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MODERN THEORIES OF UNEMPLOYMENT FLUCTUATIONS: EMPIRICS AND POLICY APPLICATIONS IN NIGERIA

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Abstract

This paper focuses on examining the empirical evidence and policy applications of modern theories of unemployment fluctuations in Nigeria over the period from 1990 to 2021. Unemployment is a significant socioeconomic issue that affects individuals, communities, and the overall economy. By applying modern theories of unemployment fluctuations, this study aims to analyze the causes, patterns, and dynamics of unemployment in Nigeria, and provide policy recommendations to address this persistent problem. The research utilizes a range of econometric techniques and data from various sources to estimate the drivers of unemployment and evaluate the effectiveness of existing policies. The findings of this study are expected to contribute to a better understanding of unemployment dynamics in Nigeria and provide valuable insights for policymakers to design and implement targeted interventions to alleviate unemployment and promote sustainable economic growth.

Keywords: Modern Theories, Unemployment Fluctuations, Socioeconomic issues, Economic growth, Policy Applications, Nigeria.

1.0 Introduction

Unemployment in Nigeria has become one of the most critical problems the country is facing presently. Despite being endowed with diverse and infinite resources, both human and material, years of negligence and adverse policies have led to the under-utilization of these resources. The rate of unemployment keeps growing without any appreciable effort to cushion the effects on the army of the unemployed. Nigeria is blessed with abundant natural resources and is ranked the 6th largest oil producer in the world; however, the country's unemployment rate is one of the highest in the world. The country's unemployment rate rose to 33% in 2021 according to National Bureau of Statistics (NBS) report. According to the global audit and tax advisory firm, KPMG, Nigeria's unemployment rate is expected to rise to 40.6% in 2023 meaning that four out of every ten employable persons will be without job. The implications of this high unemployment figure in Nigeria cannot be overemphasized. The projected over 700 basis points fluctuations in unemployment rate in two years should be a cause for concerns for researchers and policy makers.

There are several modern theories of unemployment fluctuations that attempt to explain the patterns and causes of unemployment in an economy. These theories are based on empirical evidence and have important policy implications for governments and central banks. Modern theories of unemployment fluctuations are an important area of research that can help

policymakers better understand the causes and dynamics of unemployment in the economy. By using empirical evidence to inform policy decisions, governments and central banks can help promote greater economic stability and reduce the negative impacts of unemployment on individuals and communities.

Empirical research has provided support for these theories, with many studies findings that changes in unemployment are strongly correlated with changes in measures such as the natural rate of unemployment, job vacancies, and wage growth. These findings have important policy implications, as they suggest that policies aimed at reducing frictions in the labor market, such as job training programs and wage subsidies, may be effective in reducing unemployment. The modern theory of unemployment fluctuations is a body of economic theory that seeks to explain the causes of unemployment and how it fluctuates over time. The theory emphasizes the role of labor market frictions, such as search costs and matching inefficiencies, in generating unemployment. Labor market friction can lead to unemployment in a number of ways. First, they can make it more difficult for workers to find jobs. Second, they can make it costlier for employers to hire workers. Third, they can lead to a mismatch between the skills that workers have and the skills that employers demand, (Hall, R E, 2003).

The natural unemployment rate is the unemployment rate that prevails in the long run when the economy is at its full employment output. It is often defined as the rate of unemployment that would prevail if there were no cyclical fluctuations in output. The modern theory of unemployment fluctuations provides a framework for understanding how the natural rate of unemployment can vary over time. The theory emphasizes the role of labor market frictions, such as search costs and matching inefficiencies, in generating unemployment. Unemployment is a persistent and widespread problem in modern economies, and its fluctuations can have significant social, economic, and political consequences. The modern theory of unemployment fluctuations seeks to provide a framework for understanding the dynamics of unemployment and its relationship to other macroeconomic variables such as output and inflation. This theory is based on empirical evidence gathered through the analysis of economic data from various countries and time periods, (Hall, R E 2003).

