

THE RELATIVE IMPACT OF MONETARY POLICY AND FISCAL POLICY ON GROSS DOMESTIC PRODUCT IN NIGERIA

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Abstract: The Nigerian economy has been frontally constrained by unsteady GDP growth rates with episodes of recession, and other unimpressive socio-political and economic indices over the past three decades. The situation has become aggravated by the identifiable cases of fiscal and monetary distortions, macroeconomic shocks and gaps in our budgetary provisions that are evident in recurring deficit budgets, fiscal crises, and unsustainable debt profile. The persistence of these problems has, unarguably, impacted negatively on the overall economic performance of Nigeria, and this begs the question of the potency of the use of monetary policy and fiscal policy in addressing our targeted macroeconomic problems. Spurred by the need to finding policy solutions to these problems, this study empirically examines the relative impact of fiscal policy and monetary policy in stimulating gross domestic product in Nigeria. To achieve the study objectives, annual time series secondary data spanning from 1983 to 2021 were empirically analyzed using Autoregressive Distributed Lag (ARDL) estimation after the unit root test revealed a mixed order of integration. The result of the long and short run dynamics revealed that Total Government Expenditure (TOGE) has a positive and statistically significant relationship with GDP in Nigeria. Also, Broad Money Supply (MPMS) and Open Market Operations (MPOM) have positive and statistically significant relationships with GDP within the study period. The study concludes that in the short and long run, monetary policy and fiscal policy play significant roles in stimulating GDP growth in Nigeria. However, in relative terms, fiscal policy is more potent than monetary policy in Nigeria within the review period. The study, therefore, recommends that for the attainment of macroeconomic goals and sustainable economic development effective coordination of monetary and fiscal policy tools should be encouraged for consolidated socio-political and economic gains.

Keywords: Monetary Policy, Fiscal Policy, and Gross Domestic Product

1.1 Introduction

The need to extend the knowledge base of the age-long debate between the Monetarists and Keynesians with respect to the importance of stabilization policies in stimulating overall economic performance and other developmental trajectories in most countries of the world, have attracted various well-chronicled studies in the Finance and Economic literature. These stabilization policies come in the forms of monetary policy and fiscal policy, and they are designed and implemented across global boundaries to ensure the attainment of sustainable economic growth through their common objective of price stability, inflation control, employment generation and macroeconomic recoveries.

The Central Bank of Nigeria (CBN, 2006) defined Monetary Policy as specific actions taken by the Central Bank to regulate the value, supply, and cost of money in the economy with a view to achieving government's macroeconomic objectives of controlling inflation, as well as price and financial stability. Monetary policy is transmitted through several channels such as interest rate, exchange rate, credit, asset price and expectations

(Mishkin, 1996). The transmission mechanism is carried out either in a contractionary or expansionary manner, and in some cases discretionary manner. A contractionary stance of the monetary authority implies the various approaches and measures taken by the government through the use of interest rates, statutory reserve requirements, open market operations (OMO), among others in reducing money stock to check the rising trends in, and harmful effects of inflation among other macroeconomic targets. On the other hand, an expansionary monetary policy stance involves the use of monetary policy toolkits to expand the volume of money in circulation in order to stimulate economic activities in the country. Also, fiscal policies on the other hand are deployed to correct economic imbalances in periods of recession and depression (Alade, 2017). In its very simplistic form, it is generally viewed as the structure and nature of government spending, tax and other avenues of revenue generation reflected in the periodic annual budgets. Osuala and Ebieri, (2014) chronicled the primary importance of fiscal policy in the light of its nexus with allocation, stabilization and redistribution of resources. They are transmitted through government expenditure (recurrent and capital expenditure), tax revenue, national budget, public debt etc. While increase in government spending and reduction in tax rates relate to expansionary fiscal policy drive, a very unlikely reduction in government spending and increase in tax rates point to contractionary fiscal policy stance at any point in time. The active participation of the government in economic activities as widely advocated by Keynes (1936) has brought public spending to the front line among fiscal policy implementation tool.

In the context of implementation strategies, while the regulatory authority in Nigeria targets the volume of money aggregates, particularly, in the custody of deposit money banks (DMBs) through the use of the anchor rate (Monetary Policy Rate), statutory reserve requirements, and open market operations (OMO), the implementation of fiscal policy in the country is basically routed through annual national budgets that contain the levels of planned expenditures and revenues within a financial cycle. The use of the national budget further underscores the concept of government intertemporal budget constraints that identifies how gaps in revenue generation are filled in the face of unending expenditures through borrowings, whether domestic or foreign. Effective implementation of monetary and fiscal policies is critical in stimulating overall economic performance and charting the course for maintaining internal and external balances among other extended benefits. Therefore, they are useful tools in stimulating the growth of gross domestic product (GDP) – a useful barometers for the measurement of economic performance in the country. In theory, there exists various propositions on the combined effects of monetary policy and fiscal policy on economic performance mirrored in the lens of gross domestic product in most economies of the world, particularly, in Nigeria. The protagonists of the classical viewpoint affirmed the direct impact of money in stimulating aggregate demand and output growth. They asserted that the impact of government expenditure is transient and less potent, particularly, in the long run when prices are adjusted and employment and output are at their optimum levels (Khosravi and Karimi, 2010). On the contrary, Omran (2017), underscored the Keynesian viewpoint that government spending, tax and consumption play contributory roles in stimulating economic activities. This position is, most recently, extended by the propositions of endogenous growth theory that government spending and taxation would have permanent and temporary impacts in promoting growth and investment activities (Osuala and Ebieri, 2014). Economic and growth literature are replete with studies on the growth stimulating influence of government spending and proper use of monetary policy toolkits in most countries of the world. They are stimulating factors in harnessing socio-economic potentials for rapid economic growth through accelerated output growth, aggregate demand, financial stability and increased domestic investment (Uremadu & Onyele, 2019)

Despite the identifiable benefits of the use of these policies, some of the problems they are designed to address, globally, have not only persisted but has become more debilitating. This has heightened the need and global call to strengthen the implementation strategies and make the socio- political and economic impacts of monetary and fiscal policies in reigniting prompt macroeconomic gains and recoveries more visible and potent. This global call for proper conceptualization and design of these policy responses in line with the economic conditions, challenges, and institutional framework peculiar to countries - advanced or emerging, has continued to resonate as the world encounters the resurgence of macroeconomic distortions, cyclical fluctuations, unending shocks and volatilities, conflicts, and most recently, global contagion (Alzyadat, 2022). This is because dissimilarities in operating environments and economic challenges have made the effectiveness of these policies in addressing macroeconomic challenges heterogeneous across advanced and emerging market economies (Abata, Kehinde, & Bolarinwa, 2012). While most advanced countries have resorted to policy synthesis for consolidated and sustained macroeconomic gains; transitioning economies like sub-Saharan Africa are still inclined to reactionary adjustments without noticeable positive impact on growth trajectories (Kilishi, Mobolaji, Yaru. & Yakubu, 2013).

It is, therefore, unarguable that despite the various economic reforms, structural adjustments, evolution of various policy thrusts and sustained increase in government spending over the years, our GDP growth rate has continued to wobble, with accompanying harsh economic conditions and episodes of recession. This begs the question of the potency of monetary and fiscal policy tools in addressing targeted macroeconomic challenges and further underscores the need for pursuit of sound stabilization policy stimuli that could exert a strong regulating impact on the exogenous factors militating against the growth of the Nigerian economy (Uremadu and Onyele, 2019). It is in the context of these challenges that this study is predicated to investigate the impacts of monetary policy and fiscal policy on gross domestic product in Nigeria.

