



Impact of Technological Globalization on Unemployment Rate in Nigeria

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Abstract

This study examines the effect of technological globalization on Nigeria's unemployment rate from 1991 to 2020, using data from the Central Bank of Nigeria statistical bulletin, the KOF Globalization Index, and the World Bank data base. Employing the autoregressive distributed lag (ARDL) model, the study found that technological and political globalization, as well as labor force dynamics, significantly impact unemployment rates. Results indicate that a 1% rise in technological globalization reduces unemployment by 0.10% in the short term, while political globalization decreases it by 3.0%. Over the long term, a 1% increase in technological globalization leads to a 0.51% fall in unemployment, with political globalization reducing it by 3.6%. Conversely, the labor force increases unemployment by 3.6% in the long run. These findings suggest that while globalization in technology and politics helps lower unemployment, an expanding labor force may raise it. Based on the above, it was recommended that technological globalization should be fostered through the encouragement of foreign exchange trade, digital literacy programs, and remote work skills training for youth, among others.

Keywords:

Technological Globalization
Unemployment rate
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Youth employment

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1. Introduction

Globalization, driven by technological advancements, helps reduce unemployment by fostering innovation, creating new job opportunities, and stimulating economic growth (Oluwagbade & Ibidapo, 2024). By promoting trade and financial openness, globalization further accelerates growth and reduces unemployment, underscoring the

importance of technology in economic development.

Despite these benefits, challenges persist. Leading companies adopting advanced technologies can monopolize markets, stifling innovation and widening income inequality. For instance, the Dangote Group has harnessed technology to dominate industries like cement, sugar, and oil refining, boosting productivity and profitability. However, this concentration

of benefits illustrates how globalization can increase income disparities, as smaller competitors struggle to enter markets dominated by technologically advanced players.

While proponents argue that globalization integrates developing economies into global markets, encourages cultural exchange, enhances governance, and promotes technology transfer, scholars like Borrell (2006) and Ogunwa (2012) caution that countries with limited capital may find globalization more challenging, potentially viewing it as a hindrance rather than an asset. Unemployment is a significant challenge facing many developing countries. The high rate of unemployment indicates that the country is not effectively utilizing its labor resources. Unemployment is a critical economic problem due to its detrimental impact on individuals, society, and its rapid spread worldwide, leading to issues such as drug addiction and crime in numerous countries (Anbaraki et al., 2020).

Globalization exerts direct and indirect influences on the socio-economic and political progress of nations. It catalyzes and accelerates technological advancements in developing countries. While some scholars view globalization as advantageous, inevitable, and irreversible, others argue that it exacerbates inequality within and between nations, contributes to unemployment, and poses threats to social stability and advancement (Czenter, 2002). Consequently, globalization presents both opportunities and challenges for many nations in sub-Saharan Africa (Mugabe, 2002).

This study thus sets to examine the impact of this technological globalization on unemployment rate in Nigeria using available data spanning 1991 to 2020.

The paper is structured into five sections with section one on taking the introductory aspect, Section two providing a review of relevant literature; Section three outlining the data and methodology used for analysis; Section four presents the empirical results;

while Section five concludes and gave some recommendations.

2. Literature review

Globalization has become a widely discussed phenomenon, often sparking varied opinions worldwide. At its core, globalization involves expanding economic and social interactions internationally, largely driven by technological advancements. These advancements have enabled seamless international trade and financial transactions, marking a decline in strictly national markets, politics, and legal systems. Technological globalization, in particular, highlights the growing integration of national economies through digital technology and innovative communication methods. The internet, mobile technology, and advanced software have transformed global communication, allowing real-time data exchange across great distances and effectively diminishing time and space barriers.

Furthermore, technological globalization accelerates knowledge and innovation sharing across borders, encouraging collaboration in research and development. Multinational corporations, leveraging these advancements, optimize supply chains, access diverse markets, and improve productivity strengthening the global economic structure. However, this transformation also underscores disparities between developed nations with advanced infrastructures (often referred to as the “North”) and developing countries (the “South”), revealing gaps in technological access and economic power, despite globalization’s promise of a unified global society (Mugabe, 2002).

