

**THE IMPACT OF MONEY SUPPLY ON ECONOMIC  
GROWTH IN NIGERIA (1981-2010)**

**BY**

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**EC/2008/646**

**DEPARTMENT OF ECONOMICS  
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**CARITAS UNIVERSITY  
AMORJI – NIKE  
ENUGU**

**AUGUST, 2012**

**TITLE PAGE**

**THE IMPACT OF MONEY SUPPLY ON ECONOMIC GROWTH IN  
NIGERIA  
(1981-2010)**

**A PROJECT SUBMITTED IN PARTIAL FULFILMENT OF THE  
REQUIREMENTS FOR THE AWARD OF BACHELOR OF SCIENCE  
(B.SC) DEGREE IN ECONOMICS**

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**APPROVAL PAGE**

This is to certify that this project was originally carried out by Nwankwoeze Ikechukwu and has been read and approved

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## **DEDICATION**

I dedicate this project work to almighty God who made it possible for me to carry out this project research and also for seeing me through from the beginning to the end of the project, who also gave me knowledge and understanding. And to my lovely parents, Mr. and Mrs S.N. Nwankwoeze and also to my wonderful sisters and brothers.

## **ACKNOWLEDGEMENT**

I wish to express my gratitude to all those who have contributed in one way or the other towards the realization of this project work, most especially to God almighty.

I am so grateful to God for the gift of life, good health, protection and strength to accomplish this project work. May His name be exalted in Jesus name (Amen).

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**NWANKWOEZE IKECHUKWU**

## **ABSTRACT**

The study examined the impact of money supply on economic growth in Nigeria. In the model specified, real gross domestic product (real GDP) is the regress while broad money supply, real exchange rate, and real interest rate are the regressors. Data was collected from CBN statistical Bulletin for the period 1981 – 2010. The statistical techniques used for the analysis is the ordinary least square techniques with the aid of Stata 10 software package. The research indicates that real interest rate and real exchange rate in Nigeria within the period under study failed to influence real gross domestic product while broad money supply being the only significant regressor influenced real gross domestic product (real GDP) within the period under study. It has been identified that the major problem militating against the poor performance of monetary policy instruments in influencing real GDP in Nigeria is time lags involved which now makes any policy employed by the government to take many months to achieve its full effect. In effect to this, effectiveness of influencing real gross domestic product in Nigeria maybe promoted by emphasizing on broad money supply instead of on monetary target variables due to the fact that broad money supply is statistically significant.

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**CHAPTER ONE**

**INTRODUCTION**

**1.1 BACKGROUND OF THE STUDY**

The relationship between money supply and economic growth has been receiving increasing attention than any subject matter in the field of monetary economics in recent years. Economists differ on the effect of money supply on economic growth. while some agreed that variations in the quantity of money is the most important determinant of economic growth and that countries that devote more time to studying the behavior of aggregate money supply experiences much variations in their economic activities(handle 1997),others are skeptical about the role of money on gross national income (Robinson 1950, 1952).

Evidence has shown that since 1980 some relationship exist between the stock of money and economic growth or economic activity in Nigeria. Over the years, Nigeria has been controlling her economy through variations in her stock of money. Consequent upon the effect of the collapse of oil price in 1981 and the balance of payment (BOP) deficit experienced during this period, various methods of stabilization ranging from fiscal to monetary policy were used. Ikhide and Alwoda (1993) concluded that reducing money stock of money through increased interest rates would lower gross national product (GNP). Thus the notion that stock of money varies with economic activities applies to the Nigerian economy. As already explained money supply exerts considerable influence on economic activity in both developed and developing economics. The low level of supply of monetary aggregates in general and money stock in particular had been responsible for the

fundamental failure of many African countries to attain growth and development. Various scholars have laid much of the blame for the failure of monetary policies to translate into economic growth on the government and its agencies as a result of poor implementation and sincerity on the part of policy executors.

In discussing the concept of money supply and its impacts, two other issues often come to our mind which is the state of inflationary pressure and the unemployment rate. According to the monetarist, an increase in money supply in an economy causes an increase in general price level of commodities which brings about inflationary in the country (uzougu 1981). Also related to the issue of inflation is the issue of unemployment which is the primary goal of any economy so as to produce as many goods and services as possible while maintaining an acceptable level of price stability, but this major goal will be very difficult to attain at high inflation rate and price instabilities due to excess money supply in the economy. This research work therefore, would review the technicalities involved in the control of money supply in Nigeria.

## **1.2 STATEMENT OF THE PROBLEM**

A study of this nature is always necessitated by the existence of certain problems. The major problem that triggered off this work is the recurrence of general

price instability, persistent inflationary pressures and unemployment in the economy, in spite of the plethora of monetary policy measures adopted and applied over the years.

There is also this problem of general feeling that a continuous annual rate of money increases will adversely increase the rate of price level which will directly lead to inflation, which may deny the intended effects of use of monetary policy measure to influence economic growth thus, requiring a policy response. Recently, these inflationary pressures have succeeded in bringing about devaluation in Nigeria's currency value as a result of expansionary measures of money supply.

From the above issues, this research work will address the following pertinent questions:

- a) What is the impact of money supply on economic growth in Nigeria?
- b) How can monetary policy be used such that its intended effects of promoting economic growth are assured?

### **1.3 OBJECTIVE OF THE STUDY**

As a result of the problems highlighted above, the researcher desires to achieve the following objectives;

1. To determine the impact of money supply on economic growth in Nigeria.
2. Recommending ways in which money supply could be used more effectively in achieving its intended effects of promoting economic growth in Nigeria.

## **1.4 HYPOTHESIS OF THE STUDY**

The hypothesis is built around objective 1 because it probes into what can be revealed through statistical means while objective 2 involves only making recommendations, this work is interested in testing the hypothesis below;

Ho: money supply has no impact on economic growth in Nigeria over the years.

H1: money supply has impacts on economic growth in Nigeria over the years.

## **1.5 SIGNIFICANCE OF THE STUDY**

This research work will help us to investigate into the beneficial effects of the control of money supply especially its impacts on economic growth in Nigeria. It will also add to the existing knowledge about the relationship between money supply and inflation in Nigeria.

It will equally help students, government, policy makers and corporate bodies in areas relating to monetary policy, the volume of credit to be supplied and economic growth stabilization. The implication of this is not farfetched as research in the field could lead to a proper and more focused policy formulation, which would yield much better results.

## **1.6 SCOPE OF THE STUDY**

We rely on the secondary data for this study of which the sources are the Central bank of Nigeria (CBN) statistical bulletin 2009 and 2010 versions. The

research work centers on the impact of money supply on economic growth in Nigeria from 1981 – 2010, It is expected in course of this study that the researcher will examine and appraise the stock of money supply and its impacts with regards to growth in the Nigerian economy.

