improvements in import concentration have no impact on economic development, increases in export concentration do. These findings differ from earlier research conducted in other parts of Africa, where it was shown that import and export concentration had a substantial effect on economic development. The report emphasizes how crucial export diversification is to promoting ECOWAS's sustained economic growth. Strong economic development is linked to a greater export concentration index, underscoring the advantages of a diverse, export-focused economy. Based on these observations, the researcher recommends that ECOWAS countries concentrate on investing in manufacturing and services in order to broaden their export base beyond conventional commodities. The research also recommends bolstering the industrial sector and assisting regional business owners in order to lessen dependency on imports.

Keyword: Trade, Economic, Trade Agreements, and Economic Growth.

Introduction

Trade is seen as an economic concept that involves the purchase and sale of products and services, with payment made by a buyer to a seller. Trade often takes place between producers and end customers in any economy. The finest part of international commerce was formerly thought to be the exchange of goods. Even while goods make up around 75%

of all exports worldwide, according to IMF statistics from 2006, they continue to be the primary commodities exchanged globally. However, the system of international commerce in products has undergone significant transformation in previous centuries. In the 20th century, the essential commodities that have historically dominated international commerce have becoming second-class trade tutelages. Manufacturing commodities began to take center stage in the structure of items exchanged primarily in international commerce in the middle of the 20th century.

Although the trade in services is becoming more significant every year, its share of global commerce is still only about 20%. In the majority of the world's countries, services constitute a key contributor to GDP, accounting for more than 50% of GDP output (Ikue et al., 2020). In most sophisticated economies, this percentage even surpasses 70%. The kind of services and their awareness play a major role in the problem of insufficient service segments in international commerce. In the same way that services cannot be separated from their suppliers, they can only be provided inside the residence where they are implemented. Similarly, a number of services—such as forwarding, transportation, indemnification, etc.—are representative of subsidiary services offered to the exporting of commodities; as a result, they are statistically included in international commerce in goods. Because services are immaterial, it is difficult to identify them after they are exported. The World Bank (2016) emphasizes that this kind of export is known as "invisible exports."

Following World War II, a number of less developed West African nations (LDCs) followed the route of Import Substitution Industrialization (ISI), which mostly involves exporting basic commodities and agricultural goods. According to UNCTAD (2016), the LDCs' ISI strategy necessitated better equipment and technology imports; as a result, it places more emphasis on international trade than on the expansion of export earnings. The LDCs then made the problem of the deficit balance of payment their top priority. The LDCs become more dependent on the developed nations to cover this shortfall. The Bretton Woods institutions advised the LDCs to integrate their economies over trade liberalization and economic policies in order to avoid economic catastrophes and achieve rapid development (UNCTAD, 2016).

Following the conclusion of World War II, "trade liberalization" began in 1947 with the signing of the "General Agreement on Tariffs and Trade" (GATT). Twelve of the twenty-three countries that founded the GATT in 1947 were technologically sophisticated, and eleven were rising economies, according to UNCTAD (2016). The primary goal of the GATT, which was renamed the World Trade Organization (WTO) in 1994, was to lower international trade barriers. Because the SR involved rapid and extensive liberalization, deregulation, and privatization of economic action to integrate up their economies as the search for a solution to the slowness and decline, GATT gave rise to structural reforms that were embraced by several African nations (UNCTAD, 2016).

According to Ikue et al. (2020), "trade" is a crucial factor in every country's economic development. Additionally, trade liberalization promotes efficient resource distribution, opens up access to international industrial and scientific distribution, and makes local monopolists lose market share. A country's economy is more likely to embrace additional

effective systems of production and trade integration when its trade volume is bigger. This leads to a faster rise of total factor products (TFP) and, therefore, real per capita income. Trade liberalization, financial reforms, and trade-related reforms all had a substantial and positive impact on market productivity, decreased biases in quantity, and increased Africa's appeal to the international market, which encouraged resource inflow and postponed exports. It is still unclear how the various structural reforms put in place to promote trade and monetary integration may impact economic productivity among West African member states, despite the many attempts in the past to ascertain the impact of trade amalgamation on economic growth. the effort to address the issue by examining how trade and financial integration impact West African productivity in order to provide more effective policy guidance.

