IMPACT OF GRADUATE UNEMPLOYMENT ON THE ECONOMIC GROWTH OF THE NIGERIAN ECONOMY (1980 – 2014)

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ABSTRACT
The term unemployment can be defined as a situation whereby those who are willing and able to work do not find job. This is mostly seen among graduates of various institutions of learning especially in underdeveloped nation like Nigeria. The study was designed to investigate the impact on unemployment on Nigeria economy (1980-2010). The research focuses on determining the causes and effects of unemployment and how the problem of unemployment in Nigeria will be reduced to a minimal level or even eradicated. It focuses on this objective: to determine the relationship between unemployment and economic growth in Nigeria (GDP). The method of analysis used in testing the hypothesis is the t-test, f-test etc. Data for the study was obtained from the Central Bank of Nigeria statistical bulletin. The major findings were that unemployment has a negative effect on the gross domestic product (GDP) of the Nigerian economy. Some suggestions and policy recommendations were made based on the findings.

1. Introduction

Unemployment arises as a result of insufficient and non-availability of jobs to correspond with the growing population, even those who are employed sometimes live with the fear of being unemployed due to job insecurity and retrenchment of workers. There is employment of factors of production if they are engaged in production. The term unemployment could be used in relation to any of the factors of production which is idle and not being utilized properly for production. However, with reference to labour, there is unemployment if it is not possible to find jobs for all those who are eligible and able to work. Labour is said to be underemployed if it is working below capacity or not fully utilized in production (R.A.I Anyawuocha 1993). Unemployment can either be voluntary or involuntary. Voluntary in the sense that one chooses not to work because he or she has means of support other than employment. Example is an idle rich man. On the other hand, involuntary unemployment

exists when persons who are eligible and willing to work at the prevailing rate of pay are unable to find work, (Anyanwa 1995). According to the central bank of Nigeria (2004), unemployment rose to 30% during 2004 statistics on employment rate.
Unemployment has been seen as a world-wide economic problem and has been categorized as one of the serious impediments to social progress. Apart from representing a huge waste of a country's manpower resources, it generates welfare loss in terms of lower output thereby leading to lower income and well being of the people (Akinboyo, 1987, and Raheem 1993). Unemployment is a very serious issue in Africa (Vandemortele, 1991, and Rama 1998), and particularly in Nigeria (Oladeyi, 1994 and Umo, 1996). The need to avert the negative effect of unemployment has made the tackling of unemployment problems to feature very prominently in the development objectives of many developing countries.

In the study of unemployment in Africa Okonkwo (2005) identified three (3) cause of unemployment, the educational system, the choice of technology which can either be labour intensive or capital intensive and inadequate attention to agriculture. The use of machines to replace work done by labour and computerization has contributed to these social problems in the sense that what for example forty (40) men can do manually a machine will only need like five (5) men. Therefore, the remaining thirty five (35) are unemployed. More so, lack of enough education and skill to have access to credit and capital.

One particular feature of unemployment in Nigeria is that it was more endemic in the early 1980's than any other period. According to Udabah (1999:62), the major factor contributing to low standard of living in underdeveloped countries in their relative inadequate or inefficient utilization of labour in comparison with advanced nations. Unemployment rate is measured by the proportion of the labour force that is unemployed divided by the total number of the labour force. The total labour force was projected at 61,249,485 in 2007 indicating an increase of 3.9%. Total employment in 2007 stood at 52,326,923 compared with 50,886,836 in 2006. This represents an annual increase of 2.8%. The labour force consists of the number of people aged 18 and over who are employed (that is, those who currently have jobs) and unemployed (those who do not have jobs but who are actively looking for work).Individuals who do not fall into either of these group such as retired people and discouraged workers are not included in the calculation of the labour force. The International Labour Organization (ILO) defines unemployment as the proportion of the labour force which was available for but did not work for at least one hour in the week preceding the survey period. National Bureau of statistics (N.B.S) Nigeria defines unemployment as the proportion of the labour force that is available for work but did not work for at least thirty nine (39) hours in the week preceding survey period. Unemployment according to Lipsey (1963:456) brings about economic waste and cause human suffering. According to Fadayomi (1992), Osinubi (2006), unemployment is as a result of the inability to develop and utilize the nation's manpower resources effectively especially in the rural sector.

The socio-economic effect of unemployment includes: fall in national output, increase in rural-urban migration, waste of human resources, high rate of dependency ratio, poverty, depression, frustration, all sorts of immoral acts and criminal behaviour e.g prostitution, armed robbery etc. The social effect of unemployment brings to light the need to proffer possible solution to salvage our nation Nigeria.

