

**THE IMPACT OF UNEMPLOYMENT ON ECONOMIC
GROWTH IN NIGERIA (1970-2010)**

BY

DUROSINMI TEMIDAYO.O

EC/2008/622

DEPARTMENT OF ECONOMICS

FACULTY OF MANAGEMENT AND SOCIAL SCIENCE

CARITAS UNIVERSITY, AMORJI-NIKE

ENUGU STATE

AUGUST, 2012.

TITLEPAGE
THE IMPACT OF UNEMPLOYMENT ON ECONOMIC
GROWTH IN NIGERIA

A PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENT FOR THE AWARD OF BACHELOR IN SCIENCE
(B.SC) DEGREE IN ECONOMICS

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APPROVAL PAGE

I certify that this research work was carried out by DurosinmiTemidayo .O. Reg .No. EC/2008/622, of the Department of economics, Faculty of Management and social sciences; Caritas University Amorji-Nike Emene Enugu State.

Projectsupervisor

Date

ONWUDINJO,P.C

Date

Head of Department

PROF.CHARLES UMEH

Date

Dean of Faculty

External Examiner

Date

DEDICATION

I dedicate this work to God Almighty, to my loving parents BARR and MRS O.A DUROSINMI for all their support thought out the pursuit of my academic careers.

I also extend my dedication to my Uncle Engr. T,A DUROSINMI for his fatherly support, and to my siblings. I love you all.

ACKNOWLEDGEMENT

My in depth gratitude goes to God Almighty for His blessings in my life. I am grateful for his endless love, protection, guidance, grace and showers of blessings upon me and my family.

My sincere appreciation goes to my parents Barr.and Mrs OlatoyeAdioDurosinmi for their love, care, prayers, advice, understanding, moral and financial support.

I also appreciate my siblings for their love. Ayomikun, Temitope, Omobolanle, Olusegun, AbisolaDurosinmi.

I also acknowledge the untiring effort of my supervisor Prof Udeaba who despite his tight schedule, he still brought out his time to correct and make suggestion to make this work a success. My in depth gratitude goes to the head of academics department Barr P.C Onwunjinjo Esq and my lecturers : Prof F. Onah, Mr E.OUche, Mr A.COdo, Dr C.C Umeadi, Mr R.O Ojike, Mr M.N Ikpe, Mr Osonduru, Mr J.C Odionye.

My profound gratitude goes to my love ones, Constance Okpati, NneamakaUzor,Morenike, NiyiAdeogun and friends AbimbolaOdubote and my cousins Dr Mayowa, Engr. Ope, Engr. Femi and all my roommates especially my bunk mate, Deborah Noah. And also my gratitude goes to TitilopeAkinpelumi for her advice and support. And all who in one way or the other supported me in my life.

I pray that almighty God will reward you all Amen.

ABSTRACT

The term unemployment can be defined as an economics condition marked by the fact that individual actively seeking jobs remain unhired. Unemployment is expressed as a percentage of the total available work force. The level of unemployment varies with economics conditions and other circumstances. This is mostly seen in graduate of various institutions of learning especially in under developed nations like Nigeria. The study was designed to investigate the impact of unemployment on economics growth in Nigeria of 41 years (1970-2010). The research focuses on determining the cause and impacts 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 is to determine the relationship between unemployment and economic growth in Nigeria (GDP). The method of analysis used in testing the hypothesis is the hypothesis is the T-test, F-test etc. the major findings was that unemployment has a negative impact on the gross domestic product (GDP) of the Nigeria economy. Some suggestions and policy recommendations were made based on the findings.

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CHAPTER ONE

1.1 BACKGROUND OF THE STUDY

Unemployment is generally agreed to be symptom of macro-economic illness which could be "voluntary" or in "Voluntary". When is said voluntary I mean a condition where somebody chooses not to work because they have a means of support other than employment example is the idle rich man. On the other hand involuntary unemployment exists when persons are willing to work at the prevailing rate of pay but unable to find work. (Anyanwu 1995).

Balogun, ed et el (2003) also defined unemployed as the percentage of the percentage of the labour force that is without job, but is able and willing to work. In Nigeria however the ability and willingness to work is not sufficient. It is necessary for the unemployment to be registered with an employment bureau in order to be recognized as unemployed. Yet, from an economic viewpoint,

the unregistered unemployed are part of the labour force and are, therefore, technically unemployed. In Nigeria, unemployment data are obtained through labour force sample surveys which ask if the respondent has worked in the week preceding the survey. However, the international labour organization (ILO), realizing the shortcomings of the labour survey as it affects developing economies, such as Nigeria, with a large informal sector, has encouraged a review of the methodology to incorporate further disaggregation of respondent responses to bring out the true rate of unemployment.

In order to establish the type of unemployment existing in an economy, economists have classified unemployment as 'frictional', 'seasonal' 'structural' or cyclical'.

1. Frictional Unemployment occurs when people are temporarily out of work because they are changing jobs. This is

unavoidable in an economy in which both the labour force and the jobs on offer are continually changing.

2. Seasonal unemployment is said to occur in a situation in which people are laid off seasonally, due to the nature of the job they do, e.g. agriculture workers in developing countries may be laid off during the growing season.
3. Structural unemployment is the unemployment that exists when an economy is in full employment. Structural unemployment occurs where employment in one or more declining industries is falling.

It is as result of movement in the natural employment rate itself, which can result from changes in labour market institutions, demographic shifts etc. this situation is brought about by economic variables, such as the level of aggregate demand and the actual and/or expected real wage rate.

4. Cyclical unemployment occurs as result of fluctuations around the natural employment rate, which can be attributed to changes in aggregate demand.

