

IMPACT OF FISCAL POLICY AND MONETARY POLICY ON THE ECONOMIC GROWTH OF NIGERIA (1980 – 2016)

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ABSTRACT: This research work focused on the impact of fiscal and monetary policy on Nigeria's economic growth between 1980 and 2016. In the study, variables such as government expenditure and taxation revenue were used to proxy fiscal policy while the broad money supply was employed as a proxy for monetary policy. The other variable employed as controlled variable is interest rate. The unit root test confirmed that all the variables were not stationary at levels but were stationary at first difference. Also, the Johansen cointegration test confirmed that a long run relationship exists between fiscal policy, monetary policy and economic growth in Nigeria. The empirical results reported using the ordinary least squares technique suggested that fiscal policy has positive and significant impact on economic growth, and monetary policy has positive impact on economic growth as well. We, therefore, conclude that both fiscal and monetary policies have positive and significant impact on Nigeria's economic growth between 1980 and 2016. To this end, we recommend that the Federal Government of Nigeria should focus on using the fiscal policy instruments to stimulate the economy in the desired direction in order to sustain economic growth process. We also call on the Central Bank of Nigeria to consistently embark on appropriate and effective monetary policy to boost the economy. Furthermore, since interest rate is observed to negatively impact economic growth, efforts should be made as lowering the cost of borrowing in the commercial banks and other financial institutions in order to boost investment and increase economic growth in the country.

I. INTRODUCTION

1.1 Background to the Study

The achievement of macroeconomic goals, namely full employment, stability of price level, high and sustainable economic growth and external balance, from immemorial, has been a policy priority of every economy, whether developed or developing. The realization of these goals undoubtedly is not automatic but requires policy guidance (Ajisafe and Folorunso, 2002). This policy guidance represents the objective of economic policy. Fiscal and monetary policy instruments are the main instruments of achieving the macroeconomic objectives. The basic fiscal policy instruments are public expenditure and tax while the monetary instruments include reserve requirements, discount rates and open market policy (Buiter, 2002; Omojolaibiet al, 2016).

Monetary policy can be described a deliberate effort by the monetary authority to control the money supply and the credit conditions for the purpose of achieving certain broad economic objectives which might be mutually exclusive (Cochrane, 2005). For most economies, the objectives of monetary policy include price stability, maintenance of balance of payments equilibrium, promotion of employment and output growth, and sustainable development. These monetary policy measures are necessary for the attainment of internal and external balance, and the promotion of long-run economic growth. For example, an expansionary monetary policy designed to stimulate economic growth will lower the rate of interest and may generate higher inflation which the level of growth may not be able to prevent (Gertler and Gilchrist, 1991). The effectiveness of monetary policy in achieving its target objectives, therefore, depends strongly on the operating economic environment, the institutional framework adopted, and the choice and mix of the instruments used (Cochrane, 2005).

Fiscal policy is also a major economic stabilization weapon that involves measure taken by the Government to regulate and control the volume, cost and availability as well as direction of money in an economy, to achieve some specified macroeconomic policy objective and to counteract undesirable trends in the Nigerian economy (Gbosi 2001). In this view both monetary and fiscal policies cannot be left out to the market forces of demand and supply just like any other instruments of stabilization. Fiscal policy is one of the two macroeconomic

policies which comprise public spending, taxation and any other government income. Fiscal policy can be used to influence the level of demand in an economy, for the main purpose of making unemployment as low as possible without triggering excessive inflation. At times fiscal policy has been deployed to manage short term demand by fine-tuning although since the end of the Keynesians it has more often targeted on long-term goals rather than short term, with monetary policy more often used for shorter term adjustments. Fiscal policy also can be described as the use of government budget, government revenue (tax) and expenditure to influence the level of economic activities through the use of fiscal policy instruments like government expenditure, tax, government borrowing/ public debt (Gbosi, 2001; Ajisafe and Folorunso, 2002). Tax can be reduced by the government or government involving in a more productive expenditure that will bring about a good performance and effect on the economy to increase economic activities, government borrowing which could be in the form of public debt can also be used for the purpose of smoothing, tilting and stabilizing the economy.

Fiscal and monetary policies are inextricably linked in macroeconomic management as developments in one sector directly affect developments in the other. Moreover, there is an accord among economists such as Isaksson (2001), Gbosi (2001), Ajisafe and Folorunso (2002) and Ndiyo and Udah (2003) that monetary and fiscal policies are either jointly or individually affecting the level of economic activities but the degree and relative potency of these policies has been the subject of debates and controversies between the Keynesians and the Monetarists. Monetarists strongly believe that monetary policies exact greater impact on economic activities as unanticipated changes in the stock of money affect output and growth (Amassomaet *al*, 2011; Chimezie, 2012). In fact, they are of the opinion that an increase in government spending would crowd out private sector and such can outweigh any short-term benefits of an expansionary fiscal policy. On the other hand, the concept of liquidity trap which is a situation in which real interest rates cannot be reduced by any action of the monetary authorities was introduced by the Keynesian economists. Hence, at liquidity trap, an increase in money supply would not stimulate economic growth because of the downward pressure of investments owing to insensitivity of interest rate to money supply (Ajisafe and Folorunso, 2002). The Keynesians recommend fiscal policy by stimulating aggregate demand in order to curtail unemployment and reducing it in order to control inflation.

The impact of both fiscal and monetary policies has been widely examined in the context of Monetarists and Keynesians controversies (Husain and Abbas, 2002; Cochrane, 2005). These two very theories explain the direction of causation between money, prices and income. In Nigeria, there are having been very few empirical studies regarding the relative efficacy of the stabilization tools. Gbosi (1998) in his study on money supply, government expenditure and prices in Nigeria, found a very poor and insignificant relationship between government expenditure and prices. Ajisafe and Folorunso (2002), in their analysis, showed that monetary rather than fiscal policy exerts a great impact on modelling techniques. The emphasis on fiscal action of the government has led to greater distortion in the Nigerian economy.

Central to the role of different economies of the world is the need to regulate and stabilize the system in order to achieve macroeconomic objectives. According to Okunronmu (1993), these objectives include economic development and growth, full employment of labour, price stability, equilibrium balance of payment and equitable distribution of income, among others. A set of policy measures adopted invariably by the government to regulate the economy for the attainment of the macroeconomic objectives include monetary and fiscal policies. While monetary policy focuses on the control of availability, volume, flow, direction and cost of credits within the economy, fiscal policy rather concerns with the control of taxes and government expenditures. Invariably, the adoption of either monetary or fiscal policies may signify far-reaching implications on the overall attainment of the perceived macroeconomic objectives (Okpara, 1988; Nagayasu, 2003). Hence, governments are often wary over whether to go for more of monetary policies or lean more on the fiscal policies as the necessary solution for the attainment of overall economic growth in the economy.

1.2 Statement of the Problem

Nigeria's potential for growth and poverty reduction is yet to be realised. A key constraint has been the recent conduct of macroeconomics, particularly fiscal and monetary policies. This has led to rising inflation and decline in real incomes. What is more, the public delivery services are poor and deteriorating. Moreover, there has been little transparency and accountability in the management of public resources. The Nigerian economy has experienced traumatic times from the inception of the present administration because of the low growth rate of GDP and economic recession. This was a manifestation of a demoralized workforce coupled with corruption that characterized government business. Lack of transparency and accountability in the execution of public sector activities was very pronounced in all tiers of government. Equally glaring is the poor socio-economic condition of the people. Poverty rate remained very high, with about 70percent of the population estimated to be living below the \$1 per day consumption bar (Gbosi, 1998; Hussain and Abas, 2002).

National economic management became a Herculean task, as the economy has to contend with volatility of revenue and expenditure. The widespread lack of fiscal discipline was further exacerbated by poor co-ordination of fiscal policy among the three tiers of government. Also, there is a weak revenue base arising from high marginal tax rate with very narrow tax base, resulting in low tax compliance. These have been curbed with the introduction of a new integrated tax system. Other gray areas of the national economy include poor infrastructure, weak public service delivery and a generally weak environment for private sector development. In many countries of the world, the level of income disparity, inflation, unemployment and poverty is astronomically high such that the standard of living of an average person remains completely low. The situation state above is more popular in developing and less developed countries of the world. Governments and policy makers in these nations seek policies and strategies to “push” their economies out of the low socioeconomic ebb (Isaksson, 2001).

