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Trade Openness and Poverty Reduction in Nigeria: Myth or Reality?

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ABSTRACT

This study examined the effect of trade openness on poverty reduction in Nigeria from 1981 to 2024, motivated by the persistent high incidence of poverty despite decades of trade liberalization. Specifically, it investigated whether trade openness, measured by the import openness ratio (IOR), export openness ratio (EOR), and total trade openness (OPEN), has contributed to reducing poverty in Nigeria. The study adopted an ex-post facto research design and employed the Autoregressive Distributed Lag (ARDL) model to estimate the short- and long-run relationships between trade openness indicators and poverty. The findings revealed that import and export openness were associated with higher poverty levels in the short run but contributed to poverty reduction in the long run, although the magnitude and statistical significance of these effects varied. In contrast, total trade openness exhibited mixed effects, showing a weak relationship with poverty in the short run but a tendency to exacerbate poverty in the long run, reflecting structural imbalances and weak domestic production linkages. The study concludes that trade liberalization alone is insufficient to achieve sustained poverty reduction in Nigeria. It recommends strengthening inclusive trade policies, promoting investment in productive domestic sectors, and expanding social protection programmes to ensure that the benefits of trade openness are broadly shared across all segments of society.

Keywords: Export Openness, Import Openness, Nigeria, Poverty Reduction, Time-Series Analysis, Trade Openness

1.0 INTRODUCTION

Trade has traditionally been a crucial element of the development of countries. From the classical theories of absolute and comparative advantage to contemporary

globalization, the integration of economies due to international trade has been advocated as a means of economic development and better living standards (Abdwlglil & Taib, 2024). Liberalization of trade is normally linked with entry of new markets, foreign capital inflow, foreign technology transfer and high productivity. Consequently, most of the developing nations have embraced open trade policies in a bid to accelerate economic growth and reduce poverty (Obuobi, et al., 2022).

Theoretically, the trade openness is supposed to lead to economic efficiency as it would reallocate the resources to areas where a country has a comparative advantage in an attempt to create more jobs, generate more income as well as poverty alleviation. World Bank and the International Monetary Fund (IMF) as institutions have long promoted trade liberalization of low-income countries as a model of economic development and poverty reduction (Amna-Intisar, 2020). Nonetheless, the empirical studies on the trade-poverty nexus are inconclusive with contradictory results in regions and countries. Although in certain countries, trade reforms have led to a significant decline in poverty, in other cases, inequality has arisen, and the poor have not benefited (Ayoo, 2022).

Nigeria is one of the biggest African has progressively opened its borders to international trade since the 1980s through various policy reforms and trade agreements. Although the country has become more open in the field of trade, it still has to struggle with such problems as high poverty rates, low human development indicators, and income inequality (Ugwuja & Chukwukere, 2021). Despite several decades of trade liberalization, poverty remains widespread in Nigeria. According to the World Bank, about 38.9% of Nigerians, representing over 87 million people, were living below the poverty line in 2023, making Nigeria one of the countries with the largest poor populations globally. At the same time, Nigeria's trade openness ratio has expanded considerably since the Structural Adjustment Programme (SAP) era of the mid-1980s, raising concerns about whether increased integration into global trade has effectively translated into broad-based poverty reduction. (Balogun et al., 2024).

Nigeria is plagued by the problem of poverty, even after decades of economic change in the country working towards freeing the trade. Nigeria has adopted many policies on trade to become more actively part of the global economy with the involvement of tariff reductions, the elimination of import quotas, and the inclusion of Nigeria in the international trade agreement (Mordecai & Akinsola, 2021). These initiatives were aimed at driving economic progress, employment and lifting millions out of poverty. Nevertheless, as the volumes of trade have been boosted and the macroeconomic indicators sometimes demonstrate positive signs of improvement, the expected gains in the form of the prevalent reduction of poverty have not been achieved to the full extent (Goodwin et al., 2022).

The Nigerian population is still living below the poverty threshold, and the rates of inequality and unemployment are still elevated. This brings up the question of whether the benefits of more trade are shared evenly among the population or are concentrated in certain sectors and the elites (Olabiyi and Akanbi, 2021). More so, due to the absence of sustained empirical research between trade openness and poverty reduction in Nigeria, it is uncertain what the true impact of trade liberalization initiatives could be regarding alleviating the living standards of most Nigerians (Mordecai and Akinsola, 2021). The increasing mismatch between the results of the trade policy and the enhancement of social welfare is to be examined further to establish the trade–poverty relationship in the Nigerian environment.

The study sought to provide answers to the following questions:

1. To what extent does the import openness ratio (IOR) affect the poverty rate in Nigeria?
2. What is the impact of the export openness ratio (EOR) on poverty reduction in Nigeria?
3. How does the overall trade openness ratio (OPEN) influence the poverty rate in Nigeria?

The study put forth the following hypotheses to test:

H_{01}: The import openness ratio (IOR) has no significant effect on the poverty rate in Nigeria.

H_{02}: The export openness ratio (EOR) has no significant impact on poverty reduction in Nigeria.

H_{03}: The trade openness ratio (OPEN) does not significantly influence the poverty rate in Nigeria.

The general aim of the study is to examine the impact of trade openness on poverty reduction in Nigeria from 1981 – 2024. The year 1981 provides a suitable starting point because it precedes the introduction of the Structural Adjustment Programme (SAP) in 1986, which marked the beginning of major trade liberalization policies in the country.

