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Unemployment and Economic Growth in Nigeria: An Empirical Analysis 1985 to 2015

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Abstract: *Unemployment is looked upon as a grave problem faced by most developed and developing countries and resulting socio-economic problems. The main purpose of this paper is to examine the influence of unemployment on economic growth in Nigeria. The study employed panel data, which includes a combination of time series and horizontal section data. In the study, the impact of unemployment on economic growth in Nigeria was examined for the period 1985-2015. The data set taken was taken from Nigerian Statistical Bureau and consists of economic growth and unemployment between 1985-2015. The ordinary least square (OLS) method was used to test the influence of unemployment on economic growth in Nigeria. The results indicated that the coefficient of economic growth represented by GDP was found negative and significant at the 5% level, implying that unemployment will fall economic growth. The study therefore, concludes that unemployment has significant impact on Nigeria's economic growth. The study recommends among others that, the government should ensure there is job creation in the economy especially in the real sector, i.e. agriculture and manufacturing sector to raise employment opportunities from these sectors, reduce unemployment rate and trigger economic growth in the country.*

Key words: *Economic growth, Nigeria, Unemployment.*

INTRODUCTION

Reducing unemployment and achieving a high rate of economic growth are the most important priorities of developed and developing country economies. In terms of the success of a country's economy, economic growth and employment are two extremely important macroeconomic variables and are indispensable elements of the economic policies of many countries, especially developed countries.

Unemployment is a macroeconomic variable that is important to economic growth and which is of particular concern to countries. Unemployment represents the level of employment in which people have the desire and ability to work and want to pay but who cannot find jobs. Unemployment is the existence of a workforce in and out of the working force who is willing to work from the existing wage and cannot find a job. Categories of unemployment can be defined as voluntary unemployment, involuntary unemployment, frictional unemployment, cyclical unemployment, seasonal unemployment, technological unemployment, structural unemployment and hidden unemployment. The too little employment state of affairs has several wide-ranging socio-economic, political and moral consequences. Ogwumike et al. (2003) show that persons in compensated employment and those with inadequate skills are most vulnerable when a macroeconomic distress occurs in the labour market. Unemployment arises from the economic structure of a country, and it arises from different reasons depending on whether it is a developed or underdeveloped country. The reason for unemployment in underdeveloped countries is capital inadequacy, while in developed countries technological progress is the reason (Yilmaz, 2005).

There is plenty of study that has quantitatively analyzed unemployment and economic growth in Nigeria. For instance, Okoroafor & Nwaeze (2013) in their research work on poverty and economic growth in Nigeria between 1990 and 2011 have posited that there is a zero correlation between poverty, discomfort index and economic growth in Nigeria. Akeju & Olanipekun (2014) study on unemployment and economic growth in Nigeria with the Okun's law shows that a negative relationship exists between unemployment and economic growth. Poverty and unemployment have continued to be core problems facing the economy of Nigeria and other African countries. It has led to human denial of choice and opportunities for living tolerable life (United Nations, 1997) amid plenty. More so, the number of unemployed youth in Nigeria keeps increasing while the gap between the rich and the poor keep widening.

On this note, this study re-investigates the link between unemployment and economic growth in Nigeria between the periods of 1985 to 2015. Furthermore, the study investigates the nexus of unemployment and economic growth in Nigeria by finding a long run and causal relationship between unemployment and economic growth. This paper is arranged into five parts. The first section presents the introductory aspect of the study while empirical review of past studies was presented in the second section. The third section provided the methodology; fourth section presents the results and discussion whereas the concluding part is shown in the last section

Statement of the Problem

In the developing countries, it is attributed that there is the shortage of economic growth, which is not commensurate with changes in labour market. Since the early 1980s, Nigeria's economic growth in spite of several years of economic reforms has remained sluggish averaging 2.8% in the decade of 1990s. This poor growth performance certainly causes developmental challenges including macroeconomic volatility that impact negatively on low per capita GDP; investment; and high level of unemployment (NEEDS, 2004; NEEDS2, 2007).

