

Long Run Effect Of Trade Openness On Unemployment In Nigeria

By

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ABSTRACT

Integrating the world economy through trade openness helps reduce poverty and unemployment. Despite the influence of trade openness to employment generation, the unemployment in Nigeria continues to rise. This study examines the effect of trade openness on unemployment in Nigeria, covering the period from 1982 to 2022. The study used Auto Regressive Distributed Lag (ARDL). The computed ARDL results indicate that trade openness (TRO) reveals a negative and significance impact on unemployment (UNE) in the long run. Specifically, a percent increase in trade openness is associated with a decrease in Nigeria's unemployment. Similarly, trade openness (TRO) shows a negative and significant impact on unemployment (UNE) in Nigeria. Specifically, a percent increase in trade openness is associated with decrease in unemployment. Based on these findings, the study recommends that the country must embark on necessary reforms and adopt sound policies to provide employment solutions to address the issue of unemployment.

Keywords: Trade Openness, Unemployment, Nigeria, ARDL.

1. Introduction

Over the past two decades, global trade openness has increased on average by 6% annually. The integration of the global economy through trade openness has reduce the rate of unemployment across various regions globally. However, most developing countries have not fully shared in this prosperity, even though their incomes have risen dramatically (Warrad, 2018). Trade openness recognizes that no country can solely rely on domestic production to meet all the needs of its citizens (Mannur, 1995).

Integrating the world economy through trade openness helps drive faster economic growth, generate employment, reduce poverty and decrease unemployment both domestically and internationally (Ikechukwu et al., 2017). Countries that are open to trade tend to grow

rapidly, innovate, and improve productivity, leading to higher incomes and more job opportunities, thereby reducing unemployment levels. Trade openness particularly benefits lower-income households by providing access to more affordable goods and services.

The impact of trade openness on unemployment is a subject of ongoing debate among scholars. Generally, trade openness can create new jobs in export industries. When businesses gain access to larger markets, they often expand production, requiring additional labor. Moreover, cheaper imported goods resulting from trade openness can lower the cost of living for consumers, potentially increasing demand and thus boosting employment in other sectors of the economy (Martes, 2018). However, opening up to international competition can compel domestic

firms to enhance their efficiency and innovation. This can support long-term economic growth and contribute to job creation.

Africa's trade has opened up significantly to the global market, especially in merchandise trade, although trade in services has also been increasing over recent decades. For instance, in 2016, Africa exported goods valued at approximately \$361 billion, with services exports reaching nearly \$96 billion. Intra-African trade alone accounted for over \$129 billion, constituting about 15.4% of Africa's total goods trade (exports plus imports). Africa's total trade openness to the rest of the world averaged \$760 billion from 2015 to 2017, including \$4,109 billion from Asia, \$6,801 billion from Europe, \$5,140 billion from America, and \$481 billion from Oceania (United Nations Conference on Trade and Development [UNCTAD], 2019).

Nigeria stands as one of the leading economies in Africa, particularly in terms of GDP (current US\$). The country ranks 140th globally in GDP per capita (current US\$), 47th in total exports, and 50th in total imports (Economic Complexity Index [ECI], 2019). The contribution of trade openness to Nigeria's GDP has shown remarkable growth over the years, especially since the advent of democratic rule. Globalization has significantly increased Nigeria's trade openness, evident in the rising volumes of trade in both oil and non-oil sectors. Before the discovery of oil, the agricultural sector played a crucial role in Nigeria's economy, contributing significantly to

overall economic activities (Muhammad et al., 2018).

Hazera et al. (2021), trade openness can reduce unemployment by introducing reasonable wages and increasing returns to scale. Malefa (2020) argues that small countries benefit from deep trade openness into the global economy, gaining access to a larger consumer base, skilled labor, additional financing sources, and new technologies. Trade openness creates an environment where existing firms can expand and become more productive, while new firms can emerge and create more job opportunities.

Masamba et al. (2020) contend that trade openness immediately expands market size for each firm, facilitating the trade of intermediate and finished goods across borders. A larger market size stimulates a country's production volume, leading to increased demand and supply of labor. Naime & Saudi (2015) assert that long-term trade openness enables poor countries to enhance their economies by increasing production volumes of goods and services for global markets, generating higher foreign earnings and funding programs to reduce poverty and unemployment.

