

Unemployment Rate and Economic Growth in Nigeria: An Empirical Analysis

Daniel O. Adebamiwi

The Federal Polytechnic, Ilaro. / Department of Banking and Finance
daniel.adebamiwi@federalpolyilaro.edu.ng

Stephen D. Ogundeyi

The Federal Polytechnic, Ilaro. / Department of Banking and Finance
ogundeyi.damilola@yahoo.com

Abstract: *The connection between the unemployment rate and economic growth is one of the most vital issues. The study aims to determine how these variables have a bearing on each other and what impact they are having on national economic development. Secondary data were collected from CBN Statistical Bulletin for the period 1993 – 2022. Multiple regression analysis was used to analyze data. The study indicates that the unemployment rate (UNM) has a static relationship with GDP, which is not statistically significant, whereas the population growth rate (PGR) and money supply (MS) have a positive relationship with GDP because it is statistically significant. It is recommended that the government should implement targeted programs and policies to address unemployment, including investments in education, vocational training, and entrepreneurship development. They should also Formulate and implement policies that promote family planning, education, and healthcare to align population growth with sustainable economic development goals.*

Keywords: Unemployment, development, Gross domestic product, Population, Money supply

Introduction

Nigeria is a nation endowed with an abundance of material and human resources. Nigeria's citizens continue to struggle for survival, despite the wealth of natural resources that they have been endowed with, because of economic problems and difficulties in the country (Ekpo, 2008). A major impact on country development is unemployment. Nigeria's unemployment rates have risen from 14.2% in Q4 2016 to 27% in 2nd Quarter 2020, according to the National Statistical Bureau NBS, 2020. Numerous reasons contribute to the high unemployment rate. These factors include absence of employment opportunities in some sectors, population growth and skills gap between employers' needs and available labour (Lemchi 2020). There are two groups of people in any given country; the economic active and the economically inactive. The improvement of human well being and standard living is an integral part of economic development. Gross national income and gross domestic product is measured as parameters for measuring the development of economies. Rather than growth, governments focus on economic development due to the fact that growth only refers to an increase in national productivity. Given the need for higher productivity per person as a consequence of growth in output and income, economic development is concerned with production per capita. Indeed, improved indicators of human development and living standards are often a result of developments in the economy. By contrast, the improvements in economic

well-being observed over recent years in Nigeria cannot always be sustained by growth.

In Nigeria, studies and insights into the rate of unemployment and growth in the economy have been carried out by several authors. The results of their research show how dynamic and intricate Nigeria's labor market is, as well as how it affects the world economy. According to Ogwomike, Ogunrinola and Fakile (2018), unemployment rate in Nigeria remains a major concern, they stress the need for policies to stimulate entrepreneurship, skill acquisition and investment in sectors with large employment potential. In a second study conducted by Adejumo and Bekun (2021), it is shown that unemployment has a significant negative effect on economic growth, suggesting the need to address it to achieve sustainable development. The issue of unemployment in Nigeria takes on distinct dimensions due to the inclusion of underemployment. Some persons in this condition work but receive little pay, which prevents them from being able to meet their basic necessities, which include clothing, food, and shelter. Another case of unemployment in the country, for example, disguised unemployment has also been discussed by Kemi and Dayo (2014). In their view, the situation of people accepting work which they do not possess qualifications or experience relates to this type of unemployment. Consequently, the unemployment rate in Nigeria has been categorized as cyclically unemployed, structurally unemployed, frictionally unemployed and statically unemployed. Structural unemployment is associated with



globalization and technological progress which entails replacing human labour with machines in the production process, whereas cyclical unemployment arises from insufficient overall demand of the economy that discourages output by reducing employment. On the contrary, frictional unemployment occurs if a worker has skills which are not in line with an underlying occupation. In addition, the phenomenon of classical unemployment arises when wages are set above the equilibrium price, which leads to an oversupply of labour and thus the labour market exceeds the existing vacancies.