## **CHAPTER TWO**

### **REVIEW OF LITERATURE**

#### **2.1 THEORETICAL LITERATURE.**

When it comes to considering the relationship between the state of economic growth and the rate at which money is supplied, it is clear that a great amount of empirical and theoretical work remain to be done. With monetary policies and association of monetary policies and association of monetary and fiscal policies in determining the exact influence of money supply, there is a sizeable literature on which this and further researchers can rely, but little of this appears to have penetrated the mainstream of what literature is required in monetary economics.

Although, in case of difficulties in finding much of existing literatures on money supply, policy makers have agreed on that the reason could be the inaccessibility of various channels through which money is supplied. These channels are shared by the federal government fiscal policies via tax cuts and budget spending and the central bank of Nigeria's monetary options. Yet, having observed that each of the above mentioned policies exert its influence on the quantity of money stock in the economy in the economy, the issue remains the robustness of the surrounding theories. The support of the government had led to the general belief by the policy makers, that central banks does not take full control of the quantity of money supplied to an economy.



However, our literature review is centered on the components and the impacts of monetary policy options in Nigeria economy.

The first known attempt to define the concept of money supply in Nigeria economy was done by Roman and Newlyn, both monetarists agreed that the definition of money supply should base on the stage of development of the financial system and the concept of money adopted which serves as a working rule for measurement purposes and guided by the institutional framework of this economy.

Meanwhile, the supply of money implies the amount of cash and currencies available in economy insufficiently liquid and spendable forms at any point in time. It is on this notion that money forms a very important instrument which can be manipulated as a money stock variable in order to control money supply in the economy. But the formation of money stock in any modern economy have been found to be more than just a currency as the case may be, but the extent to which the financial system is developed determines the other instruments. This is why the federal government monetary management (FGMM) basically, is to influence macro economic variables and the use of appropriate instruments which vary between developing and developed countries.

Money supply can also be defined as the sum of all the money holdings of all the members of the society. This could be either  $M_1$  or  $M_2$  in Nigeria,  $M_1$ ,  $M_2$

and  $M_3$  in United Kingdom (UK) or  $M_1$ ,  $M_2$ ,  $M_3$  and  $M_4$  in United States of America (USA).

The  $M_1$  is a narrow measure of money supply, it focuses on the role of money as a medium of exchange and defines money as “currencies in circulation outside the banks plus demand deposits held in banks” =  $C+DD$ . The central bank of Nigeria defines  $M_1$  as currencies outside banks plus positively held demand deposits.  $M_2$  is a broad measure of money supply. It includes savings and time deposits =  $C + DD$  for  $M_1 + SD+TD$  for  $M_2$ . The argument for including time and savings deposits of commercial banks is that they can be converted into cash in short notice and used to carry out financial transactions.  $M_+$  comprises of  $M_1$  and  $M_2$  plus deposits held in other financial institutions including finance houses, merchant banks and similar institutions (i.e.  $C+DD$  for  $M_1 + SD+TD$  for  $M_1 + D$  for  $M_3$ ). The arguments supporting  $M_3$  is the same as for  $M_2$  (i.e. it can be converted into cash within a short notice).  $M_4$  comprises of  $M_1$ ,  $M_2$ ,  $M_3$  plus investment in government security in government bonds and securities such as treasury bills and certificates, call money e.t.c. The arguments for including the government security is that they are easily cashable which makes them influence the spending habit of its holders in the same way a bank deposit does.

Although money has been discussed as  $M_1$ ,  $M_2$ ,  $M_3$  and  $M_4$  above, they are all not recognized in Nigeria as the CBN only recognized  $M_1$  and  $M_2$  as the total

Nigeria money supply. This is because the country's financial markets are still not relatively developed. Another type of money is the base money identified as M0. It comprises of all currencies in circulation and all reserves of banks including the central bank. It is high powered money used in creating other types of money

A monetary economist argued that a general reduction in interest rate would increase the availability of consumer goods as well as investment credit. Hence, the reduction of government expenditures would offset the effects of this increase.

In similar manner, another monetary economist had his own view concerning the monetary policy effects. He said that since the Nigerian money market is still underdeveloped, the instruments of monetary policy could not possibly be a better measure for combating inflation in Nigeria. Therefore, his opinion has formed a conclusive aspect of little but well researched literature gathered for the purposes of completing the knowledge of money supply. Though, there exist other related theories, our interest is to form a coherent understanding on what previous writers had said concerning the rate at which money is supplied, its components and the reviling impacts to an economy.

Economist differs on the effect of money supply on economic growth. While some agreed that variations in the quantity of money is the most important determinant of economic growth and that countries that denote more time to

studying the behavior of aggregate money supply rarely experience much variations in the economic activities (Handler 1997).

Others are skeptical about the role of money or gross national income (Robinson 1950).

Kuznets (1955) supports the view that financial markets starts growing as the economy approaches the intermediate stage of the growth process and develops once the economy approaches the intermediate stage of the growth process and further develops once the economy becomes matured. This entails that economic growth stimulates increased financial development.

Steve (1997) and Domingo (2001), explains that there may not be possibility of economic growth without an appropriate level of money supply credit and appropriate financial conditions in general. Reducing money stock through increased interest rates would lower gross national product (GNP). Thus the notion that stock of money varies with economic activities applies to the Nigerian economy (Laidler 1993).

Montiel (1995), Emernuga (1996) and Osikoya (1992) all submitted that possible effects of financial debt (money in circulation) on economic growth can manifest in three channels:

- a) Improved efficiency of financial intermediation.
- b) Improved efficiency of capital stock and

c) Increases national savings rate.

Findings according to Asogu corroborates the earlier work of Ajayi (1974), Nwaobi (1999) while examining the interaction between money and output in Nigeria between the periods 1960 - 1995. The model assumed the irrelevance of anticipated monetary policy for short run deviations of domestic outputs from its natural level. the result indicated that unanticipated growth in money supply would have positive effect on output. A clear examination of the above shows that there is no general agreement on the determinant of economic growth in the Nigeria economy.

It is therefore the usual slogan of the monetarist school of thought that money matters. They argued that changes in money in the amount of money in circulation are the sources of other economic changes. In other words, the changes in the size of money supply have a number of implications on the macro economic variables, thus affecting the growth rate of the economy as a whole. Keynesian economics showed that the monetary policy could be used to control aggregate demand and output in the short-run but does not provide the effects of changes in money stock on output quantitatively.

The growth in money supply and its economic implications it's therefore an issue to be thoroughly investigated. The proponents of quantity theory of money postulate that money supply is exogenous, while Cagan (1965), argues that money supply exhibits both endogenous and exogenous properties. For short run and

cyclical fluctuations, Cagan (1965) proposed a relation in which the money supply is endogenously determined by changes in the real sector. However he asserts that in the long run secular trend, movements in money supply are independent of real sector and determined exogenously.