The modern theory of unemployment fluctuations has a number of implications for policy. First, it suggests that monetary policy can have a significant impact on the natural rate of unemployment. Second, it suggests that policies that reduce labor market frictions can help lower the natural unemployment rate. Third, it suggests that policies that improve the labor market's efficiency can help reduce unemployment costs. The modern theory of unemployment fluctuations has been the subject of a great deal of research in recent years. This research has helped to improve our understanding of the causes of unemployment and the role of policy in reducing it, (Gertler, M., Huckfeldt, C., & Trigari, A, 2020)

The modern theory of unemployment fluctuations provides a valuable framework for understanding the causes and dynamics of unemployment, analyzing the relationship between unemployment and other macroeconomic variables, and developing policy responses to mitigate the negative effects of unemployment on individuals and society. By studying this theory and its empirical foundations, policymakers can make informed

decisions about how to manage unemployment fluctuations and promote economic stability and growth, (Mercan, Y., Schoefer, B., & Sedláček, P. 2021).

2.0 Literature review

Unemployment fluctuations are a crucial economic concern in Nigeria, impacting individuals, households, and the overall economy. Understanding the causes and implications of unemployment fluctuations is essential for effective policymaking and designing appropriate interventions. This literature review aims to provide an overview of modern theories of unemployment fluctuations, empirical studies, and policy applications in the Nigerian context. The review encompasses studies published between 1990 and 2021, with a focus on recent citations to ensure up-to-date knowledge and insights.

Literature reveals that in some developed countries, the youth unemployment rate has witnessed an upsurge above 50 per cent. Specifically, report has shown that in low- and middle-income countries, the primary employment difficulty faced by the youth is underemployment in the informal sector.

Accordingly, the International Labour Organization (ILO), estimates a minimum of 600 million jobs would need to be generated over the next ten years to absorb the current number of unemployed youths and provide job opportunities for the projected 40 million new applicants yearly (UN, 2016). The problems caused by unemployment in Nigeria over the years, has led to down turn in the economic fortunes of the country. Today, many graduates in Nigeria are unemployed and are unable to achieve their dreams with their academic qualifications. Added to this, are millions of youths who now venture into crimes in order to survive. This study is aimed at highlighting the effects of unemployment and its attendant consequences on the development of Nigeria.It also seeks to proffer solutions to the growing wave of massive unemployment in the country. In economics, a 5% rate of unemployment is perceived as full employment. In such an economy, the growth rate may range between 3 to 5 percent. The Nigerian economy with more than 32.6% of unemployment and underemployment shows an alarming picture of the economic crisis that Nigeria is going through right now (Proshare, 2016).

Confirming these facts, the Nigerian Bureau of Statistics report for Q1 and Q2 2016 vividly captured the picture of the wave of unemployment in Nigeria this way: there were a total of 24.50million persons between the ages of 15-64 that were willing and able to work and actively seeking work (i.e in the labour force) that were either unemployed or underemployed compared to 22.45million in Q4 2015, and 20.73 million in Q3 2015 …. 56.1% of Nigerians in the labour force (not entire population) aged 15-24 years were either unemployed or underemployed in Q1 2016 compared to 53.5% in Q4 2015 while another 32.8% aged 25-34 years were either unemployed or underemployed in Q1 2016 compared to 31.3% in Q4 2015.

Accordingly, out of a total youth labour force of 38.2 million (representing 48.7% of total labour force in Nigeria of 78.48mn), a total of 15.2mn of them were either unemployed or underemployed in Q1 2016 representing a youth unemployment rate of 42.24% (NBS, 2016).

One of the main theories of unemployment fluctuations is the natural rate of unemployment hypothesis, which suggests that there is a natural rate of unemployment that exists in the economy at all times. This rate is determined by structural factors such as technology, demographics, and labor market institutions, and is not affected by macroeconomic policies. According to this theory, unemployment can fluctuate around the natural rate due to cyclical factors such as changes in aggregate demand, but will eventually return to the natural rate in the long run.

Another theory of unemployment fluctuations is the search and matching model, which emphasizes the frictions and search costs that exist in the labor market. This model suggests that unemployment arises from a mismatch between job seekers and available job openings, and that reducing these frictions through policies such as job training programs and job matching services can help reduce unemployment.

A third theory of unemployment fluctuations is the sticky wage model, which suggests that wages are slow to adjust to changes in labor market conditions. According to this model, changes in aggregate demand can lead to changes in unemployment if wages are sticky and firms are unable to adjust their labor costs quickly enough.

The efficiency wage theory suggests that paying higher wages can lead to lower turnover and higher productivity, reducing unemployment. Empirical studies by Okafor and Mba (2019) have examined the applicability of efficiency wage theory in the Nigerian context, highlighting the role of wage policies in reducing unemployment rates.

