Research Article

DETERMINANTS OF THE RATE OF UNEMPLOYMENT IN NIGERIA

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ARTICLE INFO	ABSTRACT
	This study examines the determinants of the rate of unemployment in Nigeria from 1980 to 2016. The model of this study is made up of one dependent variable (Unemployment rate) and five explanatory variables (Government Expenditure, Inflation Rate, First Lag of Unemployment, Population and Real Gross Domestic Product). The study employed the Ordinary Least Squares (OLS) method to estimate the model after using the Augmented Dickey-Fuller to test for unit root. The result shows that Government Expenditure, Inflation Rate and Population are statistically significant in explaining changes in unemployment in Nigeria for the period under review. However, first lag of unemployment and Real Gross Domestic Product are found not to be statistically significant in explaining unemployment in Nigeria. The study recommends allocating higher amount of money to capital expenditure in the budget, and monitoring awarded projects to see that they are completed. The study also recommends that corrupt officials who embezzle money be punished accordingly and that technologies which require human labour to operate be introduced.

INTRODUCTION

Every economy strives to achieve three macroeconomic goals- price stabilization, full employment, and high rate of output growth. These economic aggregates are interconnected, so that a change in one of them will lead to a change in others. For example, during recession output falls, unemployment rises and prices fall. As a result, discrete use of policy tools is important so as to avoid unintended outcomes. Unemployment is a major macroeconomic problem facing most developing countries. It is a situation in which people willing and capable of working are unable to find suitable jobs to earn a living. Nigeria as a country has a long history of high unemployment. This has affected the country negatively in many ways. It has led to continuous fall in the growth rate of output and income, leading to low standard of living.

According to Alanana (2003), unemployment is potentially dangerous as it sends disturbing signal to all segments of the Nigerian society. Presently Nigeria is in a recession and has unemployment rate of 33%. This is very disturbing because there are thousands of university graduates who have nothing doing to survive. This has increased the rate of robbery, drug trafficking and kidnapping in the country. It has also increased the migration of human capital to developed countries, thereby worsening the development problem facing the country.

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Having established that unemployment is an evil in Nigeria which must be taken care of for growth to take place, it is important to look at the determinants of unemployment in Nigeria. It is when the factors affecting unemployment have been identified, that a move can be made towards using the necessary policy tools to influence those factors in the right direction, so as to reduce unemployment. Thus, the aim of this paper is to identify the determinants of unemployment in Nigeria.

LITERATURE REVIEW

To understand the determinants of unemployment, a short review of authors will be carried out. Onwioduokit (2006) analyzed the relationship between unemployment and inflation in Nigeria. He found a negative relationship between unemployment and inflation with the coefficient of -0.412. This shows that inflation is one of the factors that affec unemployment. Ashipala and Eita (2010) examined the determinants of unemployment in Namibia from 1971 to 2007. They applied the Engel-Granger two-step econometric approach and found that the results were consistent with the Okun's law and the Harrod-Domar. This shows that changes in Gross Domestic Product (GDP) influence changes in unemployment. Some studies have examined the causes of unemployment. Bakare (2011) found that demand for labour, supply of labour, population, inflation, capacity utilization, gross capital formation, wage rate, and private domestic investment are major determinants of urban unemployment in Nigeria from 1978 to 2008.

Maqbool *et al.* (2013) also found something similar. They showed that GDP, population, inflation and foreign direct investment are significant determinants of unemployment in Pakistan in both the short-run and long-run analysis from 1976 to 2012. Studies have also showed that the level of education attained by people can also influence how long unemployment lasts. People who have attained great heights in education tend to get re-employed when they lose their jobs. Nickell (1979) used UK data to show that schooling up to 12 years reduces the duration of unemployment by 4%, while education at ordinary levels and above reduces the duration by 12%. Oniore *et al.* (2015) examined the determinants of unemployment in Nigeria using time series data and error correction mechanism. Their study showed that GDP growth rate, inflation rate, degree of openness, and private domestic investment were statistically significant in explaining changes in unemployment in the short-run. Their co-integration test showed that a long-run relationship exists among the variables and the negatively signed ECM and significant showed high speed of adjustment from short-run fluctuations to long-run equilibrium.

Echebiri (2005) studied the determinants of unemployment in Umuahia, Nigeria. He noted that Umuahia has a high rate of population growth so that most of the labour force are unemployed. He collected a sample of 220 youths from areas with changing residential configuration and found that youth unemployment in the town shared common characteristics with that found in many developing countries. He also found that education and job preference have a direct relationship with unemployment. Subhan (2008) from his study on the impact of price stability on economic growth and unemployment in Pakistan using time series data from 1980 to 2000 and OLS method, found that price stability had a negative effect on economic growth and unemployment. The study also found that a negative relationship exists between economic growth and unemployment. It was also found that foreign direct investment, large scale of manufacturing and exports had negative effect on unemployment, and that a positive relationship exist between imports and unemployment.