1.2.0 CONCEPTUALIZATION AND THEORETICAL FRAMEWORK

1.2.1 Concept of Trade Openness

Trade openness is used to describe the extent in which a nation participates in international trade by opening its borders to the free movement of goods, services, and capital without restricting it in any way. It represents the decrease or the absence of the trade barriers, including tariffs, quotas, and subsidies, and the development of policies that promote imports and exports (Azmeh et al., 2020). The opinion of economists tends to favor trade openness as it allows the specialization of countries according to the comparative advantage and therefore encourages competition, innovations and allows access to a wider range of goods and services. This concept came into the limelight with the escalation of globalization whereby the integration to the global economy has been regarded as a driver of economic growth and development (Algieri et al., 2022).

What is more is that trade openness is considered as a driving force towards economic growth especially in developing economies. It has the benefit of attracting foreign direct investment (FDI), efficiency in resource allocation, and consumer welfare by offering a wider range of goods at competitive prices (Radmehr et al., 2022). The gains of trade openness however depend on the structural capacity of an economy i.e. infrastructure, institutional and macroeconomic stability. Although openness can be beneficial or contribute to poverty reduction by creating jobs and generating income, its distributional effects, when mismanaged, can cause inequality (Cerra, 2021). Thus, policy regimes that are conducive to inclusive growth are necessary to reap the greatest advantages of trade openness.

2.2.3 Import Openness Ratio (IOR)

The ratio of the import openness is used to determine how much a country relies on imported goods and services in relation to the gross domestic product (GDP). It is determined by the ratio of the value of imports to the GDP and is a significant measure of the degree of liberalization of an economy to the rest of the world. The high ratio of openness to imports indicates that it is greatly integrated into the global market, which gives it access to foreign goods, technology, and capital. In less developed economies such as Nigeria, the higher level of imports can be used to enhance productivity, as it enables access to the necessary factors of production, but it can also create an issue of trade imbalances and the competitiveness of the local industry (Ali et al., 2023).

2.2.4 Export Openness Ratio (EOR)

Export openness ratio shows the ratio of exports of goods and services of the country as compared to its GDP. This proxy is used to estimate the extent to which an economy is outward-looking and the ability of the country to earn foreign exchange. The high export openness ratio is usually an indication of the existence of strong international

trade connections and the capacity to utilize comparative advantages. In the case of Nigeria where crude oil is majorly exported, this action also indicates the instability and fragility of the economy to the prices of international commodities. An increase in the export ratios has the potential to reduce poverty through the creation of employment, higher income, and social investment in the government (Osuma & Nzimande, 2024).

2.2.5 Trade Openness Ratio (OPEN)

The trade openness ratio is an aggregate measure which includes the values of imports as well as export as compared to the GDP giving a wider view of how a country is involved in international trade. It represents the level of economic openness in general to the international markets. The trade openness ratio differs from import openness ratio (IOR) and export openness ratio (EOR) because it measures the combined value of imports and exports relative to GDP, thereby providing a broader indicator of a country's overall integration into the global economy. While IOR and EOR individually capture the effects of imports and exports, the trade openness ratio reflects the total trade environment and wider macroeconomic interactions. Although the variables are closely related and may present cointegration or multicollinearity concerns, the trade openness ratio remains important as a separate variable because it captures the aggregate effect of international trade on poverty reduction, including broader influences such as globalization, competitiveness, technological transfer, investment flows, and macroeconomic stability that may not be fully explained by import or export openness alone. (Bleaney & Tian, 2023).

2.2.6 Poverty Reduction Concept

Poverty reduction is a set of different types of strategies, policies and interventions that are targeted at reducing the number of people living below the poverty line and enhancing the living standards of the vulnerable groups. It does not just focus on

boosting the level of income but also on improving the access to basic social amenities like education, health, sanitation, clean water and proper housing. Economists commonly take the poverty headcount ratio when measuring poverty, which is the percentage of a group of people (or population) whose income or consumption level is below a predefined poverty threshold set by a country or organization. The ratio is one of the main factors used to evaluate the extent to which development policies can influence the level of poverty over a period of time (Makhubu, 2021).

Reduction of poverty not only needs the sustained economic growth but also equitable and inclusive sharing of the returns which follow economic growth. Key elements include structural reforms, job opportunities, rural growth, and special social protection packages (Kamran et al., 2023). This is the case in the Nigerian environment, where economic liberalization and the opening of the economy to trade still have not reduced poverty, but instead it is deeply ingrained in rural regions. This makes one wonder the efficacy of macroeconomic policies in solving poverty. The knowledge of how such factors as the openness of the trade is related to the outcomes of poverty is crucial in the development of policies that can foster inclusive development and promote the fact that the fruits of economic growth can be translated into the tangible benefits of the lives of people (Ayoo, 2022).

2.3.0 Theoretical Review

2.3.1 Classical Theory of Trade

The classical trade theory, set out by Adam Smith in The Wealth of Nations (1776) and subsequently structured by David Ricardo in Principles of Political Economy and Taxation (1817), holds the view that openness to trade enhances economic efficiency through specialization using absolute and comparative advantage. Smith's theory of absolute advantage contends that nations should specialize in producing those goods for which they are relatively more efficient compared to other nations, whereas Ricardo's comparative advantage rule contends that even if a nation is less efficient in

the production of all goods, it should specialize in those where relative inefficiency is the minimum. These two arguments posit that liberalization of trade helps Nigeria maximize the use of its resources, raise production, employment, and incomes, The Comparative Advantage Theory explains that international trade can reduce poverty by allowing countries to specialize in sectors where they are more efficient, such as agriculture and crude oil in Nigeria. Through specialization and trade expansion, employment opportunities, income generation, foreign investment, and productivity improvements are enhanced, leading to economic growth. Trade also supports poverty reduction by increasing government revenue, improving public welfare services, and making goods more affordable through market competition.

