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## TRADE LIBERALIZATION AND POVERTY IN ECONOMIC COMMUNITY OF WEST AFRICAN STATES

### ЛИБЕРАЛИЗАЦИЈА ТРГОВИНЕ И СИРОМАШТВО У ЕКОНОМСКОЈ ЗАЈЕДНИЦИ ЗАПАДНОАФРИЧКИХ ДРЖАВА

**Summary:** This study investigates the relationship between trade liberalization and poverty reduction within the ECOWAS region, based on the premise that economic growth can serve as a pathway to poverty reduction. The primary objective is to evaluate the influence of trade liberalisation poverty levels, incorporating macroeconomic and institutional variables to capture a broader context. Using a dynamic panel data model, the study employs annual data across ECOWAS countries, specifying poverty as a function of trade liberalisations, per capita GDP, exchange rate, education, and institutional quality. Unit root tests, cross-sectional dependence assessments, and multicollinearity checks were conducted to ensure model validity. Empirical results reveal a significant negative relationship between trade liberalization and poverty, implying that increased trade liberalisation is associated with poverty reduction. However, higher per capita income and better institutional quality also correlate with reduced poverty, whereas the exchange rate shows a positive link with poverty, indicating potential inflationary pressures. Education shows an inverse but statistically weak association with poverty. The findings highlight disparities in trade flow among ECOWAS countries, reflecting varying degrees of integration with the global economy. Based on these results, the study recommends tailored trade policies that promote inclusivity, enhance institutional frameworks, and foster human capital development. Strengthening education systems and ensuring macroeconomic stability are essential to maximize the poverty-reducing benefits of trade liberalization in the region.

**Keywords:** Trade Liberalisation ,Poverty Reduction,Institutional Quality ,Multicollinearity and Macroeconomic Stability

**JEL classification:** F13, F14, I32, O19, O55

**Резиме:** Ова студија истражује везу између либерализације трговине и смањења сиромаштва у региону Економске заједнице западноафричких држава (ECOWAS), полазећи од претпоставке да економски раст може представљати пут ка смањењу сиромаштва. Основни циљ рада је пројена утицаја либерализације трговине на нивое сиромаштва, при чему су укључене и макроекономске и институционалне варијабле ради сагледавања ширег контекста. Коришћењем динамичког панел-модела, студија обухвата годишње податке за земље ECOWAS-а, са сиромаштвом као зависном варијаблом, док су либерализација трговине, БДП по глави становника, девизни курс, образовање и квалитет институција независне варијабле. У раду су извршени тестови стационарности, провере попречне зависности панела и тестови мултиколинеарности, како би се обезбједила валидност модела. Емпиријски налази указују на значајну негативну везу између либерализације трговине и сиромаштва, што имплицира да већа либерализација трговине доприноси смањењу сиромаштва. Већи БДП по глави становника и бољи квалитет институција такође су повезани са нижим нивоом сиромаштва, док девизни курс показује позитивну везу са сиромаштвом, указујући на потенцијалне инфлаторне притиске. Образовање показује инверзну, али статистички слабију повезаност са сиромаштвом. Резултати указују на неједнакости у трговинским токовима међу земљама ECOWAS-а, што одражава различите нивое интегрисаности са глобалном економијом. На основу ових налаза, препоручује се креирање прилагођених трговинских политика које би промовисале инклузивност, побољшање институционалних оквира и развој људског капитала. Јачање образовних система и макроекономске стабилности неопходни су предуслови за максимизирање ефеката либерализације трговине на смањење сиромаштва у региону.