1.2 Statement of the Problem

Various studies have investigated the individual impacts of monetary policy (Ayodeji and Oluwole, 2018; Obeid and Awad, 2017) and fiscal policy (Okorie, Sylvester & Simon Peter., 2017; Umaru and Gattawa, 2014, Osuala and Ebieri, 2014; and Uremadu and Onyele, 2019) on the economy, while others examined their joint impacts in furtherance of the age-long debate between the Keynesians and monetarists. However, one of the significant problems with some of the studies carried out in Nigeria is their failure to effectively apply the key monetary policy and fiscal policy tools in a unified model in order to provides deeper insights into the proper policy mix and economic consensus needed to effectively address the continued macroeconomic challenges in Nigeria.

1.3 Objectives of the Study

The broad objective of this study is to investigate the relative potency of monetary policy and fiscal policy on gross domestic product in Nigeria. The specific objectives are:

- i. examine the impact of monetary policy on gross domestic product in Nigeria.
- ii. determine the impact of fiscal policy on gross domestic product in Nigeria.
- iii. ascertain the impact of inflation rate on GDP in Nigeria.

1.4 Research Hypotheses

Ho₁: Monetary policy does not have significant impact on GDP in Nigeria.

Ho₂: Fiscal policy does not have significant impact on GDP in Nigeria.

Ho₃: Inflation rate does not have significant impact on GDP in Nigeria.

2.1 Review of Related Literature

2.1.1 Conceptual Issues on Monetary Policy

The historical framework of monetary policy can be traced to Adam Smith who emphasized on the need for wealth and the effect of money on economic aggregates. Other scholars have advanced this course and the evolution of monetary policy has witnessed about five (5) phases namely: Bretton Woods (1946 to 1972), Monetarism (1972 to 1982), Inflation Control (1982 to 1992), Inflation Targeting (1992 to 2007), The Response to the Crisis (2007 to 2013), among others over the past decades. More specifically, in Nigeria, Falade and Folorunso (2015) chronicled the evolution of the monetary policy framework under three phases ranging from the exchange rate targeting regime (1959 – 1973); direct control (1974 – 1992); to indirect monetary control (1974 – date). Also, Chibundu (2009); Nnanna (2001); Mordi and Adebisi, (2014) documented two broad phases of monetary policy as: exchange rate targeting phase (1959-1973) and the monetary targeting phase (1974-date), with sub-phases like direct monetary targeting (1974-1992), and market-based monetary targeting (1993-date). In a similar development, Ajayi and Ojo (2006) further documented the phases of monetary policy in Nigeria from the year of independence in 1960 into different periods highlighting the advantages and shortcoming of the policy thrusts within these periods. Other scholars disaggregated the stages into two broad categories namely: the pre-SAP period (1959-1986) and post SAP period (1986-date). Each phase is symbolic with its unique benefits and shortcomings, however short-lived, and reflected the economic circumstances that necessitated its design and implementation in Nigeria economic history.

In recent years, the near failure of fiscal manipulation has led governments to turn to monetarist policies to attempt effective control of the economy, and the monetarist theory is an economic concept that considers money supply as the most significant stimulator of economic growth and the behavior of the business cycle (Friedman, 1962). In advancing the monetarist viewpoint, noble scholars view monetary policy based on the actions it performs through its various channels. Jhinghan (2000) defined it as the credit measures adopted by the Central Bank of a country; Nwankwo (1980) referred to it as one of the macroeconomic instruments which monetary authority of a country employs in the management of their economy to attain desired objectives, and CBN (2006) labeled it as a combination of measures designed to regulate the value, supply and cost of money in the economy in consonance with the expected levels of economic activities. Also, He, Huang, and Wright (2008) explained that it entails those actions initiated by the central bank which aim at influencing the cost and availability of credits; while Okwo, Eze, and Nwoha (2012) asserted that monetary policy consists of a government formal effort to manage the money in its economy in order to realize specific economic goals. An appraisal of these definitions and viewpoints shows that monetary policy boils down to the need to regulate money supply based on the knowledge of the fact that if money supply is in excess of what is required to support productive activities; it will lead to undesirable effects that will constrain effective GDP growth (CBN, 2006).

2.1.2 Monetary Policy and Gross Domestic Product in Nigeria.

At its simplest, Monetarist theory postulates that in the economy there is a fixed amount of money, which circulates at a given velocity, and then made available to finance the various transactions carried out in the economy at the prevailing prices. Under these circumstances, according to the theory, control of the price level can be maintained by controlling the amount of money stock, and this is important because output measured by gross domestic product (GDP) is fixed and increase in money stock beyond output level is inimical to economic growth (Koshy, 2012). Monetary policy tools are either transmitted in an expansionary or contractionary manner. An expansionary monetary policy seeks to increase the total supply of money in the economy and stimulate credit creation more rapidly than usual (Friedman, 1963). Mankiw and Zeldes (1991) defined expansionary monetary policy as traditionally being used to combat unemployment during recession by lowering interest rates in the hope that easy credit will entice businesses and stimulate aggregate demand and economic growth. It is achieved by lowering the anchor rate and other related statutory rates, as well as buying of government securities (CBN bills) from the market as part of open market operations (OMO), to provides liquidity in the market and increase economic activities (Friedman, 1963). Conversely, a contractionary monetary policy is focused on contracting (decreasing) the money supply in an economy, through increase in interest rate to reduce the growth of new credits, reduces aggregate demand and productivity with accompanying effects on economic growth. This, also, slows inflation and avoids further deterioration of asset values. It is equally achieved through increase in statutory reserve requirements and sell of CBN (OMO) bills to mop up the money in circulation.

Generally, due to the increasing spate of inflation in Nigeria, the monetary authority has sustained a contractionary monetary policy stance over the years. The Minimum Rediscount Rate in use up until 2006 before it was replaced with Monetary Policy rate has been on the increase from 8% in 1983 to 10.5% in 2006, and 18.5% in 2023. The significant impact of this sustained increase on inflation is yet to be seen as the figure continues to increase yearly and stands at 26.725 in September 2023

2.1.3 Monetary Aggregates and Monetary Policy Transmission Tools.

i. Money supply

This is a financial deepening indicator that reflects the volume of money in circulation, and classified into: narrow money (M0), and broad money (M2 and M3), and M4 in some advanced economies. Good knowledge of the dynamics of money stock helps policymakers to study potential inflationary trends needed to make monetary policy decisions with the aim of setting inflationary targets. Narrow money (M1) is the physical money such as coins and currency in circulation, while (M2 and M3) includes narrow money as well as short and long-term deposits and other deposit-based accounts including foreign denominated deposits (Owalabi & Adegbite, 2014). M3 became the higher of the two broad money categories in Nigeria in 2011 (CBN, 2021). Increase in money supply will stimulate economic activities but will equally usher in general rise in prices if not properly controlled.

ii. Monetary policy rate

CBN (2006) defines monetary policy rate formally called Minimum Rediscount Rate, as an “authorized interest rate of the Central Bank, which anchors all other interest rates in the money market and economy”. It serves as the anchor for the other rates such as interbank rate, discount rate, treasury bill rate, saving deposit rate, fixed deposit rate, lending rate, etc. The MPR rate has continued to witness monthly upward adjustments from 15.5% in September 2022 to 16.5% in November 2022, at the 288th meeting of MPC held on 21st and 22nd November 2022 (CBN, 2022). The continued increase in MPR has so many economic implications on both investment, financial stability, and credit creation because of its pivotal role as the anchor interest rate that determines the position of other rates used as monetary policy tools.

iii. Open Market Operations

OMOs are widely used in market-based economies to influence money market rates and interest rates more generally (Keynes, 1936). OMOs play an important role in managing liquidity and impacting the monetary base by allowing the Central Bank to exercise initiative in directing market behavior, and the absence of compulsion to participate in the operations reflects flexibility (Dandume, 2013). They comprise OMO (CBN) Bills that come in the forms of government securities and other money market instruments purchased (to increase money supply) or sold (to reduce money supply) by CBN on behalf of government through the commercial banks in the open market. Permanent Open Market Operations refer to the monetary authority's outright purchase or sale of securities, while temporary open market operations are used to add or drain reserves available to the banking system on a short-term basis. They are further broken down into Repurchase Agreements (Repos) and Reverse Repurchase Agreements (Reverse Repos):

iv. Others

Statutory reserve requirements made up mainly of liquidity ratio (LR) and cash reserve ratio (CRR), among other rates and tools like discount rate, inter-bank rate, quantitative easing (tightening), moral suasion, naira redesign, penalties among others are constantly being used at different intervals by the regulatory authority to increase or decrease the money stock in the country depending on the prevailing economic situation in the country.