The benefits of traditional trade theory, if used in Nigeria, are increased export revenues, employment in the export sector, and access to cheaper imports that will cut the cost of living. With international trade, Nigeria would be in a position to attract foreign capital, increase productivity through competition, and diversify the economy from oil (Erumebor, 2025). For instance, rural households would be earning revenue from cocoa, sesame, and cashew farm exportation, contributing to poverty reduction directly. Trade openness would also boost technology transfer and the creation of human skills, similarly contributing to boosting Nigeria's productive capacity. Such potential benefits are in line with the proposition of the theory that free trade increases welfare by optimally utilizing resources, (Ajayi, 2021).

Yet, traditional trade theory has been criticized, especially in developing economies such as Nigeria. The critics point out that the theory is based on perfect competition, full employment, and factor mobility conditions that are yet to be realized in Nigeria due to infrastructural shortcomings, institutional weaknesses, and labor market rigidities. The country's excessive reliance on petroleum exports has subjected it to foreign price changes, which are consuming the needed stability for uniform poverty alleviation (Ideh et al., 2021). Trade liberalization has also, in other instances, resulted in deindustrialization because of the inability of local manufacturers to

compete with cheaper imports, deepening poverty and unemployment. The theory also eliminates asymmetrical power relations in international trade in which developed countries play higher levels of advantage, therefore disadvantages developing nations like Nigeria in terms of terms of trade and value addition, (Abdwlglil & Taib, 2024).

Based on the existing trade openness and poverty-reducing studies in Nigeria, the conventional trade theory shows a base case for liberalization but must be supplemented by the structural problems of Nigeria. While the theory tends towards trade as a means of growth and poverty alleviation, the experience of Nigeria demonstrates that without complementary policies that is, investment in industrialization, education, and infrastructure, even the openness of trade may not be able to increase meaningful poverty alleviation (Abubakar et al, 2021). Future research must explore how Nigeria can leverage its comparative advantage while closing institutional and organizational bottlenecks to ensure gains from trade are inclusive and sustainable in poverty alleviation. (Abdulwahab et al, 2020).

2.3.2 Empirical Review

Adegboyo et al. (2021) examined trade openness and poverty reduction in Nigeria using variables such as domestic credit to the private sector, electric power consumption, primary school enrollment, KOF globalization index, and GDP per capita as indicators influencing poverty. However, these variables differ from the present study, which specifically focuses on import openness ratio (IOR), export openness ratio (EOR), and overall trade openness ratio (OPEN) as the core indicators of trade openness. While the study is relevant because it broadly links trade liberalization and globalization to poverty reduction, the current study narrows its scope to direct measures of trade openness in order to specifically evaluate how Nigeria's import and export activities affect poverty levels.

Onakoya et al. (2019) investigated the relationship between trade liberalization and poverty across 21 African countries between 2005 and 2014 and found that trade

openness was negatively associated with poverty levels, implying that increased integration into international trade contributed to poverty reduction through improved welfare, investment opportunities, and economic growth. The study is relevant to the present research because it supports the argument that trade openness can influence poverty outcomes in developing economies. However, while Onakoya et al. combined trade openness with variables such as foreign direct investment, inflation, and exchange rates, the current study specifically focuses on import openness ratio (IOR), export openness ratio (EOR), and overall trade openness ratio (OPEN) as direct measures of trade openness in examining their impact on poverty reduction in Nigeria from 1981 to 2024.

Asaleye et al. (2021) examined the impact of openness to trade in practice (rather than policy) on Nigeria's labor market, bridging gaps in existing literature. The research employed a structural vector autoregression (SVAR) and a vector error correction model (VECM) to analyze sectoral effects, to test the neoclassical and new trade hypotheses, and to assess trade openness shocks. The results indicated that trade openness negatively affected wages and employment in manufacturing and agriculture, with wages being more susceptible than employment to trade shocks. The research concluded that the new trade theory best described trade's labor market effects in Nigeria.

Frimpong (2020) examined how financialization affected poverty alleviation in Ghana from a political economy perspective. Financialization relates to trade liberalization because increased openness to global markets often encourages the expansion of financial activities, foreign capital flows, and banking sector reforms aimed at supporting trade and investment. However, the study found that despite Ghana’s integration into global financial and trade systems, the banking sector prioritized investment in profitable government securities rather than providing productive credit to industries and businesses. This limited industrial growth, reduced employment opportunities, and maintained low wage levels, thereby worsening

poverty instead of alleviating it. The study is relevant to the present research because it demonstrates that trade liberalization and economic openness do not automatically reduce poverty unless financial resources are effectively directed toward productive sectors that can generate employment and inclusive economic growth.

3.0 MATERIAL AND METHODS

This research adopted the *ex-post facto* research design. Based on the nature of this study which was on trade openness and poverty reduction in Nigeria, this research design suites this study. Data on import openness ratio, export openness ratio, trade openness ratio and poverty rate were obtained from the Central Bank of Nigeria (CBN) Statistical bulletin. These data source provide information on the macro-economic and financial variables. The time series data covers the period 1981 to 2024. The data was obtained via the survey of existing document (otherwise known as secondary source of data collection).

The study examined the data collected and computed the descriptive statistics for the variables used, after which the result were tested for the presence of the unit root using the ADF unit root test. Diagnostic tests such as Multicollinearity Test, Bound Cointegration Approach, Serial Correlation Test, Heteroskedasticity test and Normality tests were conducted. The Autoregressive Distributed Lag (ARDL) technique was used to estimate the model with the aid of computer statistical application (E-views 10).