**Кључне речи:** либерализација трговине, смањење сиромаштва, квалитет институција, мултиколинеарност, макроекономска стабилност

**ЈЕЛ класификација:** F13, F14, I32, O19, O55

## 1. INTRODUCTION

Scholars, governments, and international organisations have all paid close attention to poverty, which has been a major focus of research, policy, and intervention efforts worldwide. Poverty rates are still among the highest in the world in the Economic Community of West African States (ECOWAS), highlighting the urgent need for focused initiatives and interventions (Maku et al. 2021). According to World Bank estimates, 40% of people worldwide lived on less than \$2.15 per person per day between 2015 and 2018, a 1.6% decrease in global poverty (Ogundipe 2022). As the economy recovered from the COVID-19 epidemic, over 23 million more people were living in extreme poverty by 2022 than in 2019, especially in Sub-Saharan Africa. About 60% of the world's extremely poor live in this region (Fajana 2019). Oil-rich Nigeria alone accounts for more than half of the ECOWAS Gross Domestic Product, and other nations including Côte d'Ivoire, Ghana, Niger, and Nigeria have had comparatively faster rates of economic growth.

Poverty is also widespread in the ECOWAS area, where a number of member states have low Human Development Index rankings. Rapid population growth, economic inequality, and a strong reliance on informal economies which frequently lack social safety nets define the region. Insurgencies and poor governance in nations like Nigeria, Niger, and Mali make matters worse by restricting access to jobs, healthcare, and education (Afolabi and Ndamsa 2025). Despite the introduction of regional programs and policy frameworks aimed at reducing poverty and promoting economic integration, implementation has been uneven, and the gains have not been shared equally. Poverty so still restricts the ECOWAS bloc's economic potential and the development of human capital (Balogun et al. 2024).

The literature on economic growth identifies a number of growth-promoting strategies, most notably trade liberalisation, which is particularly pertinent for regional organisations such as ECOWAS, where conventional economic theory maintains that commerce serves as a "engine of growth" (Iyioha 2017). Trade liberalisation can raise incomes, draw in foreign investment, and advance a nation's technical expertise. Productivity and competitiveness are fuelled by increased investments, technical innovation, and breakthroughs; these factors in turn increase trade and national wealth (Adelowokan et al. 2023).

By lowering trade barriers, improving market access, and promoting foreign direct investment, trade liberalisation has been sought as a means of boosting economic growth in the ECOWAS area. ECOWAS seeks to boost productivity, diversify exports, and integrate member states into the global economy by fostering both intraregional and international commerce (Mbah et al. 2022). Theoretically, trade liberalisation should boost economic growth by promoting innovation, increasing market competition, and better allocating resources. Because of better trade infrastructure and lower tariffs that have made cross-border business easier, several member nations have seen modest growth in industries including manufacturing and agriculture (Blecker 2002).

Trade liberalisation has had varying effects on ECOWAS poverty reduction, nevertheless. Although poverty can be decreased by economic expansion, the advantages have not been shared equally by nations and populations (Yameogo and Omojolaibi 2021). Due to their continued reliance on primary commodity exports, many of the region's economies are susceptible to price shocks and have limited capacity to create high-quality jobs. Because of better trade infrastructure and lower tariffs, which have made cross-border business activities easier, the poor are further prevented from fully engaging in or benefiting from trade-driven growth and manufacturing by inadequate infrastructure, weak institutions, and limited social protection measures (Onakoya, Johnson, and Ogundajo 2019). Therefore, trade liberalisation might not be enough on its own to drastically lower poverty in the ECOWAS region unless it is combined with complementary policies targeted at enhancing healthcare, education, and credit availability. improved trade infrastructure and lower taxes, which have made doing business across borders easier (Nwosu, Sunday and Caleb 2023).

In the light of above, this paper examines the effect of trade liberalization on poverty in Economic Community of West African States (ECOWAS). A vacuum exists on understanding the nexus and ways through which Trade liberalization reduces poverty in the region. Section two comprises of Literature review, section three details Methodology while section four contains Econometric techniques and the rest of the paper follows accordingly from Conclusions to Recommendations.