Although the monetary economists in the later years have attempted to identify the determinants of money supply while some scholars believed that money supply is exogenously determined by the central bank of the economy, yet others outside these scholars had argued that the supply of money is an endogenous variable (Culbertson 1972).

Culbertson (1973) also established the constituents of money supply including  $M_1$  and  $M_2$  and their constituents. Their definition he ascertained is the standard definition in many developing countries. In addition, the impact of money supply on inflationary spiral has never been left out. According to Griffiths (1976), inflation is the result of excess demand and should be brought under control by removing the excessive demand through a reduction in the growth of money supply which automatically reduces the growth of prices and wages as well through monetary policy contractionary measures.

According to Odozi (2000), monetary authorities should avoid discretionary monetary policy, but should adopt monetary growth principles that will alleviate the public skepticism about the possibilities of inflationary monetary policy in future.

Hogger (1964). The theory of the total absence of money and monetary inflations is essential in combating inflation and maintaining a suitable economic growth in the country to him once there is a tendency towards capacity shortage it tends to produce inflationary effects which cannot be ignored, if the problem of inflation is persistent, and by so doing growth can be reached in the economy.

Milton Friedman argued that the supply of money is independent of the demand for money. He observed that bearing the development of hyper inflation. Only wealth, is the variable likely to cause significant changes in velocity (Jhinghan 2001). Findings of Iyoha (1969, 1976) and Taiwo (1990). Show that there is a clear relationship between money and economic growth, others in Nigeria who have confirmed a strong relationship between money supply and growth (Odedokun 1996, Odedokun 1998, Ojo 1993, Chete 2002. Saidu 2007, Ojo 1993, Owoye and Onafowora 2007).

### **2.3 WHY IS THE MONEY SUPPLY IMPORTANT?**

Because money is used in virtually all economic transactions, it has a powerful effect on economic activity. An increase in the supply of money works both through lowering interest rates which spurs investment and through putting more money in the hands of consumers, making them feel wealthier and thus stimulating spending. Business firms respond to increased sales by ordering more raw materials and increasing production. The spread of business activity increases the demand for labor and raises the demand for capital goods.

Also in a buoyant economy, stock market prices rise and firms issue equity and debt. If the money supply continues to expand and prices begin to rise, especially if output growth reaches capacity limits. As the public begins to expect inflations, lenders insist on higher interest rates to offset on expected decline in purchasing power over the life of their loans.

Opposite effects occurs when the supply of money falls or when its rate of growth declines. Economic activity declines either disinflation (reduced inflation) or deflation (falling prices) results.

### **2.4 MEANING OF MONETARY POLICY**

Monetary policy refers to the combination of measures designed to regulate the volume, supply and cost of money in an economy in conjunction with the



expected level of economic activities. An excessive supply of money would result in an excessive demand for goods and services which would lead to rising prices and a deterioration of the balance of payment position.

On other hand, inadequate supply of money could induce inflation which leads to stagnation in the economy thereby retarding growth and development.

Consequently, the monetary policy authorities must attempt to keep the money supply growing at an appropriate rate so as to secure a sustainable economic growth and maintain internal external ability. The discretionary control of money stock by the monetary authorities thus involves the expansionary or contractionary measures of money which influences the interest rate in order to make money cheaper or more expensive, depending on the prevailing economic policy.

## **2.5 OBJECTIVE OF MONETARY POLICY**

### **(Favorable money supply)**

According to some renowned economic authors like Anyanwu, Jhingan and okpara, they agree on the general objectives of monetary policies which are as follows:

- Maintenance of general price stability so as to restore confidence and maintain international competitiveness.
- Achievement of a high balance of payment (BOP) equilibrium in Nigeria.

- Achievement of a high, rapid and sustainable economic growth thus, raising the general standard of living of the Nigerian masses.
- Maintenance of exchange rate stability in Nigeria.
- Ensuring that the rate of inflation in Nigeria is at its lowest possible level.

## **2.6 MONETARY POLICY FORMULATION IN NIGERIA**

In formulating monetary policy, the CBN relies in the techniques of financial programming whose starting point is a comprehensive review of economic recent performance such as the current and anticipated economic problems projections are usually made on money supply, GDP growth, inflation rates and BOP's position,

On the basic of optimum money supply, the economy's absorptive capacity for domestic credit is derived so as to permit growth targets which would act as determinants for key policy variables and aggregate domestic credit, this domestic credit is then allocated between the public and private sectors. The size been allocated to the public sector is been determined by the size of the fiscal deficit to be financed by the banking system. The residual is been allocated to the private sector.

## **2.7 DETERMINANTS OF MONEY SUPPLY IN NIGERIA**

The supply of money in Nigeria based on its composition appears to be determined basically by the behavior of two main economic factors. First, is the

behavior of the banks concerning the amount of reserves that they decide to keep at any point in time. This amount given the fact that banks maximize profits in the long run is influenced by the banks foresight and their perception of the economic activities surrounding them. Secondly, the behavior of the non-bank public in dividing their money between currency and demand deposits, The larger the non-bank public's marginal currency deposits and money supply resulting from it, the larger the monetary base or high-powered money.

The monetary authorities in their decision to change the size of high powered money and in their right to set the legal reserve, uses the following instruments of money which can be direct or indirect.

The direct tools include:

- Aggregate credit ceiling.
- Exchange ceiling
- Deposits ceiling
- Special deposits or directives
- Stabilization securities

While the indirect tools include:

- Open market operations(OMO)
- Cash reserved requirement(CRR)
- Liquidity Ratio(LR)

- Minimum rediscount Rate(MMR) or discount window operation(DWO)
- Parity changes(PC)
- Selective credit deposits(SCD)
- Moral suasion

These direct monetary control tools which had been in vogue in the year 1980's up to June 1986. They were not only to control overall expansion but also to determine the merchant bank asset portfolio, proportion of bank loans going to the proffered sectors and the total proportion of rural bank deposit granted as loans to rural borrowers.

However, the prolonged use of the direct tools had diverse effects on both the economic and the effectiveness of monetary policy in Nigeria. Hence, a decision was taken to change the strategy of monetary management to the indirect approach involving the use of market based tools.

## **2.8 MONETARY POLICY IN NIGERIA**

The main objective of monetary policy as of then were the maintenance of confidence in Nigerian currency through measures to stabilize domestic wages and prices, effective arrangement or supplementing currency government revenue and for providing development finance, control of inflation, correction of maladjustment

in the monetary sector and promotion of productive capacity. Others are the reduction of the high unemployment rate, acceleration of national output, stimulation of financial savings and capital formation and restoration of health balance of payment position.

