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IMPACT OF MONETARY POLICY ON ECONOMIC GROWTH IN NIGERIA: 2000-2023

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Abstract

Monetary policy is a critical tool for managing economic growth, especially in developing countries like Nigeria. Despite varying perspectives on its effectiveness, it's evident that monetary policy significantly impacts key economic indicators, such as inflation, interest rates, and exchange rates. This study focuses on evaluating how different monetary policies have influenced Nigeria's economic growth from 2000 to 2023. The study reviews several research findings, including the effectiveness of forward guidance in Sweden, the impact of monetary policy on FDI in Nigeria, and the role of monetary policy in managing external shocks. These studies highlight the varying impacts of monetary policy across different economic contexts. The study is anchored on economic growth theories that emphasize the role of monetary policy in influencing economic indicators like GDP. Theories such as Keynesian economics, which stress the importance of government intervention in stabilizing the economy, provide a basis for analyzing the data. The study employs an ex-post facto research design using secondary data from 2000 to 2023. The data was sourced from the CBN Statistical Bulletin and the National Bureau of Statistics (NBS). Multiple regression analysis was used to estimate the impact of monetary policy variables such as interest rates, exchange rates, and money supply on Nigeria's GDP. The study concludes that while monetary policy has a significant impact on Nigeria's economic growth, its effectiveness is often hampered by external factors like oil price fluctuations and exchange rate volatility. The study recommends that the Central Bank focus on maintaining stable monetary policies and improving communication strategies to enhance policy predictability and effectiveness.

Keywords: Exchange Rate, Inflation, Interest Rate, Monetary Policy, Money Supply

1. Introduction

Monetary policy is certainly considered one among key financial variables that affects economic growth. The developing significance of monetary policy has made its effectiveness in influencing economic growth a concern to most governments. Despite the dearth of consensus amongst economists on how monetary policy clearly works and the value of its impact at the economic system, studies show the degree of its consequences on the economic system are limited. Monetary policy is a technique of economic management that aims to bring about sustainable economic growth and development. Monetary policy has been the pursuit of nations in their quest to transform their national economies. Since the expositions of the role of monetary policy in influencing macroeconomic objectives like economic growth, price stability, equilibrium in balance of payments and host of other objectives; monetary

authorities are saddled the responsibility of using monetary policy to grow their economies.

The importance of monetary policy and growth had occupied central position in the financial economics literature in recent decades in Nigeria (Blundell-Wignall, 2016). Over the years, Nigeria has embarked on different monetary policy frameworks such as the prudential guideline, credit ceiling, and Structural Adjustment Programme to facilitate economic growth. The study carried out by Aliyu and Fatai (2017) revealed that there was an extensive use of direct control measures before the Structural Adjustment Programme in 1986. The precarious economic situation under the direct control framework led to the introduction of SAP; subsequently, followed by indirect financial liberalization policy. These measures were taken to make private sector-led economy viable. Thus, for the private sector to achieve the desired objectives

the commercial banks are expected to provide financial resources in line with policy directives set out by the Central Bank of Nigeria (Oguda & Chinda, 2018).

The empirical work carried out by Okorie and Enzue (2018) stated that the real sector is ^ strategic for growth and development; because, of the following reasons: (i) it produces and distributes goods and services required to satisfy aggregate demand in the economy; (ii) the performance of the private sector can be used to measure the effectiveness of macro-economic policies. This is because, a well performing real sector; particularly agriculture, manufacturing, real estate, trade, oil and gas, construction and communication is expected to contribute to the growth and development of the economy. This corroborates the study by Andabai (2017) who found a positive significant relationship between private sector development and economic growth in Nigeria.

Thus, the relevance of the private sector-led economy is also manifested in its capacity building role as well as high employment and income generating potentials for the economy. The work carried out by Bernite and Benson (2018) stated that for these reasons, there is need for adequate credit flow from the banking sector to the private sector-led economy.

Monetary policy as defined by many authors is concerned with discretionary control of money supply by monetary authorities (Central Bank with Central Government) with a view of achieving stated or desired economic objectives. Most governments try to control the rate of growth of money supply because of the nexus that it has an effect on the rate of inflation.

In summary, monetary policies consist of those actions designed to influence the behavior of the monetary sector. explicitly defined monetary policy as the deliberate use of monetary instruments (direct and indirect) at the disposal of monetary authorities such as central bank in order to achieve macroeconomic stability. In short, monetary policy is the tool used in achieving monetary and price stability. In most countries, the objectives of monetary policy include price stability, maintenance of balance of payments equilibrium, promotion of employment and output growth, and sustainable development.