Unemployment, another global challenge, affects economies, societies, and individuals across diverse contexts. Its diverse form includes, but not limited to, cyclical unemployment, linked to economic fluctuations; structural unemployment, stemming from shifts in industry or technology; and frictional unemployment, the natural turnover as workers seeks new roles. Each type influences the economy uniquely, with cyclical unemployment often responding

to monetary and fiscal policies, while structural unemployment proves more resistant to such measures. The impacts of unemployment are profound economically, it curtails consumer spending and growth; socially, it exacerbates poverty and erodes social cohesion; psychologically, it affects individual well-being, causing stress, decreased self-esteem, and even depression. To address these challenges, a multi-faceted policy approach is crucial. Monetary policy's role in addressing unemployment, particularly its cyclical and structural components, has been a subject of extensive analysis. Michaillat (2012) expands on the limitations of monetary policy in mitigating structural unemployment, emphasizing that while interest rate adjustments can influence cyclical fluctuations, they are insufficient for tackling deeper issues like skill mismatches in the labor market. Michaillat argues that targeted interventions, such as improved training programs and education reform, are necessary to effectively address structural unemployment and enhance overall economic resilience.

In addition, Blanchard and Diamond (1994) provide a comprehensive examination of labor market dynamics through their exploration of search theory. They highlight that while monetary policy can stimulate job creation in the short term, long-term solutions require structural reforms that facilitate better job matching and reduce frictional unemployment. Their work suggests that a multifaceted approach combining monetary policy with active labor market policies is crucial for achieving sustainable employment levels.

According to the Heckscher-Ohlin model, globalization is anticipated to have a favorable impact on employment rates within developing countries. Developed by Eli Heckscher and Bertil Ohlin, this model posits that countries should specialize in producing goods and services that utilize their abundant factors of production, thereby enhancing overall economic efficiency and employment prospects (Heckscher, 1919; Ohlin, 1933).

In Nigeria, Foreign Direct Investment (FDI) has primarily targeted sectors like oil, agriculture, and telecommunications, impacting labor dynamics in these industries. Lee and Vivarelli (2006) elaborate that these economic activities are particularly beneficial in regions with a surplus of labor like Nigeria, where globalization fosters the specialization and skill enhancement necessary to capitalize on local comparative advantages.

In summary, the Eli Heckscher model, augmented by Bertil Ohlin's insights into the benefits of FDI and trade, provides a theoretical framework suggesting that globalization can boost employment opportunities in developing countries by fostering specialization and skill development in local labor markets.

Zeb et al. (2014), highlight the importance of FDI in reducing unemployment in Pakistan, which is also relevant in the Nigerian context. The methodology employed in this study involved the use of time series data from 1995 to 2011, with Ordinary Least Square (OLS) regression analysis to assess the impact of FDI on unemployment. Based on these results, the study concluded that FDI plays a significant role in reducing unemployment in Pakistan by creating more job opportunities. The study recommended that government should focus on attracting more FDI to benefit the economy and create additional domestic jobs. Additionally, addressing issues related to literacy, education, and skill development among the population was highlighted as crucial for lowering unemployment rates. Furthermore, the study emphasized the need for effective measures to manage population growth and mitigate the adverse effects of technological advancements on employment which is consistent with Daly's (2017) findings.

Adamu et al. (2017) in their study examines the impact of globalization on unemployment in Sub-Saharan African countries. The research, based on data from 2007 to 2014, uses a dynamic panel data model, which was analyzed using the Generalized Method of Moment analytical tool (GMM). This method was used to analyze the

relationship between globalization, labor market regulation, economic growth, inflation, wage rates, and unemployment. From the results it was revealed that globalization, economic growth, and labor market regulation significantly reduces unemployment in SSA countries.

Azebi and Baghebo (2024) investigates the impact of economic globalization on urban unemployment in Nigeria. Specifically, it examines how foreign direct investment (FDI), foreign portfolio investment (FPI), and international trade balance (ITB), as a percentage of real gross domestic product (RGDP), influence urban unemployment (UUE) over the period 1986 to 2021. The research employs the Augmented Dickey-Fuller unit root test and the Autoregressive Distributed Lag (ARDL) Bound test technique to analyze the data. The study revealed that FDI and ITB positively and significantly impacted urban unemployment, indicating that they contributed to increasing urban unemployment while FPI significantly reduced urban unemployment. The authors advocate for the development and expansion of Nigeria's capital market to enhance global economic integration and facilitate the free flow of portfolio investment.