There are some series of indirect measures to control the ability of banks in the extending new credit were applied with credit ceilings. And those measures include

- Deregulation of interest rate in august 1987, an upper limit of 21% was imposed on leading rates as of 1991 while a floor of 13.5% was fixed for saving, prescribing also a spread of 4% point between savings and lending rates.
- Due to concern of the adverse effects of high interest rates on growth of production investment. Then 1992 interest rate were again deregulated, through it has been reserved since November 1993.
- In 1986 and 1987, the naira counterparts of all external payment outstanding with banks were recalled.
- In January 1988, the liquidity ratio of merchant banks varied from 30% of demand deposit and call money to 20% of total deposit, and it was raised to 30% in 1990.
- Commercial banks cash reserve requirement were increased in 1989, 1990 and the merchant bank hitherto excluded were subject to cash reserve requirements in 1990.

- Since October 1990 banks excess liquidity are periodically mopped up through the issuance of stabilization securities ( through it was suspended since march 1993)
- Then on June 30, 1993, the CBN formally introduced its Open Market Operation (OMO) as a major direct tool of monetary policy in Nigeria. The market operation involves in buying and selling of government securities (treasury bills, treasury certificates and government development stock) by the CBN

## **2.9 FACTOR THAT HAVE MILITATED AGAINST THE EFFECTIVENESS OF MONETARY POLICY IN NIGERIA**

Several research work and efforts have revealed that monetary policy trusts are constrained by various internal and external factors. And these factors inhibit the effectiveness of monetary policy in Nigeria. The factors include:-

### ➤ **Political Instability**

The results in instability in the macro-economy increased risks in holding domestic financial assets, high level of capital flight and mostly policy somersaults. Frequent coups, violent change in government, dictatorship and the low level of participatory democracy sustain the ineffective environment for the financial system especially with regard to its ability to perform its intentional roles.

➤ **Under-Developed Financial Infrastructure**

In most of the rural areas, there are absence of financial institutions which should mobilize financial resources for the success of the financial market. There exists a large sector of economy whose activities are not influenced by the monetary policy.

➤ **High Marginal Propensity to Import**

Monetary expansion results in increase import and favorable balance of payment, loss international reserves, pressure on the exchange rate etc. The marginal propensity to import is high while production is concentrated in few exports products

➤ **Fiscal Deficit**

The financing of large fiscal deficit of the government by the banking system over the years also constraints monetary policy and implementation, It is noteworthy that between 1990 and 1993, the level of federal deficit increases tremendously and resulted in a high level of growth in monetary aggregates. This put excessive pressure on money supply. The monetary authorities thus; were constrained in controlling general level of prices through the use of monetary policy instruments.

### ➤ **Inadequate bank data**

Due to various institution malfunctioning and inefficiencies, bank data on these aggregate are inadequate and most times outdated. This policy formulation and implementations are very difficult to be realized.

## **2.10 NIGERIAN FINANCIAL INSTITUTIONS**

The Nigerian financial system has witness the rapid growth in the number of participating institutions including the scope and services rendered. It comprises of the regulatory authorities, banks, Non bank financial institutions and markets. The regulatory authorities whose role is crucial for the functioning and orderly development of the financial system include:

- The Federal Ministry of Finance (FMF).
- Central Bank of Nigeria (CBN).
- Nigeria Deposit Insurance co-operation (NDIC).
- Securities and Exchange Commission (SEC).
- National Insurance Commission (NAICOM).
- Federal Mortgage Bank of Nigeria (FMBN).
- National Board for Community Banks (NBCB).



## **2.11 OBJECTIVES OF NIGERIAN FINANCIAL INSTITUTIONS**

In an attempt to formulate certain broad general objectives for the financial system in terms of the promotion of rapid economic and social development, the committee on the Nigerian financial system (1976), was of the view that the banking financial system should achieve the following aims:

- Provide non inflation support to the economy.
- Facilitate effective management of the economy.
- Ensure that no variable project is Frustrated simply for lack of funds
- Achieve greater mobilization of savings and its efficient and effective channeling.
- Effectively sustain indigenization (ownership control and management) of the economy.
- Assist in achieving greater integration and linkages in agriculture, commerce and industry.
- Insulate the economy as much as possible and as much as is desirable, from the vicissitudes.

## **2.12 SIGNIFICANT DEVELOPMENTS IN THE NIGERIAN FINANCIAL SYSTEM IN RECENT TIMES**

Some of the witnessed significant transformations in the recent Nigerian financial system include the following;

- The promulgation of CBN decree 24 of 1991 which withdraws the autonomy of the central bank and places it under the supervision of the federal ministry of finance.
- The promulgation of the bank and other financial institutions Decree 24 of 1991 where placed in more financial institutions under the supervision of CBN
- The promulgation of the failed banks (Recovery of Debts) and financial malpractice in bank, Decree no 18 of 1994, which has the responsibility to undertake the prosecution of bank officials and others who contribute to the collapse of banks.
- The increase in the share capital of banks (both commercial and merchant to N500 million effective from January, 1997).

### **2.13 THE IMPACTS OF MONEY SUPPLY IN NIGERIA ECONOMY**

A critical study of the statistical records of the ultimate policy goals of Nigerian economic position revealed that the annual records of the general price level had steadily decline too since 1980. Certainly the unsatisfactory nature of the economic position has been attributed to the policy implication and inefficiency in executions of monetary policies.

From statistical records of the history of Nigeria in 1980s, some of the positive impacts of money supply then were:

- It increased the volume of money in the economy due to excessive revenue generated during the oil boom.
- People held large amounts of money in their hands while they increased the level of spending.
- There was increase in investment in capital projects that yielded huge returns to its investors.
- There were optimal allocations of scarce resources among sectors of the economy.
- It helped increased economic productivity in Nigeria.

Notwithstanding the advantages obtained as a result of expansionary measures of money by the CBN, there were greater negative impacts. They include

- The existence of price instability as there constant price fluctuations of goods and services
- There was inflation up to date.
- The inflationary effects led to the country's devaluation in its purchasing power of money. To this effect the Nigeria's currency lost its value as recently, the value of dollar is far higher than the currency of Nigeria.
- Productivity and output had declined in Nigeria hence the growth of real GDP (Gross Domestic Product).

- There is no reduction in the country's foreign exchange as other international countries cannot trade with a country experiencing inflation.
- There is now excessive unemployment rate as the managers employ the labour force who they can't pay of their goods and services. Even the employed vacancies are unstable as the workers can be retrenched at any time.
- The value (i.e. the purchasing power) of money falls as people don't have enough cash to expand on the consumer goods. This include, leads to wastages of the produced commodities as well as reduction in the producers profit or revenue.