## 2. LITERATURE REVIEW

The literature posits that though there is no direct relationship between trade liberalization and Poverty but when liberalizing trade it creates growth while there is high tendency for the poverty to reduce after the attainment of Growth. This pathway of arguments is built to establish a relationship between them

Afolabi et al (2025) builds on previous research by using quantile regression to analyze the impact of trade integration on poverty in ECOWAS. The objective was to examine how trade openness, bilateral trade, FDI, import duties, and exchange rates affect poverty levels across countries with different poverty headcounts. The results showed that trade openness increases poverty, while bilateral trade reduces it, especially in low-poverty countries, but has no significant effect in high-poverty countries. FDI, though potentially beneficial, was insignificant due to low inflows. Import duties and exchange rates had varying, insignificant impacts across quantiles. The study highlights that disaggregating countries by poverty level provides a clearer understanding of trade's effect on poverty, contrasting with previous studies that generalized across the region. It recommends that policies consider these differences for more effective poverty reduction strategies.

Afolabi and Ndamsa (2024) examines the effect of trade integration on poverty reduction within ECOWAS using data from 15 member countries covering the period from 2010 to 2019. The analysis considers factors such as trade openness, bilateral trade, exchange rates, foreign direct investment, inflation, interest rates, and import tariffs. To address heteroscedasticity, the Feasible Generalized Least Squares (FGLS) method was employed. The results indicate that trade openness, bilateral trade, exchange rates, and import tariffs significantly impact poverty reduction. The study highlights the positive role of trade integration in alleviating poverty in the region and suggests policy measures such as enhancing productive capacities in smaller economies, establishing a common currency for smoother trade, increasing intra-regional trade, and promoting the export of finished goods to create jobs and reduce poverty

Balogun et al (2023) explores the link between trade openness, poverty, and human capital development in achieving sustainable development across ten ECOWAS countries from 1987 to 2020. It examines both direct effects and whether trade openness influences the poverty-sustainability relationship. Using panel ARDL techniques (PMG and CS-ARDL) and supported by robustness checks (AMG and P-OLS), the study finds that poverty negatively impacts sustainability, while human capital has a positive long-term effect. Trade openness shows no direct influence on sustainability but significantly moderates the poverty-sustainability relationship over the long run. The study suggests that policies should focus on reducing poverty, enhancing human capital, managing exchange rates prudently, and designing inclusive trade strategies to support sustainable development in the region.

Nwosu et al (2023) assesses Trade Liberalization Scheme (ETLS) and its impact on Nigeria's economic development using the Neo-functional approach. It found that despite numerous policy decisions, implementation remains poor, with member states trading more with external partners like China, India, and the EU than among themselves. Key challenges include lack of political will, mistrust among members, and weak enforcement of free movement protocols, language barriers, and persistent smuggling into Nigeria. The study recommends establishing a Border Defence and Management Agency (BODMA), investing in high-tech industries, and fostering stronger regional cooperation to improve trade integration and economic growth

Fambeu et al.(2021) This study investigates the effects of democracy and trade openness on poverty in sub-Saharan Africa, using data from 24 countries between 2005 and 2016 and applying the generalized method of moments (system-GMM). The results show that democracy increases income poverty in non-oil-producing countries but has no effect in oil-rich nations, while trade openness does not impact poverty. However, imports help improve living standards in democratic oil-producing countries and reduce monetary poverty in democratic non-oil countries. The findings emphasize the need for combined policies that consider both democracy and trade openness to effectively reduce poverty in the region.

Yameogo et al (2021) analyzes the links between trade openness, economic growth, and poverty levels in 40 sub-Saharan African countries from 1990 to 2017 using the Panel ARDL, Panel VAR, and SYS-GMM models, along with robustness tests. The findings show that, in the long run, trade openness, foreign direct investment, and institutional quality boost economic growth, though institutional quality negatively affects growth in the short term. Additionally, trade liberalization, institutional quality, and population growth help reduce poverty in the long term, while trade openness

has negative short-term effects on poverty. Poverty showed no significant response to trade and growth shocks. The Pairwise Dumitrescu-Hurlin Panel Causality test reveals feedback effects between trade, growth, and poverty. The study suggests that African governments should review their poverty reduction strategies to better align with sustainable development goals