The benefits of trade openness extend to employment opportunities by reducing trade costs, enhancing availability of goods and services, and improving purchasing power (Aljebrin, 2020). Furthermore, market expansion, technology sharing, and cross-border investments stimulated by trade openness contribute to improved employment prospects. While trade

openness enhances technological advancement and generates employment opportunities, issues of unemployment persist. Recently, Nigeria closed its borders to prevent movement of certain goods and address security concerns within the country. This policy resulted in reduced income generation, increased incidents of terrorism, and loss of jobs, particularly affecting populations residing near the borders such as Adamawa bordering Cameroon, Zamfara bordering Niger, Borno bordering Niger, Chad, and Cameroon, Jigawa bordering Niger Republic, and Lagos bordering Benin Republic. The benefits of border trade primarily flowed to neighboring countries through smuggling and informal trade, notably at the Benin-Nigeria border, where significant revenues were collected by Benin through legal imports and subsequent illegal diversion into Nigeria via smuggling.

This situation has contributed to a rise in Nigeria's unemployment rates by 8.24% in 2018, 8.53% in 2019, 33.3% in 2020, and 33.5 % in 2021, compared to 3.8% and 3.7% in 2011 and 2012 respectively. Theoretical literature suggests that while trade openness can have indirect negative effects on unemployment, Nigeria's recent data on trade openness reflects a corresponding increase in unemployment rates. In light of these issues, this study aims to examine the impact of trade openness on unemployment in Nigeria.

2. Literature Review

2.1 Conceptual Review

Trade Openness

Trade openness refers to the degree to which a country or economy allows goods and services to

be imported and exported across its borders without restrictive barriers. It encompasses the extent of a nation's integration into the global economy and reflects policies that either facilitate or hinder international trade. Trade openness is often associated with trade liberalization, which involves reducing tariffs, quotas, and non-tariff barriers that restrict international trade. This liberalization aims to create a more open and competitive market environment. (Ammani et al, 2023)

Trade openness measures the extent to which a country is engaged in the global trading system and is usually measured by the ratio between the sum of exports and imports and gross domestic product. It increases product market competition by fetching in foreign more efficient industrial firms, entry of foreign firms decreases the profits and cash holdings for domestic firms, bringing outside opportunities as well as the need to defend domestic markets against superior foreign technologies and increase the need for domestic firms to invest more (Rahman et al., 2021).

Trade openness brings efficient welfare gains to all nations regardless of their initial conditions, technological capabilities, development level, and resources endowments (Afolabi et al., 2017).

Unemployment

Unemployment is the condition in which individuals who are capable of working, are actively seeking work, but are unable to find any employment. It is a critical economic indicator that reflects the health of an economy and the

effectiveness of its labor market (Ammani et al, 2024).

Unemployment can be conceived as the number of people who are unemployed in an economy, often given as a percentage of the labor force. Unemployment is also defined as numbers of people who are willing and able to work as well make themselves available for work at the prevailing wage but no work for them (Kabiru et al., 2021).

2.2 Empirical Review

Isiaka (2017) asserted that trade openness negatively impacts the unemployment rate in Nigeria both in the short run and long run, covering the period from 1981 to 2014, using the autoregressive distributed lag (ARDL) model. Ikechukwu et al. (2017) analyzed the impacts of trade openness on unemployment rates in Nigeria using time series data from 1970 to 2010, employing the vector error correction model (VECM) approach. Their study found that in the long run, real output and income per capita lead to a decline in unemployment, while trade openness is associated with an increase in unemployment.

Warrad (2018) observed a statistically significant positive impact of trade openness on employment levels in selected Arab countries, using a sample from Algeria, Bahrain, Egypt, Jordan, Oman, Saudi Arabia, and Tunisia spanning from 1990 to 2015, applying panel pooled Ordinary Least Squares (OLS). Hossain et al. (2018) investigated the relationship between trade openness and unemployment in Bangladesh empirically,

employing the vector error correction model (VECM) and data from 1990 to 2016. Their findings reveal a positive and significant cointegration between trade openness and unemployment in the long run, suggesting that increased public expenditure on education reduces unemployment, a result consistent with short-term estimates.