Monetary policy implementation by central bank of Nigeria have some position returns if it is wisely applied, but the monetary policy becomes a problem when it conflicts among the objections and instruments of monetary policy and other policies as well as the constraints it faces. The inadequate implementation of the various policies as well as constraints it faced. The inadequate implementations of the various policies as well as inconsistency in such policies have been the major problems of monetary policy in Nigeria. Fiscal deficits of the federal government in the recent past have been but out of time with monetary target largely because of improper coordination of the fiscal and monetary programme. Fiscal imbalance has adverse consequences on the monetary base and the effective use of indirect tools. Consequently, the direction of this study is to empirically determine the efficacy of both monetary and fiscal policies measures as a way of achieving economic growth in Nigeria.

1.3 Objectives of the Study

The main objective of the study is to examine the impact of fiscal and monetary policy on Nigeria’s economic growth. The specific objectives include:

- i. to determine the effect of fiscal policy on Nigeria’s economic growth.
- ii. to examine the impact of monetary policy on Nigeria’s economic growth.
- iii. to assess the relationship between fiscal policy, monetary policy and economic growth in Nigeria.

1.4 Relevant Research Questions

From the objectives of the study, one can deduce the following research questions:

- i. Does fiscal policy significantly affect economic growth in Nigeria?
- ii. To what extent monetary policy impact economic growth in Nigeria?
- iii. Is there long-run relationship between fiscal policy, monetary policy and economic growth in Nigeria?

1.5 Relevant Research Hypotheses

Hypothesis I

H₀: Fiscal policy does not significantly affect economic growth in Nigeria.

H₁: Fiscal policy significantly affects economic growth in Nigeria.

Hypothesis II

H₀: Monetary policy does not have significant impact on economic growth in Nigeria.

H₁: Monetary policy has significant impact on economic growth in Nigeria.

Hypothesis III

H₀: There is no long run relationship between fiscal policy, monetary policy and economic growth in Nigeria.

H₁: There is long run relationship between fiscal policy, monetary policy and economic growth in Nigeria.

1.6 Significance of the Study

This study is significant because it juxtaposes the fact that fiscal policy and monetary policy are very important tools in steering different economies in the desired direction. Fiscal policy helps to foster economic growth and development through a number of different channels these includes macroeconomic which is to influence on budget deficit on growth as well as microeconomic which is to influence the efficiency of resources used. It is also this fiscal policy that serves as a gearing tool for the achievement of variety of economic objectives. Monetary policy on its own is a veritable tool in the hand of the apex banks and other monetary authorities in moving the economy forward. Hence, the result of this study will help to achieve the following: (i) the outcome of this study will be a useful guide for the government of Nigeria, stakeholders in the financial sectors and the

general public on how fiscal policy can be used as a tool for the rating of performance and stabilization of the Nigerian economy; (ii) this research work will also serve as a resource base to other scholars and researchers who are interested in carrying out further research work in this field to have a clue to work on and subsequently they may also provide a new explanation to the topic and this help in adding more to the body of knowledge; and (iii) this study will be of great benefit to Bankers, Economist, Investment analysts, Government Agencies, Academics, Public and Private sectors and researchers. Moreover, it will be useful to policymakers in their attempt to arrive at dynamic and reliable monetary and fiscal Policy measures for promoting economic development.

1.7 Scope of the Study

This study evaluates the impact of fiscal and monetary policy on economic growth in Nigerian. In this study, the structural rigidities hindering the performance of the economy through fiscal and monetary policies between 1980 and 2016 are discussed. The study employs relevant indicators like taxation, government expenditure, interest rate, money supply and the real GDP.

1.8 Definition of Terms

Monetary Policy: According to Johnson “monetary Policy was defined as policy employing Central Bank control of the supply of money as an instrument for achieving the objectives of general economic policy.

Fiscal Policy: Fiscal Policy is the use of Taxation and Public Expenditure by the Government for stabilization or growth of the economy.

Open Market Operation: This can be explained as sales and purchase of securities in the money market by the Central Bank. When prices are rising and there is a need to control them, the Central Bank sells securities, the reserves of commercial banks are reduced and they are not in position to lend for to the business community, further investment is discouraged and the rise in price is checked.

Price Stability: This is one of the Macro Economic objectives of monetary policy, it helps to regulate the fluctuation in prices level, because fluctuation in prices bring uncertainty and instability to the economy.

Gross Domestic Product: Gross Domestic product is the total value of goods and services produced within a country during a year.

Efficacy: The ability of a thing to produce the result that are wanted, it implies effectiveness.

Performance: How well or bad an economy is working.

Stabilization: The act of making an economy worthwhile and stable in terms of growth and development.

Economy: A structure that comprises all set of people individuals, parastatals, corporations etc.

II. LITERATURE REVIEW

2.1 Preamble

In this chapter, concepts that are related to the subject matter are presented. Also, the chapter presents review of related theories as well as past studies that are related to the study. This will help to better situate the study and to design a blue print for the current study.

2.2 Conceptual Issues

2.2.1 The Monetarist View

The monetarists are of the opinion that the free-market economy has strong self-regulating tendencies, if a satisfactory general climate is maintained; the economy will tend naturally toward full employment and a relatively stable price level (Lipsey and Steiner, 1981). At the same time, private initiative, spurred by the profit motive will yield a satisfactory growth of real national income. In this view, governments' attempts to stabilize the economy will usually be perverse. They will cause larger recessions on the downward side and bigger inflations on the upward side than would have occurred had government policy been passive. Instead of trying to stabilize the economy, government policy should take a very passive stance. The fiscal stance should be one of low and stable government expenditure and a budget that is balanced cyclically if not annually. The monetary stance should be one of a three percent increase in money supply, year in and year out, to accommodate the increased demand for money associated with a growth of wealth and full employment income. Against this stable backdrop, the natural corrective forces of the economy can be relied on to prevent the extremes of serious recession and serious inflation.

2.2.2 The Keynesians View

Keynesians are of the view that free enterprise economy has weak self-regulatory powers and may readily settle into prolonged periods of heavy unemployment. As a result of restrictive practices of monopolies and the tendency of large corporations to avoid risks and adopt safe and cautious policies, the income growth rate will be low. Furthermore the enormous power of large unions and corporations may cause wage cost-push inflations that cannot be blamed on monetary mismanagement. In this view, active government intervention is vital,

without such efforts, the economy will sometimes undergo wide cyclical fluctuations with alternating bouts of inflation and unemployment, at other times it will settle into prolonged stable periods of heavy unemployment. To avoid these situations, government must use its instruments of fiscal policy supplemented by monetary policy (Lipsey and Steiner (1981)). A fundamental issue in the Monetarist and Keynesian views discussed above is the fact that both fiscal and monetary policies are applied by the government in regulating and stimulating the economy to achieve a desired level of inflation and unemployment. The only major difference in the two is the level of involvement of the government. While the monetarists focus on a passive role of the government, the Keynesians look into a more active role, with this the theoretical setting of the work is established. This gives the direction of further discussions with focus on economic development.

2.2.3 Fiscal Policy

In economics, fiscal policy is the use of government spending and revenue collection to influence the economy. It refers to the overall effect of the budget outcome on economic activity. Fiscal policy can be contrasted with the monetary policy, which attempts to stabilize the economy by controlling interest rates and the supply of money. The two main instruments of fiscal policy are government spending and taxation. Changes in the level and composition of taxation and government spending can impact on the following variables in the economy.

- a) Aggregate demand and the level of economic activity.
- b) The pattern of resource allocation
- c) The distribution of income

The three possible stances of fiscal policy are neutral, expansionary and contractionary.

i. **Neutral:** - A neutral stance of fiscal policy implies a balanced budget where government spending is equal to tax revenue ($G=T$). Government spending is fully funded by tax revenue and the overall budget outcome has a neutral effect on the level of economic activity.

ii. **An Expansionary stance of Fiscal Policy** involves a net increase in government spending ($G>T$) through rises in government spending or a fall in taxation revenue or a combination of the two. This will lead to a larger budget deficit or a smaller budget surplus than the government previously had, or a deficit if the government previously had a balanced budget. Expansionary fiscal policy is usually associated with a budget deficit.

iii. **A contractionary Fiscal Policy ($G<T$)** occurs when net government spending is reduced either through higher taxation revenue or reduced government spending or a combination of the two. This would lead to a lower budget deficit or a larger surplus than the government previously had a balanced budget. Contractionary fiscal policy is usually associated with a surplus.