2.1.4 Channels of Monetary Policy Transmission

Building on the works of Bernanke and Gertler (1995); Patelis (1997); Mishkin (1996a, 2001b) observed that monetary policy changes are transmitted to real sector variables through different channels. Traditional theory identifies three channels namely, the interest rate, the exchange rate, and the asset/equity channel. However, recent works have added two more channels, the credit and expectations channels (Mishkin., 1996).

Interest rate Channel

The Interest rate channel is often referred to as the hallmark of the “Money View” because of the impact of its upward adjustment on all economic agents, particularly, the impact on disposable income from high rate of payment made by businesses and consumers on their loans. High rates will lead to decline in investment and higher bank deposit rates will lead to higher yields for low-risk savers. Therefore, the interest rate is the anchor rate and channel upon which other statutory are determined.

The Credit Channel

Butkiewicz, and Ozdogan, (2013) posited that the credit channel is not seen as a departure from the traditional interest rate channel but an enhancement of it, while Mishkin (1996) described it in the context of the effects of informational asymmetry between the lender and the borrower. Therefore, the magnitude of money supply plays a significant role in credit creation and bank intermediation roles of Deposit Money Banks (DMBs) in most countries of the world as the act of borrowing and lending is the core of money creation. Dabla-Norris and Floerke Meier, (2006) further stated that expansionary monetary policy increases liquidity in the banking system making it possible for banks to grant more loans for investment and consumer spending that will boost aggregate

demand and economic activity.

Exchange Rate Channel

Exchange rate is one of the intermediate policy variables through which monetary policy is transmitted to the larger economy through its impact on the value of domestic currency, domestic inflation through its pass-through effects, macroeconomic credibility, and financial stability (Atkeson & Kehoe, 2002). Viewed in the context of interest rate, higher interest rate will provoke an appreciation of the domestic exchange rate, and this will lead to higher importation and lower exports and productivity. Further influence of monetary policy on exchange rate through can be observed through inflationary expectations and direct intervention in FOREX markets (Dabla-Norris & Floerkemeier, 2006).

Elaborate classification of the channels of monetary policy transmission will include asset channel, balance sheet channel and expectations channel. Each of these channels highlights the impact and reaction of economic agents to the transmission mechanisms of various monetary tools.

2.1.5 Conceptual Issues on Fiscal Policy

Keynes (1936), and by extension the Keynesians advanced the course of a more direct impact of fiscal policy through government intervention in stimulating economic activities in the field of macroeconomics. It involves the use of government spending, taxation and borrowing to influence the pattern of economic activities and also the level and growth of aggregate demand, output and employment. Fiscal policy refers to the use of government spending and tax policies to control the decisions of economic agents. On the expenditure side, this is achieved by spending money on construction projects and other public works that stimulate economic activities, while on the taxation side it can affect investment, job or production decisions by changing tax policies. Omran (2017), stated that fiscal policy has conventionally been associated with use of taxation and public expenditure routed through government budget to influence the level of economic activities. Osuala and Ebieri (2014) posited that fiscal policy is the use of government revenue and expenditure programmes to affect the economy in a way to produce desirable effects. They further identified the instruments of fiscal policy as taxation, government expenditure, government budget, public debts and subsidy among others.

The system of government operating in Nigeria is Federalism, which involves power sharing among the component units. It involves constitutional provision for the fiscal responsibilities of each level of government in relation to expenditures and revenues encapsulated in the exclusive list, concurrent list and residual list (Akindele, Olaopa, & Obiyan, 2002), that encourages the sharing of revenue on monthly basis by the three tiers of government by the Federation Account Allocation Committee (FAAC). (RMAFC, 2015; Lukpata, 2013; Salami, 2011). Over the past four decades, the dominant fiscal policy in Nigeria was an oil price-based fiscal policy aimed at channeling oil revenue into the budget through benchmark oil price. This was due largely to our over-dependence on proceeds from oil sales. To effectively manage the proceeds from crude oil sales, Excess Crude Account (ECA) was created in 2004 by the Nigerian Government at the CBN to warehouse the positive difference in revenues accruing to the government when crude oil price was over and above the budgeted benchmark price. The objective of the stabilization fund was to provide a mechanism to protect budget implementation from the adverse impact of revenue shortfalls associated with crude oil price volatility (Lukpata, 2013; Salami, 2011). However, this objective was thwarted by the implicit rent-seeking motives and quest to have the best share of the “national cake” by the political class that led to the discontinuity of the building process of the Excess Crude Account (ECA), and its replacement with Sovereign Wealth Fund (SWF) in 2011 (Nigerian Sovereign Investment Authority, 2015). Critical among the objectives of Sovereign Wealth Fund (SWF) is investment in and development of infrastructures, economic stabilization by engendering national savings; and making provisions for future generations. Despite the existence of Fiscal Responsibility Act (2007) saddled with the responsibility of greater accountability and transparency in fiscal operations in the design and implementation of medium-term fiscal policy framework, the objectives of various fiscal policy measures have failed to optimally yield positive results in stimulating the Nigeria economy for greatness.

2.1.6 Fiscal Policy and Gross Domestic Product in Nigeria

The role of fiscal policy in stimulating gross domestic product has attracted a wide range of empirical studies with mixed findings using different analytical techniques ranging from cross sectional, panel data, and time series data. Fiscal policy is generally believed to be closely associated with economic growth. In Nigeria like most countries in the world, Fiscal policy involves the use of Government expenditure (spending) and revenue collection (taxation), with the greater objective of full employment, price stability, accelerating the rate of economic development, optimum allocation of resources, equitable distribution of income and wealth, economic stability, capital formation, investment and growth, encouraging investment and correction of economic imbalances during periods of recession and depression (Falade & Folorunso, 2015). Also, Ekeocha, (2012) asserted that the design of fiscal policy must be such that will enable it to perform, principally, in expanding investment and growth in public and private enterprises and concluded that expansion of government expenditure encouraged investments and contributed positively to economic growth. Also, Trebicka (2015) recognized the power of fiscal policy as a tool of economic stabilization. During inflation and prosperity, excessive spending activities are curbed with budgetary surpluses while budgetary deficits are handy fiscal tools during recession. A budget deficit contends with the private sector, and this in turn increases real interest rate as demand exceeds supply. The government budget is primarily concerned with fiscal policy by defining what resources it will raise and what it will spend, and the nature of government spending and tax policies adopted depends on the political and economic situation in the country at a point in time. Therefore, the transmission mechanism of major fiscal policy tools can be broken down into two namely: expansionary and contractionary fiscal policy, and they are applied basically in anticipation or reaction to prevailing economic situation at any point in time.

Expansionary fiscal policy is typically deployed to stimulate growth when the economy is operating below its full employment capacity, and to facilitate an expansionary budget when government expenditure exceeds its revenue. They are achieved through cut in tax rates and increase government. On the other hand, contractionary fiscal policy are various measures taken by the government to decrease spending and upwardly adjust tax rates with the aim of slowing down economic activities (Arestis, 2015). Keynes (1936) stated that government in managing its portfolio of debt, can affect interest rates; and by deciding on the amount of new money injected into the economy can affect the amount of cash in circulation, and, therefore, affect other economic variables.