3.1 Model Specification

This study adopted existing econometric models of Adegboyo et al., (2021). The mathematical form of the model is specified in a functional relationship as follows;

$$POV_t = \beta_0 + \beta_1 IOR_t + \beta_2 EOR_t + \beta_3 OPEN_t + \mu_t \quad (1)$$

Where: POV = Poverty Rate; IOR = Import Openness Ratio; EOR = Export Openness Ratio; OPEN = Trade openness Ratio; μ_t = Error term; β_0 = Intercept. The model is expressed in natural log to make it easier to be estimated using the ARDL technique which assumes a linear relationship between variables.

3.2 A priori Expectation of the model

The *A priori* expectation for the study was symbolically represented in the table below;

Variables	*A Priori* Sign	Justification
IOR	(±)	Imports could either hurt local industries (negative effect on poverty) or improve access to cheaper goods (positive effect)
EOR	(−)	Export growth is often associated with job creation and income, thus reducing poverty
OPEN	(−)	More trade generally promotes economic growth, which can reduce poverty

Source: Researcher's Computation.

4.0.0 RESULT AND DISCUSSIONS

4.1.0 Data Presentation

The Central Bank of Nigeria (CBN) Annual Statistical Bulletin was used to generate data for the study's variables which are; import openness ratio, export openness ratio, Trade Openness Ratio and Poverty Rate which were used as proxies in the study. Data for the study spans from 1981-2024. Data for this study is presented as Appendix A below;

4.2.0 Results

4.2.1 Descriptive Statistics

Table 1: Summary of Descriptive Statistics

Sample: 1981-2024

	LPOVR	LIOR	LEOR	LOPEN
Mean	0.553823	4.735287	5.046807	5.609702
Median	-0.849818	4.866218	5.116018	5.732062
Maximum	4.166665	5.505395	5.779873	6.320283
Minimum	-2.519498	3.417796	3.817137	4.330418
Std. Dev.	2.709836	0.432793	0.543645	0.469303
Skewness	0.364206	-1.144569	-0.700649	-0.968066
Kurtosis	1.296846	4.385599	2.545674	3.369985
Jarque-Bera	6.290748	13.12673	3.978418	7.123412
Probability	0.043051	0.001411	0.136804	0.028390
Sum	24.36819	208.3526	222.0595	246.8269
Sum Sq. Dev.	315.7581	8.054317	12.70864	9.470529
Observations	44	44	44	44

Source: Researcher's computation with the aid of E-Views 10

From the table above, the descriptive statistic result indicated a total of 44 observations. The table showed the mean, standard deviation, minimum, skewness and kurtosis values of the dependent and independent variables. The result revealed that the mean value of poverty rate is 0.553823 with standard deviation of 2.709836. The mean value of import openness ratio is 4.735287 with standard deviation of 0.432793. The mean value of export openness ratio is 5.046807 with standard deviation of 0.543645. Trade openness ratio has a mean value of 5.609702 and standard deviation of 0.469303. Also, the data set is normally distributed since the table above indicates that none of the skewness value fall outside the -2 to 2 range. Similarly, the kurtosis value suggest that the data set is relatively peaked than normal as the majority of the variables differed from zero.

4.2.2 Unit Root Test

The Augmented Dickey Fuller (ADF) unit root test was employed to test for stationarity of all the variables employed for the study. The results are presented on the table below:

Table 2: Unit Root Test Results

Variable	ADF Statistics	Critical value @5%	Level of Stationarity
LPOVR	-6.172078	-2.933158	I(1)
LIOR	-8.752326	-2.933158	I(1)
LEOR	-7.199880	-2.933158	I(1)
LOPEN	-6.406179	-2.933158	I(1)

Source: Researcher's computation with the aid of E-View 10

The Augmented Dickey-Fuller (ADF) unit root test was conducted to determine the stationarity properties of the time series variables used in this study, namely; Poverty Rate, Import Openness Ratio, Export Openness Ratio and Trade Openness Ratio. The results indicate that all variables are non-stationary at level but become stationary after first differencing, as their ADF statistics exceed the 5% critical values in absolute terms. Specifically, the ADF test statistic for POVR is -6.172078, which is more negative than the 5% critical value of -2.933158; similarly, LIOR, LEOR and LOPEN have ADF statistics of -8.752326, -7.199880 and -6.406179 respectively, all exceeding their corresponding critical values of -2.933158 at the 5% significance level. These results imply that each variable is integrated of order one, denoted as I(1). This stationarity behavior necessitates further testing for cointegration to determine whether a long-run equilibrium relationship exists among the variables.

4.2.3 Multicollinearity Test

Table 3: Correlation Matrix

	LIOR	LEOR	LOPEN
LIOR	1.000000	0.784507	0.911983
LEOR	0.784507	1.000000	0.968827
LOPEN	0.911983	0.968827	1.000000

Source: Researcher's computation with the aid of E-View 10

Based on table 3 above, the correlation of the three variables import openness, export openness and Trade Openness with Poverty Rate shows that there are strong positive relations between the trade variables and weak negative correlation between trade and poverty. First, the correlation coefficient between LIOR and LEOR is 0.7845 which shows that imports and exports are strongly associated. This means that, as more activities are being exported, there is always an increase in the levels of imports in Nigeria, which is in line with economic structures that are dependent on trade whereby the production inputs are usually imported to facilitate export-led growth in Nigeria. Further, the variable LOPEN that is an indicator of trade openness has very high positive correlations with both LIOR (0.9120) and LEOR (0.9688). These positive coefficients confirm the fact that the level of trade openness in Nigeria is largely determined by the scale of imports and exports. This is logically in line, because the trade openness is calculated using a ratio of the aggregate of imports and exports to GDP.