Alfalih (2024) studied the impact of oil prices, foreign direct investment (FDI), and trade openness on unemployment rates in Saudi Arabia, covering the period from 1991 to 2019. Using an ARDL model and bounds testing for co-integration, the study found that oil prices, FDI, real GDP, and trade openness all negatively affect unemployment in the long run. Specifically, oil prices need to be above \$41.20 per barrel to positively impact unemployment; below this threshold, unemployment worsens.

Shuaibu & Ohams (2024) examined the relationship between trade openness, gender gaps, and unemployment in Nigeria from 1991 to 2021. Using co-integration and vector error correction models (VECM), the study found that trade openness has a significant negative effect on unemployment in the long run. In the short run, real wages reduce unemployment, while trade openness has an insignificant effect.

Ulima (2022) investigated whether trade openness fosters unemployment in D-8 OIC countries, covering the period from 1991 to 2020. The study found that trade openness has a significant positive effect on unemployment. Conversely, wages, economic growth, and

inflation have a significant negative relationship with unemployment, while population growth increases unemployment.

Gonese et al. (2023) explored the relationship between trade openness and unemployment in selected Southern African Development Community (SADC) countries using panel data from 1980 to 2019. Employing a panel ARDL (Pooled Mean Group PMG) approach, the study found that exports negatively impact unemployment, whereas imports positively affect unemployment in the long run. Effective trade policies should balance export growth with import management.

Martes (2018) examined the effect of trade openness on unemployment across 28 Organization for Economic Cooperation and Development (OECD) countries using panel regression analysis spanning from 2000 to 2016. The study found a negative relationship between trade openness and unemployment in both the short run and long run. Onifade et al. (2019) investigated the link between openness and unemployment in Nigeria from 1980 to 2014, using the ARDL model. Their empirical findings indicated that terms of trade were insignificant to

.Methodology

This study utilizes secondary data for relevant variables sourced from the World Development

.Model Specification

The specification of an economic model is typically grounded in economic theory and the available data pertinent to the study's topic (Ammani et al., 2023). The empirical model

the unemployment rate, while trade openness had a negative and significant impact on unemployment in Nigeria over the study period. Nwosa et al. (2020) inspected the relationship between trade openness and the unemployment rate in Nigeria from 1980 to 2018. The study utilized the autoregressive distributed lag (ARDL) technique, finding that trade openness had a negative and significant impact on the unemployment rate in Nigeria. Mohler et al. (2018) examined the impact of international trade and unemployment in Switzerland, using panel data covering the years 1991 to 2008. The study found a positive but insignificant relationship between import competition and the likelihood of (low-skilled) individuals becoming unemployed in Switzerland. Kabiru et al. (2021) examined the nexus between investments and unemployment in Nigeria from 1991 to 2019. The study employed the vector error correction model (VECM) and found that domestic and foreign investments negatively and significantly impact unemployment, while economic and population growths have a significant positive relationship with unemployment in the long run, with all short-run coefficients being insignificant

Indicators of the World Bank. The data covers the period from 1982 to 2022, and the variables are expressed in their natural logarithm

employed in this study draws from the Classical theory of trade, as articulated in the work of Isiaka et al. (2017). The model is formulated as follows:

$$UNE_t = f(TRO_t, FDI_t, DIV_t).....(1)$$

The model was modified in this study by adding population growth to provide assistance for achieving the objective of the study, as it signifies

that unemployment rate is function of trade openness and foreign direct investment and add population growth as given in equation 2.

$$UNE_t = f(TRO_t, DIV_t, FDI_t, POP_t).....(2)$$

The following equation 3 present econometric log form of the model:

• Estimation Procedure

$$UNE_t = \beta_0 + \beta_1 \ln TRO_t + \beta_2 \ln DIV_t + \beta_3 \ln FDI_t + \beta_4 \ln POP_t + \mu_t.....(3)$$

○ Unit root test

Unit root test will be conducted for getting unbiased estimate for Granger causality test (Jayaraman and Singh, 2007) and for further justification of applying ARDL (Awokuse, 2009). It is also performed so that if the calculated F value falls inside the bounds, we will be able to

know the order of integration of the variables under consideration for drawing inference (Pesaran et al., 2001). Augmented dickey fuller (ADF) and the Philip Perron (PP) unit roots tests used to determine the order of integration of the variables under study.

