MACROECONOMIC EFFECT OF MONETARY AND FISCAL POLICY COORDINATION ON ECONOMIC GROWTH IN NIGERIA

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ABSTRACT
In many countries, the crucial aims of macroeconomic policy are full employment, balance of payment equilibrium, price stability and sustainable economic growth of the population which can improve the quality of life. Fiscal and monetary authorities interact and coordinate in the designing and implementation of macroeconomic policies to facilitate joint decisions on issues in the economy. From the CBN Statistical Bulletin, a times series data were used to study the effects of monetary and fiscal policy coordination on economic growth in Nigeria from 1985 to 2021. The multiple regression analysis result revealed that the money supply (MS), government expenditure (GOVTEXP), government revenue (GOVTREV), inflation (INFL), and exchange rate (EXR) had a statistically insignificant and positive effect on Nigeria's economic growth. The only variable with a statistically significant impact on economic growth was monetary policy rate (MPR); additionally, coordination between fiscal and monetary policy had a substantial impact on economic growth in Nigeria. The study suggested that in order to achieve coordination between fiscal and monetary authorities, binding rules and procedures should be established.

Keywords: Monetary policy, Macroeconomics, Fiscal policy, Coordination, Economic growth
JEL Classification Codes: E52, E62, B22, F43

1. INTRODUCTION
The main objectives of macroeconomic policy in the majority of countries are full employment, balance of payment equilibrium, price stability and sustainable economic growth which can improve standards of living for the great majority of people. The two main instruments used by the government to attain macroeconomic balance are fiscal and monetary policies. Monetary authorities, including the central bank, employ monetary tools like the interest rate, money supply, credit and monetary policy rate to effect aggregate demand and accomplish

macroeconomic goals. Interest rates, bank lending or credit, exchange rates, equity, and housing prices are just a few of the ways that monetary policy influences the economy (CBN, 2013). Important tools for implementing fiscal policy include taxes, government revenue, recurrent spending, government debt, and expenditure. Since changes to taxation and expenditure can operate as counter-cyclical measures to lessen the effects of the business cycle on the economy, fiscal policy has historically been seen as a tool for demand management and stabilization (CBN, 2013; Madueke et al., 2023). There has been no agreement in the literature as to which of them is better than the other. The monetarist supported by Milton disagrees with the Keynesians believe that fiscal policy is more effective than monetary policy. Central Bank conducts monetary guidelines intending to influence the direction of temporary interest rates, credit, and money supply as a means of achieving a balance of payment viability such as low unemployment, stable prices, and as well as growth. Monetary policy is a premeditated activity taken by monetary authorities to control the magnitude, price, and credit availability to attain internal and external balances in the country.

Achieving economic growth and price stability is reliant on upon the extent of monetary and fiscal policy coordination. In the last decade, Nigerian economic growth has not been stable; it has adverse growth rates of -1.62% and -1.79% in 2016 and 2020 respectively. In 2021 it had a positive growth rate of 3.65% while in 2022 and June 2023 it was 2.91% and 2.41% respectively (CBN, 2023; Shittu, Olorunfemi & Adejola, 2023). Both monetary and fiscal policies aim to achieve macroeconomic stability as a general goal, but they usually employ different instruments and strategies.

Occasionally, fiscal measures may be implemented even at the expense of inflation to achieve employment and economic growth, and vice versa (Arby and Hanif, 2010). Efficiency in achieving policy objectives can be greatly increased by collaboration between the monetary and fiscal authorities. Additionally, it provides a platform for decision-makers overseeing various policy sectors to meet and determine the nature, aim and timeline for creating and executing macroeconomic policies. It is necessary to stop these objectives from being pursued in contradiction to one another. Coordination, in practice, means that the monetary and fiscal authorities must regularly communicate with one another to enable consensus on matters concerning the formulation and application of macroeconomic policy.