The maintenance of a steady domestic level of prices and full employment are widely considered to be part of economic objectives pursued by the government. To tackle high unemployment and the quest for sustainable growth in Nigeria, it is essential to gain a deeper understanding of the link between unemployment and growth, identify factors that have an impact on unemployment as well as assess possible policy implications. The role of entrepreneurship, skill acquisition and investment in the intensive labour market needs to be examined with a view to addressing inadequate infrastructure and education mismatches as well as taking proactive government policies that support economic diversification, improve business environment, increase human capital development. Adenutsi (2018), Ajakaiye *et al.* (2018); and Iwayemi (2020), stressed the relationship between unemployment, population growth, monetary supply as well as development of its economy. The need for policies that foster entrepreneurship, skills acquisition and investment in sectors with good employment prospects is underlined (Ogwemike, Ogunrinola & Fakile, 2018). But the majority of these studies have been limited to one or two variables, and a more comprehensive analysis needs to be carried out in order to reflect their inter-linkages. However, this study is thus aimed at examining a relationship of unemployment, population growth, the level of money supply and Economic Growth with the notion to find out how these variables have a bearing on each other and what impact they are having on national economic growth.

Literature Review

Aminu and Anono (2014) estimate that the unemployment rate is a total of all persons who are able, committed or ready to work but find no suitable employment at an established wage level. That means that, if there are people who have no jobs in the country, it is an unemployment situation. According to Carlin and Soskice (2018), unemployment is defined as "the situation in which people of working age are not employed, do not wish to remain employed or have taken specific job search measures." The unemployment rate is defined by Oyekale, Ogunleye and Olamide (2021) as the percentage of the population with no work but available to search for a job on an active basis.

Population refers to the total number of people living in a given area, regardless of whether they are permanent residents or temporary visitors" (UN, 2019). Omotayo and Oladeji (2015) define population as "the total number of people residing in a given area at a particular time. A population is defined by Todaro and Smith 2011 as "the overall number of individuals who are living in a given territory, generally within political boundaries, having the same set of characteristics such as age, gender, education, occupation or ethnic origin. Omotayo and Oladeji (2015) note that population matters because of its potential to have a big impact on development in the economy. The increase of population can also lead to increased labour supply, which could contribute to stimulating economic growth, but at the same time may entail higher resource demand and environmental pressures. The UN stresses the importance of population, since it can have a significant impact on social and economic development as well as environmental protection. Growth in the population can create a growing need for resources, urbanization and changes to society's structure.

The term "money supply" describes the total amount of money in an economy that is in circulation, including bank deposits and tangible currencies like coins and banknotes. Mishkin (2011), notes that money supply includes not only physical currency, but also deposits at banks and other financial institutions. According to McEachern, there are a number of different ways in which money is measured including M1 that includes currency and demand deposits, M2 that include M1 plus Savings Deposits And Other liquid assets as well as M3 which contains M2 plus large time deposits and other less liquid assets. It is explained by Samuelson and Nordhaus in 2010 that money supply has an important effect on the level of business activity and inflation. It notes that an increase in currency supply may result in higher inflation. The facilitation of transactions, as well as providing liquidity to the Financial System, can contribute positively to stimulating economic growth by ensuring a sound money supply.

Okun's law states that the unemployment rate reduces by around 0.5% for each 1% increase in production of goods and services. By contrast, the unemployment rate rises by about 0.5 percentage points for every 1% decrease in GDP. Okun's Law in Nigeria states that the unemployment rate should be reduced, as long as the country continues to grow economically. In short, it assumes that there is an ongoing relationship of GDP growth and changes in unemployment rates which may not be sustained over the longer term. Moreover, other factors that may influence unemployment rates such as demographic changes, labour market authorities and public policy are not taken into account in the law.

The neoclassical theory of production, Solow-Swan model, presumes that production is a function of capital and labour inputs and technology. The model argues that three key factors are at play for the development of a



country's economy: capital accumulation, labour market growth and technical progress. As far as Nigeria is concerned, the Solow-Swan model has suggested that a country's capital needs to be increased through investments on physical and personal assets alongside improvements of technology and productivity if sustained growth is to continue. It also reflects the country's efforts in diversifying its economy and seeking foreign investment, as well as improvements to its infrastructure and education system.

Dodo and Idris (2022) examined the effect of inflation on unemployment in Nigeria from 1985 to 2019 using a nonlinear ARDL estimation approach; the study's conclusions showed that inflation had a detrimental effect on unemployment. Adeleke and Adejumo (2020) analyzed from 1981 to 2018 data on the employment rate relationship with economic growth in Nigeria. The study has shown that Nigeria's unemployment rate is negatively and significantly affecting economic growth, suggesting that a reduction in unemployment can contribute to improving the economy as a whole. Another study of the effects of unemployment on GDP growth in Nigeria using data from 1986 to 2016 was carried out by Okeke and Anowor (2019). The study indicates that the unemployment rate in Nigeria has a material and adverse impact on economic growth, pointing out that high levels of unemployment can be detrimental for an economy's development potential.

