RELATIONSHIP AMONG ECONOMIC GROWTH, EMPLOYMENT GENERATION AND INCOME DISTRIBUTION IN NIGERIA

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ABSTRACT

This study examines the relationship among economic growth, employment generation, and income distribution in Nigeria from 1990-2020. Using time series data and employing Vector Autoregression (VAR) methodology, the research analyzes how economic growth translates into employment opportunities and affects income distribution patterns across different sectors and regions. The study reveals that while Nigeria has experienced periods of significant economic growth, particularly during oil boom periods, growth has not consistently translated into proportional employment generation or equitable income distribution. The findings indicate a weak correlation between GDP growth and employment creation, with a correlation coefficient of 0.34, suggesting that Nigeria's growth pattern has been largely jobless. Income distribution analysis using Gini coefficient shows persistent inequality, with values ranging from 0.48-0.52 over the study period. The agricultural sector demonstrates the strongest employment-income linkage, while the oil sector shows high growth contribution but minimal employment impact. The study recommends diversification of the economy, investment in labor-intensive sectors, implementation of progressive tax policies, strengthening of social protection programs to ensure that economic growth translates into meaningful employment and improved income distribution. These findings contribute to knowledge the growth-employment-income nexus in resource-dependent economies and provide policy insights for achieving inclusive economic development in Nigeria.

Keywords: *Economic Growth, Employment Generation, Income Distribution, Vector Autoregression, Inclusive Development*

1. INTRODUCTION

Economic growth has long been considered the primary driver of development and poverty reduction in developing countries. However, the relationship between economic growth, employment generation, and income distribution remains complex and context-specific, particularly in resource-rich economies like Nigeria. The Nigerian economy, heavily dependent on oil revenues, has experienced volatile growth patterns over the past three decades, raising questions about the inclusiveness and sustainability of its development trajectory. Nigeria, as Africa's largest economy and most populous country with over 200 million inhabitants, presents a unique case study for examining the growth-employment-income nexus.

Despite being one of the world's largest oil producers and experiencing significant economic growth during various periods, the country faces persistent challenges including high unemployment rates, widespread poverty, and increasing income inequality. The unemployment rate has risen from 14.2% in 2016 to 33.3% in 2020, while the poverty headcount ratio remains above 40% of the population.

The central problem addressed in this study is the apparent disconnect between economic growth and inclusive development in Nigeria. While the country has recorded positive GDP growth rates in many years, this growth has not translated into commensurate employment opportunities or equitable income distribution. This phenomenon, often referred to as "jobless growth," raises concerns about the sustainability of Nigeria's development model and its ability to address the socio-economic challenges facing its growing population. The oil-dependent nature of Nigeria's economy has created a dual economic structure where the oil sector contributes significantly to GDP but employs a minimal fraction of the workforce. Meanwhile, the agricultural sector, which employs the majority of the population, contributes relatively little to GDP. This structural imbalance has implications for how economic growth translates into employment and income opportunities across different sectors and population groups.

The main objective of this study is to examine the relationship among economic growth, employment generation, and income distribution in Nigeria. Specifically, the study aims to: Analyze the pattern and trends of economic growth, employment, and income distribution in Nigeria from 1990 to 2020. Assess the impact of economic growth on income distribution and inequality and examine the correlation between economic growth and employment generation across different sectors. Identify the structural factors that influence the growth-employment-income nexus in Nigeria

This study contributes to the existing literature on development economics by providing empirical evidence on the growth-employment-income relationship in a major African economy. The findings will be valuable for policymakers, development practitioners, and researchers interested in understanding how to achieve more inclusive growth patterns in resource-dependent economies. The study also contributes to the ongoing debate about the effectiveness of economic growth as a strategy for poverty reduction and social development.

2. LITERATURE REVIEW

2.1 Theoretical Framework

The relationship between economic growth, employment, and income distribution has been extensively studied in development economics. The trickle-down theory, popularized by Lewis (1954), suggests that economic growth automatically leads to employment creation and improved income distribution as benefits percolate through the economy. However, this theory has been challenged by empirical evidence from various developing countries showing that growth does not always translate into proportional employment or equitable income distribution.

Kuznets (1955) proposed the inverted U-curve hypothesis, suggesting that income inequality initially increases during early stages of development but decreases as countries reach higher income levels. This

theory has been influential in policy circles but has faced criticism for its deterministic approach and lack of consideration for institutional and policy factors that can influence the growth-inequality relationship.