Dependency on both of these authorities has been defended by many economists because a lack of independence may result in unsuitable policy combinations that may impede inflation and growth. These two goals are not mutually exclusive, according to economic theory, as achieving one has an impact on achieving the other. As a result, when fiscal and monetary authorities strictly adhere to the "separation of powers" to achieve their system-derived goals, the economy would degenerate. This suggests that even in situations when it seems as though the monetary and fiscal authorities are accomplishing or nearly reaching their goals, a lack of policy coordination may lead to significant economic distortions. Fiscal policies may have a variety of effects on the likelihood that monetary policies will be successful in an uncoordinated macroeconomic environment. These consequences could include eroding public trust in monetary policy's efficacy, changing the long-term framework for growth in the economy and low inflation, and in the short term, affecting aggregate demand. On the other hand, based on the prevailing political and economic paradigms monetary policies may be accommodative or counteractive to fiscal policies.

To improve macroeconomic management, coordination between fiscal and monetary policy is necessary. The effectiveness of fiscal policy is hampered by a dovish monetary policy position, and same with monetary policy. This highlights to the fact that there is a need for a study assessing the extent of coordination between fiscal and monetary policies. Harmony between fiscal and monetary policy variables is necessary for the Nigerian economy to flourish and avoid contradictions. Thus, most studies (Ishaku, et. al, 2023; Tarawalie, et.al, 2013, Adegboyo, et. al, 2021; Tule, Onipede, and Ebuh (2020) and Ramlogan & Sookram, 2018) on the effect of monetary and fiscal policy coordination on Nigerian economic growth have focused only on measuring the effects of variables like money supply, inflation rate, exchange rate, interest rate and government expenditure on economic growth in Nigeria without measuring the macroeconomic impact of these two policies in utilizing the monetary policy rate and government revenue. Given the foregoing, this study seeks to address the following research question. What effect do monetary and fiscal policy variables have on Nigerian economic growth? By examining this research topic, the study aims to examine the macroeconomic effect of monetary and fiscal policy variables on economic growth in Nigeria. The remaining of the paper will be discussed as follows: Section 2 provides an overview of the literature, Section 3 covers the methodology and results, Section 4 discusses the findings and Section 5 presents the conclusions and policy recommendations.

2 LITERATURE REVIEW

2.1 Conceptual Literature

The Concept of Monetary Policy

Monetary policy is a deliberate act of monetary authorities to influence the cost, quantity and availability of money to achieve desired macroeconomic goals of internal and external balances (CBN, 2012). Without needlessly pushing up domestic prices and exchange rates, Central bank can control the value, supply, and cost of money and this is achieved through the employment of monetary policy, which is a combination of tools (Mordi, 2009). Among these are adjustments to the quantity and value of money supply; central banks can lower the cost of money by varying the amount of money in the market based on the economy's capacity to absorb more money at a given point in time. Monetary authorities carry out monetary policy to accomplish the main macroeconomic goals of price stability, full employment and output growth. The idea that a money supply surplus or deficit above optimal levels may prevent macroeconomic goals from being achieved underscores the need to preserve a balanced monetary policy.

The primary goal of the Central Bank of Nigeria's (CBN) monetary policy is to ensure that the economy has the ultimate level of liquidity to support both non-inflationary growth and price stability. A monetary-targeting regime that is based on market and public communication, coordination of fiscal and monetary policy, monitoring of monetary aggregates, trends in inflation, and liquidity management serves as the foundation for the CBN's monetary policy (CBN, 2012).

The Concept of Fiscal Policy

Fiscal policy is the purposeful alteration of government spending, income, and tax, along with borrowing. Its goals include price stability, economic growth, full employment, and balance of payments equilibrium. It can be contractionary, expansionary, or neutral. Fiscal policy is neutral and also referred to as the budget balance when revenue and expenditure are equal. This indicates that when all government spending is completely offset by tax revenue, the activities of the economy cannot be impacted by the budget. If public spending surpasses tax revenue, there is a budget deficit in the government, presumably because of an expansionary fiscal

strategy. Alternatively, a contractionary fiscal strategy is when the government budget is in surplus as a result of public spending being lower than tax receipts.