#### **2.14 CONTROL OF MONEY SUPPLY IN NIGERIA**

To effectively put a curb on supply of credit in Nigeria, the following measures are necessary:

- a) The expansionary measures
- b) The contractionary measures

The expansionary measures deals the with government policy to increase the volume of money stock in the economy given that the situation at that point in time. This motive of increasing the money credit makes the government to increase its expenditure and effect a proper regulation of the CBN on the commercial Bank which in turn increases the economic productivity, output investment and generally raises the economic growth of the country.

On the other hand, the contractionary measures are just the opposite. It refers to the government policy to decrease the volume of money stock in the economy. They have the motive of reducing the credit supply by reducing its expenditure and adopting the reduction regulation of the CBN on the commercial banks which now decreases the economic productivity, output and investment. This in turn stabilizes the amount of money stock in the country.

With these expansionary and contractionary measures, the government of Nigeria through its central bank, should continuously supply that elusive optimal quantity of money that will support non- inflationary and deflationary economic growth and promote macro- economic policy (i.e. price stability, increased balance of payment (BOP), favorable terms of trade (TOT), high level of employment labour force, output growth etc. As excessive money supply leads to inflation whereas excessive reduction in credit supply leads to deflation. So to avoid both inflationary and deflationary negative effects, it is advisable to maintain money supply at an optimal and moderate rate.

## **2.2 EMPIRICAL LITERATURE**

The empirical works of this study were conducted in determining the exact relationship between the rate at which money is supplied and its influence on the general price level as well as economic growth. Such relationships and proper control of monetary phenomenon have created a lot of controversy among the monetary economists.

Money supply plays an important role in boosting the economic growth of any country provided money is exogenously determined in the economy. Its impact on the economy has been widely examined in the developed and developing countries in the context of monetarists and Keynesians controversies, Abbas and Husian (2006).

According to the monetarists, money plays an active role and prices. Hence, The direction of causation runs from money to income and prices without any feedback. The Keynesians on the other hand argues that money does not play any significant role in changing income and prices. Infant, changes in income cause changes in money stock through demand for money implying that there exists uni-dimensional causality from income to money. Similarly, changes in prices are mainly caused by structural factors.

The causal relationship between money and income and between money and prices has been an important area of investigation in economics particularly after

the provocation paper of Sims (1972). Based on Granger causality, he developed a test of causality to examine the causal relationship between money and income. He found the evidence of uni-directional causality from money to income as claimed by the monetarists. However, his results were not supported by subsequent studies.

Barth and Bannett (1974) replicating Sam's test in the Canadian economy showed a bi-directional causality between income and money.

Williams's et al (1976) applying Sam's procedure in the united kingdom found the evidence of uni-directional causality from income to money, opposite to sum's findings. They also pointed out evidence of un-directional causality from money to prices.

Brillembourg and Khan (1979) using a longer data set supported Sim's findings and established a uni-directional causality from money to income and prices. However Dyreyes et al (1980), Examining the pattern of causality between money and income for six industrialized countries showed bi-directional causality, contrary to sum's (1972) and Brillembourg and Khan (1979), similarly, they pinpointed uni-dimentional causality from money to income in Canada contrary to Barth and Banett(1974). However their findings of uni-dimentional casualty from income to money in the United Kingdom were in line with Williams et al (1976).

Lee and li (1983) examined causality among money, income and prices in Singapore and concluded bi-dimensional causality between income and money and uni-directional causality from money to prices.

Joshi and Joshi (1985) pointed out a bi-directional causality between money and income in Indian.

Khan and Saddiqui (1990) showed unidirectional causality from income to money and bi-directional causality between money and prices in Pakistan.

Abbas (1991) performed a causality test between money and income for Asian countries and identified that bi-directional causality between money and income and unidirectional causality between money and income for Asian countries and identified bi-directional causality in Pakistan, Malaysia and Thailand. Bengali et al. (1991) pinpointed a bi-directional causality from money to prices.

Aziakpono (2003) presents and tests a model to determine either or both anticipated and unanticipated money effects real output and growth in Nigeria. The evidence reveals that while anticipated money supply affects real output and growth in Nigeria, the unanticipated money do not.

Das (2003) examined the long run relationship between money and output in Indian and provided the evidence that money unidirectional affects output which affects growth as well.



Ashra et al (2004) examines the relationship between money supply and economic growth for the case of a developing country i.e India and indicates that there exists bi-directional causality between money and price level and that money is non neutral so that is not exogenous in the long run.

Abbas and Husian(2006) examines the casual relationship between money and income and money and prices in Pakistan. The co-integration analysis indicates, in general, the long run relationship among money, income and prices. The error correction and Granger causality framework suggest a one-way causation from income to money in the long run implying that probably real factors rather than money supply have played a major role in increasing Pakistan's national income, regarding the causal relationship between money and prices, the causality framework provides the evidence of bi-variate causality indicating that monetary expansion increases and is also increased by inflation in Pakistan. However, money supply seems to be the leader in this case.

A similar lack of evidence of the adverse effect of stabilization programs including contractionary monetary policy on growth performance in the short run was reported by Connors (1979) and by Donovan (1982) and Kellick (1984). According to another study based on an econometric financial-programming model applied to data for twenty-nine developing countries during 1967-1975, once and for

all reduction of domestic credit (money supply) by 10% lowered output by only about one-half in the short run (Khar and knight 1982).

Results obtained by several empirical studies [Blajer and khan (1984), Tun Wai and Wong(1982), and fry(1844) confirms the hypothesis that credit extended by the banking system in developing countries can have a significant impact on real private capital formation would imply a connection between changes in money supply and growth through the effect on private investment.

Most recent empirical evidence indicates that a 10% reduction in the growth rate of domestic credit or money supply leads on average to less than 1% reduction in the growth rate of output (GDP and GNP) over one year in developing countries. In this respect, it seems that even the rule of thumb proposed by Hanson (1980), that 10% change in the rate of growth of money supply would change output in the same direction by about 1% is somewhat over estimated.

A study of Gylfason (1987) reviewed the relationship between money supply and growth. The evidence shows that credit expansion in several non oil developing countries was reduced markedly and the overall balance of payments improved substantially.

According to Fisher (1932), as money supply changes, the price level and output changes likewise the value of money(purchasing power).

After much divergents done on the control of monetary phenomenon, we were able to learn that through reasonable and theoretically supported routes of most monetarists, that on the increase in the money stock will have little or no effect on real output and employment in the long run, but will merely raise the price level thereby resulting in potential inflation (Nwobodo 1973).

Asogun (1998) examined the influence of money supply and government expenditure on gross domestic product. He adopted the Saint Louis model on annual and quarterly time series data from 1960-1995. He finds money supply and export as being significant on the determinant of economic growth in the Nigerian economy. The result indicated that unanticipated growth in money supply would have positive effect on output.