Oluwabade and Ibidapo (2024) contribute to the discourse on globalization's impact on economic development by examining the Nigerian context in their study titled "Impact of Globalization on the Economic Development of Nigeria using the ordinary least square method(OLS).The study investigates the effects of traditional economic development factors such as private investment, public investment, and debt series, along with indicators of economic integration like trade openness and financial integration. The findings reveal that these factors were non-stationary. Importantly, the study identifies trade openness as a significant booster of Nigeria's economy, whereas financial integration's impact on the economy was found to be negligible at a 10% threshold of importance.

In his study spanning from 1980 to 2015, Johnny (2018) examined the relationship between foreign direct investment (FDI), capital formation, and the unemployment rate in Nigeria. Utilizing FDI and capital formation as explanatory variables and the unemployment rate as the explained variable, the authors employ unit root tests, co-integration tests, and ordinary least squares regression in their analytical framework. Contrary to expectations, the study finds a negative and insignificant relationship between FDI and the unemployment rate, suggesting that foreign investment alone may not sufficiently alleviate unemployment in the country. Conversely, the study identifies a positive and significant relationship between capital formation and the unemployment rate, implying that domestic investment activities, represented by capital formation, may have a more pronounced impact on employment levels in Nigeria.

In another study, Afolabi (2023) investigated the effects of technological innovation on unemployment level in Nigeria by employing the Autoregressive Distributed Lag (ARDL) framework to analyze quarterly data from the first quarter of 2011 to the last quarter of 2021. This study investigates the short-run relationship between technological innovation and employment across different Nigerian economic sectors. The findings indicate that technological innovation enhances employment generation, particularly in the service and agricultural sectors, although the positive effects manifest after a quarter. Overall, Afolabi's study provides valuable insights into the employment-innovation nexus in Nigeria, suggesting that technological innovation has the potential to improve employment rates and contribute to economic growth by reallocating labor to more productive sectors.

The Raji (2020) study examines Nigeria's unemployment dynamics in the context of globalization and technological innovation. It reveals a complex relationship between trade, financial globalization, process innovation, and product innovation, with trade and financial

globalization contributing to rising unemployment and product innovation reducing it. The study suggests policymakers should integrate globalization and technology through research and development.

While previous studies on globalization have explored its broad economic impacts, they often overlook the specific challenges it poses to the labor market in developing countries like Nigeria. Current literature does not sufficiently examine how technological globalization exacerbates the mismatch between the skills present in Nigeria's labor market and those required by its rapidly evolving technological sectors. This research seeks to fill that gap by analyzing how the skills gap is intensified by technological globalization, affecting employability, income distribution, and the overall adaptability of Nigeria's workforce.

3. Methodology

The time period covered for this study is 1991-2020 for globalization indices in Nigeria. The choice of the study period was based on the availability of data on relevant variables from KOF and also because 21st century technology has been predominantly on the steady rise since early 90's. Technological globalization (TEG), political globalization index (POG), and economic globalization (ECG) are obtained from the KOF Globalization Index. The inflation rate, sourced from the Central Bank of Nigeria statistical bulletin, is a monetary variable that directly or indirectly impacts most macroeconomic parameters, including the unemployment rate, sourced from the World Bank database, and the number of Nigeria's labor force, also from the World Bank database. Technological globalization is assessed using internet bandwidth, international patents, and high technology exports, while unemployment is measured by the Nigerian National Unemployment and Underemployment Survey.

The model employed in this study was adapted from the empirical framework of Adamu et al. (2017). The researchers employed the GMM to examine whether or not globalization has an impact on unemployment

rate in sub-Saharan Africa. Their variables are UEM-Unemployment, GLO-globalization, LMR-labour market regulation, GROWTH-represents gross domestic product per capita, INF-Inflation and WAGE which is the gross domestic product per employed person. This study incorporates three new variables in the model and removed labour market regulation, growth and wage. Technology globalization, economic globalization, labour force, and political globalization were selected because they are key determinants of labour market outcomes in developing countries like Nigeria. Their model is specified as follows:

$$UEM_{it} = \beta_1 GLO_{it} + \beta_2 LMR_{it} + \beta_3 GROWTH_{it} + \beta_4 INF_{it} + \beta_5 WAGE_{it} + v_i + v_t + \varepsilon_{it} \quad 1$$