Optimum Lag Selection Test

The lag length selection criteria test will be follow and is mainly to show the appropriate number of lags that would give the best Cointegration and that of optimum lag determined must be free from serial correlation problem in order to avoid getting spurious result. In order to select the appropriate model of the (HQC).

long run underlying equation, it is necessary to determine the optimum lag length (k) by using proper model order selection criteria such as; the Akaike Information Criterion(AIC), Schwarz Bayesian Criterion (SBC) or Hannan-Quinn Criterion

○ ARDL Model

This study employed Autoregressive Distributed Lag (ARDL) bounds test approach for co-integration developed by Pesaran, Shin and Smith (2001) to estimate the correlation between variables under study. The ARDL approach gives more statistical advantages than other co-integration techniques. ARDL test procedure provides valid results whether the variables are I

(0) or I (1) or mutually co-integrated and provides very efficient and consistent estimates in small and large sample sizes (Pesaran, Shin & Smith 2001). The ARDL approach, this approach is applicable to this study as all the series are either I (0) or I (1). The ARDL model is shown in equation 4.

○ **ARDL Bounds Test Model**

The statistic used to determine whether a long-run relationship exists between the variables through testing the significance of the level lags of the variables in ARDL bounds testing

$$\Delta UNE_{1t} = \theta_0 + \sum_{h=1}^U \beta_{1h} \Delta \ln TRO_{2t-i} + \sum_{i=0}^U \beta_{2i} \Delta \ln DIV_{t-i} + \sum_{j=0}^U \beta_{3j} \Delta \ln FDI_{t-i} + \sum_{k=0}^U \beta_{4k} \Delta \ln POP_{t-i} + \alpha_1 UNE_{2t-i} + \alpha_2 \ln TRO_{t-i} + \alpha_3 \ln DIV_{t-i} + \alpha_4 \ln FDI_{t-i} + \alpha_5 \ln POP_{t-i} + \mathcal{E}_t \dots \dots \dots (4)$$

ARDL Model (Long Run)

$$UNE_t = \delta_i + \sum_{i=1}^M \theta_i \ln TRO_{t-1} + \sum_{i=1}^M \theta_i \ln DIV_{t-2} + \sum_{i=1}^M \theta_i \ln FDI_{t-3} + \sum_{i=1}^M \theta_i \ln POP_{t-4} + \mu_{it} \quad (5)$$

stands for the natural logarithm sign, θ_0 is the drift parameter, $\theta_1 \dots \theta_4$ are the long-run coefficients, $\sum$ is the summation sign, **M** is the maximum lag, t is the time trend, UNE is the unemployment, **ARDL Model (Short run and Error Correction)**

$$UNR_t = \gamma_i + \sum_{i=1}^M \beta_1 \Delta \ln TRO_{t-1} + \sum_{i=1}^M \beta_2 \Delta \ln FDI_{t-1} + \sum_{i=1}^M \beta_3 \Delta \ln DIV_{t-1} + \sum_{i=1}^M \beta_4 \Delta \ln POP_{t-1} + \phi ECT_{t-1} + \varepsilon_t \quad (6)$$

Where: $\beta_1 - \beta_4$ are the short-run values, $\mathcal{E}$ is the value of error term, Δ is the short-run sign or the change parameter, A is the maximum or

• **Diagnostic Tests**

The diagnostic tests will also be applied to test the accuracy of the model which includes the

3. **Data analysis and Presentation**

• **Unit Root Test**

As discuss in methodology section, the unit root test was carried out using Augmented Dickey Fuller (ADF; 1981) and Philips Perron (PP, 1988) test was carry out to check for the presence of

approach is Wald or F test. To check for the existence of long-run cointegration between the independent variables and the dependent variable, the study use ARDL bound test

TRO is the trade openness, FDI is the foreign direct investment, DIV is the domestic investment, POP is the population and ε is the error term

optimum lag length and $\sum$ is the summation or sigma.

serial correlation LM test, the heteroscedasticity test, the normality test, the Ramsey Reset test for specification and the stability test

stationarity among the variables of study. The stationarity tests were conducted at level and at first difference, the results of the unit root test is presented in table1.