According to Todaro (2010), economic growth is thought to be the component that drives the process of economic development. Christine defines it as an increase in the overall productivity of goods and services or an increase in the actual growth rate of the annual production of commodities and services. To fully integrate West African countries via trade, it is imperative to remove trade barriers, both tariff and non-tariff, in order to encourage policy support and harmonize trade plans and activities across member states. Among the constraints among the West African countries include the absence of a shared market for her goods, limitations on reciprocal trade, and common phases of commerce. However, once commerce has persisted, the effects of trade agreements on economic growth have been well recognized. There have been differing degrees of success in establishing an empirical link between trade integration and growth, or more precisely, an examination of the constraints imposed by certain trade integration processes on cross-national economic development.

Many economists have studied the connection between economic growth and trade expansion, including Singer (2020) and Prebisch (2020). They even claim that countries' long-term economic development, especially in Africa, has suffered as a result of trade integration. According to Echekoba et al. (2015) and Agbarakwe (2023), trade policies have led developing nations to "de-industrialize." The influence of trade integration on economic growth in many West African countries demonstrates that financial integration is mostly a provincial show. This study sought to ascertain if physical capital mobility inside a country was greater than that between countries. The study also seeks to ascertain if financial capital would be more mobile than physical capital and whether financial capital will facilitate the free mobility of physical capital within the region. It also seeks to determine if exchange rates, informal trade barriers, and formal trade barriers in the form of tariff and non-tariff protection are three forms of possible friction at national borders. Africa's argumentative temperament, low economic development, and divided nature have all been made worse by these contests. African politicians rapidly attributed the West African subregion's failure to establish robust regional integration to foreign leadership, particularly in the early years of independence. This was a shared uniqueness. This study aims to investigate the impact of regional trade agreements on the economic growth of West Africa.

2.0 Conceptual Clarifications

Economic Growth

According to Nnanna et al. (2004), economic growth is the ability of any economy to enhance the output of goods and services via the standard of capital and other production-related factors. It suggests the quality that propels economic growth. According to Todaro (2010), economic growth may be defined as either an increase in the amount of goods and services produced nationally or an increase in the annual productivity of products and services. Gross Domestic Product, often known as "Gross National Income" (GNI), is a proxy for economic growth. The GDP is simply the total trade value of all products and services produced in a nation over a certain time period, usually a year. For the purposes of this research, economic growth will be defined as the level of the real gross domestic product. A macroeconomic component of the rate of economic production that accounts for price fluctuations, or inflation and deflation, is the real gross domestic product (RGDP). By making this change, nominal GDP—a money-value indicator—becomes a catalog for the total amount of production. It is often referred to as inflation-corrected GDP, constant-price GDP, or constant-dollar GDP. Natural resources, technical innovation, foreign direct investment, human capital development, financial development, population growth rate, institutional quality, and government action are other factors that contribute to economic growth.

Trade Integration

According to Romer (2016), the Trade Integration Mechanism (TIM) was established in April 2004 to assist member countries in addressing balance of payments imbalances that can result from trade liberalization initiatives carried out by other economies. He goes on to say that trade integration addresses both financial tides and a nation's degree of reliance on international commerce. Generally speaking, the size of a country's exported/imported sectors in relation to total output might be considered trade integration. An economy's worldwide appeal in the global market is gauged by trade integration. Better integration into global markets is facilitated by increased growth. Import/export taxes, overt non-tariff trade misrepresentations, and, to varying degrees, exchange-rate policies, internal taxes and subventions, competition and other monitoring procedures, education strategies, the type of legal system, the system of government, and the general type of institutions and culture are all considered aspects of trade integration.

