FEDERAL UNIVERSITY OYE EKITI, EKITI STATE.

PROJECT ON

THE EFFECTIVENESS OF MONETARY POLICY ON UNEMPLOYMENT IN NIGERIA

(1970-2013)

BY

FRANCIS OLUWATOSIN ESTHER

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FACULTY OF SOCIAL SCIENCE AND HUMANITIES

FEDERAL UNIVERSITY OYE – EKITI, EKITI STATE.

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CERTIFICATION

This is to certify that this project work was originally carried out by FRANCIS OLUWATOSIN, a student in the department of Economics and development studies, with matric number EDS/11/0171, Federal University Oye Ekiti, Ekiti State.

SUPERVISOR

DR AMASSOMA, D

35/9/15

SIGNATURE

HOD
DEPT. OF ECONOMICS
& DEV. STUDIES
09 OCT 2015
FEDERAL UNIVERSITY, OYE-EKITI

HEAD OF DEPARTMENT

SIGN

DR CHRISTOPHER EHINOMEN

Date: 09/10/2015

SIGNATURE

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ABSTRACT

This research work addressed the effectiveness of monetary policy on unemployment in Nigeria. Monetary policy serves as the macroeconomic tool used to alter the negative outcomes in order to maintain viability and employment in the economy. The study objectives is to explain the effect of monetary policy on unemployment rate in Nigeria and to ascertain the extent of causality between the monetary policy variables and unemployment in Nigeria. Data spanning from 1970-2013 were utilized. The multiple regression (OLS) approach was used in the study to examine the effect of some key monetary policy variable on unemployment in Nigeria. The result shows that only exchange rate and consumer's price index are monetary variables that influence unemployment rate. The study went further to check for causality between key monetary policy variables and unemployment in Nigeria, the result show that there is unidirectional causality which runs from exchange rate to unemployment. It was equally discovered that causality does not exist between other monetary policy variables and unemployment. The study recommends that the monetary authorities should ensure reasonable monetary stand that will be suitable to reduce interest rate in an economy. Furthermore, they should also ensure price stability that will ensure sustainable investment that can enhance employment opportunities.

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND TO THE STUDY

Monetary policy has invariably been seen as an elementary instrument over the years for the attainment of macroeconomics stability. usually viewed as necessity to achieving sustainable growth. Thus, within the pursuit of macroeconomic stability, the managers of monetary policy have typically set targets on intermediate variables that embody the short term interest rate. growth of money supply and exchange rate. Among these intermediate variables of monetary policy, the exchange rate is argued to have a larger influence on the economy through its impact on the value of domestic currency, domestic inflation, the external sector, economics credibility. capital flows and money stability. Increased exchange rate directly affects values |the costs} of foreign commodities and a rise within the price of foreign merchandise and services contributes on to increase in inflation (CBN, 2008). Essentially the consequences of macroeconomic policy depend on the effective use of monetary policy on inevitable macroeconomic aggregates. It cannot be denied that the ability to achieve the staffed economic policy objectives such as non-inflationary growth, exchange rate stability, promoting financial sector soundness, mobilization and product use of resources, employment and output growth depend on the choice of appropriate mix of policy instruments.

The interest rates conjointly had a sway on the industries in no small part due to the marginal revolution in economic growth that shows however members of the general public would change a decision supported within the industrial trade-offs. Other instrument of monetary policy square measure the market rate of interest, the market rate of returns etc. In this research work, broad money supply, Treasury bill rate, consumer price index, monetary policy rate and exchange rate will be adopted to analyze the effect of monetary policy on unemployment in Nigeria. The term monetary policy is employed to explain the suggestion that a chief financial administrative body within a country tries to influence the flow of money among a specified economy through the initiation and promulgation of policies geared toward the overall stabilization of the economy. In

this respect, reducing unemployment in the country would be one of the principal goals of the monetary authority, a task that is usually reserved for the central bank in that country. As such, the connection between monetary policy and unemployment is the undeniable fact that monetary policy is used as a method for the regulation of the economy, one thing that essentially involves the reduction of unemployment. To this end, monetary policy may either be an expansionary one or it is going to be crafted to be contractionary. Consequently, this link between monetary policy and unemployment is most apparent, due to the fact that expansionary monetary policy is specifically geared toward making unemployment rates to be kept at the barest minimum, particularly once the economy is or could presently be in an exceedingly recession.

A further associate degree analysis of the relationship between monetary policy and unemployment can reveal that one in all the monetary policies adopted by the apex bank inside an economy into account to lower the rates of unemployment could be a reduction of the interest rates. This is done by the regulatory bank with the intention that the reduced rate can have a ripple impact on the economy, eventually resulting in hiring employees and neglecting unemployment, particularly in an exceedingly recession. Usually, once the Apex bank reduces its interest rates, the other banks within the economy can function as a vehicle for the implementation of the monetary policy by conjointly reducing their own interest rates and relaxing some of their conditions for the approval of loans to people and businesses alike. This can be seen within the manner during which the interest rates connected to the acquisition and utilization of credit are reduced, creating it more likely that various businesses can have access to much-needed loans for expansion as well the maintenance and growth of the business.

The link between monetary policy and unemployment here is that the power of the companies to realize easier access to loan and credit facilities can function as a method for them not to solely continue their operations, but to also function as a room for expansion. Where this is often the case, such businesses would not have the cause to extend the speed of unemployment by shedding their employees in times of economic downturns. The contrary is that the aim within the applying associate expansionary financial policy since this can function as a method for the companies to not solely retain their staff, however to conjointly rent additional owing to a probable enlargement.

1.2 STATEMENT OF THE RESEARCH PROBLEM

The monetary policy enforced within the economy over the past years has been detrimental to and inconsistent with the departmental need of the economy (Apata, 2007). This concern has exerted pressures on the national monetary authorities in Nigeria to re-examine and re-evaluate their domestic monetary policies with the view of finding possible solutions. As a result of this, the Structural adjustment programme was introduced in Nigeria in 1986 so as to correct structural imbalances within the economy and to liberalize the national economy. In guaranteeing optimum growth in liquidity for meeting desired growth and balance of payment objectives and at a similar time come through economic stability. However despite all effort place in situation to boost and increase the amount of each national output (i.e. Gross Domestic Product) and employment in Nigeria, very little may be shown for the efforts that have been put in place by the government towards economic growth and development in African nations at large especially in Nigeria. Government through the monetary authority has been controlling the money supply in circulation to stop inflation and deflation within the economy, and maintain a balanced growth and development in Nigeria. Yet the distortion still exists. The main problems of this research work is based on the area of detecting the relationship between monetary policy and unemployment rate despite the increase in money supply and all other instruments of monetary policy in Nigeria. Therefore this research work will want examine the effect of some key monetary variables like (Exchange Rate, Treasury bill, Broad Money Supply, Monetary Policy Rate, Consumers Price Index) on unemployment in Nigeria.

1.3 OBJECTIVES OF THE STUDY

This research work is meant to measure the effectiveness of monetary policy via (M_2, exchange rate, treasury bills, monetary policy rate, consumers price index) on unemployment in Nigeria from 1970 – 2013. The effect on monetary policy instruments will be measured on employment rate. This being the broad objective of this work. But for analytical purposes, the following shall be the specific objectives of the research work:

I. To investigate the effect of monetary policy on unemployment rate in Nigeria

II. To ascertain the extent of causality between the monetary policy variables and unemployment in Nigeria

1.4 RESEARCH HYPOTHESIS

Below are the hypothesis formulated for the purpose of this research work.

Ho; Broad money supply has not effectively increased unemployment in Nigeria.

H_1; broad money supply has effectively increased unemployment in Nigeria.

H_0: Exchange rate has not effectively increased unemployment in Nigeria.

H_1; Exchange rate has effectively increased unemployment in Nigeria.

H_0: Monetary policy rate has not effectively increased unemployment in Nigeria.

H1: Monetary policy rate has effectively increased unemployment in Nigeria.

1.5 SIGNIFICANCE OF THE STUDY

This research work is aimed at measuring the effect of monetary policy on unemployment rate in Nigeria from 1970-2013. This research work is of great importance to the monetary authorities' in order to know the step that are required to decrease the level of unemployment in Nigeria and to ascertain how previous monetary policy has been able to perform, and make necessary checks where possible.

1.6 SCOPE OF THE STUDY

The scope of this research work encompasses government monetary policy instruments (i.e. M2, EXR, MPR, CPI and TBR) between the periods of 1970-2013 with its effectiveness on unemployment in Nigeria. The reason for this specific period of time is that data that are gather by the researchers are limited to this period of time. Much of data to be use are from Central Bank of Nigeria (CBN) which will be used for monetary policy while the unemployment rate data will be from Nigeria Bureau of statistics. Other related data will be from statistical bulletin and World Bank Annual Reports.

1.7 ORGANIZATION OF THE STUDY

Following the introduction, this will also include an overview of the effectiveness of monetary policy on unemployment in Nigeria between 1970-2013. Chapter two will review both the theoretical and empirical literature pertaining to the effectiveness of monetary policy on unemployment in Nigeria. Chapter three shall discuss the methodology and the sources of the data to be used in this study. Chapter four shall estimate the regression model and interpret the results. The project key findings, policy recommendations, suggestions for further research and conclusion would be contained in Chapter five.