Thus, the amount of imports or exports increases will inherently raise the index of trade openness. Interestingly, the poverty rate (LPOVR) has moderately low negative correlation with all trade related variables: -0.5217 with the LIOR, -0.4456 with the LEOR and -0.5041 with LOPEN. These are negative correlations implying that the more trade is carried out be it by imports, exports or just by openness, the lower the poverty levels in Nigeria. This observation concurs with the theoretical and empirical literature which indicates that trade liberalization and increased integration

of markets are associated to poverty alleviation through economic growth, job creation and availability of cheaper goods and services.

4.2.4 Bound Cointegration Approach

Table 4: F-Bounds test result using ARDL Long run form and bound test

A. Conditional Error Correction Regression (Short run)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-41.18083	17.68362	-2.328756	0.0276
LPOVR(-1)*	-0.226295	0.113182	-1.999386	0.0557
LIOR(-1)	-27.28552	10.27766	-2.654839	0.0131
LEOR(-1)	-36.33265	13.88260	-2.617135	0.0144
LOPEN(-1)	63.06635	24.16546	2.609772	0.0146
D(LIOR)	-8.803802	6.252082	-1.408139	0.1705
D(LIOR(-1))	22.59940	7.036276	3.211841	0.0034
D(LIOR(-2))	21.79445	5.744263	3.794125	0.0008
D(LEOR)	-10.47550	8.643819	-1.211906	0.2360
D(LEOR(-1))	29.08400	9.362765	3.106348	0.0044
D(LEOR(-2))	30.17295	7.606553	3.966705	0.0005
D(LOPEN)	19.64821	14.84871	1.323226	0.1969
D(LOPEN(-1))	-51.17173	16.30133	-3.139114	0.0041
D(LOPEN(-2))	-52.36523	13.24774	-3.952768	0.0005

* p-value incompatible with t-Bounds distribution

***Source**: Researcher's computation with the aid of E-Views 10*

B. Long-Run Coefficients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LIOR	-120.5749	82.35387	-1.464107	0.1547
LEOR	-160.5542	112.2297	-1.430585	0.1640
LOPEN	278.6906	195.1213	1.428294	0.1647
C	-181.9783	139.8398	-1.301335	0.2041

***Source**: Researcher's computation with the aid of E-Views 10*

C. Bounds Cointegration Test

Significance	I(0) (Lower Bound)	I(1) (Upper Bound)
10%	2.37	3.20
5%	2.79	3.67
1%	3.65	4.66

Test Statistic	Value
F-statistic	2.968422
K	3

***Source**: Researcher's computation with the aid of E-Views 10*

Results of the ARDL model suggest that there are both short-run and possible long-run relationships between poverty (LPOVR) and trade openness proxies (LIOR, LEOR and LOPEN). Poverty moderately adjusts to disequilibrium in the short run at a rate of 22.6 percent per year with the historical values of import and export openness (LIOR and LEOR) having a huge impact on poverty. Lagg history of trade openness (LOPEN) however greatly limits the poverty, implying that the openness gains are delayed. In the long term, the variables do not have any significant relationship although import and export openness have a poverty-reducing tendency, whereas trade openness seems to raise poverty perhaps through inequality or poor domestic capacity. The bounds test provides weak support of a long run cointegrating relationship at the 10% level, which means that there is a possibility of a stable equilibrium, but not strongly supported.

4.2.5 Serial Correlation Test

Table 5: Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.180709	Prob. F(2,25)	0.8358
Obs*R-squared	0.584278	Prob. Chi-Square(2)	0.7467

***Source**: Researcher's computation with the aid of E-View 10*

Table 5 above shows the Breusch-Godfrey Serial Correlation LM Test which was conducted to examine whether the residuals from the estimated ARDL model exhibit serial correlation up to the 2nd order. In this test, the null hypothesis states that there is no serial correlation in the residuals, while the alternative hypothesis posits the presence of serial correlation. From the result, the F-statistic value is 0.1807 with a corresponding probability (p-value) of 0.8358, and the Obs*R-squared (LM statistic) is 0.5843 with a p-value of 0.7467. Since both p-values are greater than 0.05, the researchers fail to reject the null hypothesis, implying that the residuals are free from serial correlation at the 5% level of significance. This outcome validates one of the key assumptions for the reliability of ARDL model estimates, that the residuals are uncorrelated over time. The Durbin-Watson statistic of 2.002790, further supporting the absence of autocorrelation in the model.

4.2.6 Heteroskedasticity Test

Table 6: Heteroskedasticity Test: Breusch-Pagan-Godfrey

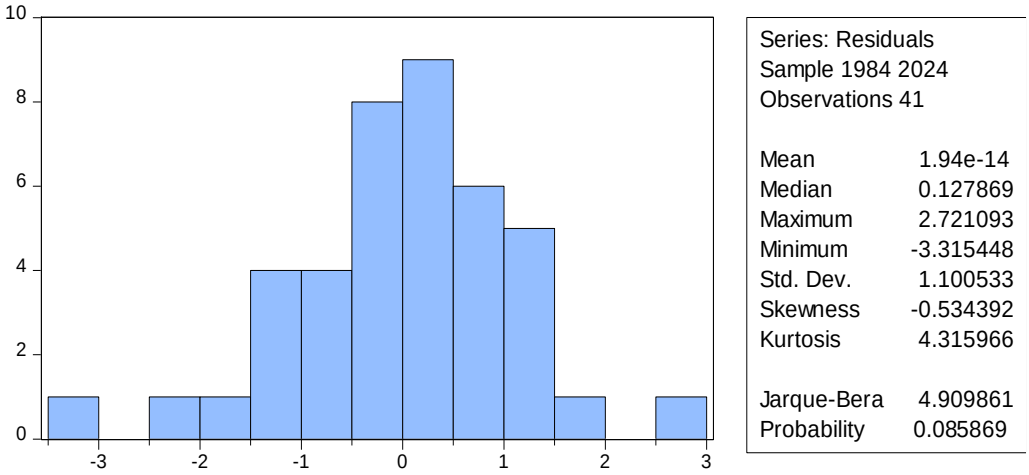
F-statistic	1.126958	Prob. F(13,27)	0.3802
Obs*R-squared	14.42166	Prob. Chi-Square(13)	0.3448
Scaled explained SS	10.36944	Prob. Chi-Square(13)	0.6635