However, the Nigerian economy is faced with mirage of problems such as unemployment, low investment and high inflation rate and these factors militate against the growth of the economy. In truth, these problems cannot be traced to the inadequacies of monetary policies alone but also in the fluctuations in other important economic factors. This coupled with the high level of uncertainties in the monetary policy process and there is yet to be a defined set of policies and procedures that policy makers can use to deal with all situations that may arise. Thus, Central Bank most times undertakes both contractionary and expansionary measures in tackling the problems of fluctuations experienced so in the economy.

In recent times, persistent exchange rate depreciations increase the relative profitability of investing in tradable, a reason why episodes of undervaluation are unfortunately strongly associated with higher economic growth. Thus, interest rate is an important determinant of economic growth in Nigeria. Therefore, the question on whether the monetary policy measures are actually impacting on the Nigerian economy still remains unsolved. The aim of this study is to evaluate the impact of the monetary policies implemented over the years on economic growth. The challenge lies in achieving a sound monetary policy that will revamp the Nigerian economy (National Bureau of Statistics, 2023).

Given the foregoing above, this paper investigated the impact of monetary policies on economy growth in Nigeria from 2000 to 2023. Thus, the study answered the following questions; To what extent has interest rate affected economic growth in Nigeria? How has exchange rate affects economic growth in Nigeria? and What is the impact of money supply on economic growth in Nigeria?

Furthermore, the paper is subdivided into five sections. Following Introduction is section 2 which covers Literature Review and Theoretical Framework. A short overview of the literature has been provided in this section, which includes empirical evidence, and the concepts of fiscal deficit determinants and agriculture sector output. The empirical findings from the data analysis are presented in Sections Three and Four. Section five summarises the study with its conclusions and recommendations.

2. Literature Review

2.1 Conceptual Issues

Concept of Monetary Policy

Concept of Monetary Policy Monetary policy is described through the Central Bank of Nigeria (CBN, 2017) as mixture of measures designed to modify value supply and cost of money in an economical system, in consonance with the extent of economic activities. Odufalu, (2018) described monetary policy because of the mixture of measures taken via a way of means of economic government (e.g. the CBN and the ministry of finance) to steer at once or circuitously each the money supply and credit to the economic system and the shape of interest rate for economic growth, price balance and stability of charge equilibrium.

He added th.at the CBN is empowered via a way of means of decree 25 of 1991 Act, to formulate and put in monetary policy in Nigeria, in session with the ministry of finance challenge the approval of the President. (Onyido, 2009) sums it up while he stated that monetary policy is consequently carried out to steer the supply and price of credit which will manage the money supply policy.

According to CBN (2021), monetary policy is a tool of general macroeconomic management, under the control of the monetary authorities, designed to achieve government economic objectives such as economic growth, price stability, employment generation and balance of payment equilibrium among other. Furthermore, Adigwe, Echeboba and Justus (2015) posited that monetary policy is a major economic stabilisation weapon which involves measures designed to regulate and control the volume, cost, availability and direction of money and credit in an economy to achieve some specified macroeconomic policy objectives. In sum, monetary policy is the policy employed by the monetary authority of a nation to checkmate either the interest rate payable for short-term borrowing by banks from each other to meet their short-term needs or the money supply, frequently as an effort to reduce inflation or the interest rate, to ensure price stability and general trust of the value and stability of the nation's currency. In Nigeria, according to Simon and Elias, (2021) among other several objectives, monetary policy is designed to achieve price stability,

balance of payment equilibrium and high rate of economic growth.

He describes the movement taking through a means of the Central Bank as the use of equipment tool at its disposal to steer economic situations particularly, the amount and money supply within the macro-financial items. These desires could generally encompass price balance, full employment, excessive economic growth, price and stability of price equilibrium. The attainment of those desires will end result into the country reaching each inner and outside balance of payment.

In the oil boom era, the rapid monetisation of foreign exchange earnings resulted in large increases in government expenditure which substantially contributed to monetary instability. In the early 1980s, oil receipts were not adequate to meet increasing levels of demands, and since expenditures were not rationalised, the government resorted to borrowing from the Central Bank to finance huge deficits, which had adverse implications for monetary management (CBN, 2012). The failure of monetary policy rules before 1986 to achieve the expected and desired results led to the policy shift from regulation to deregulation.