Methodology

The study obtained relevant data from secondary source by extracting the relevant data from the CBN statistical bulletin for the sampled periods of 1993 –2022.

The model specification for the study is shown below:

$$GDP = f (UNM, PGR, MS)... (1)$$

The econometric form of the model is stated as follows:

$$GDP = \beta_0 + \beta_1 UNM_1 + \beta_2 PGR_2 + \beta_3 MS_3 + \mu... (2)$$

Where:

GDP = Gross domestic product

UNM = Unemployment rate

PGR = Population growth rate

MS = Money Supply

$\beta_1 - \beta_3$ = Regression coefficient

β_0 = Regression constant

μ = Error Term

For the purpose of this study, the method of analysis used is the Ordinary least square (OLS) method of analysis while the scientific Instrument to be used to carry out the analysis is the Econometrical view.

Result Presentations

Table 1: Descriptive Statistics

	GDP	PGR	UNM	MS
Mean	57932.92	2.602333	10.36467	12707.91
Median	37315.08	2.585000	9.610000	6885.415
Maximum	202365.0	2.760000	14.35200	48462.07
Minimum	1257.175	2.410000	9.341000	165.3400
Std. Dev.	58670.01	0.106469	1.457229	14211.33
Skewness	0.911359	-0.120903	1.544299	0.964658
Kurtosis	2.729049	1.704503	4.018254	2.771216
Jarque-Bera	4.244648	2.170979	13.22087	4.718254
Probability	0.119753	0.337736	0.001346	0.094503
Sum	1737987.	78.07000	310.9180	381237.3
Sum Sq. Dev.	9.98E+10	0.333672	61.62406	5.86E+09
Observations	30	30	30	30

Source: Authors' Computations from E-views 9 Outputs (2024)

Table 1 reports the descriptive statistic of the variables employed, it was shown that gross domestic product has a mean of 57932.92 with standard deviation of 58670.01, population growth rate with a mean of 2.602333 and standard deviation of 0.106469. Unemployment has a mean of 10.36467 with the standard deviation of 1.457229. Lastly, money supply has a mean of 12707.91 with the standard deviation of 14211.33. The Jarque-Bera normality test of 4.244648, 2.170979, 13.22087 and 4.718254. This indicates that population growth rate and money supply are normally distributed because the p-value is greater than 0.05 while unemployment is not normally distributed.



Table 2: Regression Results

Dependent Variable: GDP
 Method: Least Squares
 Date: 09/22/24 Time: 17:28
 Sample: 1993 2022
 Included observations: 30

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-125532.3	38232.96	-3.283352	0.0029
PGR	37814.68	9868.645	3.831801	0.0007
UNM	3366.427	1661.225	2.026473	0.0531
MS	3.947691	0.142156	27.77020	0.0000
R-squared	0.996817	Mean dependent var	57932.92	
Adjusted R-squared	0.996450	S.D. dependent var	58670.01	
S.E. of regression	3495.553	Akaike info criterion	19.27994	
Sum squared resid	3.18E+08	Schwarz criterion	19.46676	
Log likelihood	-285.1990	Hannan-Quinn criter.	19.33970	
F-statistic	2714.519	Durbin-Watson stat	1.620025	
Prob(F-statistic)	0.000000			

Source: Authors' Computations from E-views 9 Outputs (2024)

The table above shows the regression analysis of the variables. It can be seen that the coefficient of the constant variable is -125532.3 which implies that the constant variable has a negative relationship. The coefficient of population growth rate, unemployment and money supply are 37814.68, 3366.427 and 3.947691. This show that population growth rate, unemployment and money supply has a positive relationship with gross domestic product. The implication of the findings is that an increase in all the variables will lead to increase in gross domestic product. The p-value is used to test the level of significance. If the probability value is less than 5% level of significance it means there is a significant and if otherwise it shows there is no significance. The p-value of population growth rate, unemployment and money supply are 0.0007, 0.0531 and 0.0000. According to the result, population growth rate, unemployment and money supply has a considerable impact on gross domestic output. The dependent variable's change percentage in relation to changes in the independent variables is explained by the R-squared, which also gauges the fit's goodness. With an R-squared of 0.996817, the independent variables are relevant to the performance of the banks because they account for approximately 99% of changes in the gross domestic product. The remaining 1% of changes in GDP is due to other variables that the model does not account for. We refer to this 1% as the stochastic error term.