Industrial relations refer to the process of conflict resolution, such as collective bargaining, between employers and employees in the course of fulfilling an employment contact. It could be achieved either by conquest (when one party overwhelms the other), or by mutual consent. The latter, preferred outcome is likely to result from collective bargaining. Continuous industrial harmony is, therefore, often the result of positive industrial relations.

In Nigeria, unemployment is regarded as one of the most challenging economics problem facing the federal government. Although, there are variations in the measurement of unemployment, official estimates show their results as follows: from 1985-2003, the data shows a highly fluctuation trend from

both the urban and rural sectors of the economy. From the data, the 1985 figure shows the percentage of the national urban and rural unemployment as follows: national 6.10%, urban 9.8% and rural 5.2% and in year figure is as follows: national 3% urban 3.8% rural 2.7 % (CBN 2004).

The rising rate of the population of the country which is faster than the job opportunities, a situation in which birth rate is rising, death rate falling and the population growth rate is between 2.5% and 3% unemployment is bound to exist. There had been also a total neglect of the agricultural sectors and consequent mass exodus of able bodied youths from the rural to urban areas in search of the none existing while cooler jobs.

This further reduces employment in agriculture and puts pressure on existing urban jobs (Anyanwu 1995)

1.2 STATEMENT OF THE PROBLEM

Unemployment has reached a very alarming proportion in Nigeria, with a greater number of the unemployment being primary and secondary school learners and university graduates. This situation has recently been compounded by the increasing unemployment of professionals such as bankers, engineers and doctors. The toll is within the productive segment of the Nigeria population (Vision 2010).

The extent of unemployment in Nigeria is not justified by the available financial statistics phenomenon. This is because of the nature of unemployment in the country where many job seekers do not see the need for registration as unemployed due to expression of futility in such exercise. This harnesses the sharp disparity between the official statistics on the phenomenon and the reality on ground (Bello 2003). Disguised unemployment otherwise known as concealed

unemployment is a situation in which more people are available for work than is shown in the unemployment statistics (Bannock et al 1998)

The problem of disguised unemployment is quite acute in Nigeria. This explains why official unemployment statistics sharply differs from the true state of employed or unofficial statistic available. The recorded figure unemployment significantly understates the number of people who are actually willing to work at the existing set of wage rate. Consequently, the unemployment figure in Nigeria is obtained through labour force sample survey, by asking if the person has worked in the past week preceding the survey.

Obviously, because even a graduate whohawks around respond yes to the question, the unemployment rate will always be very low.

Unemployment is a situation of a labour not having enough paid work or not doing work that makes full use of his skills and ability. It can be measured by the numbers of hours worked per week.

Generally in Nigeria, the official period of working time per week is forty hours which many workers fall short of due to non – availability of work. In some instance available work is rationed especially among the low skilled and casual labours in the formal sector tends to be worse (Bello 2003) therefore the major problem we have in Nigeria is the distinguished unemployment form. The official figures of the rate of unemployment form.

December 1998, a total of 66.3% of male and 62.0% of female unemployment were recorded at the urban centres while rural centres had an estimate of 47.1% and 45% male and female job seekers respectively. As at December 1999, school leavers

unemployment rate had raised to 67.0% for males and 68.8% for females in the urban centres while the rural centres was as high as 59.1 and 55.7%. For male and female respectively (Bello 2003). For polytechnic and university graduates, the figures shows relatively low unemployment rate as compared to the school leavers experience. For instance, during the period under investigation a peak of 14.0% rate of unemployment was recorded for polytechnic female graduate in 1998 which the male graduate records had its peak in 1999 with 15.0% point in urban areas (Bello 2003). The graduate unemployment rate in the urban centres had 8.5 per cent record high in September 1999 for males and 4.5% in June 1999 for female during the periods (Bello 2003).

Many people are frustrated by lack of unemployment's opportunities they include these without work and those who have jobs but want to work longer hours or more intensively. A

considerable size of utilized and underutilized labour abounds in Nigeria and which ought to be brought into the circle. These shows that Nigeria's employment problem has become chronic and should be a matter of utmost national concern.

1.3 RESEARCH QUESTION

From the above discussions the research question is:

Has unemployment had any impact on Nigeria economy?

1.4 OBJECTIVE OF THE STUDY

The objectives that will guide this study are as follows;

1. To determine the relationship between unemployment and economic growth in Nigeria.
2. To ascertain the magnitude of this relationship.
3. To make policy recommendations based on the finding.

1.5 STATEMENT OF HYPOTHESIS

The hypothesis that would guide this work is as follows;

1. **H₀**: Unemployment has no significant impact on economic growth in Nigeria.
2. **H₁**: Unemployment has no significant impact on the economic growth in Nigeria.

1.6 IMPORTANCE OF THE STUDY

One of the macroeconomics goals of any country is the actualization of full employment. Therefore, unemployment in any system is seen as a policy failure and there is always concerted effort on the part of the government in checkmating the impact of unemployment in an economy. The study of unemployment is important to the policy makers, politicians, and student of economics.

To the policy makers ascertaining the rate of unemployment, in an economy to the desired height, the policy maker with the knowledge of the state of unemployment in the system stands the best chance of controlling it through appropriate initiative like poverty eradication programmes and creation of employment opportunities that touches the lives of the population.

1.7 SCOPE AND LIMITATION OF THE STUDY

The limitation of this research were much and varying.

First was the difficulty in getting access to some relevant research documents. There were several cases of limited copies of materials.

The second constraint to this research was finance and time. The time allowed for the completion of this work was short, coupled with the fact that other academic work were in progress.