More recent theoretical contributions emphasize the importance of the quality and pattern of growth rather than just its quantity. Ravallion and Chen (2003) introduced the concept of "pro-poor growth," highlighting that the distributional pattern of growth determines its impact on poverty and inequality. Similarly, the concept of "inclusive growth" has gained prominence, emphasizing the need for growth that creates opportunities for all segments of society.

2.2 Empirical Literature

Empirical studies on the growth-employment-income nexus have produced mixed results, often dependent on the specific context, time period, and methodology employed. Kapsos (2005) found that the employment elasticity of growth varies significantly across countries and sectors, with developing countries generally showing lower elasticity compared to developed countries. This suggests that growth in developing countries is less effective at creating employment opportunities.

Studies specific to Africa have shown similar patterns. Ncube and Shimeles (2013) analyzed employment patterns across African countries and found that despite positive economic growth, many countries failed to create sufficient employment opportunities for their growing populations. The study attributed this to the dominance of capital-intensive sectors and weak linkages between different sectors of the economy.

Research on Nigeria specifically has highlighted the challenges of jobless growth. Akintoye and Adejumo (2014) examined the relationship between economic growth and employment in Nigeria and found a weak positive relationship, suggesting that growth has not been effective in generating employment. Similarly, Sodipe and Ogunrinola (2011) analyzed the employment intensity of growth in Nigeria and concluded that the country's growth pattern has been largely capital-intensive rather than labor-intensive.

Further empirical support comes from Aminu (2011), who investigated the employment-growth nexus in Nigeria using time series data from 1970 to 2008. The study revealed that GDP growth had a statistically insignificant impact on employment generation, reinforcing the notion of jobless growth in Nigeria.

Oyinlola et al. (2016) extended this analysis by examining sectoral contributions to employment and income distribution. Their findings indicated that while the services and agricultural sectors were more employment-intensive, the oil and manufacturing sectors contributed little to job creation despite their significant GDP contributions.

Using panel data from Sub-Saharan African countries, Adams (2008) found that economic growth had a limited effect on employment generation, particularly in oil-exporting nations where growth was concentrated in capital-intensive industries. This aligns with the Nigerian experience, where oil wealth has not translated into broad-based job creation.

In a comparative study of Nigeria and South Africa, Nwosa and Akinbobola (2011) noted that both countries experienced high inequality alongside moderate to high economic growth, indicating a weak pro-poor nature of growth. They emphasized the need for targeted social policies to ensure inclusive development.

Iwayemi and Adenikinju (2006) analyzed energy use and employment in Nigeria and found that increased energy consumption did not necessarily lead to higher employment rates, especially in the absence of industrial policy and infrastructure development. This further supports the argument that structural factors mediate the growth-employment relationship.

Bhorat et al. (2014) studied employment trends in post-apartheid South Africa and found that despite macroeconomic stability and growth, job creation remained sluggish due to skill mismatches, minimum wage laws, and rigid labor markets. These findings offer important insights for Nigeria, which faces similar labor market challenges.

Finally, UNCTAD (2016) reported that in many resource-rich developing countries, economic growth remains decoupled from employment generation and poverty reduction. The report recommended that governments implement structural reforms aimed at promoting labor-intensive industries, enhancing productivity, and improving access to credit and education.

2.3 Income Distribution Studies

Studies on income distribution in Nigeria have consistently shown high levels of inequality. Bakare (2012) used the Gini coefficient to measure income inequality in Nigeria and found persistent high levels of inequality over time. The study attributed this to unequal access to economic opportunities, regional disparities, and the concentration of wealth in the oil sector.

Alvaredo and Gasparini (2015) provided a comprehensive analysis of income inequality in developing countries, including Nigeria, and found that inequality has been persistent despite periods of economic growth. The study emphasized the role of structural factors, including the concentration of productive assets and limited access to education and credit, in perpetuating inequality.

2.4 Gaps in Literature

While existing literature provides valuable insights into the growth-employment-income relationship, several gaps remain. First, many studies focus on aggregate relationships without adequately considering sectoral differences and their implications for overall outcomes. Second, there is limited analysis of the temporal dynamics of these relationships, particularly how they evolve during different phases of economic development. Third, most studies do not adequately address the role of institutional factors and policy interventions in mediating these relationships.

3. METHODOLOGY

3.1 Research Design

This study employs a quantitative research design using time series analysis to examine the relationship between economic growth, employment generation, and income distribution in Nigeria. The study covers the period from 1990 to 2020, providing a comprehensive analysis of three decades of economic development.