Ul-Haq et al (2022) explored the impact of trade liberalization on poverty in Pakistan using panel data from 1990 to 2005. Applying the Feasible Generalized Least Squares (FGLS) model, the study found that reductions in import tariffs were linked to rising poverty, as reflected across multiple poverty indicators. The authors argue that the poor's limited access to external markets may explain this outcome. They recommend that trade policies be more inclusive and supported by social programs, skills training, and infrastructure to ensure that vulnerable populations benefit from trade reforms

Onakoya et al (2019) explores 21 African countries (2005–2014) on the link between trade liberalization and poverty using econometric methods, including descriptive statistics, correlation matrix, panel unit root test, pooled OLS, and Johansen co-integration. To ensure model robustness, tests for autocorrelation, heteroscedasticity, and cross-sectional dependence were conducted. The results showed that foreign direct investment and inflation positively affected the human development index, while trade openness and exchange rates were inversely related to poverty levels at the 5% significance level. The study recommended enhancing poverty alleviation programs, fostering South–South cooperation through market diversification, strengthening regional economic integration, and providing incentives for export-oriented production and human capacity development

### 3. MATERIAL AND METHODS

#### 3.1 Theoretical Framework

The adoption of an export-led growth hypothesis in the ECOWAS region is strongly justified by its potential to stimulate economic development, reduce poverty, and enhance living standards through increased trade liberalisation. Trade liberalisation facilitates access to international markets, promotes competitive industries, and encourages the inflow of foreign direct investment (FDI), which is vital for infrastructure development and job creation. As trade barriers are reduced, the region becomes more attractive to foreign investors, resulting in capital inflows and technology transfer that boost productivity. Consequently, this leads to an increase in GDP per capita, reflecting improved economic performance and higher income levels. Furthermore, trade openness often creates a demand for skilled labor, incentivizing investments in education and human capital development. Improved educational outcomes, in turn, enhance workforce capabilities, leading to more inclusive growth and a reduction in poverty. By integrating these dynamics, export-led growth emerges as a viable strategy to drive sustainable development and poverty alleviation across ECOWAS member states

Against this background, extant studies and policy makers have advocated for the relevance of export-led growth hypothesis (Herzer et. al. 2004; Ee 2016). The export-led growth hypothesis is a developmental strategy appropriate to mitigate poverty (Bankole and Bankole 2014; Idoko 2023). It argues that export is the main determinant for economic growth. Policy makers seem to view it as stimulus engine efficient to enhance poverty reduction with the notion that export promotion stimulates economic progress sufficient to curb unemployment and poverty. Though, some studies have argued that the positive productivity effects expected of the export-led growth hypothesis may not be feasible in developing countries due to the fact that most developing countries depends heavily on the exports of primary products. Nevertheless, studies have documented evidence that most countries that have sustained growth in the past decades were committed to export expansion (Akanni, 2017). Also, World Bank (2019) study conceded that all the countries that have succeeded in reducing their domestic poverty level have all expanded their shares of global exports. Furthermore, the Heckscher-Ohlin theory argues that exports through international trade could significantly level the gap between rich and poor countries. Thus, exports-oriented growth could shift attention of countries from the competitive manufacturing sectors which have many externality factors required for sustainable growth.

Thus, in line with extant studies on export led-growth model, this study adapts Idoko (2023) exported led-growth model. Thus,

$$PO_{it} = f(TR_{it}, X_{it}) \quad (3.1)$$

where  $PO_{it}$  is the measure of poverty and  $X_{it}$  is a set of variables characterising trade regulations occasioned by liberalisation. The link between trade liberalization and poverty is captured in the works of Winter, et al (2004). The work identified four channels by which trade liberalization affects poverty

### 3.2. Model Specification

This study is anchored on the assumption of attaining Growth before reducing poverty through liberalizing trade . Extending the theoretical framework, this section details the construction of the empirical model to achieve the each of the stated objectives of the study. The baseline model for this study is based on the theoretical framework to investigate the effect of trade liberalization on poverty is specified in natural logarithms:

$$\ln PO_{it} = \beta_0 + \beta_1 \ln TR_{it} + \beta_2 Z_{it} + \varepsilon_{it} \quad (3.2)$$