Additionally, Yannikaya (2013) emphasized that a country's trade concentration is its trade integration. He said that the aforementioned claim regarding trade integration has evolved over time to become a sign of trade liberalization. According to Pritchett (2016), trade integration refers to established policies that affect the level and kind of commerce (prices) to be similar to or identical to those in a free trade zone. On the other hand, Krueger (2017) said that trade integration may be achieved by using strategies that lessen biases against the export industry, such as encouraging exports or comforting export structures. Harrison (2016) expressed the idea that trade integration may be equivalent to objectivity, the meaninglessness of getting a unit of foreign currency by distributing and conserving a unit

via exports-substitution. Understanding this claim becomes crucial since there are many growth aspects that are otherwise related to economic growth. Denwi et al. (2022) use the Pooled Mean Group (PMG) estimator and a dynamic growth framework to examine trade policies in 42 African nations. According to their research, there are certain trade, export, and import openness thresholds that promote economic development; going above these thresholds may lead to economies "under-heating." The results of Onuosa et al. (2024), who similarly pinpoint a threshold beyond which trade liberalization starts to negatively impact Nigeria's manufacturing sector, are consistent with this nonlinear connection. Openness promotes early industrial and economic progress, according to both studies, but unchecked liberalization may have unfavorable effects, as seen by the convex association found in Onuosa et al.'s ARDL study. The emphasis of the two research is one of their main differences. Denwi et al. support region-specific trade strategies that take different income levels and socioeconomic circumstances into consideration, emphasizing wider economic expansion across Africa. They contend that in order to reap the benefits of liberalization without causing negative consequences, African nations must keep openness within precisely calculated limits (such as 139.94% of trade to GDP). Onuosa et al., on the other hand, concentrate on Nigeria's manufacturing sector and show how liberalization boosts production but ultimately degrades industrial performance over a certain threshold. By highlighting the need for careful management of liberalization to maximize economic and industrial development, both books add to the body of knowledge on trade policy integration in Africa. These academics agree that trade liberalization has its limitations even if it promotes prosperity. Policymakers must steer clear of the extremes of protectionism and over-liberalization in order for African economies to prosper. Instead, they must create trade policies that take into account the distinct economic structures and sectoral dynamics of each nation. The significance of threshold-based trade policies, which strike a balance between openness and domestic economic capabilities, is highlighted by these observations.

Economic Integration

According to Laden (2019), economic integration is the process by which a group of independent economies embrace and carry out measures and regulations that would combine the region's economic resources to address its demands without any restrictions or prejudice. In order to improve and promote cross-border investment prospects as well as making commerce within the regional grouping cheaper, relaxed, and more favorable and active, economic integration is accomplished by removing any trade or economic obstacles that now exist in the area.

Therefore, a sustained degree of unity among the participating or cooperating economies is necessary for any significant economic integration to take place. This will enable the institutional framework of the provincial economic community of states to be fully invested in ensuring the gradual and progressive accomplishment of the integration plans, programs, and projects. As a result, it is anticipated that the integrating states will cede some aspects of their sovereignty to the integration agencies or supranational bodies that will be

established. Additionally, citizens are expected to shift their allegiances, political commitments, and expectations to the innovative and larger center, whose main joint institutions have the authority to render mandatory decisions that affect all member communities as well as their specific and business citizens (Revised ECOWAS Treaty, 1993: Articles 3,5, and 6).

Economic integration, according to Balasa (2021), is the liberalization of commerce or the absence of economic discrimination among economic components. However, Adetula (2020) pointed out that Balasa's explanation of economic integration can be misleading for Africa. He noted that by 1963, the "East African Communal Market" had become more cohesive than the "European Common Market," based on a reciprocal tariff and free measure of labor and capital. He made it clear that just 20% of East African nations' total commerce was with their neighbors, but the "European Economic Community" (EEC) had around 40% of trade among its members. The neo-functionalists' belief that integration can only be maintained when there is a high degree of mutual interdependence and a significant amount of commerce among the unit is supported by his instances.

The Phases of ECOWAS Economic Integration Scheme

A four-state approach was conventionally earmarked and adopted by ECOWAS to attain full economic integration in the sub-region. These stages include the establishment of

i. Free Trade Area

Participants in a free-trade region have unfettered access to the market and commerce. Tariff and non-tariff obstacles do not exist in market transactions inside the free trade area (Ladan, 2015). The establishment of a free trade bloc is one of ECOWAS's main goals. Article 3 (2) d (i) of the Reviewed ECOWAS Accord gives ECOWAS the authority to end tariff blockades among its member nations. This is accomplished by eliminating customs charges on member-state imports and exports. The goal of this was to create a free-trade area inside the community (Revised ECOWAS Treat, 1993: Article 3:5-6).