Policy coordination

Haleim (2016) defines coordination as the arrangements that are required among the fiscal and monetary authorities to guarantee the consistent implementation of policy measures. Over the years, policy coordination has received a lot of attention in economic research. In order to bring coordination amid fiscal and monetary policy, two methods are commonly used: the first involves close collaboration between the two authorities to reach a consensus on decisions regarding the creation and execution of macroeconomic policy, and the second involves the development of an established guidelines and procedures (Tarawalie, 2013). Nigeria uses joint committees to carry out the first method. Representatives from the Ministry of Finance, the CBN, the DMO and other revenue-generating government parastatals are on the committee. Coordination of monetary and fiscal policy is realized through many routes of communication. At one level, there are bilateral discussions between the heads of the monetary and fiscal agencies; at another level, committees are set up.

2.2 Theoretical Literature

2.1.1 The Fiscal theory of price level (FPTL)

The FPTL theory also known as the quantity theory of public debt was propounded by (Leeper, 1991), Woodford, 1994), and (Sims, 1994). The theory states that monetary and fiscal policies are connected to the determination of prices. It outlines the principles for monetary and fiscal policy so that, at most, monetary policy has an indirect influence on price levels, which are set by government debt and fiscal policy alone. The notion runs counter to the monetarist perspective, which holds that the money supply is the main factor influencing inflation and price level. As prices are determined in Quantity theory by money supply and monetary aggregates, prices are determined by the public debt in the new theory of price level. The FTPL approach, according to Semmler and Zhang (2003), assumes that the intertemporal solvency constraint is not satisfied by the trajectories of government expenditure, debt and taxes. To ensure government solvency, the price level consequently modifies in equilibrium. To put it in another way, the FTPL illustrates how both non-Ricardian and Ricardian notions of wealth effects affect household consumption and price determination, and it argues that the combined government present value budget restriction is an ideal situation. The idea behind the FTPL is that an economy needs more than just monetary policy to have a nominal anchor. The course of the price level is instead determined by the mixture of a specific monetary policy and a specific fiscal policy.

2.1.2 The classical theory

According to Adam Smith-inspired classical theory, the economy is always in a state of full employment equilibrium, and shocks that disturb the equilibrium are quickly corrected by the imperceptible forces of supply and demand (Amah, 2019). Because wages and prices are infinitely flexible, the economy will not deviate from its long-run equilibrium, and actual output will not differ from potential output for a long time. At the extreme, monetary and fiscal policy cannot be relied upon to increase or reduce economic output. Any increase in government spending or money supply will simply put more money in the hands of consumers and investors, and predictably show up as an increase in prices. The pillars upon which this view is validated are the absence of spare capacity in the economy and fully flexible nominal wages and prices in the labor and goods markets. Indeed, several measures implemented by monetary and fiscal authorities are thought to magnify distortions in the various markets and constitute interference in the transmission process of market forces.

2.3 Empirical Literature

Based on theoretical claims, a large number of empirical studies were carried out to evaluate the effect of coordinated monetary and fiscal policy on Nigerian economic growth. Nonetheless, this paper discusses a few of these most pertinent studies. Multiple regression analysis was used by Ishaku et al. (2023) in their study on monetary and fiscal policies coordination on economic growth in Nigeria from 1980 to 2018. Findings demonstrated that although government spending and money supply hinder economic growth in Nigeria, government revenue has a major and favorable impact. Autoregressive distributive lag (ARDL) model was utilized by Shittu, Olorunfemi, and Adejola (2023) to study the impact of monetary policy variables on the economic growth in Nigeria from 1981 to 2021. The results demonstrated a positive and statistically significant association between GDP and interest rates, while GDP, money supply and exchange rate had a statistically significant but negative on economic growth.