However, despite the various policy alignments with respect to increased government spending and tax decisions, Nigeria is yet to effectively harness the benefits of effective fiscal policy design and implementation. This is attested in studies carried out by Okorie *et al.*, (2017); Osuala and Ebieri (2014); Fadare (2011); and (Uremadu & Onyele, 2019), who collectively agreed that despite the critical roles of fiscal policy in the management of an economy, the Nigerian economic and investment environments are yet to fully appreciate its full impact with worsening cases of budget deficits, unsustainable debt profile, infrastructural gaps and lack of accountability in the management of public finance.

2.1.7 Fiscal Policy Transmission Tools

The major components of Fiscal policy can be viewed from the standpoints of the overall effect generated by the net of the resources the government puts into the economy through expenditures, and the resources it takes out through taxation, charges, or borrowing; as well as a microeconomic effect generated by the specific policies it adopts. This underscores the major transmission tools of fiscal policy as government expenditure, tax revenue, public debt among other.

Government expenditure

This involves government expenditure on real goods and services. In Nigeria, an elaborate classification of government expenditure will include capital expenditure, Recurrent expenditure, non-debt recurrent expenditure and statutory transfers. Capital expenditure is the money spent by the government on public works, as well as expenditure incurred in acquiring fixed assets and profit oriented futuristic investments (Arestis, 2015). On the other hand, recurrent expenditure involves payment for overheads, salaries, pensions, social security benefits, miscellaneous expenses, etc. salaries and overhead are payments that are periodical in nature, e.g., monthly quarterly, annually (Alade, 2017). During depression, public spending emerges with greater significance, and is

helpful to lift the economy out of the morass of stagnation (Keynes, 1936). This is because during depression, deficiency of demand is the result of sluggish private consumption and investment expenditure.

Tax Revenue

Government spending pattern depends largely on the availability of money generated through tax or non-tax revenues, and the amount of tax collected depends on the tax policy that may be skewed towards collecting more from either the rich or poor. Also, the tax policy may be targeted at companies and their products with the aim of encouraging or discouraging consumption of such goods. This is why evaluation of tax revenue is considered by many as a powerful instrument of fiscal policy in the hands of public authorities. Higher taxes reduce disposable income, consumption, and investment, and stagnates aggregate demand and output growth, while anti-depression tax policy increases disposable income of the individual, promotes consumption and investment.

Public Debt

Borrowing is a sound fiscal weapon that brings about economic stability and full employment in an economy when it is appropriately moderated. The Government can borrow from banking institutions, draw from treasury or borrow from non-bank individuals and institutions through the sale of bonds (Omoka & Ugwuanyi, 2010). The effect is that money may flow out of consumption, saving, private investing or even hoarding with a similar quantitative and non-inflationary effect on national income (Musa, Asare, & Gulumbe, 2013). It is unarguable that borrowing creates debts that may be referred to as reproductive and dead-weight. While reproductive debts are used to purchase capital projects whose proceeds would help to repay the loan, dead-weight debts are incurred to fund wars and current expenditures. In Nigeria, and most sun-Saharan African countries, dead-weight debts are predominant and have become increasingly worrisome and unsustainable. Other fiscal policy tools used by the government are national budget, subsidies, transfer payments, fiscal stimulus and operations among others. However, for the purpose of this study we shall use government spending, and public debt as proxies for fiscal policy in Nigeria.

2.2 Review of Related Empirical Literature

There has been a wide range of debate on the relative effectiveness of monetary and fiscal policies in most countries of the world. Apart from the viewpoints of the Keynesians and Monetarists, Anderson and Jordan (1968) were among the first set of scholars that empirically investigated it using their popular St. Louis Equation. They employed dynamic econometric model and concluded that monetary policy is more certain, more effective and faster in influencing the economy in relation to fiscal policy. Consequently, the study of the relative effectiveness of monetary and fiscal policies has become the subject of numerous empirical research. In line with this, many studies carried out in the 80s agreed on the superiority of monetary policy over fiscal policy in terms of magnitude, predictability, and lag of influence.

Havi and Enu (2014) examined the relative impacts of monetary and fiscal policy on economic growth in Ghana. Their findings favoured the superiority of monetary policy over fiscal policy in accelerating the level of economic growth. In a corresponding submission, Jawaid, Arif and Naeemullah (2010) in their study of the comparative effects of fiscal and monetary policy in Pakistan for the period covering 1981 to 2009 concluded that though both monetary and fiscal policy had positive and significant impact on the Pakistani economic growth, the study underscored the superiority of monetary policy impact on economic growth.

In a related development, Senbet (2011) examined the relative impact of monetary and fiscal policies on the real economic activity of US by utilizing a quarterly response covering the sample period of 1950: Q1 to 2010: Q2. The study employs a Granger causality test and the VAR model to estimate the model coefficients and concluded that monetary policy is relatively superior that the fiscal policy in affecting the real output growth. Also, Rahman (2009) in his study of the relative effects of monetary and fiscal policies on real output growth in Bangladesh. Using VAR model, concluded that monetary policy has more significant impact on economic growth than fiscal policy.

Some studies in Nigeria carried out to ascertain the impacts of monetary policy variables on economic growth over the years have returned with varied outcomes. For example, Shobande (2019) examined the impact of switching from direct to indirect monetary policy on industrial growth in Nigeria using Autoregressive Distributed Lag (ARDL) bound testing approach developed by Pesaran, Shin, and Smith (2001) on data spanning from 1960-2015. The results revealed that domestic credit, interest rate and trade balance have positive impact on industrial output while money supply, inflation and exchange rate have negative impact on industrial growth. Also, Owalabi and Adegbite (2014) in their similar study in Nigeria from 1970- 2010 using multiple regressions concluded that Treasury Bills, Deposit, lending and Rediscount Rates had statistically significant effects on the industrial Growth in Nigeria.

Okwo, et al (2012) examined the effect of monetary policy outcomes on macroeconomic stability in Nigeria from 1985 to 2010 using simplified ordinary least square technique. The results revealed that monetary policy, gross domestic product, credit to private sector and inflation in Nigeria may have been inactive in influencing price stability in Nigeria within the period. Salami and Toriola (2021) investigated monetary policy shocks and economic growth in Nigeria from 1986 - 2018. using Vector Autoregression (VAR) technique. The study revealed that money supply exerts a significant positive effect on economic growth in Nigeria while inflation and interest rate exert an insignificant positive effect on economic growth in Nigeria. This result is similar to a study by Awogbemi (2022) on the impact of monetary policy on Nigeria's economic growth from 2000 to 2022, where broad money supply was positive and statistically significant relationship with economic growth in Nigeria. A similar study by Adefeso and Mobolaji (2010) from 1970-2007 using Ordinary Least Squares (OLS) method revealed that money supply exerts a positive impact on GDP growth and balance of payment but has a negative impact on rate of inflation. Using Granger causality test, Umaru and Zubairu (2012) investigated the impact of inflation on economic growth between 1970-2010 and observed that inflation exerted a positive impact on economic growth through encouraging productivity and output level and on evolution of total factor productivity.

Economic and finance literature are equally replete with scholarly studies on the relative effectiveness of monetary and fiscal policy that favored the superiority of fiscal policy over monetary policy. Ubi-Abai and Ekere (2018) in their analysis of the effects of fiscal and monetary policies on economic growth in a panel of 47 sub-Saharan African economies from 1996 to 2016, using dynamic panel General Method of Moment revealed that fiscal policy had a greater scale of effect in enhancing economic growth in sub-Saharan Africa. Using the same method (GMM), in the same region and scope (Sub-Saharan Africa), Praise and Jacob (2018) concluded that analytical evidence shows that fiscal policy has larger and greater impact towards accelerating rapid economic growth than the monetary policy in Sub-Saharan African. Bokreta and Benanaya (2016), in a similar study, but limited to Algeria from 1970-2014 using cointegration test and vector error correction mechanism observed that government expenditure exerted greater impact that led to the conclusion that fiscal policy is more effective than monetary policy in accelerating the pace of sustainable economic growth. This result is in line with the study carried out by Gusti (2014) from 1988-2013 in Indonesia where fiscal policy measures possessed higher impact than the monetary policy within the same period. Petrevski, Bogoev and Tevdovski (2015) examined the effects of monetary and fiscal policies in three South Eastern Europe economies: Bulgaria, Croatia, and Macedonia using the Recursive VARs on quarterly data from 1999-2011. Their results revealed that positive fiscal shocks induce higher output in all economies, pointing to the expansionary effects of fiscal consolidation.