The questions this paper seeks to answer are: is there any relationship between unemployment and economic growth? Does unemployment have any significant impact on economic growth? Following from these questions, the specific objectives of the paper are to:

i. Examine the relationship between unemployment and economic growth in Nigeria.
ii. Examine the impact of unemployment on Nigeria's economic growth.

The rest of the paper is organized in the following order: literature review, the theoretical framework, the methodology, the discussion of results, and finally, the conclusion and recommendations.

2. Literature Review

For the purpose of achieving the objectives of this study, it is necessary to review some earlier work in this subject that would provide us with adequate theoretical and empirical background for assessing the relevance and contributions of this research study. This study tries to ascertain the relationship or linkage that exists between unemployment and growth making use of analytical and econometric research tools.

Unemployment in Nigeria is one of the most critical problems the country is facing now. The years of corruption, civil war, military rule and mismanagement have hindered economic growth of the country. Nigeria is endowed with diverse and infinite resources both human and material. However, years of negligence and adverse policies have led to the under utilization of these resources.

Briggs (1973) defined unemployment as the difference between the amount of labour at current wage rate and working conditions and the amount of labour not hired at these levels. However, Gbosi (1997) defined unemployment as a situation in which people who are willing to work at the prevailing wage rate are unable to find jobs. The unemployment is a number of an economically active population who are without work but available for and seeking for work, including people who have lost their jobs and those who have voluntarily left work (World Bank 1998) Oduah (1999) saw that one of the ways of economizing efforts in any enquiry is to review and build up the work done by others. Based on this fact, this chapter covers both the theoretical and empirical literature.

3. Theoretical Framework

Classical Theory of Unemployment

The view of most economists always goes with their thinking at that particular time. The two major school of economic thought were the classical and Keynesian. The classical were the school of thought that emphasized the role of money in explaining short term changes in national income.

Traditionally, this theory has been that unemployment has been looked upon in terms of aggregate. Their view was that involuntary unemployment was a short term phenomena resulting from a disc discrepancy between the price level and the wage level. Unemployment was the result of too high real wages.

At times the wage level in the classical view would be reduced and there would be no unemployment except for frictional search unemployment caused by time delay between quitting one job and starting another. This school posse that the problem of urban unemployment is traceable to the fault of workers and the various trade union powers. They believed strongly in the theory of demand and supply. Therefore it insists that urban unemployment is caused by low supply of labour of more than the capacity of the economy.

Consequently, the school argued that the demand for too high wages of worker without a corresponding increase in productivity renders product costly thereby discouraging competitiveness among local industries and foreign industries. The implication of these trends is the reduction of sales, which further leads to mass retrenchment of workers resulting to unemployment.

Keynesian Theory of Unemployment

The ideas of the British economist, John Maynard Keynes in 1930 have revolutionized thinking in several areas of macro economics including unemployment, money supply, and inflation this is seen in his publication of 1936 as the general theory of unemployment interest and money. Cyclical or Keynesian unemployment also known as demand deficient unemployment occurs when there is no aggregate demand in the economy. It gets its name because it varies with the business cycle, though can also be persistent as during the great depression of the 1930s. Cyclical unemployment rises during economic down turns and falls when the economy improves.

Keynes argues that this type of unemployment exist due to inadequate effective demand. Demand for most goods and services falls, less production is needed; wages do not fall to meet the equilibrium level and mass unemployment results.

The Keynesian framework, as examined by Thirlwal (1979), Grill and Zanalda (1995) and Hussain and Nadol (1997), postulate that increase in employment, capital stock and technological change are largely endogenous. Thus the growth of employment is demand determined and that the fundamental determinants of long term growth of output also influence the growth of employment.

In the Keynesian theory, employment depends upon effective demand which results in increased output, output creates income and income provides employment. He regards employment as a function of income. Effective demand is determined by aggregate supply and demand functions. The aggregate supply function depends on physical or technical conditions which do not change in the short run, thus it remains stable. Keynes concentrated on aggregate demand function to fight depression and unemployment. Thus employment depends on aggregate demand which in turn is determined by consumption demand and investment demand.

According to Keynes, employment can be increased by increasing consumption and or investment. Consumption depends on income C(y) and when income rises, savings rises. Consumption can be increased by raising the propensity to consume in order to increase income and employment but the psychology of the people (taste, habit etc) which are also constant in the short run. Therefore the propensity to consume is stable. Employment thus depends on investment.