1.8 DEFINITION OF TERMS

MONETARY POLICY: Monetary policy is the macroeconomic policy laid down by the central bank. It involves management of money supply and interest rate on the demand side of economy policy used by the government of a country to achieve macroeconomic objectives like inflation, consumption, growth and liquidity. (The economic times.com, 2012).

UNEMPLOYMENT: Total number of able men and women of working age seeking paid work. Unemployment statistics vary according to how unemployment is defined and who is deemed to be part of the workforce. Traditional methods for collecting unemployment data are based, typically, on sampling or the number of unemployment benefit requests. International labor organization (ILO) computes unemployment on the basis of number of people who have looked for employment in the last four weeks and are available to start work within two weeks, plus those who are waiting to start working in a job already obtained. (Business dictionary.com)

CHAPTER TWO

LITERATURE REVIEW

2.0 INTRODUCTION

The debate on relative effectiveness of monetary policy on unemployment is not a new issue in Nigeria which has been examined by other researchers. Literature update is a necessary part of system inquiry. It involves recognition, formulation of drawback, assortment information, experiment and testing of hypothesis. Literatures are review in other to ascertain the state of data within the subject into consideration. This section examines the relevant interaction to explain the effectiveness of monetary policy on unemployment in Nigeria.

2.1 CONCEPTUAL ISSUES

2.1.1 Definition of monetary policy

Monetary policy is outlined by the Central Bank of Nigeria (CBN) 2004 as combination of measures designed to manage value supply and price in Associate in nursing economy, in consonance with the extent of economic activities. Odufalu (1994) outlined monetary policy as the combination of measures taken by financial authorities (e.g. the CBN and also the ministry of finance) to influence directly or indirectly each of the availability of cash and credit to the economy and also the structure of interest rate for economic process, value stability and balance of payment equilibrium. He added that the CBN is empowered by 25 degree of 1991 Act, to formulate and implement monetary policy in Nigeria, in consultation with the ministry of finance subject to the approval of the President. Onyido (1993) sums it up once he aforesaid that monetary policy is so applied to influence |the provision} and price of credit so as to regulate the money supply policy. He usually describe the action taking by the monetary organization as victimization tools / instrument at its disposal to influence monetary conditions. These goals would usually embody price stability, monetary condition, high economic process rate and balance of payments equilibrium. The practice of monetary policy victimization tools / instruments to control the amount of money offer to realize stability within the economy is predicated on the premise that there's a stable relationship between the amount of money equipped in associate degree economy and economic activities. Even if, the way and manner with which the financial organization regulates its funds vary from place to place, the approach will be divided into 2 main groups. The first group advocates that monetary policy should target

price stability as its single important objectives. The other macro-economic goal agitates for due regulation of money supply and extension in the control of persistent price increase to ensure sustainable and balance development in the economy, Onyido (1993).

2.1.2 Definition of Unemployment

Pettinger (2010), Define unemployment as a situation where someone of working age is not able to get a job but would like to be in full time employment. One area is voluntary unemployment. This happens once the unemployed choose not to take employment because the going wage rate (e.g. wrong job, advantages too high etc.) they may be counted as unemployed as a result of they are still seeking employment they simply do not wish to require one they're offered. Each month; the federal governments Bureau of Labor Statistics indiscriminately surveys 60,000 people round the nation. If respondents say they are each out of labor and seeking employment, they are counted as unemployed members of the labour force. Idle respondents have chosen not to continue longing for work are thought-about out of the labour force and so aren't counted as unemployed. Almost half all state spells finish as a result of folks leave the labour force. Ironically, people who drop out of the labour force as a result of they are discouraged, have family responsibilities, or are sick really create per centum look better; the unemployment rate includes solely folk intervals labour force that are out of labour. Not all unemployment is the same. Unemployment are often long run or short term. It can be frictional, which means somebody is between jobs; or it may be structural, as when someone's skills are no longer demanded as a result of a modification in technology or a business downswing.

2.1.3 Types of unemployment

- **Frictional Unemployment**

Frictional unemployment is another type of unemployment within an economy. It is the time period between jobs when a worker is searching for or transitioning from one job to another. Frictional unemployment is always present to some degree in an economy. It occurs when there is a mismatch between the workers and jobs. The mismatch can be related to skills, payment, work time, location, seasonal industries, attitude, taste, and other factors. Frictional unemployment is influenced by voluntary decisions to work based on each individual's valuation

of their own work and how that compares to current wage rates as well as the time and effort required finding a job. (Boundless.com)

- **The Natural Unemployment Rate**

The natural unemployment rate, sometimes called the structural unemployment rate, was developed by Friedman and Phelps in the 1960s. It represents the hypothetical unemployment rate that is consistent with aggregate production being at a long-run level. The natural rate of unemployment is a combination of structural and frictional unemployment. It is present in an efficient and expanding economy when labor and resource markets are at equilibrium. The natural unemployment rate occurs within an economy when disturbances are not present. (Boundless Economics.com)

- **Structural unemployment**

Structural unemployment is usually caused by technological changes that create the task skills of the many of today's employees obsolete, and might be addressed by either providing better information to the employees who are structurally idle or by retraining these employees to fill new jobs that are in higher demand within the economy. As an example, within the 1970s automobile assembly lines an employed person to make welds on cars being produced. When automation replaced those workers with robots within the 1980s, there was no longer the same demand for welders among manufacturers in the automobile producing states. However, at the same time, there was a strong demand for welders in other sectors of the economy (such as the oil industry) and in other parts of the country (such as America and the Oil Patch states). If welders laid off in the auto industry were informed of these job opportunities (and were sufficiently mobile) they could find employment and would no longer be employed. Another way of addressing structural unemployment would be preparation of employees with obsolete job skills to figure in fields that require employees with a special set of skills. When welders on automobile assembly lines were replaced by robots, the demand for welders went down, however the demand for individuals to keep up and program automobile line robots went up. Employee who lost their jobs as welders on assembly lines once robots were introduced may well be retrained to keep up and program those same robots. Those employees who were successfully

retrained to keep up and program line robots would not be laid-off, and less structural unemployment would exist within the economy.

- **Cyclical unemployment**

Cyclical unemployment refers to a state in which an individual loses his or her job as a result of downturns. It generally happens once the economy contracts, as measured by Gross Domestic Product (GDP). If the economy contracts for 2 quarters or additional, then it's during a recession: Circular unemployment is typically the reason for high unemployment, once rates quickly grow to 8% or maybe 10% of the labour. It's referred to as circular as a result of, once the economy re-enters the enlargement section of the variation, the leisure can get rehired. Circular unemployment is temporary though it may last anywhere from eighteen months (the typical timeframe of a recession) to 10 years. (useconomy.about.com)

- **What can kick off the economic downturns that result in cyclical unemployment?**

Often, it's a stock market crash, such as the crash of 1929, the tech crash of 2000, and the financial crash of 2008. A bad crash can cause a recession by creating panic, and subsequent loss of confidence in the economy. Businesses suffer a loss of their net worth as stock prices fall; Even before demand in the general economy falls, they can lose their ability to raise capital to grow and expand. As stock market wealth evaporates, consumers delay purchases, waiting to see if confidence returns. If it does, as happened in the 1987 stock market crash, then economic growth resumes and cyclical unemployment doesn't get started. However, if confidence continues to erode, lowered demand forces businesses to lay off workers, resulting in cyclical unemployment. Follow the cycles in U.S. Unemployment Rate by Years. (useconomy.about.com)

- **Effects of cyclical unemployment**

Unfortunately, cyclical unemployment can become a self-fulfilling, downward spiral. That is because the newly unemployed now have less disposable income to spend. This further lowers demand and business revenue, leading to even more layoffs. Without intervention, this spiral will continue until supply has dropped to meet the lowered demand. Unfortunately, this may not

happen until unemployment reaches 25%, as happened during the Great Depression. It could also take a decade, as the Depression did. In fact, the only thing that truly ended the Depression was demand for military equipment production as the U.S. entered World War II. This massive fiscal spending resulted in an increase in the U.S. debt. (useconomy.about.com)

2.2 LITERATURE REVIEW

Monetary policy refers to the combination of measures designed to regulate the value, supply and cost of money in an economy, to match with the level of economic activities. It may also be described as the act of dominating the direction and movement of monetary policy and credit facilities in pursuance of stable value and economic growth in an economy; CBN (1992). Monetary Policy provides a logical relationship between its variables stipulated to affects the outcomes relating to the monetary institution by applying these tools to manage the cash creation, targeting the speed of interest to manage the pace of monetary circulation. The target is to stabilize internal and external value of the currency. The first goal of monetary policy to him is to make sure that money supply is at the level that according to the expansion rate are ensured. While not refined words, the literatures stipulate that the consistent of value stability thus encompasses all main areas during which the financial institution will contribute towards stabilizing the political economy surroundings of the country.

Another impulsive proof is that the one from the monetary press in Federal Republic of Nigeria as reportable by Saint Christopher (2006) that investors usually believe that monetary policy and political economy events have an outsized influence on the unpredictability of the stock value, that more implies that political economy variables might exert shocks on share returns and thenceforth influence inventors investment decision. The study found proof that monetary policy innovations have each real and nominal effects on economic parameter counting on the policy variable chosen. Kuttner, (2001) examines the impact of monetary policy actions on the bill, note, and bond yields, using U.S. Fed funds futures rates as a live of expected element of policy changes to separate expected and surprising elements changes within the target funds. Kuttner finds that rate of interest markets response to the anticipated part of monetary policy changes is little whereas its reaction to the unlooked for surprises is massive and extremely important. He contends that the failure of previous studies in documenting the shut link between monetary

policy actions and market reactions is due to the shortcoming to disentangle the anticipated element of the about face from the unlooked for element.