Table 1 Unit Root Test Result

Table 1: Unit Root Test Results									
Variables	Order of integration	Augmented Dickey Fuller(ADF)				Philips Perron (PP)			
		ADF Critical Values			Prob.	PP Critical Values			Prob.
		1%	5%	10%		1%	5%	10%	
UNE	I(0)	-	-	-	0.007	-	-	-	0.0000
		3.61045	2.93898	2.60793	4	3.60559	2.93694	2.60685	
		3	7	2		3	2	7	
Δ LTRO	I(1)	-	-	-	0.000	-	-	-	0.000
		3.61558	2.94114	2.60906	8	3.61045	2.93898	3.61045	0
		8	5	6		3	7	3	
Δ LFDI	I(1)	-	-	-	0.000	-	-	-	0.000
		3.61558	2.94114	2.60906	2	3.61045	2.93898	2.60793	0
		8	5	6		3	7	2	
Δ LDIV	I(1)	-	-	-	0.000	-	-	-	0.000
		3.61558	2.94114	2.60906	0	3.61045	2.93898	2.60793	0
		8	5	6		3	7	2	
Δ POP	I(1)	-	-	-	0.000	-	-	-	0.00
		4.21186	3.52975	3.19641	0	4.21186	3.52975	3.19641	00
		8	8	1		8	8	1	

Source: Author Computation using E-views10 (2024)

As reported in Table 1, both the ADF and PP tests indicate that all variables are non-stationary at the level except for the unemployment rate, which is stationary at the first difference. This implies that all variables are integrated of order one, while only the unemployment rate is integrated at both

the level and the first difference. Therefore, the variables may exhibit a long-run relationship, supporting the use of ARDL as the preferred method for model estimation. As mentioned in methodology, ARDL is applicable to mixed orders of integration.

• Optimum Lag Selection

Table 2 Optimum Lag Selection Result

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-103.4533	NA	0.000242	5.862338	6.080030	5.939085
1	8.991639	188.4212	2.17e-06	1.135587	2.441737*	1.596066
2	46.91970	53.30430	1.17e-06	0.436773	2.831381	1.280985
3	68.74041	24.76945	1.71e-06	0.608627	4.091693	1.836571
4	117.2102	41.91984*	7.63e-07*	-0.660012*	3.911512	0.951664*

*Indicates lag order selected by the criterion

From Table 2 the optimum lag selection result shows that all the criteria selected a lag four (4), except SC Information Criterion, which indicate

lag one (1), but considering the SC criterion The best lag for analysis is lag one (1) as shown majority of the criterion

ARDL Bound Test

Table 3. ARDL Bound Test Result

Model	F-stats	Lag	Level of significance	Bounds critical values	
				[Unrestricted intercept & no trend]	
				I(0)	I(1)
UNE _t = F (TRO _{it} DIV _t FDI _t POP _t)	13.67	1			
			10%	1.9	3.01
			5%	2.26	3.48
			2.5%	2.62	3.9
			1%	3.07	4.44

As reported in table 3 ARDL bounds test result shows that the computed F-statistic 10.48640 is greater than the upper bound critical value of 3.01 at 10 percent, 3.48 at 5 percent, 3.9 at 2.5 percent

and 4.44 at 1 percent level of significant. This indicates the presence of strong Cointegration among the UNE, TRO, FDI, DIV and POP.

• ARDL Long Run Estimate

Table 4 ARDL Long run Result

UNE (D.V)		
Regressors	Coefficients	T-statistics / Probability
LTRO	-0.730555	-0.456248 (0.0522)**
LDIV	-3.378464	-1.845872 (0.0768)*
LFDI	1.402401	1.042333 (0.3072)
LPOP	21.715476	2.063363 (0.0496)**

* **, *, Denotes 1%, 5% and 10% significance level respectively.

Source: Source: Author Computation using E-views 9 (2023).

According to Table 4, the natural logarithm of trade openness (TRO) exhibits a negative and significant impact on unemployment (UNE) at the 5 percent significance level in the long run. Specifically, a 1 percent increase in trade openness is associated with a -0.73 decrease in Nigeria's unemployment in the long-term. This finding contrasts with the results reported by Isiaka (2017). In the long run, domestic investment shows a negative effect on

unemployment at the 10% significance level. This suggests that a 1 percent increase in domestic investment results in a -3.37 percent decrease in the country's unemployment in long-run equilibrium. This result aligns with the findings of Musa et al. (2020). Conversely, the coefficient of foreign direct investment (FDI) indicates a positive and statistically insignificant effect on unemployment (UNE) in Nigeria in the long run.