Concept of Interest Rate

Normally, central banks use the policy interest rate to perform contractive or expansive monetary policy. A rise in interest rates is commonly used to curb inflation, currency depreciation, excessive credit growth or capital outflows. On the contrary, by cutting interest rates, a central bank might be seeking to boost economic activity by fostering credit expansion or currency depreciation in order to gain competitiveness. Thus, monetary policy plays a stabilizing role in influencing economic growth through a number of channels such as monetary policy rate, money supply and lending interest rate. These aforementioned variables is been measured by time series data released annually by monetary policy authority headed by Central Bank of Nigeria.

Interest Rate Bank lending interest rate or commonly known as Prime Lending Rate is the lowest interest rate used as the basis for banks in determining the lending rate charged to bank customers (Bank Indonesia, 2013). The dimensions or indicators of interest rates are the amount of lending, macro and microeconomic

conditions (Bank Indonesia, 2013). Interest rates are the price of using investment funds (loanable funds). The interest rate is one of the indicators in determining whether someone will invest or save (Boediono, 2014). The dimensions or indicators of interest rates are credit and investment (Boediono, 2014). Interest rates are the price of a loan (Sunaryah, 2013). Dimensions or indicators of loan growth are loans or credit (Sunarya, 2013).

Concept of Money Supply

The supply of money is a stock at a particular point in time, though it conveys the idea of a flow over time. The concept, supply of money is synonymous with such terms as 'money stock' and quantity of money.' The supply of money at any moment is the total amount of money in the economy. There are three alternative views regarding the definitions or measures of money supply. The most common view is associated with the traditional and Keynesian thinking which stresses the medium of exchange function of money. The second definition is broader and is associated with the modern quantity theorists headed by Friedman. According to him, money supply is literally the number of dollars people are carrying around in their pockets. Thus, this definition includes M1 plus time and deposits within commercial banks. This wider definition is characterised as M2.

Concept of Economic Growth

IMF (2024) observes that the world economy's growth engine is losing steam, prompting questions about its medium-term prospects. The growth declines and identifies a significant and widespread slowdown in total factor productivity as a key factor, partly driven by increased misallocation of capital and labour between firms and sectors. Adigwe et al (2015) examined monetary policy and its impact on economic growth in Nigeria. Using OLS method to analyse data between 1980 and 2010, they recommended that monetary policy should facilitate a favourable investment climate through appropriate interest rate, exchange rate and liquidity management mechanism and the money market should provide more financial instruments that satisfy the requirements of the ever-green sophistication of operators.

Smith hypothesized a supply sided -facet-decided version of growth. According to him, population growth turned into endogenous—it relies upon at the accessibility to lifestyles maintaining desires and it has the ability for the growing workforce; Investment turned into additionally endogenous—established via a means of savings (typically via way of means of capitalists); land growth turned into reliant on invasion of new lands (e.g. Colonisation) or technological enhancement of fertility of old lands. Technological improvements may also upload to usual growth. Smith's famend thesis that the department of labour (specialisation) complements growth turned into an crucial argument. Smith additionally noticed traits in equipment and worldwide change as engine of growth as they aided in additional specialization. He additionally assumed that "department of labour is limited in a way of means of the scale of the marketplace", hence speculating an economies of scale dispute. Therefore, he argued that growth turned into self-fortifying because it demonstrates growing returns toscale. Lastly, due to the fact economical savings of capitalists is what generates funding and for this reason growth, he noticed the allocation of profits as being one of the maximum sizable determinants of the way speedy (or slow) a country could grow. Smith's version of growth remained the primary version of Classical Growth. David Ricardo (1817) adjusted it by of incorporating diminishing returns to land. Output growth needs growth of component inputs, however, in contrast to labour, land is "variable in quality and fixed in supply".

2.2 Empirical Review

The relationship between monetary policy and economic growth has been the subject of much research, with varying results. Some studies have found that monetary policy has a limited or non-existent impact on economic growth, while others have found that it plays a crucial role. Studies such as Cyrus and Elias (2014) and Lashkary and Kashani (2011) have found that monetary policy has a negligible influence on real output, while others such as Havi and Enu (2014) and Rasaki *et al.* (2013) have found that monetary policy has a significant positive impact on economic growth. The literature also shows that the impact of monetary policy can vary depending on the

country and the specific monetary policy measures used. This study aims to provide an overview of the current research on the topic of monetary policy in developing countries.