The impact of exchange rate regimes and exchange rate movements on inflation and growth has additionally been mentioned in several empirical studies of developing countries. However the findings of those studies disagree and can't be generalized. On inflation, there's a broad agreement regarding the role of monetary growth either as a main actuation behind inflation or otherwise, as a necessary part in accommodating inflation triggered by alternative factors. However, the impact of nominal exchange rate flexibility on inflation is additional ambiguous. All empirical researches ensure that depreciations of nominal exchange rate are related to temporary increase in shopper costs (Akinbobola 2012). In African nation as in different developing countries, the objectives of monetary policy embrace economic condition, domestic value stability, adequate economic process and external sector stability.

Over the years, Nigeria monetary policy has undergone profound changes. It gone from associate era of direct to indirect instrument of monetary management. Before the Structural Adjustment Programme (SAP) that started in 1986. Monetary management depended chiefly on the direct financial instruments like credit ceilings, selective credit, exchange rates, interest rates, money reserve necessities and special deposit. Monetary policy ought to be complemented with coordinated economic policy however past studies have unconcealed that the effectiveness of monetary policy was hindered by the pursuit of expansionary economic policy. Owing to this, the result of monetary policy was stricken by body controls that concerned the fixing of basic costs like interest rate and exchange rate at below market level. Despite numerous actions employed by the financial authorities in administering monetary policy in Federal Republic of Nigeria, there are still limits to the effectiveness of monetary policy. There has been a large discrepancy between target and outcome as a result of the very fact that the financial organization has not been ready to bring home the bacon of objectives set for itself. As an example, the target for money supply was fastened at 10.2 % in 1998 however money supply rose by 2% that year. In 2001, money supply target rate of growth was 4.3% however rose by 28.1%. Identical pattern of failure is ascertained for money supply (broad money) series. There has been a drag conjointly touching the inflation target. As an example, the target for inflation in

2007 was 7%however the performance was regarding19%. Monetary policy conjointly strives to stabilize production and employment around long-run property ways.

The mechanism that is assumed to produce this link between inflation and unemployment is that wage agreements are supported by expectations that inflation are 2%. The very fact is that inflation has after been lower has junction rectifier to higher real wages, and lower employment, than supposed. It is a typically accepted read that an additional expansionary monetary policy ends up in higher inflation and quickly lower unemployment.

2.3 THEORECTICAL FRAMEWORK

2.3.1 THEORIES OF MONETARY POLICY

- **The Keynesian monetary policy**

The essential element of Keynesian economics is the idea that the macro economy can be in disequilibrium (recession) for a considerable time. Keynesian economics advocates government intervention to help overcome the lack of aggregate demand to reduce unemployment and increase growth. Keynes does not agree with the older quantity theorists that there is a direct and proportional relationship between quantity of money and prices. According to him, the effect of a change in the quantity of money on prices is indirect and non-proportional. Keynes complains that economics has been divided into two compartments with no doors or windows between the theory of value and the theory of money and prices. This dichotomy between the relative price level (as determined by demand and supply of goods) and the absolute price level (as determined by demand and supply of money) arises from the failure of the classical monetary economists to integrate value theory with monetary theory According to him, the problems of the real world are related to the theory of shifting equilibrium whereas money enters as a "link between the present and future". Keynes's Reformulated Quantity Theory of Money:

The Keynesian reformulated quantity theory of money is based on the following:

Assumptions:

- All factors of production are in perfectly elastic supply so long as there is any unemployment's
- All unemployed factors are homogeneous, perfectly divisible and interchangeable.

- There are constant returns to scale so that prices do not rise or fall as output increases.
- Effective demand and quantity of money change in the same proportion so long as there are any unemployed resources.

Given these assumptions, the Keynesian chain of causation between changes within the amount of cash associated in costs is an indirect one through the speed of interest. Therefore once the amount of cash is exaggerated, its 1st impact is on the speed of interest that tends to fall. Given the marginal potency of capital, a fall within the rate of interest can increase the amount of investment. The exaggerated investment can raise resultant demand through the multiplier factor effect thereby increasing financial gain, output and employment. Since the provision curve of things of production is absolutely elastic in an exceedingly scenario of state, wage and non-wage factors are obtainable at constant rate of remuneration. There being constant returns to scale, costs does not rise with the rise in output as long as there is any unemployment. Below the circumstances, output and employment can increase within the same proportion as effective demand, and therefore the effective demand can increase within the same proportion with the quantity of money. But once full employment is reached, output ceases to retort the least bit to changes within the supply of money and then in effective demand.

The elasticity of supply of output in response to changes within the supply that was infinite as long as there was unemployment falls to zero. The whole result of changes within the supply of money is exerted on costs that rise in precise proportion with the rise in effective demand. So long as there is unemployment, output can change within the same proportion because the quantity of money, and there will be no change in prices; and once there is full employment; costs can change within the same proportion because of the quantity of money. Therefore, the reformulated amount theory of money stresses the purpose that with increase within the quantity of money costs rise only if the amount of full employment is reached, and not before this. Keynesian himself discovered that the important world is thus difficult that the simplifying assumptions, upon that the reformulated quantity theory of money relies, will not hold. In line with him, the subsequent potential complications would qualify the statement that as long as there is unemployment, employment can change within the same proportion because of the quantity of money, and once there is full employment, price can change within the same proportion because of the quantity of money. Tily (1993)

➢ The classical monetary theory

The classical faculty evolved through combined efforts and contribution of economists like Jean Baptist Say, Smith, Richardo, Pigou. The classical model makes an attempt to clarify the determination, savings and investment with reference to money. The classical model on says law markets that states that supply creates its own demand. Therefore classical economists believe that the economy mechanically tends towards full employment level by birth stress on index and on however best to eliminate inflation (Amacher and UIbrich, 1986).

➢ The monetarist view

The monetarist view argue that solely financial matters in associate degree economic which economic recessions and expansions are caused by decrease and increase in funds severally. They emphasize that the expansion rate of money is that the principal determinant of the behavior of national income. This view relies on variety of historical studies allotted by Friendman and Schwarz, Friendman and Meiselman, Anderson and Jordan of the FRS Bank of Saint Price fighter. These studies reveal that there is an awfully shut relationship between funds than between value and any of the economic expert variables like combination expenditure. Although the monetarists have tried to enforce their position on the idea of empirical studies nevertheless they are skeptical concerning the success of monetary policy in distinction of economic policy. They agree that as associate degree economic stabilizer, monetary policy could do a lot of damage than sensible attributable to the operational lag.

The operational lag refers to the time elapsing between taking of associate degree action and also the effective impact of that action on the economic state of affairs. On the common it takes long term for an amendment within the cash in hand to affects value thus additionally the operation lag. Milton Friedman himself admits that the intermission concerned is thus giant that contrary diurnal monetary policy may even have destabilizing result on the economy. The economist thus, hold that the economy is essentially stable and once disturbed by some changes in basic conditional can quickly revert to its end of the day growth path. It is on this basis that the monetarists advocate associate degree mounted proportion growth within the cash in hand and a finish to discretionary monetary policy. Milton Friedman thus, believes that economic policy

might not have any potent influence on the economy except that it affects the behavior of money. Oladipo (2013)

2.3.2 THEORY OF UNEMPLOYMENT

- **UNEMPLOYMENT IN THE CLASSICAL ECONOMIC THEORY**

The classical theory, as analyzed by Pigou (1933) and Solow (1981), argues that the marketplace consists of demand and supply of labour. Demand for labour could be a derived demand, obtained from the declining portion of the marginal product of labour. The demand curve could be a negative perform of real wage in that if wages increase the amount demand for labour can decline and therefore the opposite is correct. The supply of labour springs from worker's alternative whether or not to pay a part of time operating or not operating (leisure). offer of hours worked may be a positive perform of the $64000 wage, as a result of if the $64000 wage rises, staff offer additional hours of labor. In equilibrium, demand and supply of labour are intersected at a clearing purpose that determines the equilibrium real wage rate and full employment.

Unemployment, Sweezy (1940) explaining Pigou's Theory of Unemployment, "apart from frictional obstruction would be nonexistent if it were not for the fact that wage-earners habitually stipulate for a rate of wages higher than the 'equilibrium' level." Full employment does not mean that there is no unemployment. Still frictional unemployment will exist at the going real wage rate. As an example, if an employee thinks that the disutility of labour is bigger than the advantage of work or the utility of the $64000 wage, this employee can decide to not work. This sort of unemployment is termed voluntary unemployment. Frictional unemployment arises attributable to the dynamic nature of the labour markets, the supply of knowledge, the rummage around for higher jobs, and random fluctuations in demand for labour like closing of a plant and of gap of a replacement plant. Length of frictional unemployment is set by the unemployment insurance advantages and also the speed of the data. Wicksell thinks that if wages square measure sufficiently versatile downward, then this decline will maintain full employment (Jonung 1989). Cheaper credit to businessmen is the simplest measure to fight unemployment. He even thought that the government ought to support non-public investment in housing and soils. Government will support the introduction of assorted inventions additionally. Government support should be supported by taxation.