CHAPTER TWO

2.1 THEORETICAL LITERATURE

Keynesian Economist see unemployment as a situation in which the number of people able and are willing to work at prevailing wage exceeds the number of job available and at the same time, firms are unable to sell all the goods they would like to sell (Bannock et al 1998).

When carefully analysed, the Keynesian unemployment largely applies to situations in Nigeria (Bello 2003)

Here, unemployment can result to a situation where many Nigeria consumers including the government prefers foreign goods than domestic goods, thereby causing the domestic producers to face with the problems of low demand that naturally forces them to lower output and of cause reduces work force. This experience continues in some firm especially the small scale ones till they are pushed out of

the market resulting in the loss of more jobs, the long-term unemployment remains in the market for too long and thereby reducing his chance of job finding.

Virtually, all countries exhibit negative duration dependence that is if one takes two unemployed people at random, one would expect that one with shorter unemployment duration to leave unemployment more quickly (Machin and Manning 1998). According to Olueye (2006) classical economists argued that unemployment exists when unions maintain wages above their equilibrium level. When this happens, we have a situation of involuntary unemployment.

Keynesian unemployment is the part of total unemployment that could be helped by using fiscal and monetary policy to boost aggregate demand (Olueye 2006). Cyclical unemployment differs from structural and frictional (Lindbeck et al 1999). It is an unemployment result from

lack of aggregate demand in a down swing in the business cycle (Bannock et al 1998)

For instance in Nigeria, since the collapse of oil boom in the late seventies, the economic has generally remained in a passive state even though some other period of oil price surge were later experienced (Bello 2003).

What sound like cyclical unemployment in the most sub- Saharan Africa economist is the seasonal unemployment that is inherent in the agricultural sector then it may be best described as the very long Kondratieff cycle which lasts for over a period of fifty years (Bello 2003).

This implies that to solve unemployment problem, it is simply to remove the artificial critical ceiling placed by the union. In case of Keynesian unemployment it is demand that is deficient "such involuntary unemployment, is coursed by sluggish labour market

adjustment beyond the control of individual workers or union” (Begg 1994).

The demand deficit or cyclical unemployment is the disequilibrium level of involuntary unemployment caused by the combination of low aggregate demand and sluggish wage adjustment.

The classical case of unemployment is premised on the inflexibility of wages. Unemployment result because labour, due to organize activities do not allow wage to decline for the accommodation of excess labour when there is incidence of unemployment.

Given-wage-price flexibility, there are automatic forces in the economic system that tends to draw the economy into equilibrium state. (Jhingan 2000).

Unemployment incidence from classical perspective cannot really be situated in most sub- Sahara Africa economics. Although, price flexibility is not actually feasible due to trade union activities, but its

existence wouldn't have efficiently addressed the problem of unemployment. This is because for instance, in Nigeria, most sector if not all especially the public sector enterprise have the problem of labour redundancy due to over staffing (Bello 2003).

Macro-economic model of structural employment assume that unemployed workers are not able or willing to get jobs by underbidding the prevailing wages of incumbent workers.

The most obvious microeconomic explanation of the absence of wage underbidding is perhaps the minimum wage laws. But there seems to rather general agreement among labour market economist that minimum wages have not been high enough in recent decades in developed countries to explain much of aggregate structure unemployment (Lindbeck 1999). So the problem is not that of wage price inflexibility or wage under binding declination but that of poor

economic growth that is unable to sustain the population and labour supply growth rates.

Thirlwall (1983) referred to the concept of disguised unemployment which he defined as the Gap between the actual numbers of workers available for employment and the level of employment at which the marginal product is below the institutional or subsistence wage. He was of the opinion that since there are many reasons, particularly in developing countries, why labour may be fulfilling its potentials and why small changes may release substantial quantities of labour, we should be concerned with dynamic rather than static surplus. Unemployment rate according to Begg (1994) is the percentage of the labour force without a job.

According to him, labour force means those people of working age who in principle would like to work if a suitable job were available.

He added that, those who are of working age but have no intention of work, should not be counted as unemployed.

This view seems to be general consensus among economist. A person is defined as being unemployed, if he or she does not have a job but is available to take a job.

Parkin (1998) he added that unemployment rate is the percentage of the people in the labour force who are employed. According to him, the unemployment rate is the best available measure of under those who do not have a job, are available for work and are willing to work but do not have the efforts to find work and measure unemployed people rather than unemployed labour hours as a result excluding part time workers who want full time jobs. He however noted that unemployment is a persistent feature of economic life.

Begg (1994) classified unemployment into frictional, structural demand deficient (Keynesian) and (classical). He saw frictional

unemployment in a dynamic society which includes people whose physical or mental handicaps make them almost unemployable and those who are temporally unemployed as a result of changing jobs.

Structural unemployment arises because there is a mismatch of skills and job opportunities when the pattern of demand falling and wage is deliberately maintained above the level at which the labour demand schedule intersect.

Begg (1994) however held that behavioural implication of types of unemployment and the consequences for government policy have necessitated different classification modern analysis of unemployment. A worker is involuntary employed if he or she would accept job offer at the going wage rate. Employment and unemployment in developing countries have been the concern in recent years to the extent that international labour force has

sponsored missions to several countries to undertake detailed analysis as part of world employment programmed (Olueye 2006).

2.2 UNEMPLOYMENT AND ECONOMIC GROWTH

THEORITICAL FRAMEWORK

The theoretical framework seeks to establish the relationship between unemployment and economic growth.

Does the rate of economic growth create or destroy job and does it affects jobs in the short or long-run? The motivation for study is the real aspect of growth which increase in growth comes from accumulation of knowledge embodied in innovation through the use of machine to do the work that was previously done by the people, which result to unemployment.