The adjusted R² supports the claim of the R² with a value of 0.996450 indicating that 99% of the total variation in gross domestic product is explained or caused by the independent variables in the model.

Discussion of Findings

The regression results indicate that population growth rate has a positive and significant impact on gross domestic product in Nigeria. This implies that there is a positive relationship between the two variables i.e. an increase in population growth rate will lead to a corresponding increase in gdp at a significant rate and vice versa. This shows that a growing population can potentially contribute to economic dynamism through a larger labor force and consumer base. Unemployment rate has a static impact on gross domestic product. This shows an inverse relationship between the two variables. An increase in unemployment will lead to a decrease in gross domestic product and vice versa. This attest to the fact that the youth demographic, constituting a substantial portion of the population, faces challenges in accessing employment opportunities, leading to reduced productivity and economic growth. Lastly, Money supply has a positive and significant impact on gross domestic product showing a direct relationship between the two variables, however, the nuanced nature of this relationship requires careful consideration. Excessive money supply without corresponding increases in productivity and real economic activities can lead to inflationary pressures.

Conclusion

In conclusion, the nation's economic performance is influenced by the combination of population growth, unemployment, and money supply. A comprehensive strategy that takes into account the unique requirements of the labor market, aligns population growth with development goals, and executes prudent monetary policies is required of policymakers. It is recommended that the government should enact specific policies and programs to reduce unemployment, such as funding for enterprise development, education, and vocational training. To ensure that population increase is in line with the objectives of sustainable economic development, policies promoting family planning, healthcare, and education should be developed and put into effect. The regulatory body ought to provide a comprehensive policy framework that takes into account the relationships between money supply, population growth rate, unemployment and gross domestic production.



References

- Adeleke, A. Q., & Adejumo, A. V. (2020). Unemployment rate and Economic Growth in Nigeria: A time series analysis. *Open Journal of Business and Management*, 8(1), 197-211.
- Adenutsi, D. E. (2018). Unemployment and economic growth in Nigeria: An empirical investigation. *Journal of Economic and Sustainable Development*, 9(1), 1-11.
- Ajakaiye, O., Adeyemi, O., & Adeniran, A. (2018). Nigeria's poverty profile: A multidimensional approach. *Nigerian Journal of Economic and Social Studies*, 60(2), 245-265.
- Aminu U, & Anono AZ. (2012) An empirical analysis of the relationship between unemployment and inflation in Nigeria from 1977-2009. *Business Journal, Economics and Review*.;1(12):42-61. 16.
- Dodo; F. & Idris M. M. (2022). Impact of inflation on unemployment in Nigeria. A non-linear ADRL approach. *Global journal of management and research* (22) C2 19-28
- Ekpo, A.H., (2008). The Nigerian Economy: Is it at the crossroad? Presidential Address at the NES Annual Conference, 67-105.
- Iwayemi, A. (2020). Poverty in Nigeria: A multidimensional analysis. *Journal of Economic and Sustainable Development*, 11(9), 13-23.
- Lemchi, J. I. (2020). Unemployment in Nigeria: Causes, effects and solutions. *International Journal of Advanced Research and Publications*, 4(1), 97-103.
- McEachern, W. A. (2017). *Economics: A contemporary introduction* (11th ed.). Cengage Learning.
- Mishkin, F. S. (2011). *The Economics of Money, Banking, and Financial Markets* (10th ed.). Pearson.
- National Bureau of Statistics (NBS). (2020). Labor Force Statistics: Unemployment and Underemployment report. Retrieved from <https://nigerianstat.gov.ng/download/761>
- Okeke, V. C., & Anowor, O. F. (2019). The impact of Unemployment on Economic Growth in Nigeria. *International Journal of Economics, Commerce and Management*, 7(9), 122-132.
- Omotayo, A. M., & Oladeji, S. I. (2015). Impact of population growth on the Nigerian economy. *Journal of Economics and Sustainable Development*, 6(6), 34-40
- Oyekale, A. S., Ogunleye, E. O., & Olamide, A. O. (2021). Does energy consumption promote economic growth in Nigeria? An empirical analysis. *OPEC Energy Review*, 45(1), 63-78
- Samuelson, P. A., & Nordhaus, W. D. (2010). *Economics* (19th ed.). McGraw-Hill.
- Todaro, M. P., & Smith, S. C. (2011). *Economic development* (11th ed.). Addison-Wesley
- United Nations (UN). (2019). Glossary of demographic terms. Retrieved from <https://population.un.org/glossary/>