Wicksell analyzes technical unemployment owing to technological amendment also. The introduction of machinery would cause unemployment however the fired can seek for new jobs, a search that may push wages downward. Hence, full employment is rehabilitated once more. For the traditional (frictional) unemployment, Wicksell thinks that advertisements and employment agencies will reduce the traditional rate of unemployment. The cyclical unemployment, as another form of unemployment, is owing to the shortage of effective demand. He thought it would be a decent plan to lift wages so as for staff to shop for more. However this action might cause staff to lose their jobs as a results of higher wages.

Basically, for Wicksell the cyclical unemployment was owing to the incorrect investment of capital. Capital was endowed in areas where rates of return were low. He concluded that construction is the best measure to fight cyclical unemployment. After World War I, Wicksell thinks the boom and the rise in price induced by the war would come to an end. Therefore unemployment would rise. Staff have to settle for lower wages. He additionally thought that government should give source to the unemployed who could not get jobs. After 1921, Wicksell turns to Thomas Malthus. He thought that the causes of the unemployment are the surplus people, shortage of capital led to by the war, and the scrambled unemployment of the monetary system. For the third cause, when the war price were falling and producers determined to supply lower amounts of production as a result of they knew they might receive lower costs for his or her product. Thus, they let their money set idle in banks and employees became idle. These causes counsel that out-migration became one amongst the vital policies for determination of unemployment downside. Wage reduction is not a competent policy to extend employment. The rise in wages is possibly owing to exaggerated labour productivity and wage reduction can scale back work intensity and productivity. Wage reduction will not force some capital intensive companies to change to labour intensive techniques within the short run. Higher wages ought to stimulate the substitution impact by using additional machines for labour. And this substitution will increase labour productivity and employment in the long run.

Hayek (Nishhiyama and Leube 1984) contends that unemployment is due to a discrepancy between the distribution of labour between industries and the distribution of demand among their producers. This discrepancy is caused by a distortion of the system of relative price and wages. In alternative words, the unemployment is caused by a deviation from the equilibrium price and

wages which might establish themselves with a free market and stable money. This can be truly a pair between demand and supply of labour that is typically caused by expansionary financial and monetary policies and powerful trade unions. These policies produce economic dislocation and structural changes in an economy that misdirect labor and other economic resources to alternatives. Unions also are able to set higher wages compared to plug wages that generate unemployment, notably in industries that become less profitable. In short, for Hayek the unemployment drawback is caused by resources being in the wrong places at the wrong time and may be corrected if wages and price are determined by the equilibrium of supply and demand. In line with Hayek theory of unemployment,

Trehan (2001) provides a crucial clarification of the search theory of unemployment. Firms look for the productive employees and employees look for high-paying jobs. So, each agents continue looking out till matches area unit reached. At that time an employee will leave the unemployment pool. however if an employee realizes in a while that her productivity value higher wages and corporations area unit paying high wages on the common, then the employees reservation wage will increase.

Consequently, the unemployment rate will begin to rise, indicating a mismatch has occurred once more. Originally, this theory was developed by the German economist Von Mangold Ekelund and Hebert 2007 wrote a book concerning entrepreneurial profits in 1855 and connected profits to risk. He provided several ways by which the business man will build profits. These ways are (1) finding explicit markets, (2) acquisition of productive agents, (3) skillful combination of things of production, (4) successful sales policy, and (5) innovations. And it is well understood proposition that entrepreneurial profits will increase employment (Mouhammed, 2010). Joseph Alo is Schumpeter (1934) does not give expressly theory of unemployment but his theory of the fluctuation demonstrate clearly how unemployment are often reduced. Innovation (see also Vecchi, 1995) that creates additional jobs relative to job destruction is that the basic force beyond the increase in employment and the decreases in employment. When entrepreneurs introduce one thing new like the assembly of a replacement product, the finding of a replacement market, the finding of a replacement technique of production, and the introduction of latest technologies and a replacement organization, they increase investments to materialize those innovations.

Domestic investment expenditures will increase demand on economic resources and will increase their price. Others entrepreneurs will imitate the leaders by adopting the new innovations. Labour and materials will be used to provide the new items. Consequently, wages will increase and unemployment will decline, assuming that employment creation will outweigh employment destruction due to the new innovations (Mortensen, Pissarides 1998 and Manuelli 2000). Economic expert started his analysis by explaining economic development. By development, that is the essential a part of his endogenous dynamic political economy, Schumpeter (1934) means that the changes in economic life are not forced upon it from without but arise by its own initiative, from within. Economic development that reflects new changes printed below is not a development which will be explained by economic forces solely, but it is to be explained by different forces that are external to those analyzed by theory. For Schumpeter (1934), economic development generates changes within the socio-economic surroundings, together with the present equilibrium. As he puts it, development is spontaneous and discontinuous modification within the channels of the flow, disturbance of equilibrium that forever alters and displaces the equilibrium state antecedently existing.

The essential propulsion for generating development is innovations introduced by the entrepreneurs whose leadership becomes the triggering device for the discontinuous dynamic changes. Innovations begin by the producer [not consumer] who as a rule initiates economic modification, and consumers educated by him if necessary (Schumpeter 1934). It follows that economic development is outlined by the completing of latest mixtures that are triggered by the business entrepreneur and appeared discontinuously (Schumpeter 1934). And the outcomes of those mixtures welcome by the consumers who laid low with the entrepreneurial leadership. That is, leadership becomes the cause to consumers and alternative imitating producers. Throughout the method of economic development the economy is drifted toward a boom that is followed by a worsening, or a recession.

Schumpeter contends that during the early period of the prosperity phase of the business cycle, the new innovating firms generate a higher demand for economic resources which must come from other industries. However, associate innovative firm means that it is able to turn out per unit of a product at a smaller price (Schumpeter 1928). At constant time the innovative corporations begin commercialism the new product at cheap price, reflective the economic

power of those innovative enterprises. Given the low price of production, the cheap price can generate higher revenues and surpluses that embody profit. The profit, however, could be a temporary development. This can be as a result of some older corporations become tailored to the new conditions and innovations and will be able to imitate the ways and also the product of the leading innovative enterprises. On the one hand, demand for economic resources will rise, thus will their price and also the price of production. Price per unit of output can increase. On the opposite hand, the big volume of production can lower the price, as corporations lose their economic power for setting higher price for his or her product. Consequently, as prices rise and revenues decline, profits will be eliminated, and liquidation will follow. Pessimism emerges and also the laissez-faire economy moves toward a recession or a depression Revival will begin once more when new swarms of innovations square measure initiated by some entrepreneurs Business enterprises whose leader' square measure artistic will establish their economic power once more for setting higher price for low price production. Profits will be rising, thus will investments and employment. Primarily, Schumpeter's theories of economic development and also the fluctuation square measure supported the business man and his artistic leadership and responses.

Economic expert emphasizes the very fact that innovation means that artistic destruction, destroying previous product, firms, markets, making new product, and technologies that generate secondary waves. Innovation may be a matter of entrepreneurial leadership and individual initiatives (Schumpeter 1928). The entrepreneurial artistic responses, Schumpeter (1947) argues: does not seem to be sure but are generating vital changes for a protracted amount of your time: Hence, entrepreneurship consistent with Schumpeter (1947) is that the mechanism of economic modification, and the business men is one that gets things done and controls the resistance and difficulties facing her business operations. In fact, the business men is the force behind economic and institutional changes like technologies, products, contracts, property, labour relations, rules, security, and freedom.

➢ UNEMPLOYMENT IN THE THEORY OF EFFECTIVE DEMAND

(Veblen 1995) points out that the quantity of output is about to realize a satisfactory profit and will be a manifestation of the predatory instinct of the unconditional interests that aim at domestic and international dominance. But how is this volume of production determined to realize affordable profits Veblen offers a plain answer. He accurately realizes, and before Lord

economic expert reaches an analogous conclusion, that unconditional interests verify the quantity of output when taking into thought the mixture demand. As (Veblen 1904) explains partly by actual increase of demand and partly through an active anticipation of a complicated demand, aggressive commercial enterprise extends its venture". And the venture, of course, suggests that extending production and operations, forward the existence of an affordable level of profits.

The extent of mixture demand will increase in total revenues. On the opposite face, the value of production needs to decline. If revenue rises and price declines, then the affordable level of profits will be found. There are varied forces in Veblen's work that scale back the value of production. Technology will increase production and scale back the value of inputs utilized in the assembly method, and enterprises cut wages and increase productivity so as to chop price per unit of output. Better technology can scale back the costs of capital merchandise, and government will cut taxes. Banks will cut back the interest rates likewise. Body and insurance value is declined so as to stimulate business enterprises. The decline in prices, given rising revenues, will increase the profit level for Veblen. Consequently, higher profits will force the business enterprises to expand and use additional employees. Thus, employment will increase and therefore the rate of unemployment will decline.

Keynes (1936) considers unemployment as associate degree involuntary development. He thinks that employment is cyclical, generated by the deficiency of mixture demand (Mohammed 2010). Capitalists rent employees and invest to provide output once the expectations concerning the economy and profits favorable. If expectations concerning the longer term supported by reality, investments and employment continue rising till equilibrium is reached. This equilibrium is earned by the intersection of the mixture demand and supply the purpose of the effective demand which can be but the complete employment equilibrium. If expectations concerning the longer term of the economy does not seem to be favorable, capitalists invest less and use less variety of employees. Hence, the equilibrium is achieved where cyclical unemployment exists. This unemployment is owing to the deficiency of the mixture demand, significantly investment expenditures. In line with Keynes teaching, Davidson (1998), a representative of Post economist economic science, argues that involuntary unemployment is explained by insufficiency of effective demand, instability of exchange rates, and international quality of finances that produce

uncertainty that weakens entrepreneurial confidence to form investments to scale back unemployment. Similarly, alternative Keynesians.