Efficiency Wage Theory

This is a macro-economic approach of explaining unemployment. The rationale behind the theory is as follows; Assume that worker differ in quality, not just abilities but in the probability to shrink, in other words, some people are lazier than others and are therefore less likely to work harder. The effort is a function of costly monitoring i.e if you are being closely monitored than if you are not. An employer cares about the cost of labour (the wage rate). However, the cost is dependent upon the productivity of the workers. So, the objective is one to minimize the wage divided by productivity (wage per unit produced). To do this, there are at least two options: Firstly, you can increase productivity by increasing wages. The reason for this is that as wages increases, the cost shrinking becomes higher because if you are caught, you are fired and lose your wages and the higher the wage is the more you lose by being fired. A higher wage thus means that you work even harder since it is more important for you not to be fired. Hence, there is a connection between quality of workers and the wage rate. The higher the wage the more costly it is to be fired and the less likely is it that the

workers will shrink. Another argument using the same reason is that turn over itself is costly (firing, hiring and training) and consequently the employer would want to pay higher wages to prevent high quality workers from leaving.

This theory explains unemployment in the sense so far it has been established that is profitable for an individual factory to differ higher wages than the market equilibrium. However, the factory is not alone in making this discovery advantage of higher relative wages for the firm is going to disappear. The solution to this problem lies in the creation of a permanent group of unemployment. The high real wage level creates an excess supply of labour. The excess supply does not result in a decrease in the wage level because the firms know they need some unemployment to provide on incentives for the employed workers not to shrink. The incentive is produced by making the cost of being unemployed high which is what a high unemployment rate reflects. Here, wage performs two functions, one as payment for the use of a resource and another as an incentive not to shrink. As a result of the second role of wage, unemployment becomes a permanent equilibrium phenomenon.

The Search Theory

The search theory of unemployment argues that unemployment is a result of employers quitting their job to search for a new and better-paid job. This involves a certain optimum time spent searching in order to find the best paid job. While searching, the worker is unemployed. This seems to be a theoretical explanation of unemployment since only less than 10% of the unemployed actually quitted their own job.

The Insider-Outsider Theory

The alternative micro-economic theory of unemployment is the insider-outsider theory. The focus in this theory is the turn over costs of labour. This means that there are significant costs involved in firing, hiring, and training workers. Not only are there exogenously determined costs but the insider can increase the costs of turn over by refusing to cooperate with hired outsider i.e those who already have a job gain market power over wages as a result of these costs, the employers are willing to give the workers higher wages because this is more profitable than the costly process of turnover.

2.3 EMPERICAL LITERATURE

In attempt to analyze the relationship between unemployment and economic growth, a lot of researchers have applied empirical data to ascertain the nature of the relationship Blackley (1991) calculated the Okuns co-efficient for the largest 26 states in the united states and found out there was a significant difference in the reaction of unemployment to changes of economic growth by each state for most states, for most state Okuns coefficient is between 2.0 and 4.0 the smallest coefficient being Alabama with 2.137 and the largest with 6.803. In further study by Bisping and Hilde (2005) it was observed that the aggregate response of unemployment rate to economic growth was different across regions in the United States and when broken down by race and gender, demographic group's similar response was not experienced. In the study general impulse response function were not used to determine the impact unanticipated growth on different unemployment rate the researcher also utilized the expanded version of Okuns as a basis for the formulation of VAR estimations concerning unemployment rate broken down by region, gender and race. In Nigeria context, Obadan and Odusola (2005) discovered that unemployment and growth are inversely related. It was also discovered that growth response to unemployment varied among sectors of economy. For example employers in industries sector use less labour to accomplish high volume of production thereby leading to unemployment of workers the researcher

analyzed the casual link between unemployment and productivity in different sectors of Nigerian economy except service sectors.

Aluko (1999) also explains that these casualties of unemployment and their potential for production in Nigeria have terminated by the scourge. According to Scherush(1983) in emphasizing that class position is one of the causes of unemployment which make the children of the higher managers to be often employed; he posited that these exercise impels the unemployed children of lower class to take to criminal activities to make out a living undoubtedly, this depicts the impacts of unemployment on our country. Hence it derives labour force to cause social vices like robbery, the poor consist that section of the population whose resources are so depressed from the means as to be deprived of enjoying the benefit of participating in the activities which are customary in the society. Thus the rate of such criminal acts propelled by lack of employment in the case of armed robbery and theft stealing from 1991 to 1992 are 10,641,568 and 7,229,478,707 respectively in Nigeria. Nigeria Police force annual report (1993). Concerning with this view, Nnoli has asserted that unemployment causes wanton migration of labour forces in Nigeria from rural to urban to other countries in search for job. This leads to drain in Nigeria and most often to the destruction of the productive labour potential of the migrants for majority. Nigerians who travels abroad seeking for job engages in nefarious activities like drug peddling. This tarnished the country's image in country of nations and hampers attraction of foreign impartment in the nation's economy. For example, number of Nigerians arrested and convicted abroad for drug trafficking in 1988 was 2,034. International co-operation in crime invention and criminal justice for twenty first century (1990:31).