2.2.3.1 Effect of Fiscal Policy on the Economy

Fiscal policy is used by governments to influence the level of aggregate demand in the economy in an effort to achieve economic objectives of price stability, full employment and economic development and growth (Heyne, et al, (2002)). Keynesian economics suggests that adjusting government spending and tax rates are the best ways to stimulate aggregate demand. This can be used in times of recession or low economic activity as an essential tool in providing the framework for strong economic growth and working toward full employment. The government can implement these deficit spending policies due to its size and prestige and stimulate trade. In theory, these deficits would be paid for by an expanded economy during the boom that would follow. During periods of high economic growth, a budget surplus can be used to decrease activity in the economy. A budget surplus will be implemented in the economy if inflation is high in order to achieve the objective of price stability (Nelson (2007)).

The removal of funds from the economy will (by Keynesian theory) reduce levels of aggregate demand in the economy and contracts, it bringing about price stability. Some economists argue that fiscal policy can have no stimulus effect. This is known as the treasury view and is categorically rejected by Keynesian economics. The Treasury View refers to the theoretical positions of classical economists in the British Treasury who opposed Keynes' call for fiscal stimulus in the 1930s. The same general argument has been repeated by neoclassical economists up to the present day. From their point of view, when a government runs a budget deficit, funds will need to come from public borrowing (the issue of government bonds), overseas borrowing or the printing of new money. When a government funds a deficit with a release of government bonds, an increase in interest rates across the market can occur. This is because government borrowing creates higher demand for credit in the financial markets, causing a lower aggregate demand, contrary to the objective of a budget deficit. This concept is called Crowding out.

Other possible problems with fiscal stimulus include the time lag between the implementation of the policy and detectable effects in the economy and inflationary effects driven by increased demand. In theory, fiscal stimulus does not cause inflation when it uses resources that would have otherwise been idle. For instance,

if a fiscal stimulus employs a worker who otherwise would have been unemployed, there is no inflationary effect. However, if the stimulus employs a worker who otherwise would have had a job, the stimulus is increasing demand while labour supply remains fixed, leading to inflation.

2.2.4 Monetary Policy

Monetary policy is the process by which the government, through the Central Bank or monetary authority of a country controls the supply of money, availability of money and cost of money or rate of interest, in order to attain a set of objectives oriented towards the growth and stability of the economy. Monetary policy rests on the relationship between the rates of interest in an economy and the total supply of money. Monetary policy uses a variety of tools to control one or both of these, to influence outcomes like economic growth, inflation, exchange rates with other currencies and unemployment. Where currency is under a monopoly of issuance, or where there is a regulated system of issuing currency through banks which are tied to a Central Bank, the monetary authority and this influence the interest rate, in order to achieve policy goals.

Monetary policy is referred to as either being an expansionary policy or a contractionary policy. Expansionary policies increase the size of the money supply, or decrease the interest rate. A policy is referred to as contractionary if it reduces the size of the money supply or raises the interest rate. Furthermore, monetary policies are described as follows, accommodative, if the interest rate set by the Central monetary authority is intended to create economic growth, neutral fit is intended neither to create growth nor combat inflation; or tight, if intended to reduce inflation Orphanides (2008).

It is important for policymakers to make credible announcements and degrade interest rates as they are non-important and irrelevant with regards to monetary policies. If consumers and firms believe that policymakers are committed to lowering inflation; they will anticipate future prices to be lower than otherwise. If an employee expects prices to be high in the future, he will draw up a wage contract with a high wage to match these prices. Hence, the expectation of lower wages is reflected in wage-setting behaviour between employees and employers and since wages are in fact lower, there is no demand pull inflation because employers are paying out less in wages. In order to achieve this low level of inflation, policymakers must have credible announcements, that is, private agents must believe that these announcements will reflect actual future policy. If an announcement about low-level inflation targets is made but not believed by private agents, wage-setting will anticipate high-level inflation and so wages will be higher and inflation will rise. A high wage will increase a consumer's demand (demand pull inflation) and a firm's costs (cost push inflation), so inflation rises. Hence, if a policymaker's announcements regarding monetary policy are not credible, policy will not have the desired effect (Federal Reserve Board, 2006).

If policymakers believe that private agents (consumers and firms) anticipate low inflation, they have an incentive to adopt an expansionary monetary policy, where the marginal benefit of increasing economic output outweighs the marginal cost of inflation. However, assuming private agents have rational expectations, they know that policymakers have this incentive. Hence private agents know that if they anticipate low inflation, an expansionist's policy will be adopted, that causes a rise in inflation. Consequently, unless policymakers can make their announcement of low inflation credible, private agents expect high inflation. This anticipation is fulfilled through adaptive expectations (Wage-setting behavior) and so, there is higher inflation (without the benefit of increased output). Hence, unless credible announcements can be made, expansionary monetary policy will fail. Announcements can be made credible in various ways. One is to establish an independent Central Bank with low inflation targets, but no output targets. Hence, private agents know that inflation will be low because it is set by an independent body. Central Banks can be given incentives to meet their targets, for example larger budgets, a wage bonus for the head of the bank, in order to increase their reputation and signal a strong commitment to a policy goal.

2.3 Theoretical Review

2.3.1 Afonso-Alegre Growth Model

This is an extension of the simple endogenous growth model and incorporates elements of fiscal policy to illustrate the system through which different types of public expenditure and taxes affect economic growth. The model assumes an economy with four types of public expenditures and three types of taxes in an extended Cobb-Douglas type model with constant returns to scale. The types of the public expenditures in the model are: the expenditures on public input in the production function; the capital-enhancing type of public expenditure; the labour-enhancing type public expenditure and the publicly provided consumption good. Taxation is allocated among taxes on consumption, taxes on corporate profits and taxes on labour income (Afonso and Alegre, 2011). The conclusions of the model show that changes in the levels public input in production, capital

enhancing public-expenditure and labour-enhancing public expenditure will all have permanent and positive effects on growth whereas changes in both labour income tax and corporate income tax will also have permanent and negative effects on growth. And since government expenditure on consumption and consumption tax affect the economy through consumption, both would affect growth temporarily based on the theory that consumers would not change their consumption pattern in the long run. (Twumasi, 2012)

2.3.2 Wagner's Theory

Historically, many theories have been developed to explain the behaviour and influence of government expenditure on growth. A German economist named Adolph Wagner developed this theory. The law states that government expenditure must increase as the Gross National Product (GNP) increases and the government expenditure must of necessity grow at a faster rate. According to him, there are inherent tendencies for the activities of different layers of government (such as central and state governments) to increase both intensively and extensively (Peacock, 2004). He argued that there was a functional relationship between the growth of an economy and the growth of government spending, such that, as both increase, there is a tendency for the former to grow at a faster rate than the latter. It is not clear from the original version of this theory whether Wagner was referring to an increase in absolute level of government expenditure, the ratio of government expenditure or the proportion of public sector in the total economy. Musgrave believes that Wagner was thinking of the proportion of public sector in the total economy. Nitti not only supported Wagner's thesis but also concluded with empirical evidence that it was equally applicable to several other governments, which differed widely from each other. All kinds of governments, irrespective of their levels (say, the central or state governments), intentions (peaceful or warlike) and size and so on had exhibited the same tendency of increasing public expenditure.

A number of reasons can be enumerated for the inherent long-term tendency recorded in history. The first is the expansion in the traditional functions of the state. Defence became increasingly more expensive overtime. Within the country, administrative set kept increasing both in coverage and intensity. With the progress of the society, administration of government and its services had to become increasingly more extensive, cumbersome, and expensive so as to retain efficiency. Secondly, the state activities were increasing in their coverage. Traditionally, they were limited to only defence, justice, law and order, maintenance of the state and social overheads. The government started expanding its activities in the field of socio-economic welfare in order to increase its responsibility to the society. These measures include efforts to rich cultural life of the society as old age pension and subsidies. Most government took active steps in ensuring distributive justice by reducing income and wealth inequalities. Thirdly, the need to provide and expand the sphere of public goods received an increasing attention. The state tries to shift the composition of national produce in favour of public goods and this in turn necessitated an expansion of investment activity of the government (Peacock, 2004).