Trebicka (2015), empirically examined the impact of fiscal policy on the level of economic growth in Albania from 1994 to 2014 using cointegration technique with its implied error correction model. The result revealed that profit after tax, government expenditure and external debt had positive impacts on economic growth of Albania This result agrees with findings by Alzyadat and Al-Nsour (2021) who investigated the effects of fiscal policy instruments on economic growth in Jordan using annual data from 1970 to 2019 and applied both the VAR model (Vector Auto regression) and the Vector Error Correction Model (VECM). The results show both government expenditure and total revenue have positive effects on economic growth in Jordan in the short run. Conversely, a similar investigation carried out by Omran (2017) in Egypt structural vector autoregressive model (SVAR) model and impulse response function (IRF) revealed that Government spending shock had a negative impact on real gross domestic product, and taxation seemed to be less efficient as it had a positive but weak impact on real gross domestic product. This is in line with studies by Khosravi and Karimi (2010) in Iran using an ARDL approach on data spanning the period between 1960 to 2006.

The result of some studies in Nigeria equally agreed with the proposition of the superiority of fiscal policy over monetary policy. Empirical evidence from Ehikioya, Uduh, and Edeme (2018) in their study of the impact of fiscal policy and monetary policy on growth of SMEs in Nigeria from 1986 to 2015 using revealed that OLS estimation method revealed that fiscal policy is more effective than the monetary policy in encouraging the output growth performance of SMEs in Nigeria for the period under review. Similarly, Musa et al. (2013) investigated the effectiveness of monetary and fiscal policies on price and output growth in Nigeria using the cointegration test and the VAR model on data collected from 1970 to 2010. The result showed that both monetary and fiscal policy has a significant impact on economic growth, but the fiscal policy appears more relevant for sustainable growth. Adegioriola (2018) investigated the effectiveness of fiscal and monetary policy tools in stabilizing the Nigerian economy covering the period of 1981 to 2015 using the Johansen cointegration and the error correction model. Their findings indicate that fiscal policy is more effective than the monetary policy. Osuala and Ebieri (2014), analyzed impact of fiscal policy on economic growth of Nigeria using time series data from 1986 to 2010. By applying the ordinary least square method of multivariate regression, the study revealed that government recurrent and capital expenditures had significant and positive impact on economic growth in Nigeria, while non-oil taxes and government total debts had no significant impact on real GDP within the period. However, empirical analysis of the influence of fiscal policy tools like government revenue, government expenditure and government debt on gross domestic investments in Nigeria by Uremadu, and Onyele (2019) revealed that government revenue had negative and significant influence on gross domestic investments, while government expenditure and government debt both had positive influence on domestic investments with government expenditure been significant.

Studies by Okorie et al (2017) have lent credence to the need for policy harmonization for sustainable economic growth. Similarly, Falade and Folorunso (2015) examined the relative effectiveness of fiscal and monetary policy instruments on economic growth sustainability in Nigeria and concluded that fiscal and monetary are still complementary. Chatziantoniou, Duffy, and Filis (2013) studied the interaction between monetary policy and fiscal policy as it affects the stock market behaviour of three developed economies of Germany, UK and US from 1991 (1) to 2010(4), and they emphasized the importance of incorporating both policies in a single model when building a stock market behavioral framework. Tarawalie and Kargbo (2020) conducted a similar empirical study in Sierra Leone using data from 1980 to 2017 and concluded that monetary and fiscal policies should be well coordinated, and government should implement a balanced budget in order to overcome the issue of fiscal dominance in the economy.

Cem (2012) studied the nexus between the fiscal and monetary policy using DSGE model for the period 2002Q1 – to 2009Q3 in Turkey. The result singled out inflation rate as the key variable that connects both policies. A result that aligns with similar findings by (Fragetta & Kirsanora 2010; Akta, Kaya, & Ozlale 2010; and Sanchez, 2012). However, while similar studies by Matthieu, Flaschel, Hartman, and Proano (2011), and Louis and Eldomiaty, (2010) have identified the importance of using a combination of both monetary and fiscal policies tools in averting financial market collapse and counteracting the global recession, they jointly agree on the role of interest rate in transmitting the effect of the interactions between fiscal and monetary policies on stock market.

Other literature that supports a suitable coordination and policy harmonization between monetary and fiscal policy includes studies by Noman and Khudri (2015) in Bangladesh; Alavi et al. (2016) in Iran; and Falade and Folorunso (2015) in Nigeria. Some other studies have remained uncertain in their empirical results on the better of the two policies. For instance, Owoye and Onafowora (1994) examined the relative importance of monetary and fiscal policies in stimulating growth in 10 African countries and concluded that it is not possible to generalize a particular economic philosophy between the Monetarist and the Keynesian view for the affected African countries. This is similar to the study carried out by Atcharyachanvanich (2007) on the output level of 12 countries comprising industrialized and developing countries. The result of the analysis using OLS technique on quarterly data revealed that the impact of the two policies is not clearly distinguishable.

Our review of the vast literature has revealed a coefficient of knowledge gap in precise empirical specification of the better of the two stabilization policies in using the combination of their critical transmission tools in a mathematical representation that helps to ascertain their comparative impacts on gross domestic product in Nigeria. It is this knowledge gap that this study explores using standard IS-LM framework as our theoretical foundation.

2.3. Theoretical Framework Review

The theoretical framework of the study stems from the various perspectives of the Classicists, Monetarists and Keynesians with respect to the relative effectiveness of monetary policy and fiscal policy in stimulating economic performance. The Classicists, with Adam Smith as the progenitor advanced the course of 'Wealth of Nations' in advancing the economy in the 18th and 19th centuries. This period coincided with western capitalism, and their viewpoints with respect to the role of money in driving the economy was further elucidated by Milton Friedman and Irvan Fisher in their different versions of the quantity theory of money. The monetarist theory states that changes in the money supply are the most essential determining factor of the rate of economic growth and the behavior of the business segment (Kenton, 2018). Monetarism hypothesizes that money supply is the key driver of economic growth, which implies that as money supply rises, people demand more, factories produce more, and fresh employment opportunities emerge (Kimberly, 2018). The promoters of this theory have contended that money has substantial effect on price level in an economy in the long run while in the short run, it influences employment and output (Ahuja, 2011). Also, the classical viewpoint, which was the prevailing economic paradigm until the outbreak of the Great Depression in 1929, argued that the budget should be balanced, except in extraordinary circumstances, and must be designed to achieve effective demand management (Erkam, 2010). They further argued that the economy is always at full or near the natural level of real GDP,

In the proposition of the classical economists the economy is always at or near the natural level of GDP, and money does not have effect on economic aggregates, but price. Thus, they assume that in the short run, output and the velocity of circulation of money tend to remain constant, leaving money supply in direct proportion to price level. However, Keynes (1936) and other Cambridge economists proposed that money only had indirect effects in other economic variables by influencing the interest rate, which affects investment and the cash holding motives of economic agents. The indirect effect is suggestive that fiscal policy, through government spending and tax policies have more direct effect in stimulating economic activities. They concluded that the effectiveness of monetary policy tools is limited by liquidity trap that unemployment arises from inadequate aggregate demand, which can be stimulated by increase in government spending, consumption, employment, and economic growth. Thus, to reduce the inflation level, contractionary fiscal policy should be applied by following budget surplus policies, while in the time of recession monetary expansion would be provided by budget deficit (Bozkurt & Göğül, 2010).