Moru. J (2005) posited that the unemployment caused by the movement of labour forces from agriculture production to secondary production in Nigeria amongst the unskilled labour constitutes disaster to the economic development in furtherance of the effects of unemployment to the Nigerian economy and attainment of economic growth; estimates indicate that attaining high economic growth is possible if Nigerian can scale up its ability to effectively use its resources, through sustainable growth over time, improved policies, increased trade and investment, improvement in human capital development. CBN bullion (2004) however, it is noted that in the attempt to raise resources for economic growth the government has proposed an international financial facility.

This section of the literature review will also make an exploration of empirically-based researches carried out by various scholars with regards to unemployment. Tapounda (1994) in his research revealed that 90.30% of the unemployed persons were in the 15-29 age brackets, and the concentration was also within 15-24 age bracket. His study revealed that only a small percent of the urban employment are illiterate adding that most unemployed are usually new entrants to the labour force with little or no vocational training and experience.

In a research conducted by United Nations International labour organization (ILO), it was discovered that as many as thirty three million Nigerians fall within the working age out of which nine percent (9%) or about three million persons are unemployed. Moreso, further study revealed that as many as 2.7 million out of a million persons live in rural area. (ILO survey report Africa concord, 1986) Jeremy (1985) in his analysis of the experience long-term unemployment was fast tending towards three million people. In contrasting between contemporary experience of unemployment of the pervious of mass unemployment in Britain during the 1930"s his findings revealed that in this modern era people seem not to be better off than in the 1930's, it was shared predicament (John, 1996). Charles Zimmerman

and Sorokin (1980) in the quest for defining a city has made some combination of factors thus the type of occupation which people engage in, the government phenomena comprising of the building and water supply size of the community, density of population, heterogeneity of population, social differentiation and stratification, social mobility and also found to be flexible about the sort of work they would accept. Thus, a high proportion of the unemployed provided a relatively cheap and flexible pool of labour available to employers when demand for employment picked up. Uchitelle and Kleinfied (1996) in their study revealed that the unemployed typically suffer loss of self esteem. They feel ashamed and humiliated, avoid seeing friends and sink into depression. They also observed that the cumulative effect of unemployment on the society is great and that being unemployed is associated with an increase in broad range of other problems, from alcoholism and divorce to heart attack and suicide asserting that unemployment may not be a direct cause of these problems, but rather series as a trigger for problem prone people. They also observed that unemployment leads to class which would pose a class problem to the colonial system.

Awolowo (1993) in his study suggested that unemployment in Nigeria can be reduced to a tolerable limit through modernization of agriculture and a planned and full mobilization and employment of all the country's human resources particularly at the higher levels. Coe (1990) in his findings tried to identify natural rate of unemployment in Canada from 1971-1998, observed that the principal factor were unemployment benefits and changes in the minimum wage, unionization of labour force and in payroll taxes.

According to an International labour organization publication on the necessity of an international labour organization publication on the necessity of integrating informal sector statistics into Labour Market Information System (LMIS) employment opportunity in the 3rd World refer essentially to the insufficient capacity of the modern sector to provide employment for the rapidly expanding labour force as consequence of which a large number of people are forced to find or create other income opportunities in the informal sector depends on the possibility to produce goods and services for which there exists an effective demand (Haam 1989:6). The Nigerian labour market conforms to the segregation, according to Papohunda (1979: 107) in his evaluating the industrial deployment of the Nigerian labour force, considered its divergent sub-sectors modern traditional and intermediate.