2.3.3 The Classical Theory

The earliest organized school of macroeconomic thought is the "classical" school. The classical economists were proponents of the price mechanism (market system) which assumes a smooth functioning market where there is effective resource allocation (Samuelson and Nordhaus, 1998) and a guarantee to economic freedom to all and sundry, with built-in flexibility that excludes the need for conscious government planning and intervention. It however has certain limitations and inefficiencies resulting in a condition referred to as "market failure". The market failed to achieve a satisfactory level of welfare for the society by providing an equitable or fair distribution of income and wealth, or all of these (Dornbusch *et al*, 1990). The 1930s Great Depression was a confirmation of the reality of the failure of the market economy which led to the evolution of Keynesian economics. Keynes submitted that the lingering unemployment and economic depression were a result of failure on the part of the government to control the economy through appropriate economic policies (Samuelson and Nordhaus, 1998). Consequently, Keynes proposed the concept of government intervention in the economy through the use of macroeconomic policies such as fiscal and monetary policies. Fiscal policy deals with government deliberate actions in spending money and levying taxes with a view to influencing macro-economic variables in a desired direction. This includes sustainable economic growth, high employment creation and low inflation (Samuelson and Nordhaus, 1998). Thus, fiscal policy aims at stabilizing the economy. Increases in government spending or a reduction in taxes tend to pull the economy out of a recession; while reduced spending or increased taxes slow down a boom (Dornbusch *et al*, 1990). Government interventions in economic activities are basically in the form of controls of selected areas/sectors of the economy. These controls differ, and depend on the specific needs or purpose the government desires to achieve. Samuelson and Nordhaus (1998), distinguished between two forms of regulation, namely:

- (i) Economic regulation (involving control of prices, entry and exit conditions, regulation of public utilities, such as transportation and media organizations, regulation of the financial sector operations.
- (ii) Social regulation (aimed at protecting the health and safety of workers at workplace, the environment, and protection of consumer rights. our focus is on economic regulation.

2.3.4 The Endogenous Growth Theory

The endogenous growth theory advocates the stimulation of level and growth rate of per capita output through within the economic policies such as tax policies. The endogenous growth theory posits that the driver of economic growth is fundamentally the result of endogenous factors and not external factors (Nelson and Singh, 1998). The endogenous growth theory posits that the growth of the economy in the long run primarily depends on policy measures which have grave implications on openness, competition, change and innovation (Barro, 1990). The endogenous growth theory further argues that economic growth is generated from within a system as a direct result of internal workings of the system. Specifically, the theory notes that the enhancement of a nation's human capital will lead to economic growth by means of the development of new forms of technology and efficient and effective means of production which are not disrupted by taxes. Supporters of endogenous growth theory argue that the productivity and economies of today's industrialized countries compared to the same countries in pre-industrialized eras are evidence that growth was created and sustained from within the economy.

Since the mid-1980s the theoretical growth literature has above all tried to endogenize the growth rate of output in the long-run. As is well known, in the neoclassical growth model, if the incentives to save or to invest in new capital are affected by fiscal policy, this alters the equilibrium capital output ratio, and therefore the level of the output path, but not its slope (with transitional effects on growth as the economy moves onto its new path). The novel feature of the public-policy endogenous growth models of Barro (1990) and Barro and Sala-i-Martin (1995) is that fiscal policy (tax policy) can determine both the level of the output path and the steady-state growth rate. Endogenous growth theory pioneered by the work of Barro (1990), Nelson and Singh (1998) among others, points out mechanisms by which policy variables cannot only affect the level of output, but also steady-state growth rates. Barro (1990) constitutes one of the first attempts at endogenizing the relationship between growth and fiscal policies. He distinguishes four categories of public finances: productive vs. non-productive expenditures and distortionary vs. non-distortionary taxation. Taxation is distortionary if it affects the investment decision, and hence output/growth. This is, above all, the case for direct income and profit taxation. Otherwise taxes, such as consumption taxes, are considered non-distortionary, except for the case when households face the endogenous choice of labour or leisure.

2.4 Empirical Review

Abdurrahman (2010) empirically examined the role of monetary policy on economic activity in Sudan for the period between 1990 and 2004. The study which employed the OLS technique found that monetary policy had little impact on economic activity during the period under consideration.

Mangani (2011) assessed the effects of monetary policy in Malawi by tracing the channels of its transmission mechanism while recognizing several factors that characterize the economy such as market imperfections, fiscal dominance and vulnerability to external shocks. Using vector auto-regressive modeling, the study established the lack of unequivocal evidence in support of a conventional channel of the monetary policy transmission mechanism, and found that the exchange rate was the most important variable in predicting prices.

Karimi and Khosravi (2010) investigated the impact of monetary and fiscal policies on economic growth in Iran using autoregressive distributed approach to co-integration between 1960 and 2006. The empirical results indicated existence of long-run relationship between economic growth, monetary policy and fiscal policy. The results further showed exchange rate and inflation as proxies for monetary policy has inverse impact on economic growth.

Olweny and Chilwe (2012) examined the relationship between monetary policy and private sector investment in Kenya by tracing the effects of monetary policy through the transmission mechanism to explain how investment responded to changes in monetary. The study utilizes quarterly macroeconomic data from 1996 to 2009 and the methodology draws upon unit roots and co-integration testing using a vector error correction model to explore the dynamic relationship of short run and long run effects of the variables due to an exogenous shock. The study showed that monetary policy variables of government domestic debt and Treasury bill rate are inversely related to private sector investment, while money supply and domestic savings have positive relationship with private sector investment consistent with the IS-LM model. Based on the empirical results the study suggests that tightening of monetary policy by 1 % has the effect of reducing investment by 2.63% while the opposite loose monetary policy tends to increase investment by 2.63%.

Alam and Waheed (2006) examine channels of monetary transmission in Pakistan across seven sectors (agriculture, mining and quarrying, manufacturing, construction, wholesale and retail trade, finance and

insurance, and ownership of dwellings) of the economy; the finding of the study revealed that the manufacturing, wholesale and retail trade, and finance and insurance sectors declined more in response to the interest rate shocks while the agriculture, mining and quarrying, construction, and ownership of dwellings were observed to be insensitive to interest rate changes.

Saygin and Evren (2010) evaluate sectoral growth cycles and the impact of monetary policy in the Turkish manufacturing industry. The main objective of the study is to investigate the response of output in Turkish manufacturing industries to monetary policy shocks. According to the VAR results, all manufacturing sectors respond to a tightening monetary policy shock with a reduction in absolute output. The total manufacturing output declines very quickly after the shock, reaching its minimum value within three quarters. The degree of this output reduction; however, is not the same for all manufacturing sectors. Some of the sectors are more severely affected whereas others are not deeply affected at all and concluded that a contractionary monetary policy shock has a limited effect on Turkish manufacturing industries.

Sanni *et al* (2011) empirically investigated the use of fiscal policy and monetary policy in controlling the economic activities in Nigeria for the period from 1960 to 2010. This was done with the aim of finding out which of the two policies is superior to another. Using Error Correction Mechanism (ECM) method of the analysis, the findings showed monetary policy instruments exert more influence on the economic activity and concluded that proper mix of the policies may enhance a better economic growth.

Ezeji and Michael (2013) investigated the impact of monetary and fiscal policies on Nigerian economy between 1990 and 2010. The study employed the VAR framework and results revealed that the time series properties of the variables attained stationarity at first order. The variables were co-integrated at most 1 with at least 2 cointegrating equations. The findings of the study confirm that fiscal policy measures exert greater effect than monetary policy measures on the level of economic development in Nigeria and concluded that monetary and fiscal policies measures are jointly statistically significant to level of economic activities in Nigeria.

Ditimi *et al* (2011) examined the effect of monetary policy on macroeconomic variables in Nigeria for the period 1986 to 2009. The study adopted a simplified Ordinary Least Squares technique and also conducted the unit root and co-integration tests. The study showed that monetary policy has witnessed the implementation of various policy initiatives and has therefore experienced sustained expansion over the years. The results also show that monetary policy had a significant effect on exchange rate and money supply while monetary policy was observed to have an insignificant influence on price instability. They noted that the implication of this finding is that monetary policy has had a significant influence in maintaining price stability within the Nigerian economy. The study concluded that for monetary policy to achieve its other macroeconomic objective such as output performance there is the need to reduce the excessive expenditure of the government and align fiscal policy along with monetary policy measure.