Three phases were outlined in the plan for carrying out the free trade mandate. Initially, the "ECOWAS Trade Liberalization Scheme" (ETLS) was used to construct the FTA. The plan's goal was to gradually establish a Custom Union for the member states over a fifteen-year period, starting in January 1990 (Ladan, 2015). Three categories of goods—local handicrafts, unprocessed goods, and industrial goods—are included under the program. In order to secure member-states' trade, the Customs Union created by this scheme was supposed to result in the elimination of all trade barriers, the removal of duty charges and taxes of other member-states of equal effect, and the creation of a uniform foreign Custom Tariff System (referred to as CET) (ECOWAS Commission, 2007: 51-65).

The establishment of a Common External Tariff (CET) was the second stage of the strategy. January 2006 saw the CET's approval (ECOWAS Commission, Decision, 2006). The Commission was instructed by the community's Council of Ministers to help some member states who have not yet implemented Value Added Tax (VAT) in the third tier of the plan (UNECA, 2012-142).

ii. **Customs Union**

The goal of this second stage of the economic integration plan was to establish a customs union by implementing a Common External Tariff (CET) (www.afdb.org). In its new treaty, ECOWAS is obligated to construct the CET structure and trade policies toward non-member nations, which would effectively solve the issue of trade diversion to which a free trade area is often susceptible. The 1993 Revised Treaty's Article 3(2)(d)(ii) mandates "the adoption of a CET and harmonized commercial policies vis-a-vis third countries." One may argue that ECOWAS is approaching a single market by allowing intra-regional production flows due to the implementation of the CET arrangement.

iii. **Common Market**

The improvement of intraregional free movement of inputs of production, which would eventually lead to a single market, has been made possible by this third stage of the West African economic integration project (www.afdb.org). By eliminating non-tariff trade barriers and customs duties on import and export commerce, ECOWAS hopes to create a single market among its member nations. In order to do this, ECOWAS established a CET barrier and other common market. It also sought to eliminate any regulations that restricted the free flow of people, products, and services among its member states (ECOWAS Revised Treaty, 1993: 5-6).

iv. **Economic Union**

The integration of fiscal and monetary issues across the sub-region is the last stage of the ECOWAS regional economic integration strategy. By implementing harmonized economic, political, and sociocultural strategies that would result in the creation of a monetary union, ECOWAS hopes to achieve economic integration (Revised ECOWAS Treaty, 1993: Article 3: 5-6). Some ECOWAS member nations, including Ghana, the Gambia, Guinea, Liberia, and Nigeria, attempted to create a second West African Monetary Zone (WAMZ) in an effort to realize the aforementioned goal and create a complete monetary union for the whole sub-region (ECOWAS Commission, 2000). In order to create a unified West African monetary zone, it was expected that the WAMZ and the CAF Franc zone would merge. ECOWAS nations are anticipated to introduce a single currency by 2020, according to the ECOWAS Single Currency Program's action plan (ECOWAS West African Monitoring Institute, 2001).

Enhancing Factors to Africa Integration

The continent's population advantage has a great deal of potential to be realized. However, in order to accommodate the rapidly expanding labor force, employment must be awarded more quickly. Africans must harness the energy of the younger generations via structural, social, environmental, political, and economic reform that propels her folks to prosperity if they are to benefit demographically from their large youth population. Adequate and efficient investment in infrastructures such as education, health, power, water, and employment of women, girls, and youth will illuminate African government strategies for

addressing and eliminating poverty, unemployment, gender inequality, conflicts, crime, and threats to peace and insecurity. In addition to the topic that has been emphasized, the following lists some of the key elements that will hasten Africa's integration.