However, with the modification, the new model for this research work was specified as follows:

$$UNE = (TEG, POG, INF, LAF, ECG) \quad 2$$

Where TEG represents Technological Globalization, POG stands for Political Globalization, INF refers to the Inflation Rate, LAF denotes the Labour Force in Nigeria, and ECG indicates Economic Globalization. The following represents the econometric form of the model:

$$UNE = \beta_0 + \beta_1 TEG_t + \beta_2 POG_t + \beta_3 INF_t + \beta_4 LAF_t + \beta_5 ECG_t + \varepsilon_t \quad 3$$

Representing this relationship in a functional Autoregressive Distributed Lag (ARDL) framework we have;

$$\begin{aligned} \Delta LNUNE_t = & \beta_{0i} + \sum_{i=1}^p \beta_1 \Delta LNUNE_{t-1} + \sum_{i=0}^q \beta_2 \Delta LNTEG_{t=1} + \sum_{i=0}^q \beta_3 \Delta LNPOG_{t-1} \\ & \sum_{i=0}^q \beta_4 \Delta LNINF_{t=1} + \sum_{i=0}^q \beta_5 \Delta LNLAFF_{t=1} \\ & \sum_{i=0}^q \beta_6 \Delta LNECG_{t=1} + \lambda_1 LNUNE_{t-1} \\ & + \lambda_2 LNTEG_{t-1} + \lambda_3 LNPOG_{t-1} \\ & + \lambda_4 LNINF_{t-1} + \lambda_5 LNLAFF_{t-1} \\ & + \lambda_6 LNECG_{t-1} \varepsilon_{it} \end{aligned} \quad 4$$

Where: Δ =first difference of the variable, t =time, $t-1$ =lag one (previous period), β_{0i} =constant, Σ =summation, $\beta_1-\beta_6$ and $\lambda_1-\lambda_6$ are coefficient of the variables.

If there is no cointegration, the ARDL model is specified as thus:

$$\begin{aligned} \Delta LNUNE_t = & \beta_{0i} + \sum_{i=1}^p \beta_1 \Delta LNUNE_{t-1} + \\ & \sum_{i=0}^q \beta_2 \Delta LNTEG_{t=1} + \sum_{i=0}^q \beta_3 \Delta LNPOG_{t-1} \\ & + \sum_{i=0}^q \beta_4 \Delta LNINF_{t=1} + \sum_{i=0}^q \beta_5 \Delta LNLAf_{t=1} \\ & + \sum_{i=0}^q \beta_6 \Delta LNECG_{t=1} + \varepsilon_{it} \end{aligned} \quad 5$$

The Autoregressive Distributed Lag (ARDL) technique is a robust econometric method widely used in time series analysis to estimate the long-run and short-run dynamics between variables. Developed by Pesaran et al. (2001), ARDL is particularly advantageous due to its flexibility in handling variables regardless of whether they are stationary at level $I(0)$ or first difference $I(1)$. According to Pesaran et al (2001), there are two positions involved in estimating equation 5. First the null hypothesis of non-existence of long run relation among

variables which is defined by: $H_0 = \lambda_1 = \lambda_2 = \lambda_3 = \lambda_4 = \lambda_5 = \lambda_6 = 0$.

H_0 is tested against the alternative hypothesis H_1 . Rejecting the null hypothesis means that there is a long run relationship between the variables irrespective of their level of integration. The f-statistic also helps to test the joint relationship among variables.

The ARDL method was chosen because it allows for the examination of both the long-run and short-run relationships, and it accommodates variables that are both stationary at levels and first differences. The ARDL post-estimation diagnostic technique is crucial in econometric analysis to validate the robustness and reliability of model estimations. It involves various tests, including serial correlation, heteroscedasticity, and normality checks, to ensure that the underlying assumptions of the ARDL model are not violated.

4. Results

Table 1 presents the result of the descriptive statistics for the dataset. This table includes measures of central tendency (mean, median), dispersion (standard deviation, range), and the distribution shape (skewness, kurtosis). These statistics provide a comprehensive overview of the dataset's key characteristics and variability.