➢ UNEMPLOYMENT IN THE REAL BUSINESS CYCLE THEORY

It is argued during this theory in line with Chatterjee (1995), that the expansion of productivity of input that revolutionizes technology is the main supply of employment and unemployment. The author expressed that if the expansion of output will increase over the expansion of inputs; then total issue productivity or the residual, has inflated. If total issue productivity is not growing, then corporations and also the economy become inefficient. It follows that reallocation of labour and capital cannot be achieved and labour and capital are employed in less profitable opportunities. There are varied causes for the lag in total issue productivity.

Technology is not up within the production of products and services and employees skills are not being increased. New merchandise are not fictional and once the price of foreign materials increasing. Once total issue productivity is stagnating, the co-movements in different vital variables can lag. For instance, consumption expenditures will not increase on top of the trend; nor can investment disbursement. Value and total hours worked will not be on top of the trend either. once consumption, investment, GDP, and hours of labour decline, the Solow's residual, that represents the expansion burning productivity and is measured by the distinction between actual and foreseen productivity growth (or shocks), can decline. That is, there is no improvement in technology and productivity underneath this condition. Therefore, unemployment will increase. Technology stocks caused by scientific and engineering development, by R&D, management techniques, and by industrial organizations that build inputs a lot of productive.

In Schumpeter's word innovations being introduced and terribly effective in creating the economy grow. Innovations and favorable technological shocks conjointly cut back inputs and increase total issue productivity. In short, if shocks to productivity led to technological shocks do not exit, unemployment will rise. Gali and Rabanal (2004) contend that demand and monetary shocks have an effect on the variables of the trade cycle, together with employment, by regarding75%, where the technological shocks have an effect on those variables by

regarding25%. For him, non-technology shocks generated positive movement between hours and productivity. His results were not according to the trade cycle theory.

2.3.3 TRANSMISSION MECHANISM OF MONETARY POLICY

- **THE THEORY OF TRANSMISSION MECHANISM**

The monetary mechanism describes however policy induced changes within the nominal money stock or the short term nominal rate impact real variables like combination output and employment. consistent with the normal Keynesian rate channel, a policy iatrogenic increase within the short term nominal rate leads initial to a rise in long term nominal interest rates, as investors act to arbitrage away variations in risk adjusted expected returns on debt instruments of varied maturities, as represented by the expectations hypothesis of the term structure. Once nominal costs square measure slow to regulate, these movements in nominal interest rates translate into movements in real interest rates likewise. Firms, finding that their real price of borrowing over all horizons has exaggerated, trim on their investment expenditures.

Likewise, households facing higher real borrowing prices reduce on their purchases of homes; cars, and alternative consumer durables. Combination output and employment falls. In the short run, monetary policy influences inflation and also the economy-wide demand for merchandise and services and, therefore, the demand for the staff World Health Organization turn out those merchandise and services primarily through its influence on the money conditions facing households and companies. Throughout traditional times, the Federal Reserve System has primarily influenced overall money conditions by adjusting the federal funds rate the speed that banks charge one another for short-run loans. Movements within the federal funds rate are passed on to alternative short-run interest rates that influence borrowing prices for companies and households.

2.4 EMPIRICAL EVIDENCE

Usman and Adejare (2004) examine the impact of monetary policy on industrial growth in Nigeria economy covering the period of 1970-2010. They employed multiple regressions. Their result shows that monetary policy has significant effects on the industrial growth.

Danjuma, Jbrin and Onyeiwu (2004) examine the impact of monetary policy on the Nigerian economy from 1981 to (2008) using the Ordinary Least Squares (OLS) Method. The result of the analysis shows that monetary policy presented by money supply exerts a positive impact on GDP growth and Balance of Payment but negative impact on rate of inflation.

Chuku (2009) examine the effect of monetary policy innovations in Nigeria. The study used a structural vector auto-regression (SVAR) approach to trace the effects of monetary policy shocks on output and prices in Nigeria with a sample data spanning from 1986 to 2008. The study conducted the experiment using three alternative policy instruments i.e. broad money (M2), Minimum Rediscount Rate (MRR) and the real effective exchange rate (REER). The study made the assumption that the Central Bank cannot observe unexpected changes in output and prices within the same period. This places a recursive restriction on the disturbances of the SVAR and helped to generate impulse response functions that tracked the effects of monetary policy innovations on output and prices.

Muhammad, (2011) research into the role of unemployment on the making of the Nigerian Gross Domestic Product (GDP) for a period of nine years (2000 - 2008). His data was analyzed using regression analysis, findings showed that unemployment has enormous effects on crime (over 65 percent) on the making of the Nigerian GDP and there exist an inverse relationship between the model (unemployment) and the GDP - increase in the model leads to decrease on the GDP and vice versa.

Blessing (2012) examine the impact of monetary policy on inflation in Nigeria covering the period from 1980-2010. The study employs classical least squares method. The result shows that the liquidity ratio and interest rate are the leading monetary policy instruments that can be employed to combat inflation in Nigeria.

Hammer and Sturn (2012) examine the impact of monetary policy on unemployment covering the year (1980-2007). The result shows that the extent to which hysteresis occurs in the aftermath of recessions depends on monetary policy reactions.

Gideon (2012) examines the impact of monetary policy reforms on output growth in Nigeria covering the period of 1986-2009. Using co-integration analysis and the ordinary least square (OLS) procedures, the result shows that monetary policy instrument have not been effective in stimulating the growth of output in Nigeria during the reform period.

Bakare A. S (2012), examined the implication of unemployment crisis on economic growth. Standard econometric method, Ordinary Least Square multiple regression, (OLS) to determine the relationship between urban unemployment crisis and economic growth. The results of his finding show that the past values of unemployment crisis could be used to predict the future behavior of economic growth.

Ahiabor (2013) examines the effect of monetary policy on inflation in Ghana using annual data from (1985-2009). The results shows a long-run positive relationship between money supply and inflation, negative relationship between interest rate and inflation. However, his finding reveals a positive relationship between exchange rate and inflation.

Fasanya, Onakoya and Adegboluade (2013) examine the impact of monetary policy on economic growth in Nigeria. The study uses time-series data covering the range of (1975 to 2010). Using Error Correction Model (ECM) technique the study result shows that Long run relationship exists among the variables. Also, the core finding of the study shows that inflation rate, exchange rate and external reserve are significant monetary policy instruments that drive growth in Nigeria.

Amassoma and Nwosa 2013 examined the relationship between unemployment rate and productivity growth in Nigeria for the period 1986 to 2010. The study utilized co-integration and error correction model approach. Findings of the study posited that there is still the need for government to take urgent steps against the rising unemployment rate, because unemployment is a major impediment to social progress and results in waste of trained manpower.

Emirgena Nikolli 2014 examine the relationship between the economic growth and the unemployment rate in Albania. This relation is known as Okun's law, which states that 1 percent decrease in unemployment; GDP will increase by 3 percent during recession there is a high unemployment rate. Covering the period of 2000 to 2013. The methodology used a simple regression and takes the economic growth as dependent variable and the unemployment rate as independent. The observed result explain the Okun's law for Albania. The main reason is the current crises that prevent the improvement of economic conditions.

CHAPTER THREE
RESEARCH METHODOLOGY

3.0 INTRODUCTION

In carrying out this work, certain methods were to be used, this chapter explains in depth the procedures followed in arriving at the influence of this research work, research decision is the framework for investigating a research problem or in other words refers to the methods used in collecting data which are to be used investigating and analyzing a research problem. Data collection on its own involves a range of activities from the individuals in libraries extracting information from volumes of materials available as regard this work. Taking into cognizance he fact that two main forms of data collection exist (i.e. the primary and secondary sources). This chapter explains the methodology outlined in chapter one of this research work in a broader and self-explanatory perspective which contains the research procedure used in obtaining the relevant information about the study. It includes the data source, model specification, sampling techniques.

3.1 MODEL SPECIFICATION

The unemployment will be used as the dependent variable, while exchange rate, monetary policy rate, Treasury bill and broad money supply will be used as independent variables. Developing a model for the effect of monetary policy on unemployment in Nigeria could be stated as follows: justify by Chimezie 2008.