Where  $i$  indicates countries and  $t$  indicates years.  $PO$  is the dependent variable (poverty).  $TR$  is the measure of trade liberalisation.  $Z$  represents a vector of control variables and  $\varepsilon_{it}$  is an idiosyncratic error term.  $\beta_1$  and  $\beta_2$  are the coefficients that are the focus of this study. Therefore ,the control variable in this model is expressed as Institutional quality . According to Hynes and Lammersen (2017) and Ul-Haq et al.(2022), trade liberalisation and poverty are intertwined in that trade openness could affect per capita income and consumption, both of which affect poverty. Therefore, the empirical strategy to examine the effect of trade liberalisation on poverty in ECOWAS region follows the works of Le Goff and Singh (2014); Thelle et al. (2015); Khan, Saera and Sang, (2019) and improvement over their works could be a substantial addition to the literature.

Hence, the generic model is specified thus:

$$PO_{it} = \beta_0 + \beta_1 TR_{it} + \beta_2 pGDP_{it} + \beta_3 EXCH_{it} + \beta_4 ED_{it} + \varepsilon_{it} \quad (3.3)$$

Where  $PO$  is the poverty,  $TR$  is trade openness which is the main explanatory variable of interest,  $pGDP$  is per capita income,  $EXCH$  is real exchange rate and  $ED$  is the primary school completion rate. Per capita GDP ( $pGDP$ ), and real exchange rate ( $EXCH$ ) are the included as macroeconomic factors influencing poverty, while primary school completion rate ( $ED$ ) is the human capital factor included in the model. These factors serve as control variables because they can also affect poverty.  $\beta_0$  to  $\beta_7$  are the various parameters to be estimated

$$\Delta \ln PO_{it} = \beta_0 + \sum_{i=1}^p \gamma_{1it} \Delta \ln PO_{t-it} + \sum_{j=1}^{q_1} \gamma_{2it} \beta_1 TR_{t-it} + \sum_{j=1}^{q_2} \gamma_{3it} \beta_2 pGDP_{t-it} + \sum_{j=1}^{q_3} \gamma_{4it} \beta_3 EXCH_{t-it} + \sum_{j=1}^{q_4} \gamma_{5it} \beta_4 ED_{t-it} + \varepsilon_{it} \quad (3.4)$$

Where  $\gamma_1 - \gamma_5$  are the vector parameters of the long-run estimates,  $\Delta$  are the operators of the first difference,  $\delta_1 - \delta_5$  are the vector parameters of the short-term estimates,  $p$  and  $q_1 - q_4$  are the optimal lag length,  $\beta_0$  is the parameter of the drift component, and  $\rho_{it}$  is the stochastic white noise.

In equation 3.3, the *a priori* expectations of the coefficients are:

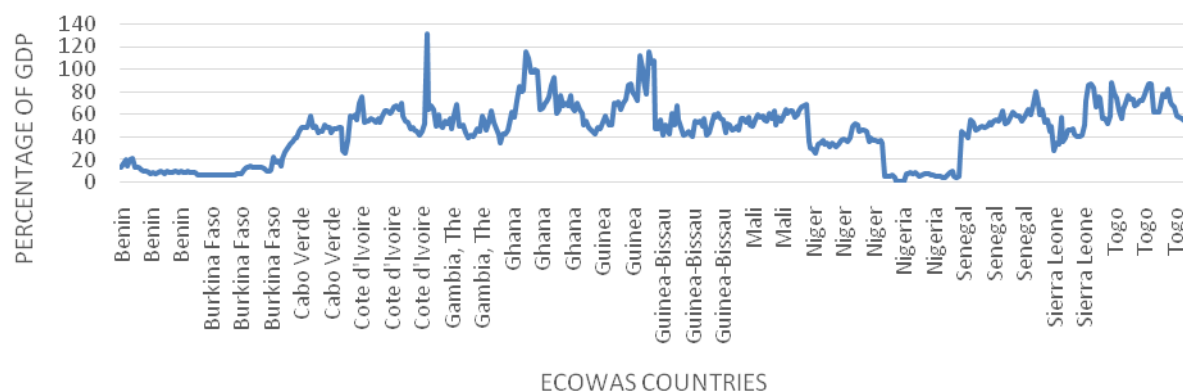
- $\beta_1 < 0$ : An increase in poverty will lead to decrease in Trade Liberalisation
- $\beta_2 < 0$ : An increase in poverty will lead to decrease in Real Gross Domestic Products
- $\beta_3 > 0$ : An increase in poverty will lead to increase in Real Exchange Rate
- $\beta_4 > 0$ : An increase in poverty will lead to decrease in Education