Table 1: Descriptive Statistics of the Variables of the Study

	UNE	TEG	POG	LAF	INF	ECG
Mean	4.06	39.51	78.46	49185497.00	18.72	30.31
Median	3.90	28.89	81.41	48226027.00	12.00	30.45
Maximum	5.63	66.66	86.94	68632664.00	76.76	54.33
Minimum	3.51	17.88	56.87	32844703.00	0.22	20.25
Std. Dev.	0.52	20.97	8.81	10901290.00	17.40	6.20
Skewness	1.65	0.26	-1.02	0.20	2.12	1.81
Kurtosis	4.95	1.21	2.95	1.84	6.54	8.81
Jarque-Bera	18.40	4.34	5.19	1.89	38.06	58.68
Probability	0.00	0.11	0.07	0.39	0.00	0.00
Sum	121.91	1185.30	2353.73	1.48E+09	561.72	909.23
Sum Sq. Dev.	7.71	12749.14	2248.90	3.45E+15	8784.92	1116.01
Observations	30	30	30	30	30	30

Source: Authors computation from EViews 10

The statistical summary for the variables UNE, TEG, POG, LAF, INF, and ECG includes their mean, median, maximum, minimum, standard deviation, skewness, kurtosis, and Jarque-Bera test results based on 30 observations each. The mean values indicate the central tendency of each variable, while the standard deviation reflects their dispersion. Skewness and kurtosis suggest that UNE, INF, and ECG are significantly skewed and exhibit higher kurtosis, indicating deviations from normality. The Jarque-Bera test results suggest that UNE,

INF, and ECG have distributions that significantly deviate from normality ($p < 0.05$), whereas TEG, POG, and LAF do not show significant deviations. The unemployment rate in Nigeria is moderate, with a maximum of 5.633%. Technological globalization is not yet fully realized, with a median of 28.89 on a KOF rating of 1-100. Political globalization is good, with a median of 81.41 also on a KOF rating of 1-100. The labor force is large, and the inflation rate is high, with a median of 12.0%.

Table 2: Results of Augmented Dickey Fuller Unit Root test

Variable	P-value(5%)	ADF Critical value a 5%	ADF	Order of Integration
<i>lnUNE</i>	0.049	-2.972	-2.982	<i>I</i> (1)
<i>lnTEG</i>	0.034	-2.972	-3.159	<i>I</i> (1)
<i>lnPOG</i>	0.00	-2.972	-5.838	<i>I</i> (0)
<i>lnINF</i>	0.00	-2.972	-8.223	<i>I</i> (1)
<i>lnLAF</i>	0.00	-2.968	-5.149	<i>I</i> (0)
<i>lnECG</i>	0.04	-2.968	-3.076	<i>I</i> (1)

Source: Authors computation from EViews 10

The results in table 2 show significant p-values for *lnUNE*, *lnTEG*, *lnPOG*, *lnINF*, *lnLAF*, and *lnECG*, contradicting the null hypothesis of a unit root, and implying that all variables integrated at levels *I*(0) and first difference are *I*(1) are all stationary.

In table 3, the lag length criteria are used to determine which lag time is best for model estimation. The efficacy of a model is thus assessed by the period of time it may be tested while meeting the greatest number of criteria. Table 3 shows the ideal lag for cointegration.

Table 3: Result of Lag Order Selection Criteria

Lag	LogL	LR	FPE	AIC	SC	HQ
0	99.116	NA	0	-6.651	-6.366	-6.564
1	334.316	352.8	0	-20.88	-18.881	-20.269
2	371.914	40.283	0	-20.994	-17.283	-19.859

Source: Authors computation from EViews 10

The lower the AIC value, the better the model fits the data without overfitting, since the AIC value for Lag 2 (-20.994) is the lowest, it indicates that a lag length of 2 provides the best fit for the model while balancing the trade-off between goodness of fit and model complexity. Therefore, based on the AIC, Lag 2 is the best lag length for this time series mode. Table 4 presents the co-integration test result to

confirm if the data set cointegrate or not in order to know the right if it impacts both long and short run.

The F-statistic of 4.474, exceeding the critical value of 3.38, provides strong evidence of a long-term relationship between unemployment and globalization in the model, leading to the rejection of the null hypothesis of no cointegration.