In general, to assess the use of monetary policy, through empirical research, in controlling money supply in Nigeria, Ojo and Adedemi considered monetary policy formation as the most important active policy of central bank because of its impact on economic development. They concluded that the greatest problem of attaining the policy objectives in Nigeria is the governments over increasing expenditure year to year, which is contradictory to the objective of dampening inflationary pressure in the economy. Hence, it is a priority expected that money supply in the Nigerian economy would be positively correlated with GDP and the general price level.

In conclusion, we have succeeded in receiving some related literatures of some persons of the subject matter in the Nigerian economy and this will go on a long way to educate on the achievement of monetary policies, the appropriate measures of money supply and control of its negative impacts towards achieving the macroeconomic goal of Nigerian sustainable growth.

Analysis in other countries showed that money demand function is a function which is not stable over time (BLundell-Wignal, 1984) because of changes that may occur in the interest rate and inflation expectations, either because of changes in function itself(changing its on structures). Analyzing the demand for money in Austria (Hayo,2000) through a VAR (vector anti regressive model ) notes that the demand for money is stable, having an elastic monetary aggregate M1 information and independent on to GDP rate, While M1 and M2 monetary aggregates are influenced by income level and long term interest (inverse relationship), for the Euro zone(Brand et all,2000) uses a structural co-integrated VAR for the money demand (M3) and finds a relation between long term interest rates and GDP.

The analysis of demand for money (M3) in Venezuela (Cueves, 2002) shows that the best function used is VECM (vector error correction model), which achieves a positive sub unit elasticity of demand for currency in transition economics.

Masha Iya bode (1999) opined that, in the latter 1980's as a result of structural adjustment program, the effects of wage increases created a cost-push effect on inflation which in the long run, was a structural feature of the economy coupled with the growth in money supply that translated these into durables increases.

Futher Friedman (1956) argued that, inflation has a monetary character because it results from the rise in the quantity of money, through the change in prices may not show up at the same time as the rise in the quantity of money. The concept of inflation, which models money supply as an exogenous variable with causality running from money supply to prices, characterized the works of Cagan (1956) and Neaime(2008), among others.

A study of Glyfason (1987) received the relationship between credit policy and growth performance as well as other relevant aspects of economic record, under stabilization programs supported by the imf during 1977, 1978 and 1979. It examined whether these programs in the entirety have influenced growth directly or indirectly or whether other developments have accounted for changes in the growth rate. The evidence shows that credit expansion in several non-oil developing countries was reduced markedly and the overall balance of payments improved substantially. At the same time, the inflation rate although increasing on average was generally kept below the rates prevailing in other non-oil producing developing

countries. Those results were achieved at the cost of relatively modest reduction in the average growth rate of output during and immediately after the program period.

A study of Dorodian (1993) of 43 developing countries of which 27 are program countries that used the IMF financial resources during 1977 (The period of observation is from 1977-1983) tried to examine directly the effects that a typical stabilization program which includes reduction in the growth of domestic credit and on increase in real interest rate may have on the rate of growth of output, the inflation and the current account balance.

A similar study of Kuwait, where a money supply model was tested, indicated that the factors that determine the stock of money in Kuwait are not government infections into the economy and capital outflows. The central banks actions in an attempt to control the money supply in Kuwait seem ineffective since the monetary authorities have no control over government expenditures and exports in Kuwait. Another study of money supply function in Kuwait also indicated that last period's government expenditure in addition to logged money supply is the main determinant of money supply.

According to Basil Moore, money supply is a function drawn as a horizontal line with the interest rate on the vertical axis. Given the rate of interest, the money supply is determined by the demand for loans and central bank cannot control the demands for loans. In an attempt to link money supply to economic growth recent

contributors in the economic growth literature have considered the role of financial structure, this presupposes that the level of money stock drives economic growth.

Ogunmuyiwa and Ekone (2010) investigated the relationship between money supply and economic growth in Nigeria by using the data for the period 1980-2006. The study employed OLS and error correction mechanism in order to check the relationship while Granger causality test for checking the causality. The study found that economic growth is influenced by the level of money supply in the economy.

Mohammed et al (2009) examines the long run relationship among M2, inflation, government spending and economic growth in Pakistan by using annual time series data from 1977-2007. Co integration results shows that public expenditure and inflation has significant and negative effect while M2 has significant and positive effect on economic growth in the long run.

## CHAPTER THREE

### 3.0 RESEARCH METHODOLOGY

#### 3.1 INTRODUCTION

This chapter aims at choosing the methods that will be used to determine the impact of money supply on the economic growth.

In general, economic research is concerned with the measurement of parameters of economic relationship with the prediction (by means of these parameters) of the values of economic variables (kontsoyiannis, 1977). Thus we will use multiple linear relationships.

#### 3.2 MODEL SPECIFICATION

The specification of econometric model is based on econometric theory and on any valuable information relating to the phenomenon being stated.

In doing these we adopt McCallum (1991) and Kohn (1999) who specified the model as follows

$$\text{GDP} = F(\text{RER}, M_2, \text{RIR}) \dots \dots \dots 3.0$$

Equation 3.0 reads that real Gross Domestic Product (Real Per Capita Growth) is a function of real exchange rate (RER), broad money supply ( $M_2$ ), and real interest rate (RIR).

However to be able to estimate the equation we transformed it into the following,

$$\text{GDP} = \beta_0 + \beta_1 \text{RER} + \beta_2 M_2 + \beta_3 \text{RIR} + U_1$$



Where

GDP = Real Gross Domestic Product

RER = Real exchange Rate

$M_2$  = Broad money supply

RIR = Real interest rate

$\beta$  = Parameter Constant

U =Error Term

$\beta_1, \beta_2, \beta_3$  are Parameter Estimates

In the above equation, GDP (Real Gross Domestic Product) is the dependent variable (endogenous variable) While RER (Real Exchange Rate),  $M_2$  (Broad Money Supply), and RIR (Real Interest Rate) are the independent variables.

### **3.3 ESTIMATION PROCEDURES**

The method to be used for this work is the ordinary least square (OLS) method because it has the best, linear, unbiased Estimator (BLUE). Another reason being that its computational procedure is fairly simple compared to other econometric techniques.

Then the computer software used to obtain the result will be stata 10.

### **3.4 METHOD OF EVALUATION**

The evaluation of the results will be based on the following

**a) Sign and magnitude of parameter**

These are the suggestions about the signs of the parameters and to check whether they are in line with economic theory. As regards to the magnitude of parameters, the B's represents marginal magnitudes of economic theory.