(a) A paradigm changes and strategy: Discrimination against one another has been one of Africa's biggest problems lately. Africa must alter the attitudes and methods of its young if it is to achieve the objectives of the Africa Union and sustainable development. There is still a lot of work to be done to dispel the negative stereotypes and attitudes about the area via public campaigns and education from the organizations, despite the various initiatives and plans put forward by Africa associations to enhance growth and development within the regions. African analysis should prioritize young employment and education while taking historical, social, political, and economic factors into account. It is important and pertinent to examine and comprehend the environment in which plans and policies are stated and implemented, as well as whether the beneficiaries accept them. As a result, both the public and private sectors must have a significant impact, be proactive, and participate.

(b) Ambitious policies: To improve and expedite Africa's young possibilities, policies and programs should be inclusive, sustainable, and wide-ranging to favor a diverse population. In order for African youth to have equal chances and compete on a global scale, policies should be comprehensive and provide them with education and a livable income.

(c) Taking proactive steps to unlock the potential of young people: The contemporary period is characterized by regional and economic integration, which tends to globalize the economy as a whole. The African government should develop, create, and carry out aggressive strategies and initiatives to release and exploit the potential of Africa's young. Adequate infrastructure investment, capacity building through skill development and acquisition, reforming immigration policies to favor youth employment and entrepreneurship development across borders, and promoting inclusion policies are some of the measures that will vary but are similar between sub-regions.

(d) An integrated approach to addressing Africa's young unemployment and literacy rate: Investing in human capital and developing skills are examples of fragmented youth development. School-to-work programs, hard and soft skill development plans, best practices, information sharing within African communities, and youth employment programs are examples of innovative approaches and solutions that need to be started in order to solve issues related to education and employment. These initiatives may raise expectations and improve the current situation.

(e) Effective Collaboration and Improved Stakeholder Involvement: To enable youth opportunities and realize their potential, civil societies, international development partners, the government, regional organizations, the corporate sector, and young people must cooperate. When young people are given the freedom to travel around the continent, they act as a catalyst for Africa's social and economic advancement. This is only feasible if sufficient funding is provided for such collaboration and involvement.

Economic growth Theories

Keynes' short-term analysis of full employment and income theory is seen to be extended by Harrod-Domar theory. A long-term theory of output is offered by the Harrod-Domar growth model. Following the Great Depression of the 1930s and the economic devastation brought on by World War II, economists began to focus on economic stability. A model that emphasizes the conditions required for consistent economic development has been

offered by Harrod and Domar. They contend that capital accumulation has a significant role in an economy's expansion.

Additionally, they stressed that capital accumulation boosts the economy's capability for output in addition to producing revenue. For example, the establishment of a building factory would boost the economy's capital and production capacity while also providing revenue to suppliers of various commodities, including steel, cement, bricks, and machines. Demand for products and services is created by the newly acquired revenue from capital accumulation. The most important prerequisite for an economy to expand, according to Harrod-Domar theory, is that the demand generated by newly generated income must be high enough to completely absorb the output produced by the new investment (increase in capital).

There would be surplus or idle production capacity if the output was not completely consumed. In order to sustain full employment and long-term sustainable economic development, these requirements must be met one after the other.

Assumptions

(a) Constant Capital-Output Ratio: Assumes that the relationship between capital and output always remains the same.

(b) Constant Saving-Income Ratio: Assumes that society saves a constant proportion of national income.

(c) Impractical Assumptions: Refer to one of the major shortcomings of the model. The Harrod-Domar model involves assumptions that cannot be applied in practical situations. According to the Harrod-Domar Model, savings becomes equal to investment when warranted and actual growth rate are equal to each other.

(d) Razor-Edge Model: Refers to another name of the Harrod-Domar model. The economic factors that are used in the Harrod-Domar model are capital/output ratio, marginal propensity to consume, growth rate of labor force, and improvement in labor-saving technology. These factors are derived independently from the model. Therefore, the equilibrium growth rate concept according to this model cannot be confirmed in long-run. Any deviation in these parameters can affect the equilibrium condition of an economy. Therefore, the model is sometimes referred as the

Methodology

Model Specification

The model would employ five variables which would be 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 /proxies is as follow;

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

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 inherent in the variables/proxies.