Adebayo (2001) who studied unemployment rate in Nigeria from 1986-1996 using secondary data observed that unemployment arises ever the supply of labour exceeds arises whenever the supply of labour exceeds the demand for it at the preventing wage rate. Causes of unemployment according to Adebayo can be analyzed from both the demand and supply side of the labour market in Nigeria. On the supply side, there is the rapidly growing urban labour force arising from rural-urban migration is usually explained in terms of push-pull factors. The push factors include the pressure resulting from manmade ratio in the rural area and the existence of serious under employment arising from seasonal cycle of climate. The factors are further strengthened in Nigeria by lack of infrastructural facilities which make rural life unattractive. The pull factor according to Adebayo (2001) include a wide rural-urban income differentiation in favour of urban dwellers and a presumed high probability of securing lucrative employment in the cities. Therefore, these writings and evidences showcase faintly the incidence of impacts of unemployment, its defective effects on economic growth and development. However, the effective of unemployment in achieving high economic growth in Nigeria remains in exhaustively and non-critically examined, so it form the gap to be filled.

Limitations of the Previous Studies

Some of the empirical studies that I have examined above are fraught with some inadequacies which have formed a radical point of departure for this study for example, Blackey (1991) examined the effect of the shock in output gap on unemployment rate by individual states of the united states and not on aggregate level. As such the study did not examine the possible impact of unemployment on growth of the economy. Again Bisping and Partron (2005) analyzed unemployment rate among races, gender and regions with much attention to its response to growth. Obadan and Odusola (2005) explained the casual link between productivity and unemployment by different sectors of Nigeria economy without paying attention to the impact of unemployment on economic growth. The study did not examine the casual link between unemployment and growth on the aggregate level rather the causal link was established on sectoral level. Also the Nigeria economy in specific and the world in general were partially explained by; Ilo (1973). Ekpo (2004), Fagara (1996); Nnole (1981); Gunderardena (1982) Aluko (1999); Sherush (1983); Townsend (1990); Moru J. (2005); CBN bullion (2004); these writers centered their work on impacts, causes, natures of unemployment. The shortfalls of their previous studies have formed the bedrock of this study. This study is designed in such a way that there will be critical evaluation of unemployment and economic growth on each other and also their causal relationship both on aggregate level.

3.0 Methodology

The Model

The research work makes use of econometric method. Econometric methods are statistical methods specifically adapted to the peculiarities of economic phenomena Koutsoyiannis (1997). It is adopted because of its ability to provide a precise prediction of economic magnitude. To achieve this, method of OLS estimation is employed for the econometric analysis. This is because the method of least square has some very attractive statistical properties that have made it one of the most powerful and popular method of regression analysis. The OLS technique, under certain assumptions has desirable statistical properties (efficiency, consistency and unbiasedness). In other words, OLS estimators are best linear unbiased estimator.

Model Specification.

An economic method is a representation of the basic features of economic phenomena. It is an abstraction of the real world (Fonta, Ichoku and Anumundu, 2003). The specification of a model is based on the available information relevant to the study in question. That is to say, the information of an economic model is dependent on the available information on the study as embedded. In standard error theory and other major empirical work or else, the model will be non-theoretical. Koutsoyannis (1977) opined that it always pays to incorporate only what is known from the subject matter into the model building process based on this our model specified as follows:

G.D.P= F(UNEMP, GEHT, GEED, RIR)
Where G.D.P = Gross domestic product
UNEMP = Unemployment
GEHT = Government expenditure on health
GEED = Government expenditure on education
RIR = Real interest rate

Mathematically the model is expressed as:
GDP = Bo + B1 UNEMP + B2 GEHT + B3 GEED + B4 RIR + UT

Where Bo = the intercept or the constant
B -B = the co-efficient of the explanatory variables
UT = stochastic error term. Gujarati (2003) defines UT as a random variable that has well defined probabilistic properties. The stochastic error term represent other determinants of economic growth not explicitly taken into account by the above model.

Estimation Techniques and Result Evaluation

The estimation procedure here would be that of OLS. The emphasis would be to note whether the variables are well behaved or not. We aim to ascertain their level of statistical significant or otherwise. The result of the model will be evaluated on the basis of three (3) criteria namely; Econometric apriori expectation, statistical test of significance and econometric test.

3.3.1 **The Economic Criteria**

The economic apriori expectation will evaluate the parameter in terms of their meeting the standard economic theory expectations.

PARAMETER	**APRIORI SIGNS**
B0	Positive/negative
B1	Negative
B2	Positive
B3	Negative
B4	Negative

3.3.3 **The Statistical Criteria**

Statistical tests are done to evaluate the reliability of the estimated parameter in accordance with statistical theory and expectation. The statistical tests carried out include;

(A) The t-test, this is used to test the significance of the individual parameters of the regression model. The decision to accept null hypothesis is based on the value of the test statistics obtained from the data at hand.