2.3.1 Investment-Savings (IS) and Liquidity Preference Money Supply (LM) Curves

The IS-LM theoretical framework is a two-dimensional macroeconomic theory propounded by Keynes (1936); popularized by Hicks (1937) and extended by Hansen as a mathematical representation of the manifold forms Keynesian and Classical macroeconomic theories that helps to find values of the various combinations of levels of income and interest rate that simultaneously equilibrates the real market and money market. From the real market, one extracts the level of income (y) and from the money market, one obtains the interest rate (r). These variables, in turn, affect elements in the other markets. In its simplistic form, income affects saving and money demand, and interest rate affects investment. Though, this interaction clearly violates the "classical dichotomy" and does not support the neutrality of money, Hicks (1904-1989) and Hansen (1887-1975) were able to show that the problem of indeterminacy of the individual interest rate theories of the Classicists and Keynesians can be solved by the effective combination of both as exemplified in the IS-LM framework. The IS- curve is downward sloping and increase in interest rate will lead to decrease in income and consequently there will be a drop in consumption pattern that will cause a decline in equilibrium level of output. Conversely, the LM curve is upward sloping and represents money market equilibrium, with money demand is also a function of output. Therefore, any rise in output will lead to a rise in money demand curve, and a subsequent rise in equilibrium level of interest rate. Also, while any point off the LM curve will denote a money-market disequilibrium of excess money supply implied by the financial market dynamics, all points below the LM curve denote excess money demand. Therefore, the relative efficacy of monetary policy and fiscal policy is determined by the interaction of the IS-LM curves that explores the joint determination of interest rate and level of output (proxied by GDP) through the simultaneous equilibrium of the goods market (IS) and money market (LM). Consequently, since the goods and money markets are closely interconnected, both monetary and fiscal policies have effects on both the level of output and interest rates depending on whether expansionary or contractionary monetary or fiscal policies are adopted. An expansionary fiscal policy such as increase in government expenditure or a reduction in taxes, would shift the IS

curve to the right indicating an increase in the level of income and the interest rate while a contractionary fiscal policy would shift the IS curve to the left and leads to a fall in income and interest rate. On the other hand, an expansionary monetary policy, that is, an increase in money supply would shift the LM curve to the right indicating a rise in income and a fall in the rate of interest while a contractionary monetary policy would shift the LM curve to the left leading to a fall in the level of income and an increase in the rate of interest. Hence, it is not only used to analyze economic fluctuations but also to suggest potential levels for appropriate stabilization policies.

3.1. Research Methods

3.2. Research Design

A research design is a blueprint that guides the researcher in his or her investigation and analysis (Onwumere, 2009). This study is designed to structurally ascertain effect of fiscal policy on GDP in Nigeria, and it adopted an *ex-post facto* research design in its execution. *Ex post facto* research design attempts to identify a natural force for specific results without manipulating the independent variable. It implies that the event being investigated had already taken place, and the data used are already in existence.

3.3. Nature and Sources of Data

This research explored the use of secondary annual time series data from 1983-2021, sourced from the Central Bank of Nigeria, and National Bureau of Statistics Bulletins for various years within the review period. The choice of this period is critical because it encompasses various periods in Nigeria’s socio-economic and political history.

3.4. Model Specification

The monetary-fiscal policy debate by the Keynesians led by Keynes (1963) and monetarists led by Friedman and Meiselman (1963) was rekindled with an empirical touch by Andersen and Jordan (1968) in the popular St. Louis equation that expressed nominal GDP as a function of narrow money supply (MS), and government expenditure induced full employment (GOV). The model is a modification of St. Louis Equation structured in a way to empirically ascertain the joint effects of fiscal policy and monetary policy on gross domestic product in Nigeria while incorporating inflation as a control variable as expressed below:

$$RGDP = (FS, MP, C) \tag{3.0}$$

Where FS is a proxy for fiscal policy variables such as Government Expenditure (TOGE) and Total Public Debt (TOPD); MS is a proxy for monetary policy variables and aggregates such as Money Supply (MPMS) and Open Market Operation (MPOM), and C is a proxy for inflation as a critical macroeconomic variable.

$$GDP = (TOGE, TOPD, MPMS, MPOM, CINF) \tag{3.1}$$

Equation 3.1 expressed in its functional form through a linear transformation gives:

$$GDP = (TOGE, TOPD, MPMS, MPOM, CINF) \tag{3.2}$$

$$GDP_t = \beta_0 + \beta_1 \ln TOGE_t + \beta_2 \ln TOPD_t + \beta_3 \ln MPMS_t + \beta_4 \ln MPOM_t + \beta_5 CINF_t + \mu_t \tag{3.3}$$

Where,

GDP - Gross domestic product (Used as dependent variable)

TOGE - Total government expenditure

TOPD - Total Public Debt

MPMS - Broad Money Supply

MPOM - Open Market Operations (proxied by CBN (OMO) bills)

CINF - Inflation Rate

β_0 - Constant parameter

$\beta_1 - \beta_5$ = Coefficients

μ - Estimated error term

ln – Logged values of the affected variables.

Variable description and measurements:

Gross domestic product (GDP): It is the total money value of all goods and services produced in a country within a year. It is measured by the aggregate value of all goods and services produced in a country within a year. Large GDP values signify viable economic performance.

Total government expenditure (TOGE): It is the sum of total Government expenditure in a year broadly decomposed into capital and recurrent expenditures. Measured by the addition of the values of both recurrent and capital expenditures within the review period.

Total Public Debt (TOPB): It is the total amount of debts owed by a country within a year. It is measured by the addition of domestic and foreign debts owed by Nigeria in a year over the review period.

Broad Money Supply (MPMS): Broad money comprises M2 and M3 in Nigeria. While M2 is narrow money plus near money items and short-term tenured deposits, M3 is *a measure of the money supply* that includes M2, large time deposits, institutional money market funds, and short-term repurchase agreements. Both M2 and M3 are used in this study since M3 became the higher of the two broad money in 2011 (CBN Statistical Bulletin Report, 2021).

Open Market Operations (MPOM): Open Market Operations is the simultaneous sale and purchase of government securities, treasury bills and other money market instruments. The objective of OMO is to regulate the money supply in the economy. It is measured, for the purpose of this study, by aggregating the values of CBN (OMO) bills including treasury bills and money market instruments within the review period.

Inflation Rate (CINF): The control variable used in the study is inflation (CINF). Inclusion of inflation rate as a macroeconomic variable is justified by the fact that unguided increase in government spending, reduction in taxes and loosened monetary policy stance could lead to deficit budget that will stimulate borrowing, increase interest rates, and trigger inflation.

3.5. Estimation Procedure

3.5.1 Unit root test

The need to avoid biasedness of the estimated results due to spurious data made conducting a stationarity test important. Therefore, we adopted the use of Augmented Dickey-Fuller (ADF) test to ascertain the stationarity features of the time series data (Dickey and Fuller, 1979), and in line with its use in similar empirical literature related to this study (Osuala & Ebieri, (2014); and Uremadu & Onyele, (2020)).

3.5.2 ARDL Bound Cointegration Test

This text is applicable to the ARDL approach and helps to ensure that the variables are not only cointegrated but there exists long run relationship between the dependent and independent variables. The literature is of diverse opinion on the benefits of the ARDL Bound cointegration test as exemplified in Uko and Nkoro (2012). Several estimation techniques such as Engle and Granger (1987), Johansen and Juselius (1990) and Gregory and Hansen (1996) among others have been used in economics and finance literature to estimate the co-integration between macroeconomic variables.