Specifically, the functional form of the model is as below:

UNE = f (TBILL, M2, MRR, EXCHR,CPI,MPR) ..... (1)

where :

UNE= Unemployment rate

TBILL = Treasury bill rate

M2 = Broad money supply

EXCHR = Exchange rate

MPR = Monetary policy rate

CPI= Consumer Price Index

Assuming a linear relationship between the dependent variable and independent variables, the equation using the multiple regression analysis econometrically, the equation could be stated as follows:

$$UNE = \beta_0 + \beta_1 M2 + \beta_2 TBR + \beta_3 EXCHR + \beta_4 MPR + \beta_5 CPI + \mu \ldots\ldots\ldots\ldots\ldots\ldots (2)$$

Given that the estimation is a time series analysis, we incorporate the time factor thus

$$UNE_t = \beta_0 + \beta_1 lnM2_t + \beta_2 lnTBR_t + \beta_3 lnEXCHR_t + \beta_4 lnMPR_t + \beta_5 lnCPI_t + \mu_t \ldots\ldots (4)$$

where μ_t = Error term

Given that time series data could be affected as a result of changes in trend, this model will be transformed into a lin-log function specified as follows:

$$UNE_t = \beta_0 + \beta_1 \ln TBILL_t + \beta_2 \ln M2_t + \beta_3 \ln MRR_t + \beta_4 \ln EXCHR_t + \beta_5 \ln CPI_t + \beta_6 \ln MPR_t + \mu_t \ldots\ldots\ldots (4)$$

3.2 DATA ANALYSIS METHOD

The ordinary least square (OLS) single equation is the estimation procedure adopted for this study. This model is chosen based on its best linear Unbiased Estimates (BLUE) properties. The ordinary least square technique is relatively simple to use and there is also already available software packages for use like E-views. Data requirements are also minimal and it is also easier to understand by non–experts in econometrics methodology.

3.3 EVALUATION OF ESTIMATE

3.3.1 ECONOMIC CRITERIA

A-priori Expectations of the Parameters in the models are expected to have signs and sizes, which conform to economic theory. Thus, we expect the signs set against each equation above to hold. If they hold, we accept them; otherwise they are rejected unless there is cogent reason to believe that in the realm of some circumstances such conditions can hold.

The following signs are therefore expected:

- **BROAD MONEY SUPPLY**: it is economically assume that M2 has negative effect on unemployment level in Nigeria. Hence the a-priori expectation of m2 is negative.
- **EXCHANGE RATE**: it is economically assume that EXR has positive effect on unemployment level in Nigeria. Hence the a-priori expectation of EXR is positive.
- **TREASURY BILL**: it is economically assume that treasury bills rate has a negative change on unemployment rate. The a-priori parameter expectation of treasury bill rates is negative.
- **MONETARY POLICY RATE**: it is economically assume that monetary policy rate has a negative change on unemployment rate. The a-priori parameter expectation is negative.
- **CONSUMER PRICE INDEX**: it is economically assume that consumer price index rate has a negative change on unemployment rate. The a-priori expectation is negative.

3.3.2 STATISTICAL CRITERIA

Under the statistical method, test of Significance of Parameter Estimates (t-statistics) will be carried out at 5% level. This will enable us compare the computed t-statistic with the given tabulated t-statistic to establish significance. When the computed t-statistic is greater than the tabulated t-statistic the parameter in question is significant but otherwise is insignificant. Goodness of Fit test (R^2). Coefficient of determination known as R^2 will be used to measure the goodness of fit of the model. Thus the higher the R^2 the more the model is able to explain and hence the better the fit. Adequacy of regression equation (F–test). The regression equation is adequate if the computed F-statistic is higher than the tabulated F-statistic. There will also be a correlation test, which measure the degree of relationship between the variables under consideration.

3.3.3 ECONOMETRIC CRITERIA

There will be a normality test, which helps to determine if the error term of the variables under consideration are normally distributed. This could be done using the hypothesis, which states that if the Chi-Square calculated is less than the Chi- Square tabulated, then it shows that the variables are normally distributed otherwise it is not normally distributed . The Unit Root test, which measures the level of stationary of the variables under consideration, would also be applied. This test is done using the Augmented Dickey Fuller test (ADF) with the hypothesis which states as follows: If the absolute value of the Augmented Dickey Fuller (ADF) test is

greater than the critical value either at the 1%, 5%, or 10% level of significance, then the variables are stationary either at order zero, one, or two. The co integration test would be carried out if the variables have different orders of stationary. Also causality test to know the monetary policies that affect unemployment both in the long run and short.

3.4 SOURCES OF DATA

The researcher utilizes the data generated from the Central Bank of Nigeria statistical bulletin on exchange rate, minimum rediscount rate, Treasury bill broad money supply from 1970 –2013: Also, data on unemployment Rate from the CBN statistics was employed.

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION OF RESULTS

4.0 INTRODUCTION

The analysis begins with the descriptive statistics which will enable us to explore the time series properties of the variables. The descriptive statistics employed in the study are the summary of statistics, normality test and correlation matrix

4.1 DESCRIPTIVE STATISTICS

The descriptive statistics of the variables is provided in table 1 below. From the table, the averages of the variables are 49.07, 1.43, 11.70, 10.85, 10.25 and 7.69 for exchange rate *(EXR)*, consumer price index *(LCPI)*, money supply (*LM2*), and monetary policy rate (*MPR*), Treasury bill rate *(TBR)* and unemployment rate (*UNE*) respectively. The maximum values of the variables are 157.50, 4.91, 16.53, 26.0, 26.9 and 23.9 for exchange rate *(EXR)*, consumer price index *(LCPI)*, money supply (*LM2*), monetary policy rate (*MPR*), treasury bill rate *(TBR)* and unemployment rate (*UNE*) respectively while the minimum values of the variables are 0.55, -2.30, 6.67, 3.5, 2.5 and 1.8 for exchange rate *(EXR)*, consumer price index *(LCPI)*, money supply (*LM2*), monetary policy rate (*MPR*), treasury bill rate *(TBR)* and unemployment rate (*UNE*) respectively. The standard deviation showed that exchange rate (61.03) was the most volatile variable in the time series. This is followed by Treasury bill rate (5.73), unemployment rate (5.43), monetary policy rate (5.19) and money supply (3.01) while consumer price index (-2.30) was the least volatile of the time series. The skewness statistic from table below revealed that with exception to consumer price index *(LCPI)* which was negatively skewed, the other remaining variables (exchange rate, money supply, monetary policy rate, Treasury bill rate and unemployment rate) were positively skewed. The kurtosis statistics showed that exchange rate *(EXR)*, consumer price index *(LCPI)* and money supply *(LM2)* were platykurtic, suggesting that their distributions were flat relative to normal distribution while unemployment rate *(UNE)* is leptokurtic, suggesting that the distribution is peaked relative to normal distribution. Also, the kurtosis statistics showed that monetary policy rate *(MPR)* and Treasury bill rate *(TBR)* are normally distributed. Lastly, the Jarque-Bera statistic rejected the null hypothesis of normal

distribution for unemployment rate *(UNE)* at five per cent critical value while the null hypothesis of normal distribution for the other variables (exchange rate, consumer price index, money supply, monetary policy rate and Treasury bill rate) were accepted at the same critical value.

Table 1: Descriptive Statistics

Variables	EXR	LCPI	LM2	MPR	TBR	UNE
Mean	49.068	1.430	11.702	10.851	10.251	7.669
Median	13.604	1.196	11.424	11.000	9.525	5.250
Maximum	157.499	4.905	16.534	26.000	26.900	23.900
Minimum	0.546	-2.303	6.671	3.500	2.500	1.800
Std. Dev.	61.026	2.442	3.008	5.188	5.725	5.428
Skewness	0.736	-0.050	0.048	0.492	0.627	1.262
Kurtosis	1.726	1.473	1.827	2.932	2.914	3.859
Jarque-Bera	6.951	4.294	2.542	1.786	2.895	13.038
Probability	0.031	0.117	0.281	0.409	0.235	0.001
Observations	44	44	44	44	44	44

SOURCE: Authors computation (2015)

4.2 UNIT ROOT TEST

Following the descriptive statistics of the variables, the time series properties of the variables was conducted by employing the Augmented Dickey-Fuller Test (ADF) and the result presented in table 2. The Augmented Dickey Fuller (ADF) test showed that all the variables were integrated of order one; that is, the variables became stationary after first difference.

Table 2: Unit Root Test Result

Augmented Dickey-Fuller (ADF) Test			
Variables	Level	1st Diff	Status
EXR	0.3989	-6.0117*	I(1)
LM2	-0.7288	-3.4604**	I(1)
MPR	-2.2260	-6.8563*	I(1)
TBR	-2.2872	-7.1715*	I(1)

UNE	-2.0615	-5.9225*	I(1)
LCPI	-0.6392	-3.3767**	I(1)

Note: *=1% and **=5% significance level.

SOURCE: Authors computation (2015)

4.3 CO-INTEGRATION ESTIMATE

The result of the co-integration estimate is presented in Table 3 below. From table 3, it is observed that the null hypothesis of no co-integration, for r=0 was rejected by both the trace and the maximum Eigen-value statistic. The statistical values of these tests were greater than their critical values. However, the null hypothesis of no co-integration that is r≤1 could not be rejected by the trace and maximum Eigen-value statistics because their statistical values were less than their critical values. The implication of the co-integration estimate is that there is one co-integrating equation at five per cent in the model.