***Source**: Researcher's computation with the aid of E-Views 10*

The table above shows result for the Breusch-Pagan-Godfrey test is conducted to check whether the variance of the residuals from a regression is constant, i.e., whether heteroskedasticity is present. The null hypothesis (H_0) of the test states that the residuals are homoskedastic, meaning there is no heteroskedasticity. In this result, the F-statistic is 1.126958 with a corresponding p-value of 0.3802. The Obs*R-squared value is 14.42166 with a p-value of 0.3448. Similarly, the Scaled explained SS has a p-value of 0.6635. All these p-values are greater than 0.05, indicating that the null hypothesis of no heteroskedasticity cannot be rejected. In other words, the residuals from the model exhibit constant variance, and thus, heteroskedasticity is not a problem in the estimated model.

4.2.6 Normality Test

Figure 1: Heteroskedasticity Test: Breusch-Pagan-Godfrey



***Source**: Researcher's computation with the aid of E-Views 10*

Figure 1 above shows whether the Jarque-Bera test evaluates whether the skewness and kurtosis of the residuals match those of a normal distribution. In this case, the skewness value of −0.5344 suggests that the residuals are approximately symmetric. However, the kurtosis value of 4.32 exceeds the benchmark value of 3, indicating a leptokurtic distribution, meaning the residuals exhibit heavier tails and a sharper peak than the normal distribution. The computed Jarque-Bera statistic is 4.909861 with a corresponding p-value of 0.0859. Since the p-value is greater than the conventional 5% significance level, the null hypothesis of normally distributed residuals is accepted. This implies that the residuals follows a normal distribution.

4.3.0 Test of Hypotheses

The hypotheses formulated in section one of this research was tested in this section.

Hypothesis One:

H0: Import openness ratio has no significant effect on poverty reduction in Nigeria

The result of long run equation test presented revealed that the P-value of import openness ratio is 0.1547 which is greater than 0.05 level of significance. This indicates that import openness ratio does not have a significant long run effect on poverty reduction in Nigeria. Therefore, the null hypothesis is not rejected.

Hypothesis Two:

H0: Export openness ratio has no significant effect on poverty reduction in Nigeria

The result of long run equation test presented revealed that the P-value of export openness is 0.1640 which is greater than 0.05 level of significance. This indicates that export openness ratio does not have a significant long run effect on poverty reduction in Nigeria Therefore, the null hypothesis is not rejected.

Hypothesis Three:

H0: Trade openness ratio has no significant effect on poverty reduction in Nigeria

The result of long run equation test presented revealed that the P-value of trade openness ratio is 0.1647 which is greater than 0.05 level of significance. This indicates that trade openness ratio does not have a significant long run effect on poverty reduction in Nigeria Therefore, the null hypothesis is not rejected.

5.0 DISCUSSION OF FINDINGS

The study examined trade openness and poverty reduction in Nigeria.

Findings revealed that Import openness ratio has no significant effect on poverty reduction in Nigeria *as indicated by the p-value* 0.1547. *This finding is in line with* Adegboyo et al. (2021) who examined the impact of trade openness on poverty in Nigeria between 1985 and 2020.

Also, findings revealed that export openness ratio has no significant effect on poverty reduction in Nigeria *as indicated by the p-value* 0.1640. *This finding consistent with findings of* Frimpong (2020) who investigated financialization's impact on poverty alleviation in Ghana, adopting a political economy approach.

The findings revealed that trade openness ratio has no significant effect on poverty reduction in Nigeria *as indicated by the p-value* 0.1647. *This finding is supported by* Onakoya et al. (2019) that investigated the possible nexus between trade liberalization and poverty in 21 African countries covering the period 2005–2014.

6.0 CONCLUSION AND RECOMMENDATION

6.1 Conclusion

This study examined trade openness and poverty alleviation in Nigeria from 1981 to 2024 using import openness ratio, export openness ratio, and trade openness ratio as proxies for trade openness, while poverty rate served as the proxy for poverty alleviation. Data were sourced from the Central Bank of Nigeria (CBN) Statistical Bulletin (2024), and the analysis employed descriptive statistics, ADF unit root test, ARDL bounds testing approach, heteroskedasticity test, and normality test using E-Views 10. The empirical findings revealed that import openness ratio has no significant effect on poverty reduction in Nigeria, while both export openness ratio and overall trade openness ratio also show no statistically significant long-run impact on poverty reduction at the 5% level of significance, as indicated by their respective p-values of 0.1547, 0.1640, and 0.1647. Relating these findings to the Comparative Advantage Theory, the results suggest that although trade openness is expected to promote specialization, efficiency, and income gains that reduce poverty, such theoretical benefits are not effectively materializing in Nigeria due to structural constraints such as weak productive capacity and limited economic linkages. This implies that trade openness alone is insufficient to reduce poverty without

complementary policies that strengthen domestic industries and ensure inclusive distribution of trade gains.