Adebiyi (2006) explored financial sector reforms, interest rate policy and the manufacturing subsector in Nigeria, using vector auto-regression and error correction mechanism (ECM) technique with quarterly time series spanning 1986:1 to 2002:4. Unit root and co-integration test were also performed. The study revealed that the real deposit rate and inflation rate are significant for the growth of the manufacturing sub-sector in Nigeria. In addition, the study revealed that the predominant sources of fluctuation in the index of manufacturing production are due largely to own shock and to a lesser extent, to real deposit rate. The study also showed that in the long run the index of manufacturing production is insensitive to inflation rate, commercial banks' credit to the manufacturing sector, interest rate spread and exchange rate.

Unaimikogbo and Enoma (2001) evaluate the impact of monetary and fiscal policies on manufacturing industry in Nigeria with a simulation equation model 1986 to 1997. Using Ordinary Least Squares (OLS) estimation technique of data analysis, the study found that both policies contribute significantly to the growth of the manufacturing industry. They concluded that monetary policy variable is more effective and dependable than fiscal variable in affecting changes in economic activities.

Obamuyi *et al* (2010) examine the effect of bank lending and economic growth on the manufacturing output in Nigeria. The study employed the unit root, co-integration and vector error correction model (VECM) on a time-series data from 1973 to 2009. The findings of the study show that manufacturing capacity utilization and bank lending rates significantly affect manufacturing output in Nigeria. However, the relationship between manufacturing output and economic growth could not be established in the country. They, therefore, call for concerted effort by the government, manufacturers and the lending institutions to reviewing the lending and

growth policies and provide appropriate macroeconomic environment, in order to encourage investment-friendly lending and borrowing by the financial institutions.

Nwosa and Saibu (2012) investigated the transmission channels of monetary policy impulses on sectoral output growth in Nigeria for the period 1986 to 2009. Secondary quarterly data were used for the study while Granger causality and Vector Auto-regressive Method of analysis was utilized. The results showed that interest rate channel was most effective in transmitting monetary policy to Agriculture and Manufacturing sectors while exchange rate channel was most effective for transmitting monetary policy to Building/Construction, Mining, Service and Wholesale/Retail sectors. The study concluded that interest rate and exchange rate policies were the most effective monetary policy measures in stimulating sectoral output growth in Nigeria.

Ogege and Shiro (2012) investigated the dynamics of Nigeria's monetary and fiscal policies on the country's economic growth. The study, which specifically focused on the effects of both on the growth of Nigerian economy, revealed that both monetary and fiscal policy contributed positively to the growth of Nigerian economy. Similarly, Sanni, *et al* (2012) found that none of the policies can be said to be superior to another and that a proper mix of the policies may enhance a better economic growth.

Effiong *et al* (2012) investigated the accounting implications of fiscal and monetary policies on the development of the Nigerian stock market. It was discovered that only a mixture of monetary and fiscal policy exerted a significant impact on the development of Nigerian stock market. Also, Enahoro *et al* (2015) reported that fiscal and monetary policies had enhanced operational efficiency in the Nigerian financial institutions, by reducing financial indiscipline in the financial and fiscal systems. The paper concluded that fiscal and monetary policies had galvanized government to commit budgetary management which would also address anomalies in the financial system.

Havi and Enu (2016) examined the relative importance of monetary and fiscal policy on growth in Ghana by using OLS estimation techniques for the period 1980-2012. Their study showed that although the effect of monetary policy is more powerful, both policies positively affect growth in the case of Ghana. In a similar vein, another country-specific study by Jawaid *et al.* (2010) analyzed the comparative effect of the two potent macroeconomic policy tools on growth in Pakistan during the period 1981-2009. Their empirical findings revealed that there exists a positive long-run relationship between both policies and growth. However, according to their findings, monetary policy is more effective than fiscal policy in promoting growth. In contrast, the study of Mahmood and Sial (2011) using time series data over the period 1973-2008 for the same country found that monetary and fiscal policies both play a significant role in growth in Pakistan.

Sen and Kaya (2017) studied empirically the relative effectiveness of monetary and fiscal policies on growth. Unlike many previous papers which have focused, to a large extent, on the effect of monetary or fiscal policies separately, this paper considers the comparative efficacy of the two policies on growth by applying the Structural Vector Autoregression (SVAR) model to the quarterly data for Turkey over the period 2001: Q1-2014: Q2. The empirical findings of the paper show that both monetary and fiscal policies do have significant effects on growth. However, monetary policy is more effective than fiscal policy in stimulating growth. More specifically, interest rate was observed as the most potent instrument in affecting growth. Then budget deficit was adjudged the second important variable after interest rate. The findings suggest that although the relative effectiveness in boosting growth is different, both policies are significant in driving growth process in Turkey.

III. RESEARCH METHODOLOGY

3.1 Theoretical Framework

The study leans on the endogenous growth theory, which advocates the stimulation of level and growth rate of per capita output through within the economic policies such as government fiscal policies. The endogenous growth theory posits that the driver of economic growth is fundamentally the result of endogenous factors and not external factors (Nelson and Singh, 1998). The endogenous growth theory posits that the growth of the economy in the long run primarily depends on policy measures which have grave implications on openness, competition, change and innovation (Barro, 1990). The endogenous growth theory further argues that economic growth is generated from within a system as a direct result of internal workings of the system.

3.2 Model Specification

The model adopted is expressed as: $Y = F(\text{GXP}, \text{TAX}, \text{MS}, \text{INT})$.

$Y = F(\text{GXP}, \text{TAX}, \text{MS}, \text{INT})$

(3.1)

As stated above, the model can be explained as:

Y is the dependent variable and the growth rate of real GDP. It is also a function of independent variables and the independent variables include:

GXP – Government Expenditure

TAX – Tax revenue

MS – Broad Money supply

INT – Interest Rate

Both government expenditure and tax revenue are proxies for fiscal policy while broad money supply and interest rate are the indicators for monetary policy. Ordinary least square regression is used to estimate the coefficients of the variables in equation (3.1)

$$Y = \alpha + \beta_1 GXP + \beta_2 TAX + \beta_3 MS + \beta_4 INT + e \tag{3.2}$$

However, the natural logarithm model will be adopted because it presents a more realistic result than when a linear regression model is used for the large values.

$$\log Y = \alpha + \beta_1 \log GXP + \beta_2 \log TAX + \beta_3 \log MS + \beta_4 \log INT + e \tag{3.3}$$

Equation (iii) displays the growth regression.

The constant is denoted as α which represents the mean effect of other factors affecting the growth rate of the GDP other than government expenditure, taxation revenue, broad money supply, and interest rate, while β_n , which are $\beta_1, \beta_2, \beta_3, \beta_4$ and are the coefficients of variables and elasticities of growth with respect to each of the explanatory variables. This is explained below:

β_1 = The point estimate representing the effects of government expenditure on growth rate while other independent variables are held constant.

β_2 = The factor estimates which represents the effects of taxation revenue on growth rate while other independent variables are held constant.

β_3 = It is the estimate of the proportion that represents the effect of broad money supply on growth rate while other independent variables are held constant.

β_4 = It is the estimate of the proportion that represents the effect of interest rate on growth rate while other independent variables are held constant.

“e” is the stochastic error term assumed to have constant variance and uncorrelated with the explanatory variables.

3.3 Method of Data Collection

In this research study, secondary data are used to accomplish the analysis that are being carried out and then method of collection involve extraction of relevant data from the Central Bank of Nigeria Statistical Bulletins. Secondary data are used because of the nature of the research study. Data to be used include government expenditure, tax revenue, broad money supply, interest rate and real Gross Domestic Product. All data are sourced from the Central Bank of Nigeria Statistical Bulletins (2017).

3.4 Method of Data Analysis

The technique of analysis of this research work is purely quantitative. The econometrics method of autoregressive model is used to carry out quantitative estimation of the specific model. The existing endogenous growth theory considers the effect of fiscal and monetary policies on Nigeria’s economic growth between 1980 and 2016 using regression analysis.