Table 3: Summary of the Co-integration Estimate

Trace Test				Maximum Eigen value Test			
Null	Alternative	Statistics	95% critical values	Null	Alternative	Statistics	95% critical values
r=0	r≥1	105.998	95.754	r=0	r=1	41.126	40.076
r≤1	r≥2	64.873	69.818	r≤1	r=2	25.155	33.877
r≤2	r≥3	39.718	47.856	r≤2	r=3	18.258	27.584
r≤3	r≥4	21.460	29.797	r≤3	r=4	14.607	21.132

SOURCE: Authors computation (2015)

4.4 LONG RUN REGRESSION ESTIMATE ON THE EFFECT OF MONETARY POLICY ON UNEMPLOYMENT RATE IN NIGERIA

The long run regression estimate of the impact of monetary policy on unemployment rate in Nigeria for the period spanning 1970 to 2013 is presented on table 4 below. The coefficient of determination (that is R^2) showed that the explanatory variables jointly explained about 71 per

cent of variations in unemployment rate in Nigeria during the study period. The F-statistics (18.38; p=0.000) showed that the model estimated is appropriate while the Durbin Watson statistics is 1.89 which is approximately 2.0, thereby indicating the absence of serial auto-correlation in the long run estimate. The long run estimate presented on table 4 below showed that exchange rate had a positive (0.078) and significant impact on unemployment rate in Nigeria, suggesting that a one percent increase in exchange rate will increase the rate of unemployment by about 7.8 per cent. With respect money supply *(LM2)*, monetary policy rate *(MPR)* and treasury bill rate *(TBR)*, the regression estimate showed that the co-efficient of these variables were insignificant, suggesting that money supply *(LM2)*, monetary policy rate *(MPR)* and treasury bill rate *(TBR)* have no significant effect on unemployment rate in Nigeria during the period 1970 to 2013. Finally, and in contrast to the above, the regression estimate showed that consumer price index *(LCPI)* had a negative (-2.69) and significant impact at 10% critical level on unemployment rate, suggesting that a one percent increase in consumer price index will decrease the level of unemployment by about 26.9%. With respect to the focus of this current study, on the effect of monetary policy on unemployment rate, the regression estimate showed that only exchange rate and consumer price index had significant effect on unemployment rate in Nigeria while the remaining variables were insignificant in influencing the level of unemployment in Nigeria in the long run.

Table 4: Long Run Regression Estimate

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EXR	0.078403	0.020216	3.878219	0.0004
LM2	1.981921	1.248352	1.587630	0.1207
MPR	-0.248740	0.272627	-0.912385	0.3673
TBR	0.070010	0.222465	0.314703	0.7547
LCPI	-2.691937	1.529540	-1.759965	0.0865
C	-13.53905	12.77258	-1.060009	0.2958
R-squared	0.707517	Mean dependent var		7.669318
Adjusted R-squared	0.669032	S.D. dependent var		5.428299

S.E. of regression	3.122890	Akaike info criterion	5.241518
Sum squared resid	370.5927	Schwarz criterion	5.484817
Log likelihood	-109.3134	Hannan-Quinn criter.	5.331745
F-statistic	18.38440	Durbin-Watson stat	1.196489
Prob(F-statistic)	0.000000		

SOURCE: Authors computation (2015)

4.5 SHORT RUN REGRESSION ESTIMATE ON THE IMPACT OF MONETARY POLICY ON UNEMPLOYMENT RATE IN NIGERIA

The short run relationship among unemployment rate and monetary policy variables is examined below. Prior to the short run regression estimate, the stationarity property of the residual from the long run estimate is examined and the result is presented on table 5 below. Using the Augmented Dickey Fuller (ADF) test, the stationarity test showed that the residual is integrated of order one at five per cent significant level.

Table 5: Residual Stationarity Test

Variable	ADF Test	Order of Integration
Resid	-4.2453*	I(0)

Note: * implies 1% significance level.

SOURCE: Authors computation (2015)

With respect to the parsimonious regression estimate capturing the short run analysis, it is observed from table 6 that there are significant improvement in the parsimonious model of the over parameterized model (see appendix). The coefficient of determination (that is R^2) from the short estimate showed that the explanatory variables jointly explained about 66 per cent of variations in unemployment rate in Nigeria in the short run. The F-statistics (6.57; $p<0.000$) showed that the model estimated is appropriate while the Durbin Watson statistics is 2.10, indicating the absence of serial auto-correlation in the long run estimate. The short run regression estimate also showed that the coefficient of the error-term for the ECM model is both statistically significant at one per cent and negative. The coefficient estimate of the error correction term of -

1.62 implied that the model corrects its short run disequilibrium by about 162 per cent speed of adjustment in order to return to the long run equilibrium. Also, the negative sign of the error correction term indicates a move back towards equilibrium. In addition to the above, it was observed that the co-efficient of the first lagged value of unemployment rate *(ΔUNE(-1))* was positive (0.85) and significant at one percent significant level, suggesting that a one percent increase in the immediate past value of unemployment rate will increase current rate of unemployment rate by about 85 per cent. In contrast, the coefficient of the second lagged value of unemployment rate *(ΔUNE(-2))* and the first lagged value of money supply *(ΔLM2(-1))* were insignificant in influencing current value of unemployment in the short run. Also, the short run regression estimate presented on table 6 showed that current value of monetary policy rate *(ΔMPR)* had negative (-0.87) and significant effect on unemployment rate at one percent significant level in the short run, thereby indicating that a one percent decrease in the current value of monetary policy rate will increase unemployment rate by about 87 per cent. In contrast to the effect of monetary policy rate on unemployment rate in the short run, it was observed that current value of treasury bill rate *(ΔTBR)* had positive (0.63) and significant effect on unemployment rate at one percent significant level, thereby indicating that a one percent increase in the current value of treasury bill rate will increase unemployment rate by about 63 per cent.

With respect to the short run effect of consumer price index on unemployment rate in the short run, it was observed from the short run regression estimate on table 6 that the current *(ΔLCPI)* and second lagged values of consumer price index *(ΔLCPI (-2))* with the coefficient values of the -5.38 and -8.04 respectively, had negative but insignificant effect on unemployment rate in the short run. However, the first lagged value of consumer price index *(ΔLCPI(-1))* had positive (10.07) and significant impact on unemployment rate in the short run, suggesting that a one percent increase in the first lagged value of consumer price index, will increase the rate of unemployment rate by about 10.1 per cent in the short run.

With respect to the objective of this study, it was observed from the discussion on the short run analysis that only current values of monetary policy rate and treasury bill rate and also the first lagged value of consumer price index that influence unemployment rate in the short run.

4.6 CAUSALITY ESTIMATE

With respect to the nature of causality between unemployment rate and monetary policy variables, this study employed the pairwise granger causality test. The result of the causality estimate is present in table 7 below. From the table, it is observed that there is a unidirectional causality from consumer price index to exchange rate while no causality exists from exchange rate to consumer price index. This indicates that changes in consumer price index cause changes in exchange rate. Also, the study observed that there is a unidirectional causality from exchange rate to unemployment rate while no causality was observed from unemployment rate to exchange rate. This implies that changes in exchange rate influences changes in unemployment rate and not otherwise.

Unidirectional causality was also observed from consumer price index to broad money supply while no causality was observed from broad money supply to consumer price index; suggesting that changes in consumer price index cause changes in broad money supply and not otherwise. Furthermore, unidirectional causality was also observed from monetary policy rate to consumer price index while no causality was observed from consumer price index to monetary policy rate; suggesting that changes in monetary policy rate causes changes in consumer price index and not otherwise. Also, unidirectional causality was also observed from treasury bill rate to consumer price index while no causality was observed from consumer price index to treasury bill rate; suggesting that changes in treasury bill rate causes changes in consumer price index and not otherwise.

However, bi-directional causality was observed between monetary policy rate and treasury bill rate, suggesting that changes in monetary policy rate cause changes in treasury bill rate while changes in treasury bill rate also causes changes in monetary policy rate. With respect to the other pairs of variable in table 7, no causal relationship was observed. Therefore, with respect to the objective of this study on the nature of causality between unemployment rate and monetary policy variables, the findings from the pairwise causality estimate, showed that only changes in exchange rate influences changes in unemployment rate, other monetary policy variables did not granger cause unemployment rate while unemployment rate did not also granger cause other monetary policy variables.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 SUMMARY OF FINDING

The finding indicates the skewness statistic from descriptive statistics which revealed that with exception to consumer price index *(LCPI)* which was negatively skewed, the other remaining variables (exchange rate, money supply, monetary policy rate, Treasury bill rate and unemployment rate) were positively skewed. The kurtosis statistics showed that exchange rate *(EXR)*, consumer price index *(LCPI)* and money supply *(LM2)* were platykurtic, suggesting that their distributions were flat relative to normal distribution while unemployment rate *(UNE)* is leptokurtic, suggesting that the distribution is peaked relative to normal distribution. Also, the kurtosis statistics showed that monetary policy rate *(MPR)* and Treasury bill rate *(TBR)* are normally distributed. Lastly, the Jarque-Bera statistic rejected the null hypothesis of normal distribution for unemployment rate *(UNE)* at five per cent critical value while the null hypothesis of normal distribution for the other variables (exchange rate, consumer price index, money supply, monetary policy rate and Treasury bill rate) were accepted at the same critical value.

The effect of monetary policy on unemployment rate, the regression estimate showed that only exchange rate and consumer price index had significant effect on unemployment rate in Nigeria while the remaining variables were insignificant in influencing the level of unemployment in Nigeria in the long run. It was observed from the discussion on the short run analysis that only current values of monetary policy rate and treasury bill rate and also the first lagged value of consumer price index that influence unemployment rate in the short run. Under causality estimation it was observed that there is a unidirectional causality from consumer price index to exchange rate while no causality exists from exchange rate to consumer price index. This indicates that changes in consumer price index cause changes in exchange rate. Also, the study observed that there is a unidirectional causality from exchange rate to unemployment rate while no causality was observed from unemployment rate to exchange rate. This implies that changes in exchange rate influences changes in unemployment rate and not otherwise.