From 1985 to 2021, Adegboyo, et. al, (2021) studied how monetary, trade, and fiscal policies impacted economic growth in Nigeria. In contrast, monetary policies show that interest rates encourage economic growth while the money supply restrains it in Nigeria. The study used auto-regressive distribution lag (ARDL) to support its premise that fiscal policies encourage economic growth. Tule, Onipede, and Ebuh (2020) used the structural vector auto-regressive model (SVAR) to study the effects of fiscal and monetary policies on the growth of Nigerian economy from 2003 to 2017. The results of the study showed that while expansionary fiscal policies did not always result in economic growth, they did have an instant favorable impact on the economy when it came to monetary expansion.

Applying vector auto-regression (VAR), Amah, (2019) conducted a study on the use of monetary and fiscal policy combinations to restore macroeconomic equilibrium from 1986 to 2016. The results indicated that interest rate has a positive effect on monetary policy, but surprisingly, there is no consistent correlation between interest rates and lending rates. Tax proxies were shown to be ineffective as policy tools on the fiscal side while recurrent and capital expenditure indicated mixed results with apparently counteracting effects. Using VAR model and Set-Theoretic Approach (STA), Ramlogan and Sookram, (2018) studied the level of coordination between fiscal and monetary policies in Trinidad and Tobago spanning 1993 to 2016. The findings showed that there is weak policy coordination during the period under review. The report suggested that to support the nation's low inflation and sustained long-term growth; policy-making agencies should better coordinate their efforts.

Oboh (2017) investigated monetary and fiscal policy coordination in Nigeria between 1981 and 2015 using Set-Theoretic Approach (STA). The results indicated a weak policy coordination rate of approximately 17%. A closer look at the data showed that the period with the highest coordination, at 36.4%, was the one with high inflation and slow growth. Still, no sign of cooperation during periods of high inflation and GDP growth. The report offers the unambiguous conclusion that monetary and fiscal authorities should better coordinate their actions to increase macroeconomic stability. In a similar vein, Tarawalie et al. (2013) examined the degree of cooperation between fiscal and monetary authorities in the nations that make up the West African Monetary Zone (WAMZ) spanning 1980 to 2011. The findings of VAR modeling technique and that of Set-Theoretic Approach (STA) showed that there was insufficient policy coordination throughout the time in all of the WAMZ countries, which contributed to their non-compliance with the WAMZ's inflation and fiscal deficit requirements. With Ghana scoring (35.4%), Gambia 41.6%, Nigeria scored (46.6%), Sierra Leone scored (41.3%), Liberia (37.9%), and Guinea (31.8%), the STA results showed less than 50% policy coordination.

Moreover, Giovanni, Giorgio, Mauro, Andrea, and Tania (2015) used an agent-based model to study how monetary and fiscal policies interact in multifaceted changing economies. Model results recommend that policy combination, monetary policy targeting employment, and counter-cyclical fiscal policy are necessary to stabilize the economy. Theoretical foundations of the consensus on monetary policy before the Great Recession were reviewed by Jean-Luc, Mauro, and Stefano (2018) using dynamic stochastic general equilibrium (DSGE) models developed newly by Keynesian. Their findings point to price rigidity and the coordination process as real barriers to the proper operation of markets. Using a dynamic stochastic general equilibrium, Valdivia and Perez (2013) investigated the coordination of monetary and fiscal policies in the Latin American region (Colombia, Brazil, Chile, Uruguay, Bolivia, Venezuela, and Peru,) during 2007–2008 and 2009–2010. The findings demonstrated the efficiency of coordinated policy implementation and the critical role that policy coordination degrees play in explaining the underlying principles of economies.