## 4. ANALYSIS OF RESULTS

### 4.1 Trend and Analysis

This figure displays the percentage contribution of trade to GDP across countries in the ECOWAS region. The data shows wide disparities in trade flows among member states. Countries like Côte d'Ivoire, Ghana, The Gambia, Senegal, and Togo register relatively high and variable trade-to-GDP ratios, suggesting a stronger link with international markets. On the other hand, nations such as Nigeria, Niger, Benin, and Burkina Faso exhibit lower trade percentages, which could be associated with large domestic markets or limited trade diversification.

Figure 1 :Trade flow in ECOWAS region



Author's Compilation, 2024

The recurring appearance of certain countries on the horizontal axis may suggest that the data spans multiple years or different trade segments. Several noticeable peaks in the data could reflect short-term surges in trade activities. Generally, the figure highlights the uneven nature of trade dependence within the region and underscores the importance of region-specific strategies to promote balanced trade growth and deeper economic integration.

Table 1: Descriptive Statistics

	Mean	Median	Max.	Min.	Std. Dev.	Skewness	Kurtosis	Jarque-Bera	Prob.
PO	44.3927	43.8000	63.9000	22.0000	9.1904	0.0263	3.4967	4.1053	0.1284
TR	54.5528	52.4944	117.8167	20.7225	19.0912	0.9252	3.8155	68.9965	0.0000
EXCH	968.2306	511.5524	10439.43	13.8540	1875.518	3.3822	14.0491	2832.288	0.0000
ED	60.9854	61.8675	105.9931	13.8540	18.4768	-0.0995	2.7672	1.5779	0.4543
PGDP	957.6790	690.0000	4550.000	100.000	784.9731	2.0840	7.6986	665.6970	0.0000

Note: PO: poverty, TR: trade openness, pGDP: per capita income, EXCH: exchange rate; ED: education; UMP: unemployment

Source: Author's compilation, 2024

### 4.2. Correlation Coefficients

The correlation coefficients of the variables for objectives were presented in Table 4.2 as follows:

Table 2. Correlation coefficients of the variables for objectives

	Po	TR	pGDP	ED	INST	EXCH
Po	1.0000					
TR	-0.3765***	1.0000				
pGDP	-0.2767***	0.3711***	1.0000			
ED	-0.4059***	0.4747***	0.4214***	1.0000		
INST	-0.0234	0.3977***	0.5900***	0.2781***	1.0000	
EXCH	-0.2267***	0.1273**	-0.1127**	-0.2193***	0.0005	1.0000

Note: "\*\*\*" and "\*\*" represent the probability values of 5% and 1% respectively

Source: Author's compilation, 2024

Table 3: Variance Inflating Factor

Variable	VIF	Tolerance $\left(\frac{1}{VIF}\right)$
TR, log	2.25	0.4446
pGDP, log	3.91	0.2560
ED	1.60	0.6241
INST	2.47	0.4041
EXCH, log	1.24	0.9154
Mean VIF	1.96	