3.5.3 Autoregressive Distributed Lag (ARDL) Model

In econometrics, the determination of the dynamic influence of a variable on other variables require the use of multiple distributed lag models. However, the ARDL linear model addresses the problem of distributed lag more efficiently (Uko and Nkoro, 2012), because it is crucial in analyzing time lag effects of changes in the economy.

Therefore, in addition to its flexibility, the ARDL approach is equally more appropriate when faced with small sample size unlike other estimation techniques that require large data set for validity (Ozturk & Acaravci, (2010); and Bekhet & Matar, (2013)).

Therefore, the ARDL form of equation (3.3) above is expressed as:

$$\Delta \ln GDP_t = \beta_0 + \sum_{i=0}^j \beta_1 \Delta \ln GDP_{t-1} + \sum_{i=0}^j \beta_2 \Delta \ln TOGE_{t-1} + \sum_{i=0}^j \beta_3 \Delta \ln TOPD_{t-1} + \sum_{i=0}^j \beta_4 \Delta \ln MPMS_{t-1} + \sum_{i=0}^j \beta_5 \Delta \ln MPOM_{t-1} + \sum_{i=0}^j \beta_6 \Delta \ln CINF_{t-1} + \beta_1 \ln GDP_{t-1} + \beta_2 \ln TOGE_{t-1} + \beta_3 \ln TOPD_{t-1} + \beta_4 \ln MPMS_{t-1} + \beta_5 \ln MPOM_{t-1} + \beta_6 \ln CINF_{t-1} + \mu_t \tag{3.4}$$

Where:

Δ is the difference operator,

\ln is the log of affected variables.

μ_t is the error term,

i 's and j 's represent the lags, and

$\beta_1 - \beta_6$ are coefficients to be estimated

Other variables remain as previously defined in equation 3.3.

3.5.4 Linear Transformation of ARDL to Error Correction Model (ECM)

ARDL model estimation technique accommodates a process of model ‘reparameterization’ to the Error Correction Model (ECM) through a simple linear transformation, which integrates short run adjustments with long run equilibrium without losing long run information (Enders, 2014). The essence of the Error Correction Model is to show the speed of adjustment back to long run equilibrium after a short run shock. Therefore, the transformed error correction representation of equation 3.4 is expressed below:

$$\Delta \ln GDP_t = \beta_0 + \sum_{i=0}^j \beta_1 \Delta \ln GDP_{t-1} + \sum_{i=0}^j \beta_2 \Delta \ln TOGE_{t-1} + \sum_{i=0}^j \beta_3 \Delta \ln TOPD_{t-1} + \sum_{i=0}^j \beta_4 \Delta \ln MPMS_{t-1} + \sum_{i=0}^j \beta_5 \Delta \ln MPOM_{t-1} + \sum_{i=0}^j \beta_6 \Delta \ln CINF_{t-1} + ECM_{t-1} + \mu_t \tag{3.5}$$

Where:

ECM_{t-1} denotes the speed of short-run adjustment of the model’s convergence to equilibrium in the long-run that must be statistically significant and negative. Other variables and parameters remain as previously defined in equations 3.3 and 3.4.

4.0 Data Analysis and Discussion of Findings

4.1 Unit Root Test

This test is carried out to avoid spurious regression results. Unit root tests are carried out on the individual variables in isolation. For the purpose of this study, the Augmented Dickey Fuller (ADF) tests is used to test for stationarity or otherwise of the variables, and the test results are shown in table 4.1 below:

Table 4.1 ADF Unit Root Test Results

Variables	ADF Test stat. @ level	Critical values @ 5%	ADF test stat. @ first diff.	Critical values @ 5%	Order of Integration	Prob.
lnGDP	-4.5621*	-4.2524	-	-	I(0)	0.0005
lnTOGE	-3.0009	-3.0440	-4.9115*	-4.0512	I(1)	0.0093
lnTOPD	-4.8126*	-4.6612	-	-	I(0)	0.0008
lnMPMS	-3.8071*	-3.0481	-	-	I(0)	0.0036
lnMPOM	-3.7661*	-3.2625	-	-	I(0)	0.0045
CINF	-4.6099*	-4.2814	-	-	I(0)	0.0106

Source: Authors Computation using E-views 12.0

Note: * represents significance at the 5% critical value.

The stationarity test (unit root) carried out for the concerned variables in table 4.1 above revealed GDP, TOPD, MPMS and MPOM are stationary at level and integrated of order 1(0), while TOGE became stationary at first difference 1(1). This implies that there is a mixed order of integration that satisfies the pre-condition for the use of ARDL estimation technique (Pesaran, Shin & Smith, 2001).

4.2. ARDL Bounds Test for Cointegration

Table 4.2 Summary of ARDL Bound Cointegration Test Result

Dependent Variable – lnGDP		
Levels	Bounds	Critical Values
10% Level	Lower bound I(0)	2.12
	Upper bound I(1)	3.23
5% Level	Lower bound I(0)	2.45
	Upper bound I(1)	3.61
2.5% Level	Lower bound I(0)	2.75
	Upper bound I(1)	3.99
1% Level	Lower bound I(0)	3.15
	Upper bound I(1)	4.43
F-Statistics ARDL (1,2,1,1,2,2,1)		6.83*

Source: Authors Computation using E-views 12.0

The results in table 2.1 above shows that the computed F-statistic- 6.83 is greater than the upper level of bounds critical value of 4.43 and lower bounds value of 3.15 for k= 6. So, we reject the null hypothesis of no cointegration and accept the alternative hypothesis of the existence of cointegration among the variables.

4.3 Estimated ARDL Long-Run Results

Table 4.3: Summary Results of ARDL Long-Run Analysis

Dependent Variable -lnGDP					
Variables	Coefficient	Error	Std	t-statistic	Prob.
lnTOGE	0.6935		0.1408	2.5059*	0.0032
lnTOPD	-0.1021		0.5039	2.4606**	0.0447
lnMPMS	0.3011		0.9124	2.5479**	0.0201
lnMPOM	0.1381		0.5902	2.2606**	0.0132
CINF	-0.1098		0.2767	2.5698*	0.0025
R-squared = 0.8101			F-statistics = 10.1995		
Adjusted R-squared =0.8253			Prob. (F-statistics) =0.0000		

Source: Authors Computation using E-views 12.0

Note: the sign of * and ** represents the level of significance at 1% and 5% respectively.

From the result of table 4.3 above shows that TOGE with a coefficient of 0.6935 and probability/ t-statistic values of 0.0032/-2.5059 has a positive and statistically significant relationship with GDP in Nigeria within the review period. This result is consistent with findings from similar studies by Trebicka (2015) in Albania; Alzyadat

and Al-Nsour (2021) in Jordan; Osuala and Ebieri (2014) and Ehikioya, Uduh and Edeme (2018 in Nigeria among others. The implication of this is that one percent increase in TOGE will lead to 53% increase in GDP performance in the long run. Also, TOPD with a coefficient of -0.1021 and probability/t-statistic values of 0.0447/2.4606 has a negative relationship with GDP but is statistically significant in explaining variations in GDP in Nigeria within the review period. The result underscores the significant role of government expenditure in stimulating economic activities in Nigeria and exposes the negative impact of continued increase in Nigeria’s debt profile on GDP growth. This is largely attributable to improper allocation of borrowed funds to unproductive ventures, which widens the scope of debt servicing that do not guarantee effective returns but creates gaps in our annual budgetary provisions. Furthermore, the results reveal that MPMS and MPOM have positive and statistically significant relationships with GDP, with coefficients of 0.3011 and 0.1381, and probability/ t-statistic values of 0.0201 / 2.5479 and 0.0132 / 2.2606, respectively, at 5% significant level. The result is consistent with the findings by Awogbemi (2022); Owalabi and Adegbite (2014); and Adegioriola (2018) that validated the relevance of regulated increase in the volume of cash in circulation below the output level in stimulating economic activities.