6.2 Recommendations

Following the results of this study, it is appropriate that the following be recommended;

1. Nigerian government ought to reconsider its importation policy especially on consumer and intermediate goods. They are supposed to be more concerned with the import substitution policies that promote local production of goods, particularly in the agriculture and the manufacturing sectors. Local value chains, the creation of employment opportunities, and eventual poverty reduction can be achieved through such policies as tariff protections of infant industries, support of local production, and strategic promotion of SMEs.
2. It is not enough that the Nigerian government should strive to augment the level of export volumes but emphasize on value added and inclusive export strategies. In addition, the government should promote the diversification of exports in terms of increasing the proportion of labor-intensive and agro-based products (e.g., processed foods, textiles, and solid minerals).
3. The government should also ensure that trade openness goes hand in hand with good institutional, infrastructural and social policies. An example is the need to enhance education, skills building, and rural infrastructure so that the citizens, particularly the poor can enjoy trade opportunities.

7.0 DECLARATIONS

7.2 Ethical Approval

This article does not contain any studies with human participants performed by any of the authors.

7.3 Consent to Publication

All authors have reviewed and approved the final version of this manuscript for publication. The authors consent to its submission and possible publication in Management Sciences Horizon's peer-reviewed academic journal.

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AUTHORS' CONTRIBUTIONS

The authors collectively collaborated in the conception, review of literature, methodology and design of the study, findings, conclusion, policy recommendations, coordinated the research process, and oversaw the overall execution and manuscript preparation. All authors read and approved the final manuscript.

Competing Interests

The authors have declared that they have no known conflicting financial interests, non-financial interests, or personal ties that could have influenced the work presented in this study.

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REFERENCES

Abdulwahab, A. B. U. H., Omede, J. A., & Jacob, J. N. (2020). Postulations and Implications of Neo-Classical Theory on Nigeria's Economic Development. *Socialscientia: Journal of Social Sciences and Humanities*, *5*(3).

Abdwlglil, N. M., & Taib, S. F. (2024). Abdwlglil, N. M., & Taib, S. F. (2024). The development of modern classical trade theories and contribution to understanding trade patterns and trade exchange processes in the global economy. *International Science and Technology Journal*, *34*(1), 1–18.

Abubakar, I., onimisi Abaukaka, T., & Momoh, M. K. O. (2021). Implications of free trade area for poverty, household welfare and economic development in Nigeria. *Innovation Journal of Social Sciences and Economic Review*, *3*(3), 01-12.

Adegboyo, O. S., Efuntade, O. O., Olugbamiye, D. O., & Efuntade, A. O. (2021). Trade openness and poverty reduction in Nigeria. *EuroEconomica*, *40*(2), 195-211.

Ajayi, O. O. (2021). The Impact of Informal Cross-Border Trades on National Economic Development:"A Case Study of Nigerian Southern Borders".

Akamobi, O., Usifoh, K., & Ejefobihi, U. (2024). Macroeconomic Policy Implications of African Continental Free Trade Area (AfCFTA) for Nigeria. *NG Journal of Social Development*, *14*(2), 282-297.

Algieri, B., Aquino, A., & Succurro, M. (2022). Trade specialisation and changing patterns of comparative advantages in manufactured goods. *Italian Economic Journal*, *8*(3), 607-667.

Ali, A., Fatima, N., Rahman Ali, B. J. A., & Husain, F. (2023). Imports, Exports and Growth of Gross Domestic Product (GDP)-A Relational Variability Analysis. *International Journal of Sustainable Development & Planning*, *18*(6).

Ali, S., Yusop, Z., Kaliappan, S. R., Chin, L., & Meo, M. S. (2022). Impact of trade openness, human capital, public expenditure and institutional performance on unemployment: evidence from OIC countries. *International Journal of Manpower*, *43*(5), 1108-1125.

Amna Intisar, R., Yaseen, M. R., Kousar, R., Usman, M., & Makhdum, M. S. A. (2020). Impact of trade openness and human capital on economic growth: a comparative investigation of Asian countries. *Sustainability*, *12*(7), 2930.

Amodu, O. B. (2018). Overdependence Of Nigerian Economy on Crude Oil, The Implications and the Solutions. *Department of International Business. Tallinn University of Technology*.

Asaleye, A. J., Ogunjobi, J. O., & Ezenwoke, O. A. (2021). Trade openness channels and labour market performance: Evidence from Nigeria. *International Journal of Social Economics*, *48*(11), 1589-1607.

Ayoo, C. (2022). Poverty reduction strategies in developing countries. *Rural development-education, sustainability, multifunctionality*, *19*.

Azmeh, S., Foster, C., & Echavarri, J. (2020). The international trade regime and the quest for free digital trade. *International studies review*, *22*(3), 671-692.

Balogun, M. A., Tella, S. A., Adelowokan, O. A., Ogede, J. S., & Adegboyega, S. B. (2024). Achieving sustainable development in ECOWAS countries: the impact of trade openness, poverty and human capital. *Future Business Journal*, *10*(1), 78.

Bleaney, M., & Tian, M. (2023). The trade-GDP ratio as a measure of openness. *The World Economy*, *46*(5), 1319-1332.

Cerra, V., Lama, R., & Loayza, N. V. (2021). Links between growth, inequality, and poverty. *International Monetary Fund*, *68*, 1-54.

Dogan, E., Madaleno, M., & Altinoz, B. (2020). Revisiting the nexus of financialization and natural resource abundance in resource-rich countries:

New empirical evidence from nine indices of financial development. *Resources Policy*, *69*, 101839.