**b) Co-efficient of multiple determinations ( $R^2$ )**

Here, the adjusted ( $R^2$ ) will be used to test for the goodness of fit. The value of  $R^2$  lies between 0 and 1. The closer the  $R^2$  is to 1, the better the goodness of fit while the closer of the  $R^2$  is to 0, the worse the goodness of fit.

**c) t-test**

This is used to find out or test for the statistical significance of the individual regression co-efficient. When this is done, the computed or calculated ratio ( $t_{cal}$ ) will be compared with the theoretical, tabulated or critical value ( $t_{tab}$ ) with the n-k degree of freedom.

**d) F-test**

A test of the overall significance of the entire variables used in the regression model, it is used to denote whether the joint impact of the explanatory (exogenous/ independent variables) actually have a significant influence on the dependent variable.

**e) Durbin – Watson test**

This helps to test the validity of the assumption of non-auto correlated disturbances.

### **3.5 DATA REQUIRED AND SOURCES**

In order to ensure an adequate and comprehensive research, secondary data of real exchange rates, broad money supply and real interest rates were collected from 1981-2010.

The relevant statistics were sourced or compiled from the CBN statistical Bulletins for the various years.

## CHAPTER FOUR

### 4.0 PRESENTATION AND ANALYSIS OF RESULTS

#### 4.1 PRESENTATION OF RESULT

The empirical results are presented in a table which shows the estimated parameters, their t- statistics and other – diagnostic tests of equations.

Table 4.1.1 modeling Real Gross Domestic Product LGDP by OLS.

<b>Variable</b>	<b>Coefficient</b>	<b>Standard Error</b>	<b>t-value</b>	<b>Probability</b>
<b>Constant</b>	4.291273	1.614189	2.66	0.013
<b>M<sub>2</sub></b>	0.8178243	0.1023062	7.99	0.000
<b>RIR</b>	0.0059977	0.0085439	0.70	0.489
<b>RER</b>	-0.0030381	0.0015183	2.00	0.056
<b>ECM</b>	0.433	0.004	7.70	0.0212

The model has the following results

$$R^2 = 0.8968$$

$$F(3,26) = 169.30$$

$$\text{Durbin Watson (DW)} = 2.05883$$

$$\text{No of observations} = 30$$

#### **4.1.1 ANALYSIS OF RESULTS BASED ON ECONOMIC CRITERIA**

**(a) Broad money supply ( $M_2$ )**

From our findings, there is a positive relationship between broad money supply and real GDP, the coefficient of broad money supply is 0.8178243 which implies that a one percent increase in broad money supply will increase real GDP by 0.8178243 percent.

**(b) Real Interest Rate (RIR):**

From our findings, there is a positive relationship between real interest rate and Real GDP, the coefficient of real interest rate is 0.005997 which implies that a one percent increase in real interest rate will increase real GDP by 0.005997 percent.

**(c) Real exchange Rate (RER)**

From our findings, there is a negative relationship between real exchange rate and Real GDP, the coefficient of real exchange rate is - 0.003078 which implies that a one percent increase in real exchange rate will reduce real GDP by 0.003038 percent.

### 4.1.2 Summary of the A prior Signs

From results obtained in the regression, the result is expected to follow the a prior expectation of magnitude and sign. Thus, table 4.1.2 below, analyses the outcome of the parameters

<b>Variables</b>	<b>Expected</b>	<b>Obtained</b>	<b>Correlation</b>
<b>M<sub>2</sub></b>	Positive	Positive	Conform
<b>RIR</b>	Negative	positive	Do not Conform
<b>RER</b>	Positive	Negative	Do not Conform

## 4.2 ANALYSIS BASED ON STATISTICAL CRITERIA

### (1<sup>st</sup> ORDER TEST)

#### 4.2.1 The co-efficient of multiple Determination ( $R^2$ )

This is used to test the goodness of fit from the regression results, the value of  $R^2$  is 0.8968 implies that in the long run, 89% of the variations in real GDP is explained by the independent variables (broad money supply, real internal rate and real exchange rate).

#### 4.2.2 Test of significance of the parameter (the t-test statistics)

The student t-test is used to determine of the significance of the individual parameter stimulated t-value in the regression result with the t-tabulated at n-k degree of freedom (df) and at 5% significance level.

$H_0: \beta_i = 0$  (not significant).

$H_1: \beta_i \neq 0$  (statistically significant).

Note: The null hypothesis assumes equality of each of the coefficients of the parameter ( $\beta_i$ ) to be zero (0) which means that each of the variables does not have significance impact on economic growth, but the alternate hypothesis ( $H_1$ ) assumes none of the coefficients of parameter ( $\beta_i$ ) to be zero which means that each of the variables has significant impact on economic growth.

### **Decision rule**

Reject  $H_0$ , if  $t_{cal} > t_{tab}$  and accept, if otherwise

From our data,  $n = 30$  and  $k = 4$

$df = n - k = 26$  at 5% significance level.

From our statistical table, critical T tabulated per 5 percent significance level is equal to 2.056.

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

<b>Variable</b>	<b>T calculated</b>	<b>T tabulated</b>	<b>Decision rule</b>	<b>Conclusion</b>
<b>M<sub>2</sub></b>	7.99	2.056	Reject Ho	Significant
<b>RIR</b>	0.70	2.056	Accept Ho	Not significant
<b>RER</b>	-2.00	2.056	Accept Ho	Not significant

From the table above, only the coefficient of  $\beta_1$  ( $M_2$ ) is significant while  $\beta_2$  (RIR) and  $\beta_3$  (RER) are statistically not significant.

Conclusion: We conclude that  $\beta_1$  ( $M_2$ ) has significant impact on real GDP whereas  $\beta_2$  (RIR) and  $\beta_3$  (RER) has no significant impact on real GDP in Nigeria in the period under review.

#### **4.2.3 The F – statistics test**

The test is conducted to determine if the independent variables in the model are simultaneously significant or not.

$$k - 1 = 4 - 1 = 3$$

$$n - k = 30 - 4 = 26$$



Table 4.2.1 Below analyses the result

<b>F-calculated</b>	<b>F-tabulated</b>	<b>Decision Rule</b>
169.30	2.98	Reject Ho

From the result, since  $F_{cal} > F_{tab}$  i.e.  $169.30 > 2.98$

We therefore reject the null hypothesis  $H_0$  and accept the alternative hypothesis  $H_1$  and conclude that all slope coefficients are not simultaneously equal to zero i.e. the independent variables are simultaneously significant.

### **4.3 ECONOMETRIC TEST OR 2<sup>nd</sup> ORDER TEST**

#### **4.3.1 Test for Autocorrelation**

This test is aimed at ascertaining if the error terms are correlated. To achieve this, we assume that the values of the random variable ( $v_i$ ) are temporarily independent by employing the technique of Durbin-watson (dw) statistics.