Further analysis of the results of in Table 4.3 revealed that inflation rate used in the model as a control variable has negative, but statistically significant relationship with GDP within the study period. This implies that high inflationary trends have continued to be inimical to economic performance in Nigeria in the long run despite the sustained contractionary monetary policy stance of the regulatory authority.

4.4 Short-Run ECM Analysis

Table 4.4: Summary Results of Short-Run ECM Analysis

Dependent Variable -lnGDP				
Variables	Coefficient	Std. Error	t-statistic	Prob.
d(lnTOGE)	0.4512	0.6767	2.2716*	0.0018
d(lnTOGE(-1))	-0.2001	0.5039	-2.4698**	0.0415
d(lnTOPD)	-0.2021	0.1408	-1.9421*	0.0025
d(lnMPMS)	0.1811	1.4911	-2.5059**	0.0276
d(lnMPOM)	-0.3353	0.1408	2.5479**	0.0131
d(lnMPOM(-1))	-0.1925	2.5902	-1.5059	0.6555
d(CINF)	-0.4461	0.2767	2.2616*	0.0037
CointEq(-1)	-0.4033	0.7039	2.5902*	0.0045
R-squared = 0.7956			F-statistics = 45.9522	
Adjusted R-squared = 0.8021			Prob. (F-statistics) =0.0000	

Source: Author’s Computation using E-views 12.0

Note: the sign of * and ** represents the level of significance at 1% and 5%, respectively.

Analysis of the ECM short-run result in table 4.4 shows that the speed of adjustment to restore equilibrium in the dynamic model appears with a negative sign of -0.4033 for GDP and is statistically significant at 1 percent level of significance. This affirms that long run equilibrium can be attained, and if further implies that the deviation from the long-term equilibrium is corrected by 40 percent within one year at 1 percent level of significance. Our results are consistent with the position of Banerjee, Dolado, Galbraith and Hendry (1998) who argue that a highly significant error correction term is a further proof of the existence of stable relationship among the variables. Further review of the results in table 4.4 shows a similar pattern of positive and statistically significant relationships between TOGE and GDP; and MPMS and GDP as observed in the long run. Also, the negative and statistical relationships between TOPD and GDP; and CINF and GDP as reflected in the long run results were sustained in the short run with varied coefficient values. However, the lagged values d(lnTOGE(-1)) and d(lnMPOM(-1)) show negative and statistically significant relationships with GDP within the study period.

4.5 The Relative Impacts of Fiscal and Monetary Policy Variables.

A review of the results in tables 4.3 and 4.4 in comparative terms show that in the long run, the aggregate coefficients of fiscal policy and monetary policy variables are 0.5914 and 0.4392, respectively, while the aggregate coefficients of the short run results for fiscal policy and monetary policy variables are 0.049 and -0.3467, respectively, with TOGE showing overwhelming dominance relative to other variables used in the model. The results imply that both fiscal and monetary policy variables are crucial in stimulating overall economic performance proxied by GDP, however, fiscal policy is comparatively more potent than monetary policy in Nigeria within the review period.

4.6 Diagnostic and Model Specification Tests

4.6.1 R-Squared:

From the results of our long and short run analysis, the values of R-squared are 0.81 and 0.79, respectively. This implies that 81% and 79% of the changes in the dependent variable – GDP are explained by the selected regressors in the model. Therefore, we can conclude that there is goodness of fit and the regression equation explains the observed data. Also, the observed marginal increases in the Adjusted R-Squared in the long and short run analysis further validates the goodness of fit of the model because a decrease would have been indicative of the need for probable reduction in the number of regressors.

4.6.2 Other Diagnostic tests

Table 4.5: Diagnostic Tests

Tests		LM-version		F-version	
		Statistic	P-value	Statistic	P-value
Breusch-Pagan-Godfrey Correlation test	serial	$\chi^2(2) = 10.55$	0.1325	F(2, 29) = 1.70	0.1901
Breusch-Pagan-Heteroscedasticity test	Godfrey	$\chi^2(9) = 4.18$	0.8911	F(9,31) = 0.67	0.7202
Normality: Jarque-Bera test		$\chi^2(2) = 3.32$	0.1812		
Functional Form: Ramsey Reset test		$\chi^2(1) = 0.12$	0.0901	F(1, 22) = 0.11	0.9025

Source: Author’s Computation using E-views 12.0

The result of Breusch-Pagan- Godfrey serial Correlation LM and F-tests in table 4.5 above shows that the null hypothesis of ‘Absence of serial correlation of any order’ is accepted with p-values of 0.1323 and 0.1901 being greater than the conventional p-value of 0.05. Therefore, we conclude that the error terms are independently distributed across the observations and the results are efficient. Also, the result of Breusch-Pagan-Godfrey test for Heteroskedasticity revealed the acceptance of the null hypothesis of ‘homoscedasticity’, which implies that the error terms have constant variances. Finally, the results of further diagnostic tests such as Jarque Bera Test for normality and Ramsey RESET test for model misspecification show that error terms are normally distributed, and the functional form of the model is not misspecified.

5.1 Summary

This study empirically examines the relative potency of fiscal policy and monetary policy on Gross Domestic Product (GDP) in Nigeria between 1983-2021 using data sourced from Central Bank of Nigeria and National Bureau of Statistics Statistical Bulletins for various years. The result of the unit root test using Augmented Dickey Fuller (ADF) test revealed mixed order of integration that justified the use of ARDL estimation technique, whose results revealed positive and statistically significant relationships between TOGE and GDP; MPMS and GDP, as well as MPOM, and GDP, within the review period. The ARDL equation was linearly transformed to Error

Correction Model (ECM), and the short run result revealed that the coefficient is correctly signed and 40 percent of the disequilibrium in GDP is corrected within one year.

5.3 Conclusion

The study concludes that monetary policy variables such as broad money supply (MPMS) and Open Market Operations (MPOM) play critical roles in stimulating gross domestic product in Nigeria. Also, while total government expenditure (TOGE) impacted positively on GDP, TOPD has a negative relationship with GDP. However, both TOGE and TOPD are statistically significant in explaining variations in GDP within the period with TOGE having the most dominant influence. The study further concludes that high inflation rate has continued to constrain GDP growth in Nigeria over the years. Finally, the study concludes that monetary policy and fiscal policy are crucial in stimulating overall economic performance in Nigeria, but fiscal policy is comparatively more potent than monetary policy variables within the study period. The policy implication of this inference is that there is need for effective coordination of both monetary policy and fiscal policy for consolidated macroeconomic gains and sustainable economic development in Nigeria.

5.4 Policy Recommendations

Policy makers in Nigeria should discard the sustained adoption of the dominant structure of monetary and fiscal policy divergence that has made the design and implementation of these policies less potent. This underscores the need for more robust and synergized policy framework from the monetary and fiscal authorities without loss of monetary autonomy and fiscal discipline for optimal macroeconomic gains. Also, the high impact of government spending on GDP calls for the need by policy makers to strengthen our revenue streams. This is because increase in revenue fuels the ever-increasing need for government spending and curtails our unbridled need for unsustainable debts with less impactful effect in stimulating GDP growth in Nigeria. Finally, there is need to decongest the shadow market, and effectively regulate over 60% of the cash volume in circulation with a view to optimally explore the advantages of money supply in the economy and strengthen policy initiatives toward combating the harmful effects of high inflation rate in Nigeria.

5.5 Contribution to Knowledge

The contributed to knowledge by validating and strengthening existing literature on the need for effective harmonization and coordination of the transmission mechanisms of fiscal and monetary policies in Nigeria. The study also added a unique dimension to literature by the adoption of both M2 and M3 values in our analysis for holistic result on the impact of broad money since M3 became the higher of the two in 2011 in Nigeria.

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