(B) The f-test, this would be carried out to ascertain whether;

I. An individual regression co-efficient is statistically significant.
II. All partial slope co-efficient are zero.
III. Two or more co-efficient are statistically equal.
IV. There is structural stability of the regression model.
V. Co-efficient satisfies some linear restrictions.

(C) Co-efficient of determination (R^2); The goodness of fit test is done using the square of the correlation coefficient. It shows or explains the percentage in the total variation of the endogenous variable being explained by the change in the explanatory variables. It measures the extent to which the explanatory variables are responsible for judging the explanatory power of the regression.

Econometric Tests

The test will be performed on the regression result in order to evaluate it according to the classical assumption of OLS. These tests are discussed briefly below;
a) Test for multi-colinearity: This will be used to test the linear colinearity among the explanatory variables and correlation matrix would be employed in this test.
b) Test for stationarity: This will be used to test whether the mean value, variance and co-variance of the stochastic process are constant overtime. The Augmented Dickey Fuller (ADF) test would be employed in this test.
c) Test for co-integration: This is used to find out if there is a long run relationship among the variables using the augmented Dickey fuller (ADF) test.
d) Auto-correlation test: This is used to test if the errors corresponding to different observation are uncorrelated; testing for the randomness of the error term. The Durbin-waston (DW) method will be employed for this test since according to Koutsoyannis (1977) D.W provides estimates which have properties and are more efficient for all sample of all size.
e) Heteroscedasticity test: This is used to know whether error term of the explanatory variables of the estimated model have equal variance.
f) Normality test: This will be used to know whether the error term of the estimated model is normally distributed.

Nature and Source of Data

Data used in this research are secondary data, sourced from the reports and bulletin of the following;

i. Central bank of Nigeria (CBN)
ii. Bureau of statistics.

Econometric Software Package

The researcher used P.C. give 8.0 software package to run the ordinary least square (OLS).

4.0 Presentation and Analysis of Results

Presentation of Result

The empirical results are presented in a table which shows the estimated parameters, their t-statistics and other diagnostic tests of equations. The result obtained from the estimation techniques are presented in the table below:

Table 4.1.1: Modeling Real Gross Domestic Product by O.L.S

Variables	Co-efficient	Std. error	T. Value	+ Prob	Part R-^{1}
Constant	-4.112e+005	1.96e+006	-0.209	0.8359	0.0017
UMP	2.1230e+005	2.6205e+005	0.810	0.4255	0.026
RIR	-4151.1	54923	-0.076	0.9404	0.0002
GEHT	226.20	148.29	1.525	0.1397	0.0851
GEED	-26.969	95.740	-0.282	0.7805	0.0032

The model has the following results:

R^2 = 0.745112

F(4,25) = 18.271 (0.000)

å = 4.40332e + 006

Durbin Watson (DW) = 2.18

RSS = 4.84730901e + 014 for S variables and 30 observations.

Result Interpretation

Analysis of Result Based on Economic Criteria

a. **Unemployment (UMP):** From our findings, there is a positive relationship between unemployment and real GDP, the co-efficient of unemployment is 2.1230 which imply that a unit increase in unemployment rate (UMP) will increase real GDP by 2.1230.
b. **Real Interest Rate (RIR):** From our findings, there is a negative relationship between real interest rate (PIR) and real GDP, the co-efficient of real interest rate is -4151.1 which implies that a unit increase in real interest rate will reduce real GDP by 4151.1.
c. **Government Expenditure on Health (GEHT):** From our findings there is positive relationship between government expenditure on health (GEHT) and Real GDP, the co-efficient of government expenditure on health is 226.20 which implies that a unit increase in government expenditure on health will increase real GDP by 226.20.
d. **Government Expenditure on Education (GEED):** From our findings there is negative relationship between government expenditure on education and real GDP, the co-efficient of government expenditure on education is -26.969 which implies that a unit increase in government expenditure on education will reduce real GDP by 26.969.

From results obtained in the regression, the result is expected to follow the economic a prior expectation of magnitude and sign. This table 4.2.1 below analyzes the outcome of the parameter.

TABLE 4.2.1

Variables	Expected	Obtained	Conclusion
UMP	Negative	Positive	Do not conform
RIR	Negative	Negative	Conform
GEHT	Positive	Positive	Conform
GEED	Positive	Negative	Do not conform

4.2.2: **Analysis Based on Statistical Criteria**

(**1st Order Test**)

1. The coefficient of multiple determination (R^2)

This is used to check the goodness of fit from the regression results, the value of R^2 is 0.745112 implies that approximately 75% of the variations in real GDP is explained by the independent variables (unemployment level, real interest rate, government expenditure on health and government expenditure on education).