Table 4: Result of Co-integration Bound Test

Test Statistic	Value	K
F-statistics	4.474	5
Critical Bounds Value		
Significance level	Lower bound $I(0)$	Upper bound $I(1)$
10%	2.08	3
5%	2.39	3.38
2.5%	2.7	3.73
1%	3.06	4.15

Source: Authors computation from EViews 10

Table 5a: ARDL Long Run Form

Variable	Coefficient	Std. Error	t-Statistic	Prob.
lnTEG	-0.51	0.17	-2.97	0.01
lnPOG	-3.63	1.11	-3.26	0.00
lnINF	-0.01	0.03	-0.47	0.64
lnLAF	3.59	0.98	3.68	0.00
lnECG	0.07	0.16	0.45	0.66
C	-44.72	12.9	-3.47	0.00
EC = lnUNE - (-0.51 *lnTEG - 3.63 * lnPOG - 0.01 * lnINF + 3.59 * lnLAF + 0.07 * lnECG - 44.72)				

Source: Authors computation from EViews 10

Table 5b: Autoregressive Distributive lag estimate (Short run Model)

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
D(lnTEG)	-0.10	0.02	-4.42	0.05
D(lnPOG)	-3.04	0.39	-7.82	0.02
D(lnINF)	0.00	0.00	2.10	0.17
D(lnLAF)	1.77	1.77	1.00	0.42
D(lnECG)	-0.15	0.02	-6.84	0.02
C	-0.27	0.11	-2.43	0.14

Source: Authors computation from EViews 10

Moving on to the level's equation in table 5a the lnTEG variable has a highly statistically significant negative coefficient indicating a robust positive impact of 0.51% decrease in unemployment over the long term. In contrast, the lnINF variable has a non-significant negative coefficient implying an unexplained impact on unemployment reduction while the

lnPOG variable has a significant effect which suggests that that political globalization has positive effect on unemployment reduction in Nigeria in the long run. In the long run, economic globalization is statistically insignificant, as evidenced by a p-value exceeding the 0.05 threshold. The constant term (C) has a negative sign and is statistical

significance implying significant constant effect. In table 5b; an increase in technological globalization leads to a 0.10% reduction in unemployment, suggesting that technological advancements have a measurable impact on job creation. The findings are similar to the work of Rostislav Kapeliushnikov (2019), titled: The Phantom of Technological Unemployment. The short-run increase and decrease of process innovation are directly related to unemployment. Furthermore, a study by Alfalih and Hadj (2021) found that globalization has a positive impact on employment creation in developing countries, particularly in the manufacturing sector.

Moving to political globalization with its coefficient as -3.03%, it implies that a one percent increase in the POG leads to a decrease of approximately 3% in the unemployment in the short run. This coefficient is also statistically significant at the 5% level, which aligns with (Adamu et al, 2017) that tested impact of globalization on unemployment in sub-Saharan African (SSA) countries using GMM (Generalized method of moments) but disagrees with the findings of Popoola (2020) that the advent of political globalization has further worsened the economic situation of the country through the various reforms more favourable to the western world that we adopted in Nigeria.

Inflation on its own does not seem to have a statistically significant effect on unemployment rate in Nigeria, as its coefficient has a probability which is greater than 5% ($p > 0.05$). Although according to the result Unemployment decreases as a result of

inflation; this is in line with the Philips curve theory. In order to address the unemployment issues, it is imperative to maintain moderate inflation, as the data indicates that stagflation is now occurring in Nigeria.

Conversely, labour force with a coefficient of 1.7% suggests that a 1% increase in LAF leads to an increase of approximately 1.7% units in unemployment rate in the short run. However, this coefficient is not statistically significant at the 5% level.

Economic globalization (ECG) has a coefficient of -0.15% which is statistically significant at 5%. This implies that a 1% increase in ECG causes a decrease of approximately 0.15% in the nation's unemployment rate in the short run, this result conform to (Amenyo, 2020) who investigate the economic impacts of globalization on employment generation in Africa with specific reference to ECOWAS. The result contradicts that of Johnny (2018) and Adamu et al, (2017) whose research on the impact of foreign direct investment on Nigeria's unemployment rate from 1980 to 2015 found a negligible relationship between the two.