Autocorrelation is defined as correlation between members of series of observations ordered in time (Guajarati, 2003: 442).

The Decision rule for Durbin Watson test is represented in the table below.

	Null hypothesis (Ho)	Decision	If
	No positive auto correlation	Reject	$0 < d < d_l$
	No positive auto correlation	No decision	$4 - d_l < d < 4$
	No negative correlation	Reject	$4 - d_l < d < 4$
	No negative correlation	No decision	$4 - d_u < d < 4 - d$
	No autocorrelation (positive or negative)	Do not reject	$d_u < d < 4 - d_u$

Where  $d_l$  = lower limit

$d_u$  = upper limit

$d_w$  or  $d$  = durbin – watson

Using  $n = 30$  (no of observations)

$k = 4$  (no of explanatory variables

26

From our durbin Watson table

$d_l = 1.143$

$d_u = 1.739$

$d_w = 2.05883$

## Decision rule

The Durbin Watson shows that there is no autocorrelation, therefore we accept the Null hypothesis (Ho).

## Computationally:

$$d_u < d < 4 - d_u$$

$$1.739 < 2.05883 < (4-1.739)$$

$$1.739 < 2.05883 < 2.261$$

**Conclusion:** There is no auto correlation since  $1.739 < 2.05883 < 2.261$ , therefore we accept the null hypothesis.

### 4.3.2 NORMALITY TEST

The normality test adopted is the Jargue – Bera (JB) test of normality. The JB test of normality is an asymptotic or large sample, and if is based on the OLS residuals. This test computes the skewness and kurtosis measures of the OLS residuals and it follows the chi square distribution (Gujarati, 2004).

#### Hypothesis

Ho:  $B_1 = 0$  (The error term follows a normal distribution).

Hi:  $B_1 \neq 0$  (The error term does not follow a normal distribution).

The normality test follows chi-square distribution with two degree of freedom (df) at 5% level of significance.

**Decision rule:**

Reject  $H_0$ , if  $X^2_{cal} > X^2_{tab} (0.05)$  and accept ,if otherwise.

From the result obtained from Jargue – Bera (JB) test of normality,  $JB = 7.70$

i.e.  $X^2_{cal} = 7.70$

$$X^2_{tab} = 5.99147$$

Therefore we reject  $H_0$  and conclude that the error term does not follow a normal distribution since  $X^2_{cal} > X^2_{tab}$ .

**4.3.3 HETEROSEDASTICITY TEST.**

This test is basically on the variation of the error term. It helps to ascertain whether the variance of the error term is constant or not.

$H_0$ = homoscedasticity test.

$H_i$  = Heteroscedasticity test

**Decision rule:**

If  $X^2_{cal} > X^2_{tab}$ , reject the null hypothesis and accept the alternate, if  $X^2_{cal} < X^2_{tab}$ .

From our analysis

$$X^2_{\text{cal}} = 0.27$$

$$X^2_{\text{tab}} = 3.841$$

From the result,  $X^2_{\text{cal}} < X^2_{\text{tab}}$  ( $0.27 < 3.841$ ). We therefore conclude that there is no heteroscedasticity and there is homoscedasticity in our model at 5% level of significance. In other words, we accept the null hypothesis, showing that the error terms have a constant variance.

#### 4.4 EVALUATION OF WORKING HYPOTHESIS

From the result of our model, there is evident using the t-test that  $\beta_1$  ( $M_2$ ) is statistically significant. This reveals that  $\beta_1$  ( $M_2$ ) has significant influence on economic growth during the period under study. This made us to reject the null hypothesis. In addition,  $\beta_1$  conformed with the a prior expectation.

Also the t-test revealed that  $\beta_2$  (RIR) and  $\beta_3$  (RER) are not statistically significant. This revealed that real interest rate and real exchange rate has no significant influence on economic growth during the period under review. This made us accept the null hypothesis  $H_0$ .

## **CHAPTER FIVE**

### **5.0 SUMMARY, POLICY RECOMMENDATION AND CONCLUSION**

#### **5.1 SUMMARY**

The objective of this research work is to determine the impact of money supply on Nigerian economic growth in Nigeria. Using secondary data from 1981-2010, the results shows an impact of money supply on economic growth in Nigeria.

It is discovered that all the monetary target variables exerts an insignificant impact on economic growth in Nigeria except broad Money Supply ( $M_2$ ) which is statistically significant to the growth of the Nigeria economy. The relationship that exists between the monetary instruments and real GDP sheds more light on the adoption of credit supply (nominal money) for promoting economic growth in Nigeria but the combination of monetary variables like; Real Interest Rate (RIR) and Real Exchange Rate (RER) may not be effective for the purpose of promoting economic growth for the period under study as the regression result shows that they are not statistically significant.

#### **5.2 POLICY RECOMMENDATION**

Given the potency of monetary policy in promoting economic growth in Nigeria, the following policy recommendations could be made

- a) The Nigerian financial system should be made more effective in its monetary management by making all financial markets organized so as to accentuate the effects of monetary policy variables like Broad money supply, Real Interest Rate and Real Exchange Rate. This promotes real GDP in Nigeria.
- b) The effectiveness of monetary policy also depends largely on the quantity of information available to the central bank. In this regards, the central bank should endeavor to improve on its current performance in producing accurate and credible balance sheet information in a timely manner. They should also estimate properly the length and variability's of lags that affect policies.
- c) Government should introduce a specification of the financial structure that is richer than the existing ones, recognizing the positive effect of a stable monetary policy.
- d) Attempts should be made by the government to improve on its infrastructure in order to reduce cost of production and increase exportation so as to achieve the objective of naira devaluation. This adds to the country's national income and in general promotes the real GDP.
- e) The monetary authorities should develop a money stable policy that would propel the economy towards a positive end.

- f) Government should formulate policy that is aimed at raising broad money supply so that by so doing it would encourage capital flight into the country and increase real GDP since its coefficient is quite higher.
- g) Government should intensify its effort in pursuing the policies that are anti-inflationary in nature such that its monetary policy objective will not be derailed.
- h) The CBN should also look into the transmission mechanisms of money supply in order to determine its lag effects on economic growth.

### **5.3 CONCLUSION**

It is evident from the result that Real Interest rate and Real Exchange Rate in Nigeria within the period under study failed to influence the real gross domestic product while broad money supply being the only significant regressor influenced the Real Gross Domestic Product within the period under study.

It has been identified that the major problem militating against the poor performance of monetary policy instruments in influencing real GDP in Nigeria is time lags involved which now makes any policy employed by the government to take many months to achieve its full effect.



In effect to this, the effectiveness of influencing Real GDP in Nigeria maybe promoted by emphasizing on Broad Money Supply instead of on monetary target variables due to the fact that Money Supply is statistically significant.

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