Random Effect Specification

Pooled Regression Model

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

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.

$\mu_i$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

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

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

Where

α_i *is the unobserved cross − sectional specific effects*

γ_t *is the unobserved time − specific effects*

η_{it} *is the common cross − section 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).

Types and Sources of Data Collection

Secondary sources provided the data utilized in this investigation. Economic Growth (EG), Financial Integration Index (FI), Trade Integration (TI), and Institutional Quality are the variables on which data were gathered. The primary secondary sources were the Penn World Tables, the IMF database online, the World Bank Governance Indicators, and the World Bank's Development Indicators (WDI). All of the variables' data span 21 years, from 2001 to 2021.

SECTION IV

Unit Root Test

After estimating the model using the OLS estimator, the research performed a pre-test analysis to see how the model behaved statistically. In order to evaluate stationarity, the time series data are subjected to unit root and cointegration tests. The unit root test assisted in determining if the series was stable or unpredictable and whether it was going upward or downward. For this reason, the Levin, Lin, and Chu (2002) and Im, Pesaran, and Shin (2003) tests were used since they define the statistical characteristics and permit heterogeneity in the error terms' serial correlation structure and individual deterministic effects. The outcomes of the two tests were used to verify one another. Test of Panel Co-integration: Pedroni (2004) offers seven statistics to investigate long-term correlations between non-stationary variables within a panel framework. These tests assess cointegration between two or more panel variables and are divided into group-mean and panel statistics. The test program's coding in STATA or E-views software makes it simple to analyze potential long-term correlations between the variables in the model.

Data Analysis

Table 4.2.1: Descriptive Stattistics Results Analysis

	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

GDP in Millions of United States Dollar at 2022 constant prices

The descriptive statistics analysis of GDP in millions of US dollars at 2022 constant prices for several West African nations is shown in Table 4.2.1. The GDP mean, maximum, minimum, and standard deviation figures for each nation are shown in the table. Nigeria had the greatest GDP of all the nations examined, with a mean 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. With a maximum GDP per capita of 3,481.03 and a minimum of 1,546.40, Cape Verde had the greatest GDP per capita, demonstrating superior economic performance. However, Liberia had the lowest GDP per capita, at 121.52, and Niger had the lowest, with a maximum value of 523.49. When comparing the GDP per capita of the two nations over a 20-year period, Cape Verde and Nigeria had higher growth rates and a wider GDP per capita dispersion. This implies that these nations' economies are becoming more inclusively. Liberia, on the other hand, had lower mean and standard deviation values and the least inclusive increase in per capita GDP. Liberia had the lowest GDP per capita over the same time period, while Cape Verde had the highest GDP per capita in the ECOWAS area.

Table 4.1.2: 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

GDP per capita data for ECOWAS nations, including mean, maximum, minimum, and standard deviation values, are shown in Table 4.1.2. Liberia had the lowest GDP per capita (mean: 418.36, max: 596.79), while Cape Verde had the highest (mean: 2636.15, max: 3481.03). This suggests that, in comparison to Liberia, Cape Verde's economic development is more robust and inclusive. the trajectory of the ECOWAS financial development index, which is determined by dividing GDP by private credit provided by deposit money banks and other financial institutions. Senegal, Burkina Faso, The Gambia, Mali, Benin, Togo, and Ghana have better financial sectors with ratios over 1%, whilst Guinea, Sierra Leone, and Guinea-Bissau have poorer financial systems with ratios below 1%. Among ECOWAS, Nigeria and Cape Verde have the most dependable and efficient financial systems (ratios: 27% and 25%, respectively). During the 2008 global financial crisis and the ensuing Covid-19 epidemic shocks, both nations showed resiliency. According to the statistics, the global financial crisis did not have a substantial impact on ECOWAS nations, particularly Cape Verde and Nigeria. This shows that these nations' financial sectors are comparatively stable and working well.

Table 4.1.3: 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 show how the financial sectors of the ECOWAS nations have developed differently, with Guinea Bissau lagging behind and Nigeria and Cape Verde having stronger financial sectors. The relative strengths of each nation's financial system are shown by the FDI figures. In keeping with that, there are regional differences in import concentration and diversification, with Liberia exhibiting a more diverse import portfolio and Ghana having a more concentrated import structure. The table offers insightful information on the economic traits and performance of the ECOWAS nations.