IV. DATA ANALYSIS AND INTERPRETATION OF RESULT

4.1 Preamble

This chapter deals with data analysis and the interpretation of results. Each of the variables in the Ordinary Least Square (OLS) equation is interpreted. Also, the ADF unit root test and Johansen co-integration test is explained.

4.2 Data Presentation and Interpretation

The following data are analyzed and presented on a table below. The section starts with the unit root test which deals with stationarity, Johansen co-integration which deal with the long-run equilibrium among variables and the causality test.

4.2.1 Augmented Dickey-Fuller Test for Stationarity

Table 4.1: ADF Unit Root Test Results

Variable	ADF Tau Statistics		Order of Integration
	5% Significant	1% Significant	
Y	-10.28823 (0) [-2.929734]	-10.28823 (0) [-3.588509]	I(1)
GXP	-6.948692 (0) [-2.931404]	-6.948692 (0) [-3.592462]	I(1)

TAX	-6.833940 (0) [-2.931404]	-6.833940 (0) [-3.592462]	I(1)
MS	-6.682703 (0) [-2.931404]	-6.682703 (0) [-3.592462]	I(1)
INT	-6.382259 (0) [-2.931404]	-6.382259 (0) [-3.592462]	I(1)

Note: Mackinnon critical values and are shown in parenthesis. The lagged lengths shown in brackets are selected using the minimum Schwarz Information criteria.

In table 4.1, the test result indicates that the time series variables, real GDP, government expenditure, tax revenue, broad money supply and interest rate were found to be non-stationary at levels. However, after first differencing the series, table 4.1 indicates that all the variables employed in the study are stationary at first difference at both 5% and 1% level of significance. We can therefore conclude that all the variables are stationary at first difference; hence, we reject the null hypothesis “no stationary” at first difference. This indicates that those incorporated series in the regression model have no unit-root. It also means that the series in their first difference are mean reverting and converge towards their long-run equilibrium.

4.2.2 Johansen Cointegration Test for Long Run Relationship

Table 4.2a: Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	Critical Value (0.05)	Prob.**
None *	0.757089	110.9523	88.80380	0.0005
At most 1	0.482908	61.42510	63.87610	0.0790
At most 2	0.448637	38.34139	42.91525	0.1331
At most 3	0.254297	17.50374	25.87211	0.3783
At most 4	0.186720	7.233789	12.51798	0.3207

Trace test indicates 1 cointegrating eqn(s) at the 0.05 level * denotes rejection of the hypothesis at the 0.05 level
 **MacKinnon-Haug-Michelis (1999) p-values

Table 4.2b: Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesis No. of CE(s)	Eigen value	Max-Eigen Statistic	Critical Value (0.05)	Prob.**
None *	0.757089	49.52716	38.33101	0.0018
At most 1	0.482908	23.08371	32.11832	0.4121
At most 2	0.448637	20.83764	25.82321	0.1987
At most 3	0.254297	10.26996	19.38704	0.5900
At most 4	0.186720	7.233789	12.51798	0.3207

Max-eigenvalue test indicates 1 cointegrating eqn(s) at the 0.05 level * denotes rejection of the hypothesis at the 0.05 level **MacKinnon-Haug-Michelis (1999) p-values

The output of Tables 4.2a and 4.2b above shows that the null hypothesis of no co-integrating vector is rejected at none co-integration vector at 5% significance level. This is owing to the fact that both Table 4.2a and Table 4.2b confirm that there is one cointegrating equation between the variables. It thus follows that there exist a long-run equilibrium relationship among variables that is considered that is, real GDP, money supply, interest rate, government expenditure, and taxation revenue in Nigeria between 1980 and 2016.

4.2.3 Result of the Ordinary Least Squares

Table 4.3: Long Run estimates

Dependent Variable: Y

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.261019	0.109470	-2.578824	0.0468
GXP	0.061715	0.020957	2.944830	0.0060
TAX	0.063245	0.029407	2.211233	0.0340
INT	-2.048706	1.834679	-1.116657	0.2725
MS	3.096135	14.59795	2.120938	0.0418
R-Squared	0.895512		F-statistic	33.52771

Adj. R-squared	0.837451	Prob(F-statistic)	0.000086
Durbin-Watson	2.04022		

Source: Author's Computation (2017)

Table 4.3 indicates that the co-efficient of the constant is 0.261, which implies that when all independent variables are held constant, the real GDP will be 0.261. The analysis further shows that one percentage increases in government expenditure causes the real GDP to increase by about 6%, while keeping constant all the other explanatory variables, implying that fiscal policy positively and significantly impacts the economic growth in Nigeria. The implication is that as government continues to pursue an expansionary fiscal policy, the economy will continue to witness an expansion. Also, a percentage increase in the tax rate will increase the real GDP by about 6.3% while keeping constant all the other explanatory variables, indicating that taxation revenue positively and significantly impact economic growth in Nigeria. The implication of this is that tax revenue is an important source of revenue for the government to implement a successful fiscal policy for the purpose of stimulating the Nigerian economy.

Furthermore, a percentage increase in the broad money supply causes the real GDP to rise by 309% while keeping constant all the other explanatory variables. This means that monetary policy provides a stimulus for Nigeria's economic growth over the period of study. The reason for this is quite understandable as monetary policy expansion is good for the national economy. However, the result in Table 4.3 suggests that interest rate has a negative effect on economic growth in Nigeria. The coefficient means that one percentage increase in interest rate causes the real GDP to fall by 204% while holding constant all the other explanatory variables in the model. The result also suggests that interest rate is not significant. The intuition behind this is that interest rate negatively affects investment, which is a component of the real GDP. This is therefore transmitted to the GDP itself. Also, it is not significant because interest rate is not a major variable that affect economic growth in Nigeria directly.

The R-squared value of 0.8955 implies that the model is a good fit as over 89% variation in the real GDP is explained by the explanatory variables in the model. Even after removing the effect of insignificant estimators, the adjusted R-squared value of 0.8374 implies that the model is still very good as about 83% variation in the real GDP is still explained in the model. The probability value of F-statistic shows that the explanatory variables linearly explain changes in the dependent variable and thus the model is well specified. Also, the Durbin-Watson (DW) value of 2.04 suggests that the model is free of serial correlation and therefore, there is no autocorrelation in the model.

4.3 Test of Hypotheses

In this study, three hypotheses were stated in chapter one. The first hypothesis was tested using the ordinary least squares technique and it was observed that fiscal policy has positive and significant effect on economic growth in Nigeria. This implies that the null hypothesis of no significant relationship is rejected. Similarly, The second hypothesis was tested using the ordinary least squares technique and it was observed that monetary policy has positive and significant effect on economic growth in Nigeria. This implies that the null hypothesis of no significant relationship is also rejected. Finally, the third hypothesis was tested by using the Johansen cointegration test and it was observed that there is a long run relationship between fiscal policy, monetary policy and economic growth in Nigeria over the study period. We therefore reject the null hypothesis of no long run relationship.

4.4 Discussion of Findings

Table 4.3 indicates that the co-efficient of the constant is 0.261, which implies that when all independent variables are held constant, the real GDP will be 0.261. The analysis further shows that fiscal policy positively and significantly impacts the economic growth in Nigeria. The implication is that as government continues to pursue an expansionary fiscal policy, the economy will continue to witness an expansion. Also, taxation revenue positively and significantly impacts economic growth in Nigeria. The implication of this is that tax revenue is an important source of revenue for the government to implement a successful fiscal policy for the purpose of stimulating the Nigerian economy. Furthermore, the result confirmed that monetary policy provides a stimulus for Nigeria's economic growth over the period of study. The reason for this is quite understandable as monetary policy expansion is good for the national economy. However, the result in Table 4.3 suggests that interest rate has a negative and insignificant effect on economic growth in Nigeria. The intuition behind this is that interest rate negatively affects investment, which is a component of the real GDP. This is therefore transmitted to the GDP itself. Also, it is not significant because interest rate is not a major variable that affect economic growth in Nigeria directly.