2.4 Gap in Literature

The majority of research on the effects of monetary and fiscal policy coordination on economic growth in Nigeria, including studies by Shittu et al. (2023), Ishaku et al. (2023), Tarawalie et al. (2013), Tule, Onipede, and Ebuh (2020), had only measured the effects of variables such as inflation rate, exchange rate, interest rate, government expenditure, and money supply on economic growth in Nigeria, without measuring the macroeconomic effects of these two policies in using the monetary policy rate and government revenue. The neglect of these important variables has created an empirical gap which this study intends to fill.

3. METHODOLOGY

3.1 Theoretical Framework

This is anchored on the Fiscal Theory of Price Level (FTPL). This theory was adopted because it describes the principles for monetary and fiscal policies, according to which government debt and fiscal policy alone control the level of prices, with monetary policy acting as a secondary role. As a result, the theory's applicability will aid decision-makers in using the two main policies to stabilize the economy.

3.2 Model Specification

To achieve the goal of the study, multiple regression analysis is utilized to evaluate the macroeconomic effect of coordinated monetary and fiscal policies on stabilizing economic development in Nigeria. To avoid inaccurate results, fiscal-monetary policy coordination model was developed and several pilot tests were carried out to establish the model's applicability and the behaviors of time series data. Real domestic product was used as a stand-in for the dependent variable, which is economic growth. The money supply (MS), monetary policy rate (MPR), government revenue (GOVTREV), government spending (GOVTEXP), inflation (INFL), and real exchange rate (EXR) are some of the other explanatory variables in the model. With minor adjustments, these variables are modeled by the Shittu, et al. (2023) model.

The functional form of the model is specified thus:

$$RGDP = f(MS, MPR, GOVTEXP, GOVTREV, INFL, EXR \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 3.1$$

The mathematical form of the model is:

$$RGDP = \delta_0 + \delta_1 MS + \delta_2 MPR + \delta_3 GOVTEXP + \delta_4 GOVTREV + \delta_5 INFL + \delta_6 EXR + U \ldots\ldots 3.2$$

Transforming Eq. 3.2 into econometrics form leads to:

$$RGDP = \delta_0 + \delta_1 MS_t + \delta_2 MPR_t + \delta_3 GOVTEXP_t + \delta_4 GOVTREV_t + \delta_5 INFL_t + \delta_6 EXR_t + U_t \quad \ldots\ldots\ldots \quad 3.3$$

Where: δ_1, δ_2, δ_3, δ_4, δ_5, and δ_6 are parameters for fiscal and monetary policy respectively, while δ_0 and U_t are the intercept and error terms of the models respectively.

Table 3.1: Description and Measurement of Variables

Variables	Descriptions	Measurements	Sources of Data
Real Gross Domestic Product (RGDP)	This represents a nation's economic production after accounting for inflation.	Measured in billions of naira	CBN Statistical Bulletin (2021)
Money supply (MS)	It is the aggregate amount of money in a country which includes physical currency, coins, and demand deposits	Measured in billions of naira	CBN Statistical Bulletin (2021)
Monetary policy rate (MPR)	MPR is the interest rate at which a central bank of a nation extends credit to commercial banks.	Measured in percentage	CBN Statistical Bulletin (2021)
Government expenditure (GOVTEXP)	This is the overall amount of money the government spent in a specific period, usually a fiscal year.	Measured in billions of naira	CBN Statistical Bulletin (2021)
Government revenue (GOVTREV)	It is the total amount of money the government collects from various sources, especially from taxes, fines, tariffs, and other sources.	Measured in billions of naira	CBN Statistical Bulletin (2021)
Inflation (INFL)	This results in a decline in purchasing power as the average price level of goods and services increases.	Measured in percentage	CBN Statistical Bulletin (2021)
Exchange rate (EXR)	The rate at which one US dollar is exchanged for naira is called exchange rate.	Measured in percentage	CBN Statistical Bulletin (2021)

Source: Authors' Compilation

3.3 Data Analysis Techniques

This analysis is time series based and secondary data sourced from CBN Statistical Bulletin for the period between 1985 to 2021. The ADF test was adopted to ascertain stationarity. The model's parameters are estimated using multiple regression analysis. The econometric software packages used for the analysis are the E-View 10 software.