Regarding population growth, the results indicate a positive impact on unemployment in Nigeria at the 5 percent significance level in the long run. Specifically, a 1 percent increase in population

growth in Nigeria corresponds to a 21.71 percent increase in the country's unemployment. This finding is consistent with the results reported by Ammani et al. (2024).

- **ARDL Short Run**

Table 5 ARDL Short Run Result

UNE (D.V)		
Regressors	Coefficients	T-statistic/ Probability
<i>D(LTRO)</i>	-0.782744	-0.444966 (0.0602)*
<i>D(LDIV)</i>	12.451587	2.530971 (0.0180)***
<i>D(LDIV(-1))</i>	-3.127362	-0.554674 (0.5840)
<i>D(LDIV(-2))</i>	16.570536	2.971945 (0.0065)***
<i>D(LFDI)</i>	1.502585	1.126905 (0.2705)
<i>D(LPOPG)</i>	444.469435	4.374442 (0.0002)***
<i>D(LPOPG(-1))</i>	1803.047977	2.989367 (0.0062)***
<i>D(LPOPG(-2))</i>	1423.428988	2.636955 (0.0142)***
<i>D(LPOPG(-3))</i>	528.748908	2.466004 (0.0209)**
<i>ECT_{t-1}</i>	-0.282437	-5.426480 (0.0000)***

***, **, * Denotes 1%, 5% and 10% significance level respectively

Source: Source: Author Computation using E-views 10 (2024)

According to Table 5, trade openness (TRO) exhibits a negative and significant impact on unemployment (UNE) in Nigeria at the 10 percent significance level. Specifically, a 1 percent increase in trade openness is associated with a -0.78 percent decrease in the country's unemployment in the short run. This finding aligns with Isiaka's (2017) research.

The short-run analysis further reveals that domestic investment (DIV) has a negative and statistically insignificant impact on unemployment (UNE) at lag one, but becomes positive and significant at the 1 percent level at lag two. This suggests that a 1 percent increase in domestic investment leads to an increase in

unemployment at lag two. Conversely, the coefficient for foreign direct investment (FDI) shows a positive and insignificant impact on Nigeria's unemployment (UNE) in the short run. Regarding population growth, the results indicate that a 1 percent increase in population growth leads to increases in unemployment by 18.0 at lag one, 14.4 at lag two, and 528.74 at lag three. This positive relationship is significant at the 1% level across all three lags, consistent with the findings of Ammani et al. (2024).

The error correction term (ECT) is negative, less than one in absolute value, and statistically significant at the 1% level. This indicates a high adjustment mechanism in the model, with a speed of adjustment to equilibrium of -0.25, corresponding to a 25 percent rate of adjustment.

- **Goodness Fit of Model**

Goodness fit the model is presented in table 6

Table 6 Goodness Fit Model Result

R-square	0.711
Durbin Watson-statistics	1.88

Source: Source: Author Computation using E-views 10(2024)

From Table 6, R-square shows that 71 percent of the proportion of the dependent variable has been explained by the independent variables. This shows that the model is good fit. The Durbin Watson statistics shows that the model is free

from first order serial correlation because it falls within the range of 1.5 and 2.5. , this means that the independent variables are jointly significant in explaining the dependent variable.

ARDL Diagnostic Tests

Table 7. ARDL Diagnostic Tests

Diagnostic Tests	F-statistic	LM-statistic
Serial Correlation Test	1.310889 (4,21)	7.392587 (0.2983)
Heteroscedasticity Test	0.107555 (4,28)	0.499371 (0.9789)
Normality Test	0.014162 (0.992944)	Not Applicable

Source: Author Computation using E-views 10(2024)

From Table 7, serial correlation test using was employed in the study to test for the presence of serial correlation. The null hypothesis for no serial correlation was not rejected since p-value is greater than five percent.

Heteroscedasticity was also estimated using Breusch-Pagan-Godfrey test and from the test result reported in Table 7, the null hypothesis of variance is constant (homoscedasticity) because the probability value is greater than five percent. The study also tested for the normality of the errors in the model through the Jarque-Bera and its probability values as reported in Table 7, the result revealed that the Jarque-Bera p-value was insignificant which implies the acceptance of null hypothesis that errors were normally distributed in the ARDL model.