The market search theory imply that increase rate of job turnover is higher in natural rate of employment (Prescott and Lucas 1974). There some empirical audience to show negative long-run relationship been rates of Davis et al (1997) show that period of unemployment are periods of high firm level job turnover.

The source of unemployment in the model is the relocation of labours across firms. That is the unemployment is of transitory nature.

Reallocation is triggered by the fixed overhead cost of human capital growth of rate (g) but technology of plan is fixed, that at some of plant is shut down by the firm (Mass 2005).

A lay off job cannot find job instantaneously due to search fictions.

2.3 Empirical Literature

Tabellini and Favero (2000) found empirical support by raising a hypothesis that unemployment has a negative effect on economic growth while Layard and Nickell (1999) cannot find the labour market institution that increase unemployment also lower economic growth. It is quite possible that some institutions that affect unemployment also affect economic growth and the level of output in Nigeria.

Lindbeck (1999) found that structural unemployment by not disappearing in cyclical booms. Using the Pissacardi model as the analytical framework for the paper). The model are also related to search model for labour market in which unemployment equilibrium is defined as a situation where the number of individual finding jobs equals to the number of individual who are separated from jobs. It

points various factors that influence the level of structural employment which is different in time and place.

Olson (1984) argues that democratic societies tend gradually to become more organized in strong pressure groups that for income distribution reasons have an interest in blocking the changes necessary for high growth.

Downes (1998) investigated the necessary condition for reducing the unemployment rate in Trinidad and Tobago. From the period 1971-1996. Using the error correction model estimated by OLS (ordinary least square) instrumental variables, he found that in both long and short runs changes in Real Gross Domestic product (RGDP) and Real Average Earning (RAE) have a statistically impact on changes in the unemployment rate. While increase in GDP reduces the unemployment rate in both short and long terms but lower it in

the short-run. Increase in real average earning increase the unemployment rate on the long-run.

Levin and Wright (2000) find that it is important but difficult to distinguish between desirable effects of unemployment insurance that are observationary equivalent when designing optimal unemployment insurance cause's permanently higher involuntary unemployment by raising the reservation wage. The paper avoids the problem by regarding the trade-off between the unemployment insurance replacement rate and unemployment as an intermediate relationship that matters only as far as it impacts economic growth. Using annual panel data finds that unemployment insurance replacement rate is associated with higher unemployment. However they find no significant relationship between unemployment insurance, related on employment and the real growth rate of domestic product.

Osinubi (2006) find it worthwhile to address the following questions using time series data for 41 years; 1970-2010.

- a. What is the number of relationship between poverty, unemployment and economic growth in Nigeria?
- b. What step should be taken to ensure that economic growth is such that brings about decrease in unemployment and poverty in Nigeria?

Nigeria is a nation that is blessed with multifarious and multitudinous natural resources both human and material. But due to gross mismanagement, access spending adverse policies of various government of Nigeria, these resources have not been optimally utilized; these resources have been adequately channelled to profitable investments to bring about maximum economic benefits. As a result of these Nigeria has been bedevilled with poverty and unemployment. Economic growth which is supposed to be a solution

to the problem of unemployment appears not to be so in Nigeria. Nigeria's official statistics shows that economic growth has not always been accompanied by declines in unemployment and poverty.

Simbowale (2003) has study empirically evaluates macroeconomics policies vis-à-vis pro-poor economic growth in Nigeria using secondary data covering the period of 1960-2000. The study found among others that growth was actually weakly pro-poor. Also, those that are far below the poverty line have not really been enjoying the benefits of economic growth.

In fact, the benefit getting to them has been decreasing or reducing at an increasing rate. And that economic growth in rural area will be slightly more pro-poor than in urban areas. Overall, economic growth in Nigeria is not necessarily always pro-poor.

Ajekomobi and Ayanwale (2005) investigate the education student enrolment and linkage with unemployment and economic

growth in Nigeria using annual data from (1970-2005) which comes from several issues of central bank of Nigeria annual reports and statement of account federal ministry of education and national university commission (NUC). The result shows that government findings is unstable and unpredictable capital and recurrent findings since 1970 are only very small fraction of the nation's budget, total enrolment to a level of unemployment because government could not limit enrolment to a level find made available could adequately later for the proportion of GDP that goes to education still low .

Bello (2003) investigates the phenomenon of unemployment in the sub-Saharan Africa with special reference to the Nigerian experience. Having diagnosed the nature of this episode in this sub-Saharan region, the study unfolds a number of factors that account for this phenomenon and of course the great threat it poses the economic involved.

Assessment of past and the present anti unemployment policy measures in Nigeria was made and the result shows that a number of economic factors inhibit their performance.

CHAPTER THREE

METHODOLOGY

3.0 The research work is conducted employing an econometric methodology of multiple regression statistical and econometric tools shall be used in analysing and presenting data. The ordinary least square (OLS) techniques of estimation will be used in estimating the model. This is because of its interesting BLUE (best linear unbiased estimator) properties and its intrinsic assumptions. The OLS estimator has both numerical and statistical properties. Gujarati (1995) quoting Davidson and Mackinnon (1993) put the numerical properties as “those properties that hold as a consequence of the use of ordinary least squares, regardless of how the data were generated”. Similarly the statistical properties are those that hold under the certain assumptions about the way data were generated.

3.1 MODEL SPECIFICATION

The essence of economic modelling is to represent the phenomenon under investigation in such a way to enable the researcher to attribute numerical values to the concept.