4. RESULTS AND DISCUSSION OF FINDINGS

The results of the study's particular objectives are assessed and summarized in this section. To assess the data features and prevent erroneous findings, several residual tests were performed, including the Cusum estimation test, the serial correlation, the heteroskedasticity, and the histogram Normality Test.

4.1 Stationarity Test

Unit root result is presented below using the ADF test.

Table 1: Augmented Dickey-Fuller (ADF) Unit Root Test Results

LEVEL			**1st** Difference		
5% Critical			5% critical		
Variables	**ADF Test**	**Values**	**ADF Test**	**Values**	**Remarks**
RGDP	-3.353750	-3.540328	-	-	1(0)
MS	-3.949533	-3.540328	-	-	1(0)
MPR	-2.234297	-3.759743	-6.424572	-3.933364	1(1)
GOVTEXP	1.844443	-3.562882	-3.562882	-5.447033	1(1)
GOVTREV	-2.763729	-3.540328	-3.544284	-5.772337	1(1)
INFL	-3.517375	-3.540328	-3.580623	-5.790776	1(1)
EXR	-0.690068	-3.540328	-3.544284	-5.558479	1(1)

Source: Authors' computation from Eview 10

From Table 1 above, variables in the model were evaluated for their time series qualities using the Augmented Dickey-Fuller (ADF) unit root test. The results indicated that only two variables, RGDP and MS, are stationary at level 1(0), whereas four variables, namely GOVTEXP, GOVTREV, INFL, and EXR, are stationary at the first difference 1(1). The variable is deemed stationary if the calculated ADF test statistics are above the test critical values in absolute terms at 5% significance level. But when the variable is changed, the results are less than the test critical values at a 5 percent level of significance, the computed ADF test statistics increase in absolute terms above the test critical values at a 5 percent significance level, the variable is said to be stationary at the first difference.

4.2. Regression Analysis Result

The macroeconomic effect of coordination between monetary and fiscal policy on economic growth in Nigeria was evaluated using multiple regression analysis.

Table 2. The estimated result for Monetary - Fiscal Policy Coordination

Variables	Coeff.	Std. error	t-Statistics	Prob.
C	15.25672	3.035918	5.025406	0.0007
MS	-0.005745	0.027734	-0.207158	0.8405
MPR	-0.988047	0.387158	-2.552049	0.0311
GOVTEXP	-0.000699	0.001162	-0.601685	0.5622
GOVTREV	0.000668	0.00059	1.133311	0.2864
INFL	-0.169854	0.197815	-0.858654	0.4128

EXR	0.002428	0.034573	0.070239	0.9455

Note: R-squared = 0.86047, Adjusted R-squared = 0.767449,
Durbin-Watson stat=2.28413, Prob(F-statistic) =0.001987
Source: Authors' computation from Eview 10

The above results indicate that money supply (MS), government expenditure (GOVTEXP), government revenue (GOVTREV), inflation (INFL), and exchange rate (EXR) had a statistically insignificant but positive impact on Nigeria's economic growth. The only variable that had a statistically significant impact on economic growth is the monetary policy rate (MPR). Thus, Nigeria's GDP would drop by 0.00% for every 1% increase in the money supply, Conversely, a 98.8% drop in economic growth would result from a 1% increase in the monetary policy rate. The variables to be measured in terms of fiscal policy were government revenue and spending. The results of this analysis show that a 1% increase in government revenue (GREV) would lead in a 0.00% growth in Nigeria's economic growth, while a 1% rise in government spending (GEXP) would have a negligible and detrimental effect, causing the country's economic growth to decline by -0.00%. In comparison, Nigeria's economic growth will decrease by -16% and increase by 0.00% with a 1% increase in inflation and exchange rates, respectively. The model is shown to be fit with 0.86047 R-squared and R-squared adjusted of 0.767449, which shows that the model is 86% fit. This suggests that the variables explain for 23% of GDP variance and external factors for 77% of the variability in the RGDP. Also, the value of F-statistics 9.250343 (prob. 0.001987) indicates that all of the study's variables have significant impacts, both individually and together. Ultimately, a D-Watson value of 2.28413 indicates that autocorrelation is not included in the model.