2. Test of significance of the parameter (The T-test statistics)

The student T-test is used to determine the significance of the individual parameter estimate. To achieve this, we have to compare the calculated. +-value in the regression result with t-tabulated at n-k degree of freedom (df) and at 5% significance level

$H_0 : B = 0$ (not significant)

$H_1 : B_1 \neq 0$ (statistically significant)

Decision Rule

Reject H_0 T cal > T tab and accept if otherwise. From our data
n = 30 and k = 5

df = n-k
= 30 – 5
= 25 at 5% significance level
From our statistical table, critical T calculated for 5% significance level is equal to 2.06.

The result of the analysis is summarized in table 4.2 below.

Variables	T. calculated	T tabulated	Decision	Conclusion
UMP	+ 0.810	± 2.06	Accept H0	Not Significant
RIR	-0.076	± 2.06	Accept H0	Not Significant
GEHT	+1.525	± 2.06	Accept H0	Not Significant
GEED	-0.282	± 2.06	Accept H0	Not Significant

From the above table, all the individual variables are statistically insignificant since all their respective values are less than 2.06 which is the tabulated value of t.

Conclusion

We conduct that B_1 (UMP), B_2 (RIR), B_3 (GEHT) and B_4 (GEED) has no significant impact on real GDP in Nigeria within the period under review.

4.2.3: **The F-Statistics Test**

This test is conducted to determine if the independent variables in the model are simultaneously significant or not. Hence, the analysis shall be carried out under the hypothesis below.

$H_0 : q_1 = q_2 = q_3 = 0$ (all slope co-efficient are 0)
$H_0 : q_1 = q_2 = q_3 \neq 0$ (all slope co-efficient are not 0)

Decision Rule

Reject H_0, if f cal > f tab
Where

V_1 = k-1 = 5-1 = 4 (numerator)
V_2 = n-k = 5 = 25 (denominator)
It is shown in the table below
Tables 4.2.3 below analyzes the results

F calculated	F – tabulated	Decision rule
18.271	2. 76	Reject H_0

From the result, since f cal > f tab (i.e 19.271 > 2.76) we therefore reject the null hypothesis (H_0) and accept the alternative hypothesis (H). Conclusively at 5% significance level, the overall regression is statistically significant.

4.3 Econometrics Test (2nd Order Test)

1. Test for Auto-correlation

This test is aimed of ascertaining if the error terms are correlated. To achieve this, we assume that the values of the random variables are temporarily independent by employing the techniques of Durbin Watson (DW) statistics.

Decision Rule

1) If d* < dl we reject the null hypothesis of no correlation and accept that there is positive auto correlation of first order.

2) If d* > (4-dl), we reject the hypothesis and accept that there is negative auto correlation of first order.

3) If d* > (4-du), we reject the hypothesis and accept the null hypothesis of no auto-correlation

4) If dl < d* <d* <du of if (4 – du) < d* < (4 – dl) the test is inclusive.

Where dl = lower

du = upper

d* = Durbin Watson calculated

we obtained

dl = 1.143

du = 1.739

d* = 2.18

Decision Rule

4-dl = 4 – 1.143 = 2.857

d-du = 4 – 1.739 = 2.261

Therefore du < d* < (4-du)

du (1.739) < d* (2.18) < (4-du) 2.261

1.739 < 2.18 < 2.261

We conclude that there is no auto-correlation in the model.

2. Normality Test

This test was carried out to check if the error term follows the normal distribution. The normality test adopted in the Jargwe-Bera (JB) test of normality. The JB test of normality is an asymptotic or large scale sample test and it is based on the OLS residuals. This test computes the Skewness and Kurtosis measure of the OLS residual and uses the chi-square distribution (Gujarati 2004 :148).

Hypothesis

H_0: B = 0 (The error term follows a normal distribution)

H_1: B ≠ 0 (The error term does not follow a normal distribution)

The statistical data follows chi-square distribution with 2 degree of freedom (df) at 5% level of significance.

Decision Rule:

Reject H_0, if x2 cal > x2 tab (0.05) and accept H_0, if otherwise.

From the result obtained from Yargwe Bera (JB) test of normality, JB = 23.81

I.e. x2 cal = 23.81

x2 tab = 5.99147

Therefore, we reject H_0 and conclude that the error term does not follow a normal distribution since x2 cal > x2 tab.

3. Heteroscedasticity Test

The test is basically on the variance of the error term. It helps to ascertain if the variance of the error term is constant or not.