5. Conclusion and Recommendation.

• Conclusion

The study aim to examine the impact of trade openness on unemployment in Nigeria covering 1982-2022, the study concluded that, trade

Breusch-Godfrey serial correlation LM test openness (TRO) has negative and significant impact on unemployment (UNE) in Nigeria at 10% level of significance in the short run. Similarly the long run estimate, the study found that, trade openness (TRO) has negative and significance impact on unemployment at 5% level significance.

• Recommendation

The study revealed a negative and statistically significant relationship between trade openness and unemployment in Nigeria, in light with these the study recommended that,

- i. The country must embark on necessary reforms and adopt sound policies to reposition itself and provide employment solutions to address the issue of unemployment, which drives insecurity, before it can fully enjoy the benefits associated with trade openness.
- ii. There is a need to create an enabling environment to reform open-border economic

activities. This includes providing adequate security for the protection of life and property, constructing good roads for the distribution of goods, ensuring standard electricity supply, and encouraging local investors by offering them long-term loans at low interest rates. These measures will attract both domestic and foreign investors to increase production capacity within

the country and provide more employment opportunities for the substantial population.

- iii. The government should also enhance education and skills acquisition development for the substantial population to equip individuals with the necessary skills for employment and productivity.

REFERENCES

- Afolabi, B., Jonathan D. D., & Muhyideen I. A. (2017). International trade and economic growth in Nigeria, *Global Journal of Human-Social Science*, (17) 5 191-205
- Alfalih, A. A. (2024). The impact of oil prices, foreign direct investment, and trade openness on unemployment rates in an oil-exporting country: The case of Saudi Arabia. *Heliyon*. <https://doi.org/10.1016/j.heliyon.2024.e25094>
- Aljebrin, M. (2020). Non-oil trade openness and financial development impacts on economic growth in Saudi Arabia. *International Journal of Economics and Financial Issues*, 19(4), 314-336. Retrieved from www.econjournals.com
- Ammani, A. I., Adamu, M., & Tahir, H. M. (2024). Population growth and unemployment in Nigeria. *Advance Journal of Economics and Marketing Research*, 9(5), 1-13.
- Ammani, A. I., Yahaya, A., & Adamu, M. (2023). Dynamic effect of trade openness on financial development: Evidence from Nigeria. *UBS Journal of Business and Economic Policy*, 1(3), 230-242.
- Economic Complexity Index. (2019). Global trade economic growth. Retrieved from https://en.m.wikipedia.org/wiki/economic_complexcity_index
- Gabriel, A. A., & David, A. O. (2021). Effect of trade openness and financial openness on economic growth in Sub-Saharan African countries. *African Journal of Economic Review*, 9(1), 71-88.
- Gonese, D., Sibanda, K., & Ngonisa, P. (2023). Trade openness and unemployment in selected Southern African Development Community (SADC) countries. *Economies*, 11(252). <https://doi.org/10.3390/economies11100252>
- Hazera, T., Alauddin, M., & Rezwanu, H. K. (2021). Effects of trade openness on unemployment rate: Evidence from selected least developed countries (LDCs). *Journal of Business Administration*, 42(1), 59-76.
- Hossain, I. R., Rahman, M. M., Farian, T., & Sabbir Hossain, M. (2018). Relationship between trade openness and unemployment: Empirical evidence for Bangladesh. *Indian Journal of Economics and Development*, 6(8), 2320-9836. Retrieved from www.iseeadyar.org
- Ikechukwu, D. N., Eastern, K. E., & Uma, G. T. (2017). Trade openness and unemployment: Empirical evidence for Nigeria. *The Economic and Labour Relations Review*, 26(1), 117-136. <https://doi.org/10.1177/1035304615571225>
- Isiaka, A. R. (2017). Determinants of unemployment in Nigeria: What are the roles of trade openness and current account balance? *Journal of Review of Innovation and Competitiveness*, 3(4), 5-30.
- Kabiru, S. M., Rabi, M., & Tahir H. M. (2021). nexus between Investments and unemployment in Nigeria. *Asian Journal of Economics, Finance and Management*. 5(2) 14-25.
- Kabiru, S. M., Rabi, M., & Tahir, H. M. (2021). Nexus between investments and unemployment in Nigeria. *Asian Journal of Economics, Finance and Management*, 5(2), 14-25.
- Malefa, R. M. (2020). Trade openness and economic growth in Botswana. *Cogent Economics & Finance*, 8(1), 178-188. <https://doi.org/10.1080/23322039.2020.1783878>
- Marta, W. L., Paweł, K., Kamil, F., & Sabina, D. (2019). Trade openness and financial development in the new EU member states. *Journal of International Trade & Economic Development* <https://doi.org/10.1080/00128775.2019.1701498>
- Martes, E. (2018). The effect of trade openness on unemployment: Long-run versus short-run. Bachelor Thesis General Economics, Erasmus School of Economics. *Swiss Journal of Economics and Statistics*.