Erumebor, W. R. (2025). *Structural Transformation, Productivity Growth and Employment in Nigeria* (Doctoral dissertation, University of London).

Frimpong, F. (2020). *Financialisation and the Myth of Poverty Alleviation in Ghana: A Theoretical and Empirical Investigation of the Impact of Financial Liberalisation on Sustainable Economic Development* (Doctoral dissertation, University of East London).

Goodwin, N., Harris, J. M., Nelson, J. A., Rajkarnikar, P. J., Roach, B., & Torras, M. (2022). *Macroeconomics in context*. Routledge.

Gündüz, G., Kuzucuoğlu, M., & Gündüz, Y. (2022). Entropic characterization of gross domestic product per capita (GDP) values of countries. *Physica A: Statistical Mechanics and its Applications*, *603*, 127831.

Haudi, H., Wijoyo, H., & Cahyono, Y. (2020). Analysis of most influential factors to attract foreign direct investment. *Journal of Critical Reviews*, *7*(13).

Ibeh, F. (2024). Assessing the Impact of Trade Policies on Growth and Development of the Manufacturing and Agricultural Sectors in Nigeria. *Insight on Africa*, *16*(2), 230-252.

Ideh, A. O., Okolo, N. M., & Emengini, E. S. (2021). Non-oil sector and economic growth in Nigeria: the national accounts perspective. *European Journal of Sustainable Development*, *10*(1), 185-185.

Jolliffe, D., & Prydz, E. B. (2021). Societal poverty: A relative and relevant measure. *The World Bank Economic Review*, *35*(1), 180-206.

Kamran, M., Rafique, M. Z., Nadeem, A. M., & Anwar, S. (2023). Does inclusive growth contribute towards sustainable development? Evidence from selected developing countries. *Social Indicators Research*, *165*(2), 409-429.

Longe, A. E., Muhammad, S., Ajayi, P. I., & Omitogun, O. (2019). Oil price, trade openness, current account balances and the official exchange rate in Nigeria. *OPEC Energy Review*, *43*(4), 446-469.

Makhubu, A. (2021). *Factors influencing implementation of poverty alleviation strategies in the City of Ekurhuleni*. University of Johannesburg (South Africa).

Massini, S., Piscitello, L., & Shevtsova, Y. (2022). The complementarity effect of exporting, importing and R&D on the productivity of Ukrainian MNEs. *International Business Review*, *32*(3), 1-18.

Mordecai, U., & Akinsola, A. (2021). Navigating Economic Dynamics: Trade Liberalization and Demographic Trends in Nigeria. *Journal of Business and Economic Options*, *4*(4), 30-36.

Mordecai, U., & Akinsola, A. (2021). Navigating Economic Dynamics: Trade Liberalization and Demographic Trends in Nigeria. Journal of Business and Economic Options, 4(4), 30-36.

Nessa, H. T., & Imai, K. S. (2023). Trade openness and working poverty: empirical evidences from developing countries. *International Trade, Politics and Development*, *7*(2), 58-76.

Nwosu, V., Sunday, J. D., & Caleb, R. (2023). Ecowas Protocol on Trade Liberalization and the Challenges of Economic Development in Nigeria. *International Journal of Humanities, Literature and Art Research*.

Obuobi, N. K., Gatsi, J. G., Appiah, M. O., Kawor, S., Amoah, E. K., & Abeka, M. J. (2022). Trade liberalization policies and foreign direct investment inflows in Africa: Evidence from new measures of trade liberalization. *The Journal of International Trade & Economic Development*, *31*(3), 394-409.

Ofuonyebuzor, M. (2021). *Contribution of Nigeria Oil Resource to Economic Growth: Assessing the Evidence of Resource Curse in Nigeria* (Doctoral dissertation).

Olabiyi, K. A., & Akanbi, B. E. (2021). Poverty, Inequality and Population Dynamics in Nigeria. Dutse International Journal of Social and Economic, 6(3), 79-88.

Onakoya, A., Johnson, B., & Ogundajo, G. (2019). Poverty and trade liberalization: empirical evidence from 21 African countries. *Economic research-Ekonomska istraživanja*, *32*(1), 635-656.

Osuma, G., & Nzimande, N. P. (2024). Exploring the dynamic link between trade openness, external debt, and economic growth in sub-saharan Africa: Challenges and considerations. *Economies*, *12*(11), 283.

Radmehr, R., Ali, E. B., Shayanmehr, S., Saghaian, S., Darbandi, E., Agbozo, E., & Sarkodie, S. A. (2022). Assessing the global drivers of sustained economic development: the role of trade openness, financial development, and FDI. *Sustainability*, *14*(21), 14023.

Seti, T. M., Mazwane, S., & Christian, M. (2025). Financial Openness, Trade Openness, and Economic Growth Nexus: A Dynamic Panel Analysis for Emerging and Developing Economies. *Journal of Risk and Financial Management*, *18*(2), 78.

Simpasa, A. (2024). Nigeria: Challenges and Opportunities to Avoid the Middle-Income Trap. *Avoiding the Middle-Income Trap in Africa: Economic Challenges and Policy Responses*, 169-205.

Sule, A., & Ebeh, J. E. (2021). Prioritizing critical sectors of the Nigerian economy: unbalanced growth theory approach. *Available at SSRN 4942402*.

Ugwuja, A. A., & Chukwukere, C. (2021). Trade protectionism and border closure in Nigeria: The rice economy in perspective. *UJAH: Unizik Journal of Arts and Humanities*, *22*(1), 78-106.