H_0 = Homoscedasticity

H_1 = Heteroscedasticity

Decision Rule

If x^2 cal > x^2 tab, reject the null hypothesis and accept if otherwise.

X^2 cal = 19.48

X^2 tab = 15.5 at 8 degree of freedom

From the result, x^2 cal > x^2 tab (i.e. 19.48 > 15.5).

Thus we conclude that there is heteroscedasticity and no homoscedasticity in our model at 95% level of significance. In other words, we reject the null hypothesis and accept the alternative hypothesis showing that the error term does not have a constant variance.

4. Test of Multicollinearity

Multicollinearity means the existence of perfect linear relationship among the explanatory variable of a regression model.

Using the correlation matrix results

	GDP	UMP	RIR	GEHT	GEED
GDP	1.000				
UMP	0.7245	1.000			
RIR	0.4812	0.6182	1.00		
GEHT	0.8590	0.7865	0.5391	1.00	
GEED	0.8473	0.8150	0.5561	0.9856	1.00

Decision Rule

From the rule of thumb, if correlation coefficient is greater than 0.8 we conclude that there is multicollinearity but if it is less than 0.8 we conclude that there is no muticollinearity.

Hence, multicollinearity exists between:

GPD and GEHT
GDP and GEED
UMP and GEED
GEED and GEHT

5.0 Summary of Findings, Policy Recommendation and Conclusion

5.1 Summary

The multiple regression model employed in this study has helped in no small measure in determining the relationships between unemployment and growth of Nigeria economy. The model has really justified the role of some variables like government expenditure on education, government expenditure on health etc. in adjusting the relationship between unemployment and growth of the economy.

In the study, it was discovered that unemployment impacts positively on the GDP, the reason is that the economy of Nigeria over depends on the capital intensive oil sector which provides 95% of foreign exchange earnings and over 65% of government revenue in 2005. It is important to state at this point that the discovery of crude oil in 1958 has led to reckless abandonment of agricultural sector which today account for 2/3 of total employment and inflation must be reduced. This implies that for GDP to grow, unemployment and inflation must be reduced. This entails employment of material and human resources in the production process. It may not achieve the desired result if government expenditure is not adjusted as well. It is the role of the federal government and the CBN at adjust money supply so as to reduce inflation which is inimical to real output growth.

Again, the reason is that just like we earlier said the oil boom of the 1970s made Nigeria to neglect its strong agricultural and manufacturing bases in favour of an unhealthy dependence on oil. In 2006, oil and gas export accounts for more than 98% of export earnings and about 83% of federal government revenue. Therefore, new oil wealth, the concurrent decline of other economic sectors and a lurch towards a statist economic model fuelled massive migration to the cities and this led to increasingly widespread of poverty especially in rural areas. This implies that the federal government makes more revenue from capital intensive oil sector without making efforts to invest in agriculture and other sectors that would absorb the unemployed youths in our society.

In the course of this our study we ran numerous tests including co integration test to see the relationships among variables used in the study as illustrated earlier in the presentation and analysis of results.

5.2 Policy Recommendation

Based on the finding of this research, the following policy recommendations are presented as follows:

1. The Nigeria government should diversify the economy so as to save the nation from the ills of mono-economy of overdependence on crude oil.
2. Formulation of effective unemployment policy which will absorb the unemployed citizens especially into informal sectors of the economy.
3. Unemployment can be addressed meaningfully by encouraging local industrial production. These factories will provide employment opportunities that will absorb many idle hands and feed the many hungry mouths.
4. Invest more in the agricultural sector which as at today is the largest employer of labour in the economy. Farming has become increasingly unattractive. Efforts should be made by the government to modernize agriculture so as to make it attractive to the unemployed able bodied youths.
5. Change in the educational system so that school leavers and graduates alike would be job creators rather than job seekers.

5.3 CONCLUSION

Having examined the relationship between unemployment and GDP, we can confidently state that over dependence on crude oil has done much harm to the Nigeria economy especially in the area of escalating rate of unemployment. The discovery of crude oil has led to the abandonment of agriculture as well as other productive sectors that would have absorbed the unemployed in our society. In Nigeria, it is a general belief that political expediency over rides economic rationality but it is not so in advanced countries. As a matter of fact we propose that the federal government should take adequate steps towards the reduction of unemployment in Nigeria society without considering whether it satisfies political interest or not what matters is the interest of the common people. The adaptation of the recommendation made in this study can go a long way in reducing unemployment and as such would assure maximum development and utilization of the nation's manpower.

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