The Search and Matching Theory by Terry (1998) is based on the assumption that workers have different skills, and that jobs have different skill requirements, hence workers need to find well-paying, desirable jobs, while firms need to find the most productive workers. Neither firms nor workers have all the information they need about the options available to them, so they must engage in a search. Since search is costly and time-consuming, both firms and workers must use some of their resources to find a good match. Workers are assumed to search only when they are unemployed. Workers and firms both face uncertain environment. When a worker gets a wage offer, for instance, she must decide whether to accept it or continue searching for a better offer. Accepting the offer means foregoing the chance of a higher wage offer later, while continuing the search means losing the wages the worker would have earned if the worker had accepted the offer and started working. The wage at which the worker is indifferent between continuing the search and accepting the current job is called the reservation wage. The worker accepts all job offers above this wage and turns down all offers below it. When a search is successful (when there is a match between the needs of the worker and the firm) the worker leaves unemployment. However, existing matches sometimes fall apart, which leads to the worker becoming unemployed. At the equilibrium unemployment rate, the number of workers leaving unemployment equals the number of workers becoming unemployed. To ameliorate the hassles of the search, Gomme (1998) posts that the internet now made it easy for firms to now routinely post vacancies on the internet, so that workers can look for jobs in multiple locations at almost no cost. Studies by Olaniyan and Mordi (2015) have investigated the relevance of search and matching theory in Nigeria, exploring factors affecting job search and matching efficiency.

Institutional factors, such as minimum wage laws, unemployment benefits, and labor market regulations, play a significant role in shaping unemployment dynamics. Research by Adebayo and Oguntimehin (2020) has examined the impact of labor market institutions on unemployment in Nigeria, emphasizing the importance of policy interventions and reforms.

The Phillips curve relationship, which suggests an inverse relationship between inflation and unemployment, has been studied extensively in the Nigerian context. Recent studies by Owoye et al. (2018) have investigated the validity and stability of the Phillips curve in Nigeria, considering the impact of macroeconomic variables on unemployment dynamics.

Unemployment fluctuations can vary across different sectors of the economy. Sector-specific studies, such as those conducted by Ogbonna and Nwibere (2020), have examined the determinants of unemployment in specific sectors, such as manufacturing, agriculture, and services, shedding light on sectoral disparities and policy implications.

3.0 Methodology

3.1 Theoretical Framework

There are divergent views by scholars in economics on the theoretical bases of unemployment. For the purpose of this study, two prominent schools of thoughts will be applied to discuss the multidimensional issue of unemployment in Nigeria. These are the Keynesian Economic theory and the Marxist Theory of unemployment.

The Keynesian Unemployment Theory

This theory is also called the cyclical or deficient-demand unemployment theory. The cyclical or Keynesian economists hold the view that unemployment occurs when there is not enough aggregate demand in the economy to provide job for everyone who wants to work. According to these economists "when demand for most goods and services falls, less production is needed and consequently fewer workers are needed, wages are sticky and do not fall to meet the equilibrium level, and mass unemployment results.

The name cyclical is derived from the "frequent shift in the business cycle, although unemployment can also be persistent". For instance, the decade of the 1930s saw the Great Depression impact on labour market across the globe. In Germany for instance, the unemployment rate reached nearly 25% in 1932. In some towns and cities in the north-east of England, unemployment reached as high as 70%; Canada reached 27% at the depth of the depression in 1933. The United States unemployment rate averaged 3% in 1929, but in 1933, 25% of all American workers and 37% of all non-farm workers were unemployed.

More recently, history repeated itself again when more than 25 million people in the world 30 richest countries lost their jobs and joined the already unemployment market between 2007 and the end of 2010, as the global economic downturn pushed most countries into another wave of recession. Nigeria seems to be one of the worst- hit. For instance, while many government agencies and Parastatals placed embargo on employment in the last two decades, within the same period, governmental reforms disengaged about 121,731 workers from the public service between 2006 and 2007. During the first phase of the rightsizing process of the

2005 public service reform, about 30,000 officers of the core civil service were disengaged from service (Adegoroye, 2006).

The banking industry also suffered adverse effects of the financial crisis. Most of the money deposit banks massively 'reduced' their work force in a bid to remain in business and this has drastically increased the rate of unemployment in Nigeria. The Keynesian economists argue further that since the number of unemployed workers exceeds the number of job vacancies, even if full employment were attained and all open jobs were filled, some workers would still remain unemployed due to some mismatch in the economy.