4.2.1 Descriptive Statistics Analysis

Table 4.2: 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: Estimated from Eview 9.0

Table 4.2 displays the summary statistics for each of the panel framework's five variables. National production growth rate, financial indicators, import and export concentration indicators, and human development indicators are among the factors. According to the findings, the ECOWAS nations' average national production growth rate is 891.75, demonstrating a significant increase in economic growth between 2001 and 2021. But over the course of 21 years, the financial system's contribution to overall production has been very low, averaging just around 12%. Additionally, the data shows that although imports are diverse, the region's exports are extremely concentrated. The region's financial integration and commerce both underperformed. Furthermore, the probability and Jarque-Bera statistics show that the normal distribution hypothesis for the variables is rejected, indicating the necessity for further testing to evaluate their stationary qualities and stability using more reliable models. The descriptive research sheds light on the ECOWAS nations' economic performance and traits, emphasizing strong economic growth but low trade concentration and financial system productivity.

Table 4.3: Panel Unit Root Test

Part I: Levin, Lin & Chu				**Part II: Im, Pesaran and Shin**		
Series	**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: Estimated from Eview 9.0

The results of the Levin, Lin, and Chu group test, the Im, Pesaran, and Shin group test summary statistics, and the individual unit root test from the Im, Pesaran, and Shin technique are shown in Table 4.3. The research takes into account both test methods in order to get more trustworthy econometric findings. The findings show that in the common unit root process, the export concentration index, import concentration index, and human development index are stable (I(0) or stationary). However, the Im, Pesaran, and Shin test was unable to definitively confirm the findings for the production growth rate, financial integration index, human development index, and global competitive index. The variables in the group unit root process had mixed integration orders (I(0) and I(1)), and sometimes the alternative test failed to validate the findings. Different outcomes are shown by the distinct unit root processes. For instance, Liberia's production growth and the financial integration index across all nations are stagnant (I(0), indicating no unit root). Other variables, however, have unit roots (I(1) or I(2) processes) in different nations. In summary, the majority of the study's variables have unit roots, which suggests instability. To investigate potential long-term links (cointegration) between them and their potential long-term co-integration, further testing is required.

Table 4.4: 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: Estimated from Eview 9.0

Table 4.4's cointegration findings show that the unit root process techniques did not provide a convincing case for the absence of unit roots. These findings are not totally meaningless, either, since prior research has shown that non-stationary economic variables often cointegrate. Cointegration links between non-stationary series have also been noted in several research. The results in Table 4.4 show that the variables in our panel framework for the ECOWAS nations have a cointegrating connection, or the potential for a long-term association. The hypothesis of no cointegration (Null Hypothesis: No Cointegration) is rejected since at least two of the four data shown in Table 4.4 are statistically significant.

4.2.3 Test for Estimators

Table 4.5: 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: Estimated from STATA 13.0

Ordinary Least Square (OLS) estimate was used to get the findings shown in Table 4.5. The model makes the assumption that all nations have the same intercept coefficients as well as the same FSE, ECI, ICI, HDI, and GCI coefficients. The model's diagnostic capabilities are impressive. A good match is shown by the R2's strength and lack of statistical difference from the adjusted R2. The residuals are free of the first Markov autocorrelation, and the F-Statistics is statistically significant, indicating the model's overall importance. Notable are also the variables' coefficients. Every variable is statistically significant and exhibits the anticipated signals. The Levene's robust test statistic of constant variance in the error across all nations was used to further verify the model (Null Hypothesis: Variances are the same or equal). Table 4.5.1 presents the test's findings.

Table 4.5.1: 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: Estimated from STATA 13.0

Table 4.5.1 presents three statistics (W0, W50, and W10). Levene's robust test statistics are represented by W0, the alternative statistics that replace the 10% trimmed mean are represented by W10, and Brown & Forsythe (1974) statistics are represented by W50. Even with the outstanding diagnostics, statistics, and theoretical support, the three statistics were unable to determine the model's acceptability since all of the Robvar statistics firmly reject the premise of equality of variance. It is evident that an estimator that can account for the diverse characteristics of each ECOWAS country in the model is required.