Source: Author's compilation, 2024

Table 4.4: Test of Cross Sectional Dependence

Test	Statistic	Prob
Breusch-Pagan LM	650.0271	0.0000
Pesaran scaled LM	34.5051	0.0000
Pesaran CD	4.9521	0.0000
<b>Slope Homogeneity Test</b>		
Tests	Statistics	p-value
<b>Pesaran and Yamagata (2008)</b>		
$\Delta(\text{delta})$ test	9.406***	0.000
$\tilde{\Delta}(\text{delta})$ adj. test	11.520***	0.000
<b>Blomquist and Westerlund (2013)</b>		
$\Delta_{HAC}$	20.736***	0.000
$(\Delta_{HAC})$ adj.	25.396***	0.000

Note: "\*\*\*" and "\*" represent the probability values of 5% and 1% respectively

Source: Author's compilation, 2024

#### 4.3. Panel Unit Root Tests

Summary of the results of unit root tests were presented in Table 4.5.

Table 4.5: 2<sup>nd</sup> Generation Panel Unit Root Tests

Variable	CIPS		Remark	CADF		Remark
	Level	First Diff		Level	First Diff	
Po	-0.677	-4.861***	I(1)	-6.126***		I(0)
TR, log	-0.346	-2.786***	I(1)	-7.996	-4.758***	I(1)
pGDP, log	-1.869	-4.013***	I(1)	-1.593	-4.838***	I(1)
ED	-1.988	-4.311***	I(1)	-1.354	-5.995***	I(1)
INST	-1.594	-4.402***	I(1)	-0.220	-5.006***	I(1)
EXCH, log	-2.712***		I(0)	-3.804***		I(0)

Note: "\*\*\*" and "\*" represent the probability values of 5% and 1% respectively

Source: Author's computation (2024)

$$\begin{aligned}
 \Delta \ln PO_{it} = & \beta_0 + \beta_1 TR_{it} + \beta_2 pGDP_{it} + \beta_3 EXCH_{it} + \beta_4 ED_{it} \\
 & + \sum_{i=1}^p \gamma_{1it} \ln PO_{t-it} + \sum_{j=1}^{q_1} \gamma_{2it} \beta_1 TR_{t-it} + \sum_{j=1}^{q_2} \gamma_{3it} \beta_2 pGDP_{t-it} + \sum_{j=1}^{q_3} \gamma_{4it} \beta_3 EXCH_{t-it} + \\
 & \sum_{j=1}^{q_4} \gamma_{5it} \beta_4 ED_{t-it} + \varepsilon_{it}
 \end{aligned} \quad (3.5)$$

In this model,  $\Delta$  represents the first difference operators, while  $\gamma_1$  to  $\gamma_5$  denote the vector coefficients corresponding to the long-run relationships. Similarly,  $\lambda_1$  to  $\lambda_5$  are the coefficients for the short-run dynamics. The values of  $p$  and  $q_1$  through  $q_4$  indicate the selected optimal lag lengths.  $B_0$  stands for the constant term, and  $p_1$  signifies the stochastic error term, assumed to be white noise. Following the framework proposed by Pesaran et al. (2001), the ARDL bounds testing approach employs the F-statistic to assess the presence of either short-run or long-run cointegration among variables. A rejection of the null hypothesis suggests the existence of a long-term equilibrium relationship. The cointegration test is thus carried out under this hypothesis framework.

$$H_0: \lambda_1 \neq \lambda_2 \neq \lambda_3 \neq \lambda_4 \neq \lambda_5 \quad (3.6)$$

Therefore, the ARDL bounds testing approach, using the computed F-statistic, provides two critical values—namely, the lower bound (I(0)) and the upper bound (I(1))—to evaluate whether there is short-run or long-run cointegration among the variables. According to the decision rule, if the F-statistic falls below the lower bound value, it implies the absence of cointegration among the variables; conversely, if it exceeds the upper bound, cointegration is confirmed. Based on the results presented in Table 4, a long-run association exists among human capital, institutional quality, and income inequality in Nigeria. This outcome indicates that the variables are cointegrated, highlighting the necessity to address any disequilibrium that may exist in their long-run relationship over the 1996–2022 period.