3.2 Data Sources and Variables

Data for this study were obtained from various sources including the National Bureau of Statistics (NBS), Central Bank of Nigeria (CBN), World Bank database, and International Labour Organization (ILO) statistics. The key variables used in the analysis include:

Economic Growth: Measured by annual GDP growth rate and per capita GDP growth

Employment: Measured by employment rate, unemployment rate, and sectoral employment shares

Income Distribution: Measured by Gini coefficient, income quintile ratios, and poverty headcount ratio

Sectoral Variables: Sectoral GDP contributions and employment shares for agriculture, industry, and services

3.3 Model Specification

The study employs Vector Autoregression (VAR) methodology to analyze the dynamic relationships between the variables. The VAR model is specified as follows:

$$Y = A1Y + A2Y + ... + ApY + e$$

Where Y is a vector of endogenous variables including GDP growth, employment rate, and Gini coefficient; A are coefficient matrices; and e is a vector of error terms.

3.4 Estimation Techniques

The analysis involves several steps:

1. Unit root tests using Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) tests

2. Cointegration analysis using Johansen cointegration test

3. VAR estimation with appropriate lag length selection

4. Impulse response functions and variance decomposition analysis

5. Granger causality tests to determine the direction of causality

4. RESULTS AND DISCUSSION

4.1 Descriptive Statistics and Trends

The descriptive analysis reveals significant variations in economic growth, employment, and income distribution indicators over the study period. Nigeria's GDP growth averaged 4.2% annually between 1990 and 2020, with notable volatility linked to oil price fluctuations and political events.

Table 1: Descriptive Statistics of Key Variables (1990–2020)

Variable	Mean	Std. Dev.	Minimum	Maximum
GDP Growth (%)	4.23	4.15	-1.62	13.25
Employment Rate (%)	51.8	8.7	33.1	62.4
Unemployment Rate (%)	12.1	7.8	3.4	33.3
Gini Coefficient	0.502	0.028	0.456	0.539

The unemployment rate shows an alarming upward trend, particularly after 2015, rising from single digits in the 1990s to over 30% by 2020. This trend coincides with periods of economic recession and structural challenges in the economy.

4.2 Unit Root and Cointegration Tests

The unit root tests indicate that most variables are integrated of order one I(1), necessitating cointegration analysis. The Johansen cointegration test reveals the existence of long-run relationships between economic growth, employment, and income distribution variables, with two cointegrating vectors identified at the 5% significance level.

4.3 VAR Model Results

The VAR model estimation with optimal lag length of 2 shows significant relationships between the variables. The results indicate that economic growth has a positive but statistically weak impact on employment generation, with an elasticity of 0.34. This suggests that a 1% increase in GDP growth leads to only a 0.34% increase in employment, confirming the jobless growth phenomenon in Nigeria.

Table 2: VAR Model Estimation Results

The Vector Autoregression (VAR) model estimation results provide critical insights into the dynamic relationships between economic growth, employment generation, and income distribution in Nigeria over

the study period (1990–2020). The model was estimated to use a lag length of two (based on Akaike Information Criterion and Schwarz Bayesian Criterion), and the results are summarized in Table 2 below:

Dependent Variable	Independent Variable	Coefficient	t-statistic	P-value
Employment Rate	**GDP Growth(-1)**	**0.341**	**2.12**	**0.043**
Employment Rate	**GDP Growth(-2)**	**0.185**	**1.18**	**0.248**
Gini Coefficient	**GDP Growth(-1)**	**0.002**	**1.85**	**0.074**
Gini Coefficient	**Employment Rate(-1)**	**-0.001**	**-2.31**	**0.028**

Interpretation of Results

Employment Rate and GDP Growth

The coefficient of 0.341 for GDP Growth (-1) indicates that a 1% increase in GDP growth from the previous year leads to a 0.341% increase in the employment rate, holding other variables constant. This positive relationship is statistically significant at the 5% level ($p = 0.043$) , suggesting that there is some degree of employment creation associated with economic growth in Nigeria. However, the relatively low elasticity value of 0.34 highlights the phenomenon of jobless growth, where economic expansion does not proportionally translate into employment opportunities. This result aligns with earlier empirical findings in Nigeria and other resource-rich economies, where growth has been largely capital-intensive and concentrated in sectors such as oil and gas, which do not absorb large segments of the labor force.

The second lagged GDP growth term (GDP Growth (-2)) shows a weaker and statistically insignificant relationship (coefficient = 0.185, $p = 0.248$), indicating that the impact of economic growth on employment diminishes over time and lacks persistence. This suggests that policies aimed at stimulating short-term growth may have limited long-term effects on job creation unless structural reforms are implemented to enhance labor market responsiveness.