It is a widely accepted view that the unemployment is linked to the growth rate of GDP. If employment rises it will have a positive impact on economic growth and the unemployment rate will fall. Many studies confirm the existence of a trade-off between unemployment and economic growth as prevailing in an economy. The main purpose of this paper therefore is to examine the influence of unemployment on economic growth in Nigeria.

LITERATURE REVIEW AND HYPOTHESIS

Theoretical Foundation

This study is anchored on the Keynesian theory of unemployment and Endogenous growth theory.

Keynesian theory of unemployment

Cyclical, demand deficient unemployment or Keynesian unemployment comes about when there is insufficient aggregate demand in the economy. It received its name because it differs with the business cycles, although it can also be enduring as during the great depression of the 1930s. Cyclical unemployment augments during economic down turns and reduces when the economy picks up. Keynes opines that this type of unemployment happens as a result of insufficient effective demand. When demand for most goods and services falls, less production is necessary; wages do not fall to meet the equilibrium level and mass unemployment results. The Keynesian framework, as evaluated by Thirwill (1979), Grill and Zanalda (1995) and Hussain and Nadol (1997), propose that increase in capital stock, employment and technological change are principally endogenous. For that reason, the growth of employment is demand determined and that the fundamental determinants of long term growth of output also have an impact on the growth of employment. Keynes (1936), posit that employment relies upon effective demand which conveys increased output, output engenders income and income generates employment. Keynes (1936) reflects on employment as a function of income. Effective demand is powered by aggregate demand and supply functions. The aggregate supply function depends on the technical or physical state which in the short run does not alter, thus remaining stable. Keynes paid attention on aggregate demand function to deal with depression and unemployment. Consequently, employment depends on aggregate demand which in turn is influenced by consumption and investment demand in that order. Keynes (1936) opines that an increase in employment can take place by increasing consumption and/or investment. Consumption relies on income and when income increases, savings increases. Consumption can be increased by growing the predisposition to consume so as to amplify income and employment. Thus, if the predisposition to consume is constant, employment will rely on investment.

Endogenous growth theory

Endogenous growth theory upholds that economic growth is chiefly the outcome of endogenous and not external forces (Romer, 1994). As well, it upholds that investment in innovation; knowledge and human capital are significant contributors to economic growth. In addition, endogenous growth theory focuses on positive externalities and spillover impacts of a knowledge-based economy which show the way to economic development. First and foremost this theory upholds that policy measures determines long run growth rate of an economy.

The studies of Arrow (1962), Uzawa (1965), and Sidrauski (1967) fashioned the foundation for this investigation. Romer (1986), Lucas (1988), and Rebelo (1991) left out technological change – in its place, growth in these models is as a consequence of unstipulated investment in human capital which had spread out impact on the economy and shrinks the diminishing return to capital accumulation (Rebelo, 1991; Carroll, 2011

The long-run rate of growth in neo-classical growth models is exogenously determined either by the savings rate (the Harrod–Domar model) or the rate of technical progress (Solow model). Though, the savings rate and rate of technological progress stay unsolved. The endogenous growth theory attempts to surmount this shortage by building macroeconomic models further than microeconomic foundations. Households are acknowledged to make the most of utility subject to budget constraints while firms make the most of profits. Key significance is normally specified to the invention of new technologies and human capital. The growth engine can be as simple as a stable return to scale production function or more intricate systems with spillover effects, increasing numbers of goods, rising qualities, etc.

Previous Empirical Studies on Unemployment and Economic Growth

Adelowokan, Maku, Babasanya and Adesoye (2019) investigate the links between unemployment, poverty and economic growth in Nigeria between the periods, 1985-2015, by means of the Augment Dickey Fuller test for unit root test, Johansen cointegration for cointegration, Ganger causality for causality test and Error Correction Model to establish the short-run links between the variables. The unit root test result demonstrates that the variables trend with time indicating their failure of integration at level. Still, they were found to be stationary at first difference. The causality result portrayed that there is no causal relationship between unemployment, poverty and growth in Nigeria. Similarly, the cointegration results indicated that there is no long-run relationship between unemployment, poverty and economic growth in Nigeria. The short-run parameter estimates designated that unemployment has a negative and significant relationship with growth. Conversely, the coefficient of the interaction between unemployment and poverty is positive and significant at the conventional level.