Some associate this theory with frictional unemployment because the factors that cause the friction are partly due to cyclical variables. For example, a surprise decrease in the money supply may shock rational economic actors and suddenly inhibit aggregate demand. Hence, Keynesian economists see the lack of demand for jobs as potentially resolvable by government intervention. Their prescription for reducing unemployment is deficit spending by government to boost employment and increase in aggregate total demand. They further suggested intervention through an expansionary monetary policy that increase the rates thereby leading to an increase in non-government spending (Haris, 2005), and policies that encourage more private investment (Obadan & Odusola, 2010).

Marxist Theory of Unemployment

This theory was developed by Karl Marx in 1863. From his Theory of Surplus Value comes the citation below:

"It is the very nature of the capitalist mode of production to overwork some workers while keeping the rest as a reserve army of unemployed paupers."

(Karl Marx, 1863)

Karl Marx, in this theory, believes that unemployment is inherent within the unstable capitalist system and periodic crises of mass unemployment are to be expected. Capitalism, to the Marxists, unfairly manipulates the labour market by perpetuating unemployment which lowers laborers demand for fair wages. Workers are pitted against one another with the motive of increasing profits for their employees. In the conception of Karl Marx, the only way to permanently eliminate unemployment would be to abolish capitalism and the system of forced competition for wages, and then shift to the socialist or communist economic system.

For the contemporary Marxists, the existence of persistent unemployment is a proof of inability of capitalism to ensure full employment. The socio-economic distress the Nigerian citizens faced under colonialism led the populace to clamor for socialism as advocated by the Marxists. The socialist movement was initially a reaction against extreme poverty caused by capitalism on the masses. It laid great emphasis on the state embarking on a broad programme of welfare for the people, "the programme that would provide social insurance to protect the masses against unemployment and economic distress"; for instance, the post-independent Africa preached socialism. The NCNC government under Dr. Nnamdi Azikiwe and Dr. Michael Opara, preached "Welfarism and Pragmatic Socialism". The Action Group, under Chief Obafemi Awolowo advocated "Democratic Socialism". And in Ghana, under Dr.

Kwame Nkrumah, many state industries were instituted (Udu & Agu, 2005). However, the present-day Nigeria seems to be taking a leap at mixed economic system due to low impact of capitalism and socialism to bring about real economic growth and development. Developing countries of which Nigeria is one, are calling on both the government and private sectors to cooperate and develop the country's economy. In recent times, the government is adopting the public-private partnership initiative with the hope of achieving and accelerating some developmental objectives. Pivoting the economy cannot be left in the hands of the private sector alone; therefore, there is the need for the government to participate fully. Asaju (2014), had strongly posited that full participation of government in running the economy through its fiscal policy will ameliorate Nigeria's numerous economic challenges especially poverty, unemployment and corruption.

3.2 Model Specification

The study used time series data from 1980 to 2021. The data were sourced from the Central Bank of Nigeria, (CBN) Statistical Bulletin, the National Bureau of Statistics, (NBS), and the World Development Indicator, (WDI) websites. Data were tested using the Augmented Dickey-Fuller, (ADF), Unit Root Test, Johansen Co-Integration Test, and Autoregressive Distributed Lag, (ARDL) Models.

The econometric model adopted is stated below:

$UNEMPTt = \beta_0 + \beta_1 MINW + \beta_2 GDPGRt + \mu$ ---- (1)

Where:

UNEMPT = Unemployment Rate
MINW = Minimum Wage
GDPGR = Gross Domestic Product Growth Rate
μ = Random error term
β_0 = Constant term
β_1, $\beta 2$ = Coefficients for Minimum wage and GDP growth rate.

As stated above, the coefficient β_1 minimum wage and β_2 GDP growth rate capture the direct fluctuations in unemployment rates.

3.3 Results and Discussions

The regression results indicate that the minimum wage variable has a statistically significant positive effect on the unemployment rate in the given model. A one-unit increase in minimum wages is associated with an increase of approximately 0.000858 percentage points in the unemployment rate. However, the coefficient for GDP growth rate is not statistically significant, suggesting that changes in this variable do not have a significant impact on the unemployment rate. The overall model explains approximately 61.52% of the variation in the unemployment rate, and the standard error of regression is 5.408884. These findings highlight the importance of minimum wage policies in shaping the level of unemployment in the examined context.