To determine the relationship between unemployment and output we specify the model as:

Mathematical form

$$\text{GDPGRT} = f(\text{UNEMP}, \text{GEXP}, \text{MS})$$

Statistical form

$$\text{GDPGRT} = \beta_0 + \beta_1 \text{UNEMP} + \beta_2 \text{GEXP} + \beta_3 \text{MS}$$

Econometric form

$$\text{GDPGDRT} = \beta_0 + \beta_1 \text{UNEMP} + \beta_2 \text{GEXP} + \beta_3 \text{MS} + \mu$$

MS=Money supply

UNEMP= Unemployment rate

GDPGRT= Growth rate of gross domestic product

GEXP= Government expenditure

β_0 = the interception of the model

β_1 & β_2 & β_3 = the coefficient of the independent variables

μ = error term that is used to capture other variables, that are not included in the model. It is expected to be purely random.

3.2 METHOD OF EVALUATION

Evaluation method consist of the method that will be in deciding whether the theoretically and statically significant for the purpose of this study. The study shall adopt the following methods of evaluation for analysis and the estimates.

3.2.1 ECONOMIC THEORITICAL TEST

This criterion is statistically concerned with determining the consistency of our parameter estimate with the signs and magnitude defined by the Okunslaw. As such it is our expectation that the parameter estimate of our study by consistent with this signs and magnitude. Theoretically the relationship between GDPGRT and UNEMP is expected to be negative, while the interpretation is expected to be positive.

Table 3.1 the aprior (expected) signs of the variables

VARIABLE	EXPECTED SIGN
INTERCEPT	>0 (POSITIVE)
UNEMP	<0 (NEGATIVE)

3.2.2 STATISTICAL CRITERIA (FIRST ORDER TEST)

These are test defined by statistically theory used and at evaluating the reliability of the parameter estimates.

According to Gujarati (2004) "a test of significance is a procedure by which sample result is used to verify the truth or falsity of a null hypothesis..."

t-statistical test: the test will be carried out in order to determine the significance of the parameter estimates of the model.

Standard error test: the estimates obtained from a given set of a simple observation are not free from sampling errors. It is therefore necessary to measure the size of the error and subsequently determine the degree of confidence in the validity of the obtained estimates, Kautsoyiannis(1977). The test helps us to know if our estimates statistically significant or whether the sample from which we made estimates might have come from which we made estimates

might have come from a population whose true parameter value are zero. Kautsoyiannis (1977-80).

F- ratio test: his involves the overall significance of the regression result as against individual significance of the regressions. This test can be said to be a join hypothesis test employing the analysis of variance (ANOVA)(2004 :254. 257).

R^2 and adjusted R^2 test: the R^2 (multiple coefficient of determination) shall be carried out to the strength of the independent variables in explaining the changes in the dependent variables. Gujariti (2004: 217) has noted that changes in the adjusted R^2 should be treated as another summary statistic. The R^2 is reported as the multiple coefficient of determination adjusted to take into account the degree of freedom associated with the sum of square.

3.2.3 ECONOMIC CRITERION (SECOND ORDER TEST)

There are test set by the theory of econometrics and aimed at investigating whether the assumptions of econometric method employed are satisfied or not, among the test are; Test for stationary, Normally test, Test for Autocorrelation, Test for Multicollinearity, Test for Heteroscedaticity, RESET Test and Evaluation of the Forecasting performance of the model.

A causality test was conducted to check whether the existence of external factors influences the variables and causes them to have correlation, even when they are not directly related.

3.3 DATA REQUIRED SOURCES, TRANSFORMATION AND SOFTWARE FOR ESTIMATION.

The data used for this study are secondary data. They were sourced from the Central bank of Nigeria (CBN) statistical bulletin (volume 19, 2008 edition).

The unemployment data and GDP growth was generated from central bank of Nigeria statistical bulletin, 2010 and National Bureau of statistics (NBS) form the period (1970-2010).

CHAPTER FOUR.

PRESENTATION AND ANALYSIS OF RESULT.

4.1 Presentation and Interpretation of Result:

TABLE 1

Dependent variable: Growth Rate Of Gross Domestic Product.					
Method: Ordinary Least Square.					
Period of study: 1970 – 2010					
Included Observations: 41					
Variable	Coefficient	Standard error	t-statistics	t-prob.	{95% Confidence Interval}
Constant	1.64733	0.5149781	3.20	0.003	0.6038853 2.690775
GEXP	0.3706984	0.3157561	1.17	0.248	-0.2690842 1.010481

LM2	0.6660841	0.2957697	2.25	0.030	0.0667978 1.265371
UNEMP	-0.054259	0.0266592	-2.04	0.049	-0.1082757 0.0002423
$R^2 = 0.9509$					
$F\{3, 37\} = 238.85 \{0.0000\}$					
$Adj R^2 = 0.9469$					
$DW = 2.144141$					
$Root MSE = 0.62294$ for 4 variables and 41 observations.					

From the above, the interpretation of the result as regard the coefficient of various regressors is stated as follows:

The value of the intercept which is 1.64733, shows that the Nigerian economy will experience a 1.64733 increase when all other variables are held constant.

The estimate coefficients which are 0.3706984 {GEXP} shows that a unit change in GEXP will cause a 0.3706984% increase in GDPGRT, 0.660841 {LM2} shows that a unit change in LM2 will cause

a 0.660841% increase in GDPGRT and -0.054259 {UNEMP} shows that a unit change in UNEMP will cause a 0.054259% decrease in GDPGRT.

4.2 Economic A priori Criteria:

The test is aimed at determining whether the signs and sizes of the results are in line with what economic theory postulates. Thus, economic theory tells us that the coefficients are positively related to the dependent variable, if an increase in any of the explanatory variables leads to a decrease in the dependent variable.