Soylu, Çakmak and Okur, (2018) examined the relation between economic growth and unemployment in Eastern European Countries for the period of 1992-2014 within panel data framework. The study employed the Okun's Law, and applied Panel Unit Root, Pooled Panel OLS and Panel Johansen Co-integration tests respectively. The results confirm that the economic growth and unemployment series are stationary at first level, unemployment affected positively by economic growth. This implies that 1% rise in GDP will fall the unemployment rate by 0.08% because of Okun's coefficient for Eastern European Countries and there is a co-integration amid these significant macroeconomic variables.

Imoisi, Amba and Okon (2017) explored the impact of unemployment on economic growth in Nigeria using the OLS multiple regression analytical method in analyzing annual time series secondary data obtained from the Central Bank of Nigeria, statistical abstract from National Bureau of Statistics, as well as the World Development Indicators from the period 1980 – 2016. This study discovered that unemployment, population and labour force have significant impact on Nigeria's economic growth, whereas minimum wage does not have a significant impact on the country's economic growth. The study recommends the following: the government should ensure there is job creation in the economy especially in the real sector; private sector employers should be given subsidies so as to encourage them to employ more people; and the labour market should be deregulated.

Khrais and Al-Wad (2016) considered the relationship between GDP growth and unemployment in MENA countries for the periods 1990-2016. The simple linear regression was used for the analyses and the findings indicated that the impact values measured by GDP on the Unemployment in all the = 0.05) suggesting no significant α countries being involved. The significance level of (F) was greater than (impact was observed for gross GDP (annual) representing all the countries being involved in the study on unemployment in all the countries calculated from labours numbers in these countries. The impact value is well thought-out to be very small (- 0.009). This value advocates that there may be other factor affecting unemployment other than GDP.

Akeju and Olanipekun (2014) tested the validity of Okun's law in Nigeria, in order to examine the relationship between unemployment rate and economic growth, Error Correction Model (ECM) and Johasen cointegration test were engaged to determine both the short run and long run associations among the variables used in the study. The result proved that there is both the short and the long run association between unemployment rate and output growth in Nigeria. Therefore, there is the necessity to integrate fiscal measures and increase the attraction of foreign direct investment (FDI) to trim down the high rate of unemployment in the country.

METHODOLOGY

The study employed panel data. The panel data consists of a combination of time series and horizontal section data. The panel data is derived from a horizontal cross-sectional datum that is followed during the sampling period. In the study, the influence of unemployment on economic growth and in Nigeria was examined for the period 1985-2015. The logarithms of the data were taken and unemployment throughout the study was expressed as UEMP and economic growth Lngdp. The data set taken from World Bank and consists of growth and unemployment rates of the country between 1985-2015 years. The ordinary least square (OLS) method was used to test the influence of unemployment on economic growth in Nigeria.

Model specification

The model is specified as follows:

Lngdp = f (UEMP)....equ (i)

$Lngdp = \beta o + \beta 1X1 + \mu t$... (ii)

$Lngdp = \beta o + \beta\ UEMP + \mu$...equ (iii)

Where:

Lngdp – Economic Growth

UEMP – Unemployment

EMPIRICAL RESULTS AND DISCUSSION

In this study, Pooled OLS analysis method was used and the findings are shown in table 1. One of the assumptions based on the estimation results that the pooled least squares model is presented is that there is no difference between horizontal (N) data matrices. the model predicts a common fixed term for all horizontal sections (Asteriou, 2006). The pooled OLS regression analysis method provides more information than the one-time cross sectional analyses because it uses the average value of the time-series of the variables. The results are as follows:

The regression is between independent and dependent variables: The independent variable is unemployment, while the dependent variable is economic growth. The test of hypotheses is given below:

Test of Hypothesis

Model 1

Dependent variable: Economic Growth

Method: Ordinary Least Square

Sample: 1985-2015.