Discussion

Trends of Trade Integration Measures and Economic Growth

The export concentration index and import concentration trends were separated from the trade integration index. It is hypothesized that an increase in the ECOWAS economies' export concentration index will speed up the communities' economic outputs, but an increase in the import concentration index should also speed up the economic output of the nations that comprise the ECOWAS states. The research shows that ideas and opinions are pretty comparable. Economic growth in the Economic Communities of West African States (ECOWAS) is negated by import concentration indices, but economic development is accelerated by export concentration indexes. On the other hand, neither trade integration index's recommendations were seen in the long run (static model). The negative correlation shows that the nations that comprise the economic community (ECOWAS) are fervent importers but monopolistic exporters of products and services, which had a statistically negligible impact on the West African countries' economy, particularly in the near term. The findings of this research vary from those of previous investigations (Anyanwu, 2015; Mevel et al., 2016; Baier et al., 2017). According to these academics, there is a substantial positive correlation between the trade index and economic integration in the economic areas of East Africa, North Africa, and West Africa. The trade proxies used in these research,

however, are calculated differently from those used in the present investigation. While some studies utilized the monetary values of imports and exports as a proxy for the trade integration index, others used the degree of openness. In the long run, this might have an impact on their models and result in the substantial positive association seen in their research. The inability of the manufacturing and industrial sectors to contribute to economic development is another reason why our data indicate that imports have a negative economic effect. In their study, Chete et al. (2015) examined the development of the industrial sector in West African nations over the past 50 years as a significant real sector in the economy. They concluded that the primary sector accounted for more than half of the GDP, with agriculture playing a significant role. The manufacturing and industrial sectors of West African nations made up a very small percentage of economic activity, despite the fact that the oil and gas industry was also a significant economic engine. Despite the fact that industrial production was determined to have made a substantial contribution to economic development in West Africa, manufacturing output, capital, and technology were presented as the primary drivers of economic progress.

CONCLUSION

With an emphasis on the export and import concentration indices, the study's results provide a critical assessment of the connection between trade integration and economic development within ECOWAS. Only a portion of the working hypothesis—that increased trade integration would stimulate economic growth—was validated. In contrast to predictions and other research carried out in other African areas, the import concentration trends showed little or even negative impacts on economic production, whereas the export concentration index positively benefited economic growth. This result implies that while ECOWAS nations have a concentrated export base, sustainable development is hampered by their excessive dependence on imports.

This study's sophisticated analysis of the growth-promoting benefits of export concentration, which emphasizes the significance of export diversification within ECOWAS nations, is a major addition. In contrast to earlier research in North and East Africa, where both export and import indices strongly affected economic integration and development, the results defy conventional wisdom by showing that advances in import concentration fail to drive growth. This variance may be explained by the different structural features of the countries being studied as well as variations in the trade integration proxies utilized in different research.

The research did, however, have several drawbacks. The dynamic character of trade integration's influence on growth, particularly over time, may not be well captured by the use of static models for certain specifications. The ECOWAS countries' incapacity to transform rising imports into profitable economic activity is another systemic issue that is highlighted by the industrial sector's meager contribution. According to studies like Chete et al. (2015), this failure highlights the region's need for improved industrial and manufacturing capacities in order to increase trade's contribution to development.

A dynamic model might be useful for capturing longer-term impacts in future studies, especially the possibility of co-integration of non-stationary variables. Further understanding of regional economic dynamics may also come from examining the asymmetric effects of trade integration on nations with different degrees of modernization and export diversification.

The research has several policy implications for ECOWAS nations. Policymakers should promote industrial and manufacturing growth, lessen reliance on imports, and increase the variety of exportable items in light of the detrimental effects of import concentration. Leveraging trade integration as a growth engine requires investments in money, technology, and local entrepreneurship. In order to promote a more robust and balanced economic structure across the area, trade policy should also concentrate on boosting intraregional trade.

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