4.4 Post Estimation Test

4.4.1Residual Diagnostics and Stability Test

Table 3. Breusch-Godfrey Serial Correlation LM Test

F-statistic	1.992644	Prob. F (2,7)		0.2065
Obs*R-squared	5.804545	Prob. Chi-Square (2)		0.0549

Source: Eviews 10 output

To test for serial correlation in the model, Breusch-Godfrey Serial Correlation LM Test was performed. The assertion that there is no serial correlation in the model which shows null hypothesis is supported by the results above, where the p-value is greater than 0.05 significant levels. This demonstrates the model's analytical dependability and effectiveness.

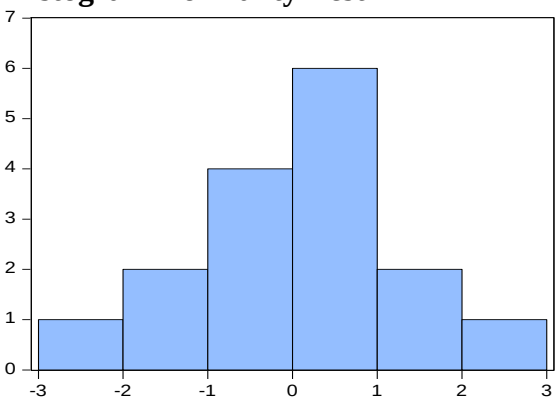
Table 4. Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	2.161195	Prob. F (6,9)		0.1437
Obs*R-squared	9.444764	Prob. Chi-Square (6)		0.1501
Scaled explained SS	3.9196	Prob. Chi-square (6)		0.6876

Source: Eviews 10 output

From the above table, the Breusch-Pagan-Godfrey test result shows that the model does not take heteroskedasticity into account because the p-value is greater than 0.05 level of significance. Then, since the model does not exhibit heteroskedasticity, we concur with the null hypothesis. The residuals have a constant variance, which gives the researcher confidence in the overall findings of the study.

Histogram Normality Test



Series: Residuals	
Sample 2006 2021	
Observations 16	
Mean	-1.86e-15
Median	0.175603
Maximum	2.564777
Minimum	-2.921035
Std. Dev.	1.263744
Skewness	-0.357407
Kurtosis	3.623225
Jarque-Bera	0.599579
Probability	0.740974

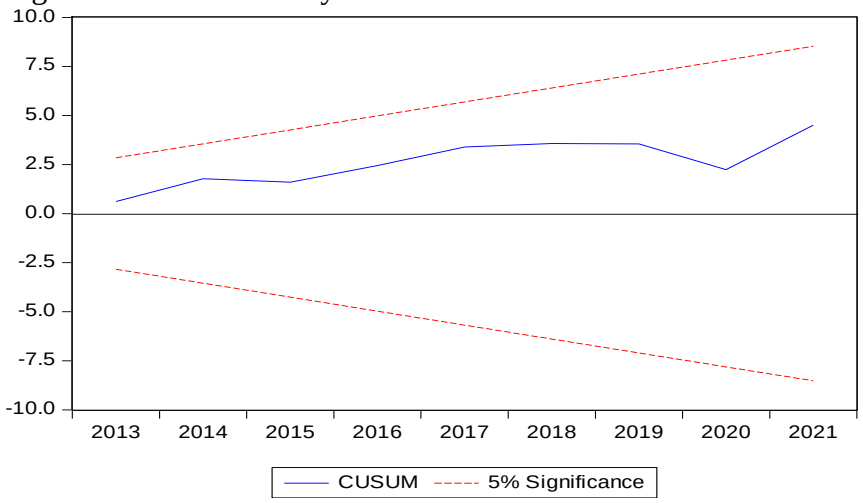
Source: Eviews 10 output

From the normality test graph above, the result indicates that the model should be distributed normally based on the result. This implies that the data's findings will be accurate and valuable. It also recommends that the data distribution used for analysis or estimation is normal.