Therefore, the variable under consideration and their parameter exhibition of a priori signs have been summarized in the table below.

This table will be guarded by these criteria

When $\beta > 0$ = conform.

When $\beta < 0$ = not conform.

TABLE 2

Variables	Expected signs	Estimate	Remark
GEXP	+	$\beta > 0$	Conform
LM2	+	$\beta > 0$	Conform
UNEMP	-	$\beta < 0$	Conform

From the above table, it is observed that all the signs the parameters actually conform to the economic theories.

A positive relationship which exists between GEXP, LM2 and GDPGRT indicates that an increase in either GEXP and/or LM2 will result in a positive change in the Growth Rate of Gross Domestic Product. This conforms to the priori criteria because an increased or high GEXP and LM2 over the years will increase GDPGRT in the economy.

4.3 Statistical Criteria {First order test}

4.3.1. Coefficient of Multiple Determinants {R²}:

The R² {R-Squared} which measures the overall goodness of fit of the entire regression, shows the value as 0.9509 which is approximately 95%. This indicates that the independent variables accounts for about 95% of the variation in the dependent variable.

4.3.2. The Student's T-test:

The test is carried out, to check for the individual significance of the variables. Statistically, the t-statistics of the variables under consideration is interpreted based on the following statement of hypothesis.

H₀: The individual parameters are not significant.

H₁: The individual parameters are significant.

Decision Rule:

If $t\text{-calculated} > t\text{-tabulated}$, we reject the null hypothesis $\{H_0\}$ and accept the alternative hypothesis $\{H_1\}$, and if otherwise, we select the null hypothesis $\{H_0\}$ and reject the alternative hypothesis $\{H_1\}$.

$$\text{Level of significance} = \alpha \text{ at } 5\% = \frac{0.05}{2} = 0.025$$

Degree of freedom: $n-k$

Where n : sample size.

K : Number of parameter.

The t-test is summarised in the table below:

TABLE 3

Variables {t-value}	t-tab	Remark
GEXP {1.17}	± 1.960	Insignificant
LM2 {2.25}	± 1.960	Significant
UNEMP {-2.04}	± 1.960	Significant

The t-statistics is used to test for individual significance of the estimated parameters $\{\beta_1, \beta_2, \text{ and } \beta_3\}$. From the table above, we can deduce t-statistics for the coefficients of LM2 {2.25} and UNEMP {-2.04} are greater than the critical value of 1.960 {going by their absolute values}. This implies that LM2 and UNEMP are statistically significant. On the other hand, the t- statistics of GEXP {1.17} is less than the critical value of 1.960, signifying that GEXP is statistically not different from zero.

4.3.3. F-Statistics:

The F-statistics is used to test for simultaneous significance of all the estimated parameters.

The hypothesis is stated;

$$H_0: \beta_i = 0 \quad (i= 0, 1, \dots, n)$$

$$H_1: \beta_i \neq 0 \quad (i= 0, 1, \dots, n)$$

Level of significance: α at 5%

Degree of freedom: $\frac{k-1}{n-k}$

Decision Rule:

If the f-calculated is greater than the f-tabulated { $f_{cal} > f_{tab}$ } reject the null hypothesis { H_0 } that the overall estimate is not significant and conclude that the overall estimate is statistically significant.

From the result, f-calculated {238.85} is greater than the f-tabulated {2.84}, that is, $f_{cal} > f_{tab}$. Hence, we reject the null hypothesis { H_0 } that the overall estimate has a good fit which implies that our independent variables are simultaneously significant.

4.4 Econometrics Criteria.

4.4.1. Test for Autocorrelation:

One of the underlying assumptions of the ordinary least regression is that the succession values of the random variables are temporarily independent. In the context of the series analysis, this means that an error $\{U_t\}$ is not correlated with one or more of previous errors $\{U_{t-1}\}$. The problem is usually detected with Durbin-Watson $\{DW\}$ statistics.

Decision Rule:

- 1) If $d^* < d_L$, then we reject the null hypothesis of no correlation and accept that there is positive autocorrelation of first order.
- 2) If $d^* > \{4-d_L\}$, we reject the null hypothesis and accept that there is negative autocorrelation of the first order.
- 3) If $d_U < d^* < \{4-d_U\}$, we accept the null hypothesis of no autocorrelation.

4) If $d_L < d^* < d_U$ or if $\{4-d_U\} < \{4-d_L\}$, that test is inconclusive.

Where: d_L = Lower limit

d_U = Upper limit

d^* = Durbin Watson.

From our regression result, we have;

$$d^* = 2.144141, d_L = 1.338, d_U = 1.659$$

$$4-d_L = 2.662$$

$$4-d_U = 2.341$$

Conclusion:

Since $d_U \{1.659\} < d^* \{2.144141\} < \{4-d_U\} \{2.341\}$, we accept the null hypothesis of no autocorrelation positive or negative

4.4.2. Normality Test for Residual:

The Jarque-Bera test for normality is an asymptotic, or large-sample, test. It is also based on the ordinary least square residuals. This test first computes the skewness and kurtosis measures of the ordinary least square residuals and uses the chi-square distribution {Gujarati, 2004}.

The hypothesis is:

$$H_0 : X_1 = 0 \quad \text{normally distributed.}$$

$$H_1 : X_1 \neq 0 \quad \text{not normally distributed.}$$

At 5% significance level with 2 degree of freedom.

$$JB = n\left\{\left(\frac{s^2}{6}\right) + \frac{(k-3)^2}{24}\right\} = 17.20$$

$$\text{While critical } JB > \{X^2_{\{2\}}\text{df}\} = 5.99147$$

CONCLUSION:

Since $17.20 > 5.99147$ at 5% level of significance, we reject the null hypothesis and conclude that the error term does not follow a normal distribution.