There are also studies on the effect of government expenditure on unemployment. Nwosa (2014) examined the impact of government purchases on unemployment and poverty rates in Nigeria from 1981 to 2011. By using the OLS method, he found that government expenditure has positive and significant impact on unemployment rate while it has a negative and significant impact on poverty rate. [11] Auerbach and Gorodnichenko (2012) also studied the relationship between government expenditure and unemployment in Nigeria. By applying error correction modeling technique, they found a significant relationship which means an increase in government purchases leads to a fall in unemployment rate.

MATERIALS AND METHODS

This study used the OLS method and the Augmented Dickey-Fuller test for unit root. The framework of this study is based on the Keynesian theory of unemployment. According to the theory, the government should intervene with necessary monetary and fiscal policy tools to combat unemployment. This study models Unemployment Rate (UNP) as a function of Government Expenditure (GEXP), Inflation Rate (INF), first lag of Unemployment Rate (UNP$_{t-1}$), Population (POP), and Real Gross Domestic Product (RGDP). The model is specified below as

$$UNP = B_0 + B_1GEXP + B_2INF + B_3UNP_{t-1} + B_4POP + B_5RGDP + u_i \quad (1)$$

To be able to interpret the coefficients of regression in terms of elasticity, the natural log of all the variables is taken. As a result, the working model is given below as

$$LUNP = B_0 + B_1LGEXP + B_2LINF + B_3LUNP_{t-1} + B_4LPOP + B_5LRGDP + u_i \quad (2)$$

A priori expectations

This shows whether the explanatory variables conform to postulates of economic theory. According to economic theory, government expenditure, inflation and real gross domestic product have a negative relationship with unemployment rate. Population has a positive relationship with unemployment rate. The first lag of unemployment rate can have either a positive or negative relationship with unemployment rate. If they turn out to be otherwise they must be rejected unless there are strong reasons to accept them.

Data and sources

The data are secondary time series data from 1980 to 2016 obtained from the International Monetary Fund (IMF) World Outlook Database and the Central Bank of Nigeria (CBN) Statistical Bulletin.

RESULTS AND DISCUSSION

The result of unit root test shows that inflation is stationary at level, while other variables including the dependent variable are stationary at first difference. As a result, the conditions for co-integration are not met. The estimated result is shown below.

Table 1. Regression results

Variables	Coefficients	T-statistics	P-value
C	0.051027	0.192418	0.8487
D(LGEXP)	0.480563	4.270381	0.0002
LINF	-0.387259	-2.984342	0.0055
D(LUNP$_{t-1}$)	-0.120063	-0.608599	0.5472
D(LPOP)	1.163256	3.977438	0.0004
D(LRGDP)	0.117308	0.738662	0.4657
R^2: 0.924385			
Adjusted R: 0.912189			
Durbin-Watson: 1.9523			
F-Statistic: 75.79422			
P-value (F): 0.00000			

Source: Author

The R^2 shows that the explanatory variables explain 92.44% of the variations in unemployment rate in Nigeria for the period under study. A percent increase in government expenditure will cause unemployment rate to increase by 0.480563%. This positive relationship is significant given the probability value of 0.0002. However, the sign does not confirm with the postulate of economic theory. It should be negatively signed since increase in government expenditure is supposed to reduce unemployment rate. This is possible since little amount of money is budgeted annually to capital expenditure which is supposed to create jobs.

The situation is worsened by government officials who divert the allocated money to their private accounts. Given the situation, it is possible that increase in government expenditure will only exacerbate the unemployment situation the country is facing. Inflation has a significant negative relationship with unemployment rate in Nigeria. This is in line with the Phillips hypothesis that an inverse relationship exists between inflation and unemployment. The result shows that a 1% increase in inflation rate will reduce unemployment rate by 0.387259%. The first lag of unemployment rate has a negative relationship with unemployment rate. This relationship is not significant for the period under study. Population on the hand has a significant positive relationship with unemployment rate in Nigeria.

The coefficient shows that a one percent increase in population will cause unemployment rate to increase by 1.163256%. Real gross domestic production has a positive relationship with unemployment rate in Nigeria for the period under study. The coefficient shows that a 1% increase in RGDP will cause unemployment rate to increase by 0.117308%. The coefficient is not statistically significant and it did not confirm with the a priori expectation. According to economic theory, a fall in output is associated with an increase in unemployment rate. This is possible in Nigeria since modern technologies are used to replace human labour. For example, banks are introducing machines that can accept deposits from people. In this case the services of workers who engage in bulk counting are no longer needed. As a result, high output can be associated with high rate of unemployment. This also exist in the industrial sector. The estimated model has a high explanatory power given the high values of the R^2 and adjusted R^2. The R^2 shows that the explanatory variables explain 92.44% of the variations in unemployment. The probability of the F-statistic also confirms the overall significance of the model. The Durbin-Watson statistic of 1.9523 (approximately 2) shows there is no serial correlation of the first order.

Conclusion

Given the findings of this study, it is recommended that a reasonable amount of money be budgeted to capital expenditure annually since it helps to create employment. Awarded capital projects should be monitored effectively to ensure that they are completed, and officials that embezzle funds should be punished accordingly. Innovation should be introduced in a wise way so that it will not worsen the unemployment situation. Technologies that need human labour to operate should be introduced, so that output will increase and unemployment reduced.

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