Stability Test

In times series data, the stability test is necessary to check if a model is correctly specified or not. This study used the Recursive CuSum and CuSum of square tests to establish stability status.

Figure 1: Cusum Stability Test



Source: Eviews 10 output

The graph moves within its mean at the 5% level of significance indicating that the model is stable. If there is a divergence between the blue and red dotted lines, the model is considered to be unstable at the 5% significance level.

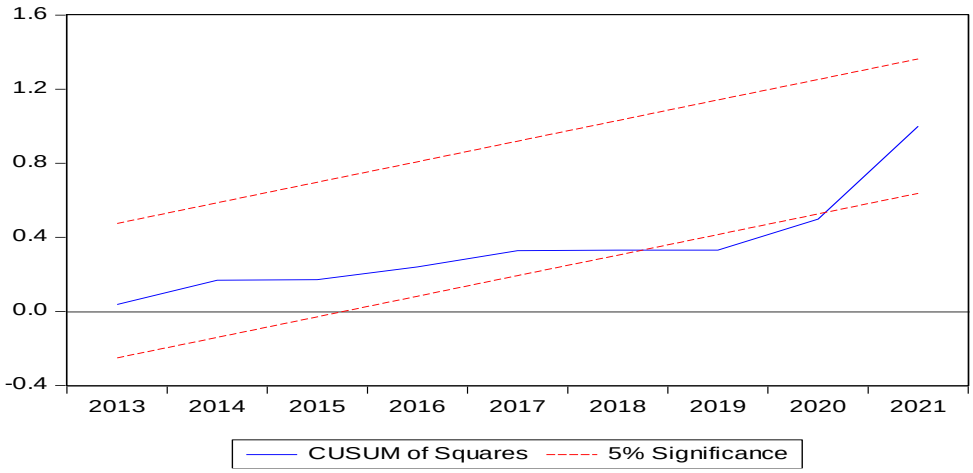


***Figure* 2: Cusum of Squares test**
Source: Eviews 10 output

The model is stable and fluctuates within its mean when the test is described as having a cusum of squares at the 5% level of significance. The model is considered unstable at 5% level of significance if the blue line diverges from the red dotted line.

5. CONCLUSION AND RECOMMENDATIONS

This study examined the effects of monetary and fiscal policy coordination on economic growth in Nigeria. Annual secondary data from 1985 to 2021 were used to achieve the study's goal, and the multiple regression analysis was applied for its empirical analysis. The results indicated the following: that money supply (MS), government expenditure (GOVTEXP), government revenue (GOVTREV), exchange rate (EXR) and inflation (INFL) had a statistically insignificant but positive impact on Nigeria's economic growth; that monetary policy rate (MPR) had a statistically significant impact on economic growth. This suggests that Nigerian economy can be stabilized more effectively by combining the two ideas of both policies than applying them separately. Ultimately, the results showed that the Nigerian economy benefited from the monetary and fiscal policies coordination. While the coordination between monetary and fiscal policy throughout the recovery and boom periods of the business cycle is little, there is economic recessions which are characterized by low GDP, high rates of poverty, high unemployment and high rates of inflation.

Policy Recommendations

Given the major findings, the study recommended that:

i. There should be established rules and procedures which will be mandatory for the coordination between fiscal and monetary authorities, also, greater coordination is required between the two authorities in the design and execution of policies.

ii. The Central Bank of Nigeria should increase the money supply to strengthen economic growth.

iii. The government should formulate a policy that will ensure exchange rate stability and not undervalued to make domestic currency to be competitive.

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