Income Distribution and Economic Growth

The relationship between economic growth and income inequality, as measured by the Gini coefficient, presents a more nuanced picture. The coefficient of 0.002 for GDP Growth (-1) implies that a 1% increase in GDP growth is associated with a marginal increase in income inequality, although this effect is only marginally significant ($p = 0.074$). This result supports the argument that growth in Nigeria has often favored higher-income groups, particularly those connected to capital-intensive industries like oil and finance.

On the other hand, the negative and statistically significant coefficient (-0.001 , $p = 0.028$) for the Employment Rate(-1) in the equation for the Gini coefficient suggests that higher employment levels are associated with reduced income inequality. This implies that the employment generation plays a moderating

role in reducing disparities in income distribution. As more people gain access to jobs, especially decent-paying ones—the overall inequality in society can be expected to decline.

These findings reinforce the importance of adopting inclusive growth strategies that emphasize both economic expansion and equitable outcomes. Simply pursuing high GDP growth without paying attention to its distributional consequences may exacerbate social inequalities rather than alleviate them.

4.4 Sectoral Analysis

The sectoral decomposition reveals significant heterogeneity in the growth-employment relationship across sectors. The agricultural sector demonstrates the highest employment elasticity of growth at 0.67, while the oil sector shows near-zero employment elasticity despite its large contribution to GDP.

The manufacturing sector shows moderate employment elasticity of 0.42, but its contribution to total employment remains limited. The services sector, particularly informal services, shows high employment absorption capacity but with low productivity and income levels.

4.5 Income Distribution Analysis

The analysis of income distribution reveals persistent inequality over the study period. The Gini coefficient has remained above 0.45 throughout the period, indicating high inequality. The relationship between economic growth and income distribution is complex, with growth sometimes associated with increasing inequality, particularly during oil boom periods. The income quintile analysis shows that the top 20% of the population consistently captures over 50% of total income, while the bottom 20% receives less than 5%. This pattern has remained relatively stable despite variations in economic growth rates.

4.6 Impulse Response Analysis

The impulse response functions reveal that positive shocks to economic growth have a delayed and modest impact on employment, with the effect peaking in the second year and gradually dissipating over five years. The response of income distribution to growth shocks is initially negative (increasing inequality) but becomes positive (reducing inequality) after three years.

4.7 Granger Causality Tests

The Granger causality tests provide evidence of unidirectional causality running from economic growth to employment at the 5% significance level. However, no significant causality is found between growth and income distribution, suggesting that the relationship is more complex and may be mediated by other factors.

5. CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

This study provides empirical evidence on the complex relationship between economic growth, employment generation, and income distribution in Nigeria. The findings reveal that Nigeria's economic growth has been largely jobless, with weak employment elasticity and persistent income inequality. The oil-dependent

structure of the economy has created a dual system where growth in the dominant sector does not translate into proportional employment opportunities. The study confirms the hypothesis that there is a weak relationship between economic growth and employment generation in Nigeria, with sectoral heterogeneity playing a crucial role. The agricultural sector shows the strongest employment-income linkage, while the oil sector contributes significantly to growth but minimally to employment.

The persistence of high-income inequality despite periods of economic growth highlights the need for more inclusive development strategies. The findings suggest that the pattern and quality of growth matter as much as the quantity in determining employment and distributional outcomes. Future research should focus on understanding the institutional and policy factors that can strengthen the growth-employment-income nexus. Additionally, analysis of regional variations within Nigeria could provide insights into how local factors influence these relationships. The study contributes to the broader literature on inclusive growth and provides policy insights for Nigeria and other resource-dependent economies seeking to achieve more equitable development outcomes. The evidence suggests that without deliberate policy interventions to address structural constraints, economic growth alone is insufficient for achieving inclusive development.

5.1 Recommendations

The findings underscore the urgent need for economic diversification away from oil dependency. The government should prioritize the development of labor-intensive sectors such as agriculture, manufacturing, and services that have higher employment elasticity. This requires targeted investments in infrastructure, technology, and human capital development.

Given the high employment potential of the agricultural sector, policies should focus on modernizing agriculture through improved technology, access to credit, and value chain development. The manufacturing sector requires support through industrial policies that promote local content, technology transfer, and export promotion.

To address persistent inequality, Nigeria needs comprehensive redistribution policies including progressive taxation, social protection programs, and targeted transfers to vulnerable populations. Investment in education and healthcare can help reduce long-term inequality by improving human capital development across all income groups.

Nigeria should adopt an employment-centered growth strategy that prioritizes job creation alongside economic growth. This includes supporting small and medium enterprises (SMEs), promoting entrepreneurship, and creating an enabling environment for labor-intensive industries.

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