V. SUMMARY, CONCLUSION AND POLICY RECOMMENDATION

5.1 Summary

In the study, we examine the impact of fiscal and monetary policy on economic growth in Nigeria between 1980 and 2016. The empirical analysis from the ordinary least squares technique revealed that government expenditure positively and significantly impacts the real GDP, money supply positively and significantly impacts the real GDP, and taxation revenue positively and significantly impacts the real GDP. However, interest rate was found to have negative and insignificant impact on the real GDP in Nigeria between 1980 and 2016. Furthermore, the result also shows that there is a long run relationship between fiscal policy, monetary policy, interest rate, taxation revenue and the real GDP. In addition, the stationarity test confirmed that all the data employed in the study were not stationary at levels. However, they all became stationary after first differencing the data, which means that the data are mean reverting and therefore, useful for making forecast in the study. Also, we found that there is absence of autocorrelation in the estimated model as suggested by the Durbin-Watson statistic.

5.2 Conclusion

This study examines the impact of fiscal and monetary policy on economic growth in Nigeria, from the periods 1980 to 2016. It is generally asserted that both fiscal and monetary policy have important role to play in promoting economic growth in a country. However, the lack of focus on the combination of this policy mix led to the conduct for this study. Therefore, the result obtained from the scientific enquiry confirmed that the broad money supply, government expenditure, and tax revenue positively and significantly impacted the real gross domestic product in Nigeria. We, therefore, conclude that fiscal both fiscal and monetary policies have positive and significant impact on Nigeria's economic growth. To this end, we proceed to suggest some possible policies in section 5.3 to ensure the sustenance of growth in Nigeria.

5.3 Policy Recommendations

Based on the results obtained, the following policy recommendations are made.

- i. The positive relationship between fiscal policy and economic growth means that the federal government of Nigeria should focus on using the fiscal policy instruments to stimulate the economy in the desired direction in order to sustain economic growth process.
- ii. We call on the Central Bank of Nigeria to embark on appropriate and effective monetary policy to boost the economy.
- iii. Furthermore, since interest rate is observed to negatively impact economic growth, efforts should be made as lowering the cost of borrowing in the commercial banks and other financial institutions in order to boost investment and increase economic growth in the country.

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APPENDIX

Data Employed in the study

Year	GXP	MS	Y	INT	TAX
1980	10.306	14.23	1957.099	5.266667	10957
1981	11.417	14.47	1654.633	5.715833	9054
1982	11.9272	15.79	1595.146	7.6	7732
1983	9.6357	17.69	1476.665	7.411667	6292

1984	9.9301	20.11	1410.679	8.254167	7154
1985	13.0447	22.3	1489.424	9.116667	9898
1986	16.2268	23.81	1324.115	9.235	7841
1987	22.0225	27.57	1151.126	13.0875	13799
1988	27.7501	38.36	1205.805	12.95	14037
1989	41.0241	45.9	1250.683	14.675	18327
1990	60.2686	52.86	1374.437	19.78333	58547
1991	66.5809	75.4	1331.612	14.91667	53900
1992	92.7933	111.11	1304.09	18.04167	72948
1993	191.2318	165.34	1298.441	23.24167	75248
1994	160.8883	230.29	1277.993	13.09167	74098
1995	248.7683	289.09	1242.738	13.53083	122863
1996	337.4163	345.85	1272.729	13.05917	184667
1997	428.2117	413.28	1276.241	7.169167	101574
1998	487.1156	488.15	1278.651	10.10833	195
1999	947.6876	628.95	1253.048	12.81083	359
2000	701.0509	878.46	1287.059	11.69083	761
2001	1017.997	1,269.32	1310.506	15.25583	905
2002	1018.178	1,505.96	1326.243	16.67	781
2003	1225.988	1,952.92	1426.903	14.2175	1150
2004	1461.89	2,131.82	1860.062	13.69834	1690
2005	1840.7	2,637.91	1875.03	10.5325	2478
2006	1942.486	3,797.91	1976.708	9.7425	2682
2007	2348.551	5,127.40	2056.839	10.28833	2506
2008	3078.25	8,008.20	2128.667	11.97083	4034
2009	3280.767	9,419.92	2216.499	13.29667	2844
2010	3993.315	11,034.94	2327.321	6.520833	3692
2011	4232.989	12,172.49	2376.639	5.699167	5021
2012	4200	13,895.39	2412.861	8.4075	5007
2013	4797.466	15,158.62	2475.948	7.945	4805
2014	5211.416	16,251.18	2563.092	9.339167	4714
2015	5283.35	17,261.19	2562.522	9.34	4886
2016	5262.18	18,456.83	2457.811	12.01	5032

Source: CBN Statistical Bulletin (2017)

Unit Root Tests

Null Hypothesis: D(TAX) has a unit root

Exogenous: Constant

Lag Length: 1 (Automatic - based on SIC, maxlag=9)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-6.833940	0.0000
Test critical values:		
1% level	-3.592462	
5% level	-2.931404	

10% level -2.603944

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

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(TAX,2)
 Method: Least Squares
 Date: 09/03/17 Time: 21:58
 Sample (adjusted): 1983 2016
 Included observations: 34 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(TAX(-1))	-1.375464	0.201270	-6.833940	0.0000
D(TAX(-1),2)	0.400441	0.143423	2.792032	0.0080
C	0.095951	2.140303	0.044830	0.9645
R-squared	0.577125	Mean dependent var		0.325211
Adjusted R-squared	0.555981	S.D. dependent var		21.06015
S.E. of regression	14.03338	Akaike info criterion		8.187969
Sum squared resid	7877.430	Schwarz criterion		8.310843
Log likelihood	-173.0413	Hannan-Quinn criter.		8.233281
F-statistic	27.29525	Durbin-Watson stat		2.061526
Prob(F-statistic)	0.000000			

Null Hypothesis: D(GXP) has a unit root
 Exogenous: Constant
 Lag Length: 1 (Automatic - based on SIC, maxlag=9)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-6.948692	0.0000
Test critical values:		
1% level	-3.592462	
5% level	-2.931404	
10% level	-2.603944	

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

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(GXP,2)
 Method: Least Squares
 Date: 09/03/17 Time: 22:00
 Sample (adjusted): 1983 2016
 Included observations: 34 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GXP(-1))	-1.475165	0.212294	-6.948692	0.0000
D(GXP(-1),2)	0.399006	0.147027	2.713833	0.0098
C	0.127904	0.240675	0.531439	0.5981
R-squared	0.600806	Mean dependent var		0.003257
Adjusted R-squared	0.580846	S.D. dependent var		2.429180
S.E. of regression	1.572702	Akaike info criterion		3.810682
Sum squared resid	98.93570	Schwarz criterion		3.933556
Log likelihood	-78.92966	Hannan-Quinn criter.		3.855994
F-statistic	30.10093	Durbin-Watson stat		2.040562

Prob(F-statistic) 0.000000

Null Hypothesis: D(Y) has a unit root
 Exogenous: Constant
 Lag Length: 0 (Automatic - based on SIC, maxlag=9)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-10.28823	0.0000
Test critical values:		
1% level	-3.588509	
5% level	-2.929734	
10% level	-2.603064	

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

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(Y,2)
 Method: Least Squares
 Date: 09/03/17 Time: 22:01
 Sample (adjusted): 1982 2016
 Included observations: 35 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(Y(-1))	-1.433181	0.139303	-10.28823	0.0000
C	0.015330	0.047782	0.320831	0.7499
R-squared	0.715924	Mean dependent var		-0.003184
Adjusted R-squared	0.709160	S.D. dependent var		0.587292
S.E. of regression	0.316724	Akaike info criterion		0.582819
Sum squared resid	4.213199	Schwarz criterion		0.663918
Log likelihood	-10.82201	Hannan-Quinn criter.		0.612894
F-statistic	105.8477	Durbin-Watson stat		1.850304
Prob(F-statistic)	0.000000			

Null Hypothesis: D(MS) has a unit root
 Exogenous: Constant
 Lag Length: 1 (Automatic - based on SIC, maxlag=9)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-6.682703	0.0000
Test critical values:		
1% level	-3.592462	
5% level	-2.931404	
10% level	-2.603944	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(MS,2)
 Method: Least Squares
 Date: 09/03/17 Time: 22:29
 Sample (adjusted): 1983 2016
 Included observations: 34 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(MS(-1))	-1.375148	0.205777	-6.682703	0.0000
D(MS(-1),2)	0.382837	0.145946	2.623138	0.0123
C	0.355517	0.585161	0.607554	0.5469
R-squared	0.571300	Mean dependent var		-0.015116
Adjusted R-squared	0.549865	S.D. dependent var		5.691498
S.E. of regression	3.818544	Akaike info criterion		5.584830
Sum squared resid	583.2511	Schwarz criterion		5.707704
Log likelihood	-117.0738	Hannan-Quinn criter.		5.630142
F-statistic	26.65270	Durbin-Watson stat		2.114904
Prob(F-statistic)	0.000000			