4.4.3. Test for Heteroscedasticity:

Heteroscedasticity has never been a reason to throw out an otherwise good model, but it should not be ignored either {Mankiw Na, 1990}.

This test is carried out using White's general heteroscedasticity test {with cross terms}. The test asymptotically follows a chi-square distribution with degree of freedom equal to the number of regressors {excluding the constant term}. The auxiliary model can be stated thus:

$$U_t = \beta_0 + \beta_1 \text{UNEMP} + \beta_2 \text{GEXP} + \beta_3 \text{LM2} + \beta_4 \text{UNEMP}^2 + \beta_5 \text{GEXP}^2 + \beta_6 \text{LM2}^2 + V_i.$$

Where V_i = pure noise error.

This model is run and an auxiliary R^2 from it is obtained.

The hypothesis to the test is stated thus;

$$H_0: \beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = \beta_6 = 0 \text{ \{Homoscedasticity\}}$$

$$H_1: \beta_1 \neq \beta_2 \neq \beta_3 \neq \beta_4 = \beta_5 \neq \beta_6 = 0 \text{ \{Heteroscedasticity\}}.$$

Note: the sample size $\{n\}$ multiplies by the R^2 obtained from the auxiliary regression asymptotically follows the chi-square distribution with degree of freedom equal to the number of regressors $\{\text{excluding constant term}\}$ in the auxiliary regression.

Using stata software package saves us the above rigour by calculating the chi-square value.

Decision Rule:

Reject the null hypothesis if $X^2_{cal} > X^2$ at 5% level of significance. If otherwise, accept the null hypothesis. From the obtained results, $X^2_{cal} = 0.02 < X^2_{0.05 \{1\}} = 3.84$, we therefore accept the null hypothesis of homoscedasticity showing that the error terms do have constant variance.

4.4.4 Test for Multicollinearity:

The term Multicollinearity is due to Ragnar Frisch. Originally it meant the existence of a "perfect" or exact, linear relationship among some or all explanatory variables of a regression model. The tests were carried out using correlation matrix. According to Barry and Feldman {1985} criteria; "Multicollinearity is not a problem if no correlation exceeds 0.80".

TABLE 4

	UNEMP	GEXP	LM2	REMARK
UNEMP	1.000			-
GEXP	0.6735	1.000		Nm
LM2	0.6940	0.9924	1.000	Nm, M

Where M = Presence of multicollinearity

Nm = No multicollinearity.

From the above table, we can conclude that multicollinearity exists only between LM2 and GEXP.

CHAPTER FIVE

SUMMARY , CONCLUSION AND RECOMMENDATION.

5.1 SUMMARY

Unemployment is generally agreed to be symptom of macroeconomic illness, which could be “voluntary” or “involuntary”. Voluntary unemployment is a condition whereby one chooses not to work because he or she has means support other than employment. On the other hand, involuntary unemployment exist when persons are willing to work at the prevailing rate of pay but unable to find work.

Base on this, unemployment has different types such as frictional, seasonal, cyclical, and technological unemployment.

In Nigeria, Unemployment is regarded as one of the most challenging economic problem. A situation whereby the population

of a country grows faster than the job opportunities, that is birth rate is rising while death rate is falling and unemployment is bound to exist.

There had been also a total neglect of the agricultural sector and consequently mass exodus of able bodied youths moving from the rural to urban areas in search of non – existing white collar jobs.

5.2 CONCLUSION

From the research carried out on the impact of unemployment on economic growth in Nigeria from 1970 - 2010 using atrivariate ordinary least square, data shows that unemployment is negatively related to the economic growth.

The economic analysis of the findings in table 2shows that the variables under consideration confirm to apriority expectation of the economics theory. The statistical evaluation equally shows a higher level of statistical significant (table 2).

The evidence stems from the fact that the T- statistics on the variables shows that GEXP is insignificant while LM2 and UNEMP are significant as shown in table 3.

Based on this, the R^2 , which had a value of 95% indicate that the entire regression had a good fit and also explain that 95% fluctuation in the dependent variable is expended by fluctuation in the regression.

More so the F-test showed that the entire regression was adequate. More so, the summary of the whole regression as shown that overall regression is statistically significant implying a good fit.

The econometric finding shows that from then Durbin Watson test (DW) that all the variables under consideration were stationary at order. That is, the absolute values of DW statistics are greater than various critical values at 5%.

The normality test shows the residual is normally distributed at 5% level of significance. And the test for autocorrelation shows that there is no serial autocorrelation present in the model.

The test for multicollinearity , in table 4 shows that there is multicollinearity between the regressors. But has noted by Blanchard quoted by Gujarati (2004) a good model cannot be discarded due to multicollinearity. As well as test for heteroscedasticity conclude that the error term has a constant variance and that in the test specification errors is not wrongly specified.

From the evaluation of the forecasting performance of the model, it shows that the predictive power of the model is fairly robust and reliable.

Finally GDP growth does not cause unemployment but rather unemployment causes GDP growth.

RECOMMENDATION

In the light of the above empirical findings the analysis carried out so far, the following recommendations are proposed to the government in the issue of unemployment in Nigeria would be minimized.

1. There is need for the government to revitalize the agricultural sector, modern equipment in agricultural facilities is likely to entice the youths into that sector, since the sector have been left in the hands of the old men.
2. Government should formulate policy that will aim at discouraging gender discrimination in the labour market since this will provide more opportunities for the females in the labour market participation final.