## 5. RESULTS AND DISCUSSION

The empirical analysis conducted in this study reveals mixed but insightful outcomes regarding the relationship between trade liberalization and poverty in the ECOWAS region. The descriptive statistics and trade flow data highlight the significant disparities in trade engagement among member countries. While nations such as Côte d'Ivoire and Ghana exhibit high trade-to-GDP ratios indicating stronger integration into international markets, others like Nigeria and Benin remain less diversified and more inward-focused. This disparity may partially explain the inconsistent impact of trade liberalization on poverty across the region, reinforcing the argument that a one-size-fits-all policy may not be effective.

Correlation analysis shows that trade openness (TR) and per capita income (pGDP) are negatively associated with poverty, suggesting that as these variables increase, poverty levels tend to decline. However, this relationship is nuanced. While trade openness is negatively correlated with poverty, supporting the theoretical proposition that increased trade leads to growth and potentially lower poverty, the quantile regression analysis by Afolabi et al. (2025) shows that this reduction is only significant in low-poverty countries. In contrast, bilateral trade has a more consistent and significant poverty-reducing effect, especially in countries with already low poverty headcounts, pointing to the importance of intra-regional trade and economic cooperation.

The regression outputs, including results from FGLS and panel ARDL techniques, provide a more robust understanding of these dynamics. Variables such as exchange rates and education display varying significance and direction across models and countries. While exchange rate depreciation may worsen poverty by increasing the cost of imports and reducing purchasing power, education (proxied by primary school completion rate) is shown to have a mitigating effect on poverty. This aligns with Balogun et al. (2023), who emphasized the role of human capital in enhancing sustainability and reducing poverty. Furthermore, the variance inflation factor (VIF) values confirm that multicollinearity is not a major concern in the model, supporting the reliability of the estimated coefficients.

Cross-sectional dependence and slope heterogeneity tests confirm the presence of structural differences across countries, justifying the use of second-generation panel techniques. These results underscore the importance of accounting for regional heterogeneities and country-specific characteristics when formulating trade and poverty alleviation policies. The unit root tests also validate the use of first-difference transformations, ensuring the stationarity of the series and the appropriateness of the econometric models used. The long-run and short-run dynamics further suggest that while trade liberalization may initially exacerbate poverty, it can lead to reductions over time, contingent on improvements in institutional quality, exchange rate stability, and education.

This study affirms the relationship between trade liberalization and poverty. Trade openness alone is insufficient to guarantee poverty reduction; rather, it must be complemented by strong institutions, targeted social programs, and investment in human capital. The findings call for tailored policy interventions that recognize country-specific dynamics, promote regional trade, and focus on inclusive growth strategies. Such nuanced approaches are crucial to achieving sustainable development and aligning with broader economic goals across the ECOWAS region.



## 6. CONCLUSION

The study highlights relationship between trade liberalization and poverty reduction in the ECOWAS region, emphasizing the importance of achieving economic growth as a precursor to poverty alleviation. The findings suggest that while trade liberalisation can stimulate growth, its direct impact on poverty is nuanced and varies across countries with differing poverty levels. The analysis underscores that factors such as foreign direct investment, education, and institutional quality play critical roles in shaping the poverty-reduction outcomes of trade liberalization. The study also points to the need for tailored policy interventions that account for the varying socio-economic contexts of ECOWAS member states. By focusing on enhancing human capital, fostering regional trade integration, and ensuring inclusive growth, policies can better leverage trade liberalization as a tool for sustainable development and poverty reduction.

Based on the findings of the study, the following recommendations were made:

- Policymakers should tailor trade liberalization strategies to the specific poverty levels of ECOWAS member states, focusing on targeted measures for high-poverty countries.
- Investing in education and skill development is crucial to enable the workforce to benefit from trade liberalization
- Strengthening institutional quality and governance will ensure trade reforms are effectively implemented and benefit all citizens.

Lastly, promoting intra-regional trade and economic integration will enhance resilience and foster collective economic growth within ECOWAS.

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