Null Hypothesis: D(INT) has a unit root
 Exogenous: Constant
 Lag Length: 0 (Automatic - based on SIC, maxlag=9)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-6.382259	0.0000
Test critical values:		
1% level	-3.592462	
5% level	-2.931404	
10% level	-2.603944	

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

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(INT)
 Method: Least Squares
 Date: 09/03/17 Time: 05:38
 Sample (adjusted): 1981 2016
 Included observations: 36 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
INT(-1)	-0.220950	0.094647	-2.334473	0.0256
C	4.102815	1.729367	2.372438	0.0235
R-squared	0.138144	Mean dependent var		0.228333
Adjusted R-squared	0.112796	S.D. dependent var		3.095624
S.E. of regression	2.915816	Akaike info criterion		5.032129
Sum squared resid	289.0673	Schwarz criterion		5.120102
Log likelihood	-88.57832	Hannan-Quinn criter.		5.062834
F-statistic	5.449762	Durbin-Watson stat		2.117036
Prob(F-statistic)	0.025615			

Johansen Cointegration Test

Date: 09/24/17 Time: 07:43
 Sample (adjusted): 1982 2016

Included observations: 35 after adjustments
 Trend assumption: Linear deterministic trend (restricted)
 Series: GXP MS Y INT TAX
 Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.757089	110.9523	88.80380	0.0005
At most 1	0.482908	61.42510	63.87610	0.0790
At most 2	0.448637	38.34139	42.91525	0.1331
At most 3	0.254297	17.50374	25.87211	0.3783
At most 4	0.186720	7.233789	12.51798	0.3207

Trace test indicates 1 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.757089	49.52716	38.33101	0.0018
At most 1	0.482908	23.08371	32.11832	0.4121
At most 2	0.448637	20.83764	25.82321	0.1987
At most 3	0.254297	10.26996	19.38704	0.5900
At most 4	0.186720	7.233789	12.51798	0.3207

Max-eigenvalue test indicates 1 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegrating Coefficients (normalized by b*S11*b=I):

GXP	MS	Y	INT	TAX	@TREND(81)
-0.017824	0.003484	0.006468	-0.267783	-3.84E-05	0.838757
0.003879	-0.000206	-0.007886	0.036646	7.76E-06	-0.375074
0.003078	-0.000490	-0.002637	0.249861	-2.10E-05	-0.131747
0.001687	-0.000320	-0.005726	-0.287263	-1.78E-06	0.083268
-0.000912	-5.39E-05	0.001479	0.176441	9.46E-06	0.106987

Unrestricted Adjustment Coefficients (alpha):

D(GXP)	79.66283	-72.12001	-23.76639	5.317592	30.32077
D(MS)	-61.63388	-261.2233	7.883032	19.55042	-37.32210
D(Y)	6.965601	-2.983096	30.41821	31.42487	22.61658
D(INT)	0.974244	0.238010	0.148966	0.694822	-0.929387
D(TAX)	12009.81	-1499.185	12994.34	-4352.077	-2494.421

1 Cointegrating Equation(s): Log likelihood -1153.916

Normalized cointegrating coefficients (standard error in parentheses)

GXP	MS	Y	INT	TAX	@TREND(81)
1.000000	-0.195490	-0.362872	15.02373	0.002154	-47.05780
	(0.00416)	(0.05091)	(2.54152)	(0.00018)	(1.56878)

Adjustment coefficients (standard error in parentheses)

D(GXP)	-1.419909 (0.46553)
D(MS)	1.098561 (1.31163)
D(Y)	-0.124155 (0.31453)
D(INT)	-0.017365 (0.00891)
D(TAX)	-214.0627 (77.9194)

2 Cointegrating Equation(s): Log likelihood -1142.375

Normalized cointegrating coefficients (standard error in parentheses)

GXP	MS	Y	INT	TAX	@TREND(81)
1.000000	0.000000	-2.653926 (0.37300)	7.370911 (29.2468)	0.001944 (0.00209)	-115.1417 (14.9012)
0.000000	1.000000	-11.71954 (1.92049)	-39.14681 (150.587)	-0.001075 (0.01074)	-348.2727 (76.7238)

Adjustment coefficients (standard error in parentheses)

D(GXP)	-1.699698 (0.40642)	0.292409 (0.07777)
D(MS)	0.085146 (0.99547)	-0.161040 (0.19048)
D(Y)	-0.135728 (0.32173)	0.024884 (0.06156)
D(INT)	-0.016442 (0.00908)	0.003346 (0.00174)
D(TAX)	-219.8788 (79.5761)	42.15543 (15.2269)

3 Cointegrating Equation(s): Log likelihood -1131.956

Normalized cointegrating coefficients (standard error in parentheses)

GXP	MS	Y	INT	TAX	@TREND(81)
1.000000	0.000000	0.000000	-2594.514 (907.828)	0.345858 (0.07937)	-765.2264 (486.932)
0.000000	1.000000	0.000000	-11528.87 (4011.68)	1.517627 (0.35071)	-3218.997 (2151.75)
0.000000	0.000000	1.000000	-980.3909 (340.350)	0.129587 (0.02975)	-244.9521 (182.554)

Adjustment coefficients (standard error in parentheses)

D(GXP)	-1.772850 (0.40371)	0.304057 (0.07692)	1.146653 (0.22989)
D(MS)	0.109410 (1.00917)	-0.164904 (0.19228)	1.640557 (0.57468)
D(Y)	-0.042102 (0.30846)	0.009977 (0.05877)	-0.011640 (0.17566)
D(INT)	-0.015983 (0.00919)	0.003273 (0.00175)	0.004031 (0.00524)
D(TAX)	-179.8830 (66.7002)	35.78702 (12.7086)	55.23222 (37.9828)

4 Cointegrating Equation(s): Log likelihood -1126.821

Normalized cointegrating coefficients (standard error in parentheses)

GXP	MS	Y	INT	TAX	@TREND(81)
1.000000	0.000000	0.000000	0.000000	0.026151 (0.00708)	-238.5076 (45.5583)
0.000000	1.000000	0.000000	0.000000	0.096991 (0.03056)	-878.4921 (196.485)
0.000000	0.000000	1.000000	0.000000	0.008779 (0.00242)	-45.92048 (15.5426)
0.000000	0.000000	0.000000	1.000000	-0.000123 (2.7E-05)	0.203012 (0.17505)

Adjustment coefficients (standard error in parentheses)

D(GXP)	-1.763879 (0.40495)	0.302356 (0.07715)	1.116205 (0.26138)	-31.44104 (10.1784)
D(MS)	0.142392 (1.01103)	-0.171158 (0.19263)	1.528613 (0.65258)	3.285366 (25.4122)
D(Y)	0.010913 (0.28943)	-7.57E-05 (0.05514)	-0.191577 (0.18682)	-3.401472 (7.27487)
D(INT)	-0.014811 (0.00890)	0.003050 (0.00170)	5.30E-05 (0.00575)	-0.414540 (0.22382)
D(TAX)	-187.2251 (65.2112)	37.17919 (12.4244)	80.15194 (42.0913)	1226.009 (1639.08)

Result of the Ordinary Least Squares

Dependent Variable: Y
 Method: Least Squares
 Date: 09/03/17 Time: 03:54
 Sample: 1980 2016
 Included observations: 37

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.261019	0.109470	-2.578824	0.0468
GXP	0.061715	0.020957	2.944830	0.0060
TAX	0.063245	0.027407	2.211233	0.0340
INT	-2.048706	1.834679	-1.116657	0.2725
MS	3.096135	14.59795	2.120938	0.0418

R-squared	0.895512	Mean dependent var	4.059022
Adjusted R-squared	0.837451	S.D. dependent var	6.364611
S.E. of regression	5.666107	Akaike info criterion	6.431970
Sum squared resid	1027.353	Schwarz criterion	6.649662
Log likelihood	-113.9914	Hannan-Quinn criter.	6.508716
F-statistic	33.52771	Durbin-Watson stat	2.040022
Prob(F-statistic)	0.000086		