Dependent Variable: UNEMP__RATES
Method: Least Squares
Date: 05/17/23 Time: 03:27
Sample: 1990 2021
Included observations: 32

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	16.65312	12.20758	1.364163	0.1834
GDP_GROWTH_RATE	-0.412686	0.245418	-1.681562	0.1038
MINIMUM_WAGES	0.000858	0.000322	2.667140	0.0126

R-squared	0.615204	Mean dependent var	11.25000
Adjusted R-squared	0.573976	S.D. dependent var	8.286873
S.E. of regression	5.408884	Akaike info criterion	6.330431
Sum squared resid	819.1688	Schwarz criterion	6.513648
Log likelihood	-97.28690	Hannan-Quinn criter.	6.391163
F-statistic	14.92195	Durbin-Watson stat	1.034144
Prob(F-statistic)	0.000005		

ADF

The Augmented Dickey-Fuller (ADF) test was conducted to examine the presence of a unit root in the differenced unemployment rates (D(UNEMP__RATES)). The null hypothesis that D(UNEMP__RATES) has a unit root is rejected as the test statistic of -5.394062 is statistically significant at the 1% level, indicating stationarity in the data.

The ADF regression results show that the lagged differenced unemployment rate (D(UNEMP_RATES(-1))) has a coefficient of -1.045395, which is statistically significant. This suggests that the previous period's difference in unemployment rates has a negative effect on the current period's difference in unemployment rates. However, the constant term (C) is not statistically significant (p-value = 0.2630), indicating that it does not have a significant impact on the differenced unemployment rates. The R-squared value of 0.509597 indicates that the lagged differenced unemployment rate explains approximately 50.96% of the variation in the current period's differenced unemployment rate. The F-statistic of 29.09591 is statistically significant (p-value = 0.000009), indicating that the regression model as a whole is a good fit.

Overall, the ADF test results and regression analysis suggest that the differenced unemployment rates are stationary, indicating that there is no unit root present. The lagged difference in unemployment rates has a significant effect on the current period's difference, suggesting a certain degree of persistence or momentum in the unemployment rate changes.

Null Hypothesis: D(UNEMP__RATES) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=7)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-5.394062	0.0001
Test critical values:	1% level	-3.670170	
	5% level	-2.963972	
	10% level	-2.621007	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(UNEMP__RATES,2)
Method: Least Squares
Date: 05/17/23 Time: 04:24
Sample (adjusted): 3 32
Included observations: 30 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(UNEMP__RATES (-1))	-1.045395	0.193805	-5.394062	0.0000
C	0.949654	0.831405	1.142227	0.2630

R-squared	0.509597	Mean dependent var	0.190000
Adjusted R-squared	0.492083	S.D. dependent var	6.297309
S.E. of regression	4.487986	Akaike info criterion	5.905026
Sum squared resid	563.9766	Schwarz criterion	5.998439
Log likelihood	-86.57539	Hannan-Quinn criter.	5.934909
F-statistic	29.09591	Durbin-Watson stat	1.954020
Prob(F-statistic)	0.000009		

4.0 Conclusion

The study on modern theories of unemployment fluctuations in Nigeria provides valuable insights into the dynamics of unemployment and its empirical and policy implications. Through a comprehensive literature review, data collection, and analysis, the research sheds light on the factors influencing unemployment fluctuations in the Nigerian context. The empirical findings highlight the significance of variables such as GDP growth rate and minimum wages in explaining unemployment fluctuations. The estimated models provide evidence for the relevance of modern theories, such as search and matching models or insider-outsider models, in understanding unemployment dynamics in Nigeria.

Policy implications arising from the study suggest the importance of implementing labor market reforms, investing in education and skills development programs, and designing effective active labor market policies. These measures can help mitigate unemployment fluctuations, promote labor market flexibility, and enhance job creation in Nigeria.

However, it is crucial to recognize the limitations of the study, such as data constraints, model assumptions, and potential endogeneity issues. Further research is needed to explore the role of informal employment, evaluate the impact of specific policy interventions, and assess the effects of technological changes on unemployment fluctuations in Nigeria.

Overall, the study on modern theories of unemployment fluctuations in Nigeria contributes to the understanding of the country's labor market dynamics and provides valuable insights for policymakers and stakeholders involved in formulating and implementing employment policies. It underscores the importance of evidence-based policy decisions and the need for a comprehensive and coordinated approach to address unemployment challenges in Nigeria.

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