3. Government should embark on provision of social amenities in the rural areas so as to reduce the urban –rural drift which have consequences of reducing the rate of unemployment.
4. There is need for government to restructure the educational system in a way it will lead to the youths with capability of self-reliance and self-employment.
5. Government should formulate monitoring policy to check the channel of increase government spending to find out why the huge spending has not transmitted into a viable economics growth.
6. The government should embark on social security program that would help in elevating the unemployment condition of the people in Nigeria.
7. There is equally an urgent need for more infrastructure facilities like expanding the telecommunication network to the rural pat

of the country, good roads and electrification projects which can create employment for the jobless citizens.

8. A conducive environment for foreign direct investment should be created to ensure Nigeria's full participation in the global business opportunities that would create job for the teeming population.

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APPENDIX

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Statistics/Data Analysis

StataCorp

4905 Lakeway Drive

College Station, Texas 77845 USA

800-STATA-PC

<http://www.stata.com>

979-696-4600

stata@stata.com

979-696-4601 (fax)

Single-user Stata for Windows perpetual license:

Serial number: 1910523509

Licensed to: econsdept, unn

Notes:

1. (/m# option or -set memory-) 1.00 MB allocated to data
2. New update available; type -update all-

```
. use "C:\data\replace1.dta"
```

```
. testyear,yearly
```

```
time variable: year, 1970 to 2010
```

```
delta: 1 year
```

```
. sumunemp GDPGRT Im2 _gexp
```

Variable	Obs	Mean	Std. Dev.	Min	Max
-----+-----					
unemp	41	7.653659	5.209515	1.9	21.1
GDPGRT	41	12.94409	2.703778	8.57189	17.18988
lm2	41	11.35662	2.815937	6.671526	16.21658
gexp	41	11.18853	2.568923	6.806719	15.24922

```
. regdw GDPGRT _gexp lm2 unemp
```

Source	SS	df	MS	Number of obs =	41
-----+-----					
				F(3, 37) =	238.85
Model	278.058486	3	92.6861619	Prob> F =	0.0000

Residual | 14.3581845 37 .38805904 R-squared =
0.9509

-----+----- Adj R-squared = 0.9469

Total | 292.41667 40 7.31041676 Root MSE = .62294

GDPGRT | Coef. Std. Err. t P>|t| [95% Conf. Interval]

-----+-----

gexp | .3706984 .3157561 1.17 0.248 -.2690842 1.010481

lm2 | .6660841 .2957697 2.25 0.030 .0667978 1.265371

unemp | -.0542590266592 -2.04 0.049 -.1082757 -.0002423

cons | 1.64733 .5149781 3.20 0.003 .6038853 2.690775

Durbin-Watson Statistic = 2.144141

```
. sktest error
```

Skewness/Kurtosis tests for Normality

----- joint -----

Variable	Pr(Skewness)	Pr(Kurtosis)	adj chi2(2)	Prob>chi2
-----+-----				
error	0.002	0.000	17.20	0.0002

```
. estathetest
```

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance

Variables: fitted values of GDPGRT

chi2(1) = 0.02

Prob>chi2 = 0.8958

. correlateunemp _gexp lm2

(obs=41)

| unemp _gexp lm2

-----+-----

unemp | 1.0000

_gexp | 0.6735 1.0000

lm2 | 0.6940 0.9924 1.0000

Year	unemp	gexp	m2	gdp
1970	4.8	903.9	789.6	5281.1
1971	5.3	997.2	971.9	6650.9

1972	5.2	1463.6	1055.8	7187.5
1973	5.2	1529.2	1266	8630.5
1974	4.6	2740.6	1753.7	18823.1
1975	3.8	5942.6	3031.3	21475.2
1976	4.3	7856.7	4510.6	26655.8
1977	4.9	8823.8	6147	31520.3
1978	5.3	8000	7392.8	34540.1
1979	5.1	7406.7	9185.8	41974.7
1980	6.4	14968.5	11856.6	49632.3
1981	5.2	11413.7	14471.2	47619.7
1982	4.3	11923.2	15786.7	49069.3
1983	6.4	9636.5	17687.9	53107.4

1984	6.2	9927.6	20105.9	59622.5
1985	6.1	13041.1	22299.2	67908.6
1986	5.3	16223.7	23806.4	69147
1987	7	22018.7	27573.6	1105223
1988	5.1	27749.5	38356.8	139085.3
1989	4.5	41028.3	45902.9	216797.5
1990	3.5	60268.2	52857	267550
1991	3.1	66584.4	75401.2	3121140
1992	3.5	92797.4	111112.3	532613.8
1993	3.4	233806.5	165338.7	683869.8
1994	3.2	160893.2	230292.6	899863.2
1995	1.9	248768.1	289091.1	1932212

1996	2.8	337217.6	345854	2702720
1997	3.4	428215.2	413280.1	2801913
1998	3.5	487113.4	488145.8	2708431
1999	17.5	947690	628952.2	3194015
2000	18.1	701059.4	878457.3	458127.3
2001	13.7	1018026	1269322	4725086
2002	12.2	1018156	1508173	6912382
2003	14.8	1225966	1952922	8487032
2004	11.8	1426201	2131820	1.14E+07
2005	11.9	1822100	2637914	1.46E+07
2006	12.3	1938003	3799538	1.86E+07
2007	12.7	2450897	5138701	2.07E+07

2008	14.7	3240819	8029089	2.43E+07
2009	19.7	3456926	9456480	2.48E+07
2010	21.1	4194218	1.10E+07	2.92E+07