- Masamba, D. F., Patrick, M. M., & Kotote, N. N. (2020). Econometric assessment of the relationship between trade openness and unemployment in Africa: The case study of Democratic Republic of Congo. *International Journal of Economics and Business Administration*, 6(2)
- Mohler, A. O. (2018). International trade and unemployment: Toward an investigation of the Swiss case. *Swiss Journal of Economics and Statistics*, (6), 17-33. <https://doi.org/10.1186/s41937-017-0006-7>
- Muhammad, D. R., Loganathan, N., Streimikiene, D., Mardani, A., & Hassan, A. A. (2018). Effects of financial development and trade openness on Nigeria's dynamic growth. *Journal of Economics and Sociology*, 11(4), 128-141. <https://doi.org/10.14254/2071-789X.2018/11-4/8>
- Muibi, S. O., Ikechukwu, O. M., & Ifeakachuku, N. P. (2022). Dynamic effect of foreign aid, trade openness, and foreign direct investment on economic growth in West African countries. *Journal of Developing Areas*, 56(2), 1-22.
- Naime, I. K., & Saudi, A. (2015). Trade openness and macroeconomic policy in OECD countries. *International Conference on Eurasian Economies 2015*.
- Nwosa, P., Sunday, K., Samuel, A., & Oluwadamilola, F. (2020). Trade openness and unemployment rate in Nigeria. *Oradea Journal of Business and Economics*, 5(2), 52-62.
- Onifade, S. T., Asongu, S., & Bekun, F. V. (2019). Revisiting the trade and unemployment nexus: Empirical evidence from the Nigerian economy. *AGDI Working Paper, No. WP/19/079**. African Governance and Development Institute (AGDI). Retrieved from <https://www.africangovernance.org>
- Pesaran, M. H., & Pesaran, B. (1999). The role of economic theory in modelling the long run. *The Economic Journal*, 107, 178-191. Retrieved from <https://www.jstor.org/stable/2235280>
- Pesaran, M. H., Shin, Y., & Smith, R. J. (2001). Bounds testing approaches to the analysis of level relationships. *Journal of Applied Econometrics*, 16(3), 289-326. Retrieved from <https://www.jstor.org/stable/2678547>
- Rahman, M.M., Rahaman, M., Rahman M.D. & Masud A.K (2021) the impact of trade openness on the cost of financial intermediation and bank performance: evidence from BRICS countries. *International Journal of Emerging Markets*. 1(2) 1-39 DOI: 10.1108/IJOEM-04-2021-0498
- Shuaibu, M., & Ohams, S. U. (2024). The nexus between trade openness, gender gaps, and unemployment in Nigeria. *African Journal of Economic Review*, 12*(3). Retrieved from [journal website](<https://www.african-journal-economic-review.com>)
- Ulima, A. O. (2022). Does trade openness foster unemployment? Evidence from D-8 OIC countries. *Muslim Business and Economic Review*, 1(1).
- United Nations Conference on Trade and Development. (2019). Key statistics and trends of regional African trade. Retrieved from <https://unctad.org/publication/keystatistics-and-trends>
- Warrad, T. A. (2018). Trade openness, economic growth, and unemployment reduction in the Arab region. *International Journal of Economics and Finance Issues*, 8(1), 179-183. Retrieved from <https://www.econjournals.com>
- World Development Indicators. (2024). Trade (% of GDP) [Dataset]. Retrieved from <http://databank.worldbank.org/data/reports.aspx?source=2&series=NE.TRD.GNFS.Z&country=>