5.2 CONCLUSION

This study examine the effect of monetary policy on unemployment in Nigeria covering the period 1970-2013. Multiple regression analysis was employed in the analysis to the data gathered with the aid of E-views on the model consisting M2, TBILL, EXCHR, MPR, and CPI as the exogenous variables while unemployment is the endogenous variable. The study concludes that only exchange rate and consumer's price index are monetary variables that influence unemployment rate. Based on the causality estimate the study concludes that with that only changes in exchange rate influences changes in unemployment rate, other monetary policy variables did not granger cause unemployment rate while unemployment rate did not also granger cause other monetary policy variables.

5.3 RECOMMENDATION

From the observation and subsequent problems discussed in the study, the following recommendations are proffered as thus.

I. The monetary authorities should ensure reasonable monetary policy stand that will be suitable to reduce interest rate in an economy. For example if government reduce interest rate it will give investors an opportunity to get contracts which will increase the number of laborers, this will brings about increase in employment thereby decreasing unemployment.

II. The monetary authorities should also made Exchange Rate stable to ensure that unemployment don't rise.

III. They should also ensure price stability that will ensure sustainable investment that can enhance employment opportunities.

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Appendix

Over-Parametized Short Run Regression Estimate

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.542750	1.631275	0.945733	0.3546
ECM(-1)	-1.717964	0.412323	-4.166548	0.0004
DUNE(-1)	0.859423	0.313078	2.745079	0.0118
DUNE(-2)	0.386875	0.256546	1.508015	0.1458
DEXR	0.018258	0.037693	0.484395	0.6329
DEXR(-1)	-0.014107	0.047801	-0.295129	0.7707
DEXR(-2)	0.003258	0.043073	0.075637	0.9404
DLM2	3.636654	5.263716	0.690891	0.4969
DLM2(-1)	-9.719024	6.616070	-1.469003	0.1560
DLM2(-2)	2.286227	5.289272	0.432239	0.6698
DMPR	-0.991020	0.326332	-3.036843	0.0061
DMPR(-1)	-0.125978	0.374707	-0.336203	0.7399
DMPR(-2)	-0.060177	0.366653	-0.164125	0.8711
DTBR	0.735712	0.280515	2.622713	0.0155
DTBR(-1)	0.166826	0.311050	0.536332	0.5971
DTBR(-2)	0.124318	0.312297	0.398077	0.6944
DLCPI	-6.570815	4.940207	-1.330069	0.1971
DLCPI(-1)	12.17677	6.380051	1.908569	0.0695
DLCPI(-2)	-8.635521	5.127968	-1.684004	0.1063

R-squared	0.679413	Mean dependent var	-0.007317
Adjusted R-squared	0.417114	S.D. dependent var	3.433789
S.E. of regression	2.621594	Akaike info criterion	5.069742
Sum squared resid	151.2006	Schwarz criterion	5.863836
Log likelihood	-84.92971	Hannan-Quinn criter.	5.358907
F-statistic	2.590226	Durbin-Watson stat	1.949738

Prob(F-statistic)	0.017832

Table 7: Pairwise Granger Causality Tests

Null Hypothesis:	F-Statistic	Prob.
LCPI does not Granger Cause EXR	5.42216	0.0086
EXR does not Granger Cause LCPI	0.29292	0.7478
LM2 does not Granger Cause EXR	2.53410	0.0930
EXR does not Granger Cause LM2	0.46052	0.6345
MPR does not Granger Cause EXR	0.53865	0.5880
EXR does not Granger Cause MPR	0.27323	0.7624
TBR does not Granger Cause EXR	0.22119	0.8026
EXR does not Granger Cause TBR	0.06379	0.9383
UNE does not Granger Cause EXR	0.77392	0.4685
EXR does not Granger Cause UNE	6.17656	0.0048
LM2 does not Granger Cause LCPI	1.92526	0.1602
LCPI does not Granger Cause LM2	3.49124	0.0408
MPR does not Granger Cause LCPI	4.46719	0.0183
LCPI does not Granger Cause MPR	0.36251	0.6984
TBR does not Granger Cause LCPI	4.92518	0.0127
LCPI does not Granger Cause TBR	0.49180	0.6155
UNE does not Granger Cause LCPI	0.29342	0.7474
LCPI does not Granger Cause UNE	1.87997	0.1669
MPR does not Granger Cause LM2	0.97951	0.3850

LM2 does not Granger Cause MPR	0.15252	0.8591
TBR does not Granger Cause LM2	0.54908	0.5821
LM2 does not Granger Cause TBR	0.40823	0.6678
UNE does not Granger Cause LM2	0.78475	0.4637
LM2 does not Granger Cause UNE	1.47884	0.2411
TBR does not Granger Cause MPR	3.15850	0.0541
MPR does not Granger Cause TBR	5.39033	0.0088
UNE does not Granger Cause MPR	0.03874	0.9620
MPR does not Granger Cause UNE	0.24924	0.7807
UNE does not Granger Cause TBR	0.58935	0.5598
TBR does not Granger Cause UNE	0.50519	0.6075

Table 6: Parsimonious Short Run Regression Estimate

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.290680	1.084916	2.111389	0.0429
ECM(-1)	-1.618497	0.257730	-6.279808	0.0000
ΔUNE(-1)	0.846631	0.193264	4.380703	0.0001
ΔUNE(-2)	0.365058	0.186049	1.962155	0.0588
ΔLM2(-1)	-6.432804	4.223397	-1.523135	0.1379
ΔMPR	-0.874140	0.244801	-3.570812	0.0012
ΔTBR	0.634417	0.205493	3.087293	0.0042
ΔLCPI	-5.384741	3.672972	-1.466045	0.1527
ΔLCPI(-1)	10.06731	4.615177	2.181349	0.0369
ΔLCPI(-2)	-8.039440	3.967434	-2.026358	0.0514
R-squared	0.656241	Mean dependent var		-0.007317

Adjusted R-squared	0.556440	S.D. dependent var	3.433789
S.E. of regression	2.286914	Akaike info criterion	4.700504
Sum squared resid	162.1293	Schwarz criterion	5.118448
Log likelihood	-86.36033	Hannan-Qunn criter.	4.852696
F-statistic	6.575495	Durbin-Watson stat	2.101741
Prob(F-statistic)	0.000034		

DATA

year	TBILL	M2	EXCHR	UNE	CPI	MPR
1970	555.9	978.2	0.7143	4.8	0.1	4
1971	646.2	1041.8	0.6955	5.3	0.12	4
1972	616	1214.9	0.6579	5.2	0.12	4
1973	616	1522.5	0.6579	4.8	0.13	4
1974	616	2352.3	0.6299	5.4	0.14	3.958333
1975	615.9	4241.2	0.6159	4.8	0.19	4
1976	615.8	5905.1	0.6265	5.2	0.24	4
1977	691	7898.8	0.6466	4.7	0.27	3.25
1978	816	7985.4	0.606	4.8	0.33	3.833333
1979	2118	10224.6	0.5957	10.4	0.37	3.166667
1980	2119	15100	4801.25	7.8	0.41	2.604167
1981	5782	16161.7	0.6369	3.2	0.49	3.318333
1982	9782	18093.6	0.6702	5.4	0.53	3.165
1983	13476	20879.1	0.7486	3.4	0.66	3.200833
1984	15475.4	23370	0.8083	7.8	0.77	1.9375
1985	16976	26277.6	0.9996	6.1	0.83	2.565
1986	16976	27389.8	3.3166	5.3	0.88	1.9875
1987	25226	33667.4	4.1916	7	0.98	0.316667
1988	35476	45446.9	5.353	5.3	1.51	0.724167
1989	24126	47055	7.65	4.5	2.27	0.874167

1990	25476	68662.5	9.0001	3.5	2.44	3.666667
1991	56728.3	87499.8	9.7545	3.1	2.75	5.766667
1992	103317.5	129085.47	9.7545	3.4	3.98	5.516667
1993	103326.5	198479.2	22.6309	2.7	6.26	5.125
1994	103326.5	266944.89	21.8861	2	9.82	6.716667
1995	103326.5	318763.47	21.8861	1.8	16.98	8.408333
1996	103326.5	370333.53	21.8861	3.4	21.95	7.391667
1997	221800.5	429731.33	21.8861	3.2	23.82	6.7025
1998	221801.5	525637.8	21.886	3.2	26.2	6.7775
1999	361758.4	699733.7	92.5284	3.1	27.93	10.62583
2000	361758.4	1036079.5	109.55	4.7	29.87	8.075833
2001	584535.8	1315869.1	112.4864	4.2	35.51	7.479167
2002	584535.8	1599494.6	126.4	3	40.08	9.583333
2003	825054.5	1985191.8	135.4067	2.3	45.7	8.1825
2004	871577	2263587.9	132.67	4.45	52.56	8.100833
2005	854828	2814846.1	130.4	3.6	61.95	6.496667
2006	701399.8	4027901.7	128.27	2.65	67.05	5.482494
2007	574929.4	5809826.5	117.968	3.375	70.66	7.415833
2008	574929.4	9166835.3	130.75	4.025	78.84	7.1575
2009	574929.4	10767378	147.6	3.125	87.94	6.650833
2010	471929.5	9967106.5	148.67	3.0125	100	3.509
2011	471929.5	10367242	156.2	3.7	110.84	5.065
2012	546929.4	10167174	157.5	3.575	124.38	11.06417
2013	509429.5	10267208	156.85	3.6375	134.92	10.3175