Table 1: Unemployment and Economic Growth

Variables	Coefficient	Std Error	T-Statistic	VIF
CONSTANT	0.716	0.47956	22.515	
LOG (UEMP)	0.631	0.76	1.410	1.225

Source: Regression Result (2020)

R2 (Coefficient of determination) = 0.7467

R2 (Adjusted coefficient of determination) = 0.7452

Durbin Watson =2.02277

F – Value = 506.939

The results of the test were statistically significant at the level of 5%. The finding of R-square at 0.7467 shows us that about 75 percent change in economic growth is explained by unemployment. As a result of the test, the coefficient of economic growth represented by GDP was found negative and significant at the 5% level, which means that 1% rise in unemployment will fall economic growth rate by 0.25%.

DISCUSSION OF FINDINGS

The concepts of unemployment and growth are important both in terms of economic and social policy makers. Economic growth represents the most essential indicator of achieving macroeconomic targets for all developed and developing countries. The concept of unemployment is a very important indicator in terms of social indicators. These variables are important in that they have the power to influence economic and social life. The problem of unemployment continues to exist both in developed and developing countries as a global problem. The solution of the long-term unemployment problem, which is an economic and social reflection, is possible by determining the national employment policies that are suitable, considering the information society requirements and technological developments and changes. In a country where economic growth is increasing, it is expected that the labor force used to carry out this production will increase and as a result the unemployment rates will decrease (Eser, 2014). Okun's Law discloses that there is an inverse relationship between unemployment rates and economic growth. In the literature, it is generally concluded that the results are consistent with the Okun Law, and that only the coefficient can differ from country to country.

From this point of view, the results of the empirical test in the study are in accord with the literature. Based on the long-term movement of unemployment and growth rate data, it can be assumed that an increase in growth can be seen by locating unemployment-reducing measures. Based on the broad objective of this study which is to investigate the link between unemployment and economic growth in Nigeria the study found that there is a long-run association between unemployment and economic growth in Nigeria in the period covered, implying that growth in the country will happen if people are employed. The economy will expand if the number of unemployed people decreases. Instructively, however, the study finds that unemployment-induced growth; it is a significant determinant of growth in the country in the short run, this is in line with Imoisi (2017) who discovered that unemployment, population and labour force have significant impact on Nigeria's economic growth, while unemployment shown to be a significant determinant of growth in the short run, it is not so in the long run. This can be seen in the related study carried out by Aiyedogbon & Ohwofasa (2012) on poverty and youth unemployment in Nigeria within the period of 1987 and 2011. The reality that the variable is significant means that the impact was felt in the system.

CONCLUSION

The main target of this paper is to analyze the impact of unemployment on economic growth. In the study, unemployment and economic growth rates of Nigeria from 1985 to 2015 were analyzed by panel data method. In this paper, panel unit root test was applied and it is understood that series are not stationary at level. For this reason the first differences of the series have been taken. After this phase, panel OLS was tested and it was determined that 1% rise in GDP will fall the unemployment rate by 0.08%. Finally, our data sets were tested by using co-integration test and found that there is a co-integration between unemployment and economic growth. The study therefore, concludes that unemployment has significant impact on Nigeria's economic growth.

RECOMMENDATION

Based on the conclusion of the study, the following recommendations were proffered:

1. The government should ensure there is job creation in the economy especially in the real sector, i.e. agriculture and manufacturing sector to raise employment opportunities from these sectors, reduce unemployment rate and trigger economic growth in the country.

2. Private sector employers should be given subsidies by government so as to encourage them to employ more people.

3. The labour market should be deregulated – labour market regulations are numerous. The minimum wage policy is one of the most obvious. Economic theories envisage that the establishment of an effective minimum wage policy will likely reduce employment; on the contrary, the rejection of a minimum wage policy, likely increases it. The threat with the establishment of a minimum wage policy is that it pushes up wages nly for the lowly paid but for all groups as workers bargain to restore relativities

4. The Nigerian government should work acidulously to reduce the unemployment rate expect to increase her economic growth targets.

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