The model predicts a 0.27% decrease in the dependent variable, assuming all other variables remain constant. However, the t-statistic is not statistically significant at conventional levels, suggesting the constant term may not significantly differ from zero in the short run. The short-term effects of technological, political, and economic globalization on the dependent variable are statistically significant, while inflation and total labor force do not.

Table 6: Breusch-Godfrey Serial Correlation LM Test

F-statistic	0.047	Prob. F(1,22)	0.83
Obs*R-squared	0.062	Prob. Chi-Square(1)	0.804

Source: Authors computation from Eviews 10

Table 7: Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	1.185	Prob. F(5,23)	0.347
Obs*R-squared	5.94	Prob. Chi-Square(5)	0.312
Scaled explained SS	3.942	Prob. Chi-Square(5)	0.558

Source: Authors computation from Eviews 10

To assess the model's dependability, the findings of serial correlation and heteroskedasticity were acquired and examined. Using the Breusch-Godfrey serial correlation and Breusch-Pagan-Godfrey tests, the null hypothesis of no serial correlation and no heteroskedasticity in the model was accepted with probability values greater than 0.05. Because the probability values of 0.8303 and 0.3471 are all greater than 0.05, the null hypotheses were accepted hence, the model's functional form is trustworthy.

5. Conclusion and policy implications

This paper examines the impact of technological globalization on unemployment rate in Nigeria, using data from 1991 to 2020. The analysis shows an asymmetric relationship between globalization and unemployment rates, in other words, changes in globalization appear to have a different impact on unemployment rates, with long-term relationship found. The study reveals that technological globalization contributes significantly to a decreased unemployment rate in Nigeria alongside political globalization. Globalization is a mixed gift to developing countries especially Nigeria, the research suggests that globalization, though presenting challenges such as increased competition, offers significant opportunities for job creation, especially in the technology sector. To fully tap the benefits of technological globalization, Nigeria must invest in digital literacy, infrastructure, and policies that support innovation. Technological advancements are leading to job creation in various industries, virtually all types of business use technology to achieve their daily deliverables, particularly in manufacturing and agricultural sector.

Companies now outsource tasks to countries with lower labor costs which some Nigeria youths have benefitted from working remotely for foreign countries as a result of the cheap cost the Nigerian youth accept as remuneration for services rendered. The rapid pace of technological change has created a skill gap between the job market and workforce

skills, leading to unemployment evidenced in the recruitment of expatriates by oil companies to work because of the advanced knowledge they have in the use of the modern-day technology while Nigerians are left to do the cheap labour. Lack of quality education and training opportunities have left some segments of the population behind in terms of skills, exacerbating unemployment in the country. Global competition from countries that have embraced technology more rapidly may also lead to job creation in Nigeria in the long run. Technological globalization offers Nigeria new chances to tackle unemployment and boost inclusive growth. Nigeria can utilize technology to create jobs empower its people and drive progress by embracing innovation supporting entrepreneurship and investing in human capital development. Collaboration between government industry academia and civil society is crucial for Nigeria to become a successful center of technological innovation and job creation internationally. In the light of the foregoing, policymakers should focus on enhancing technological infrastructure and encouraging foreign direct investments in tech-driven industries to further reduce unemployment. The government should consider several targeted recommendations to empower Nigerians in emerging economic sectors. First, it should promote training programs focused on foreign exchange (forex) trading, helping individuals understand market analysis, risk management, and trading strategies. This knowledge would enable citizens to tap into global currency markets, fostering income generation and employment opportunities. In addition, educational initiatives on cryptocurrency could provide Nigerians with the foundational knowledge needed to engage with this growing sector. Training programs covering blockchain technology, digital wallets, and the legal and financial aspects of cryptocurrency trading and investment would empower individuals to participate in cryptocurrency markets, supporting economic diversification and personal financial growth. The expansion of

remote job opportunities, driven by digital advancements, also presents a valuable avenue for employment. By offering training and promoting a remote work culture, Nigerians can access international job markets, helping to reduce local unemployment rates.

Lastly, implementing nationwide digital literacy programs would strengthen the population's ability to adapt to technological changes. These programs should include instruction on basic computer skills, internet navigation, online safety, and the use of digital tools and platforms, equipping individuals to improve their employability and engage in the digital economy.

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