Specifically, it will cover the specificity of monetary policy in these countries, the effectiveness of monetary policy in promoting economic growth, and a survey of the empirical literature on the relationship between monetary policy and economic growth in developing countries. The goal is to provide a comprehensive understanding of the current state of research in this field and to identify areas for future study.

Anderson (2024) Analysed the effectiveness of forward guidance in the Swedish economy, focusing on its impact on market expectations and policy transmission. Methodology: Event study approach, analysing market reactions to Riksbank announcements (2020-2023). Employed high-frequency data and textual analysis of policy statements. Findings: Forward guidance significantly improved market predictability, with a 40% reduction in forecast dispersion for policy rates. Enhanced policy transmission, particularly through the expectations channel, with a 0.3% impact on long-term bond yields for each year of explicit forward guidance. Increased sensitivity of financial markets to economic data releases aligned with forward guidance indicators. Recommendation: Increase transparency in communication strategies, potentially adopting a "dots plot" similar to the US Federal Reserve. Regular evaluation and adjustment of forward guidance based on economic conditions. Gap: Focused primarily on financial markets, with limited analysis of the real economy impacts. Did not extensively explore potential drawbacks or limitations of forward guidance.

Ibrahim and Musa (2024) Examined the impact of monetary policy on foreign direct investment (FDI) inflows in Nigeria, focusing on interest rate differentials and exchange rate stability. Methodology: Vector Error Correction Model (VECM) using quarterly data from 2005 to 2023. Incorporated global factors such as US interest rates and global risk aversion indices. Findings: Interest rate differentials significantly influence FDI inflows, with a 1 percentage point increase in the interest rate differential associated with a 2.3% increase in FDI inflows. Exchange rate volatility negatively impacted FDI, with a 1% increase in exchange rate volatility. Monetary policy consistency and

predictability found to be more important for long-term investors than short-term interest rate levels. Recommendation: Maintain a stable interest rate environment to attract FDI, focusing on policy consistency and clear communication. Implement measures to reduce exchange rate volatility, potentially through a managed float system. Gap: Limited analysis of sector-specific FDI responses to monetary policy changes. Insufficient exploration of the interaction between monetary policy and other factors affecting investment decisions, such as regulatory environment and political stability.

Nwankwo and Obiora (2024) Investigated the role of monetary policy in managing external shocks in Nigeria, focusing on oil price fluctuations and global financial conditions. Methodology: Structural Vector Autoregression (SVAR) model using monthly data from 2009 to 2023. Incorporated external variables such as global oil prices and the VIX index. Findings: Monetary policy effective in mitigating short-term external shocks, with a 100-basis point increase in policy rates reducing the impact of a negative oil price shock by 30% within six months. Exchange rate flexibility played a crucial role in shock absorption, but with potential inflationary consequences. Limited effectiveness against prolonged external shocks, with policy impact diminishing after 12-18 months. Recommendation: Develop early warning systems for external vulnerabilities, potentially incorporating machine learning techniques for improved forecasting. Enhance foreign exchange reserves to provide additional buffers against external shocks. Gap: Did not extensively explore alternative policy mix options, such as macroprudential measures or capital flow management tools. Limited analysis of the potential long-term structural changes needed to reduce vulnerability to external shocks.

Mamba and Zulu (2024) Investigated the effectiveness of inflation targeting in South Africa, assessing its impact on inflation control, output stability, and policy credibility. Methodology: Time series analysis using quarterly data (2000-2023), employing structural break identification and a Markov-switching model to account for regime changes. Findings: Improved inflation control, with average inflation falling within the target band 70% of the time post-adoption compared to 40% pre-adoption. Increased output volatility, with the

standard deviation of GDP growth rising by 0.8 percentage points in the inflation-targeting era. Enhanced policy credibility, evidenced by a 30% reduction in inflation expectations volatility. Recommendation: Consider adopting a flexible inflation targeting framework that explicitly accounts for output stability. Enhance communication strategies to anchor inflation expectations more effectively. Gap: Limited comparison with alternative monetary policy regimes. Insufficient analysis of the distributional impacts of strict inflation targeting.

Nnamani and Ogbu (2024) Examined the impact of monetary policy on small and medium enterprises (SMEs) in Nigeria, focusing on access to finance, business performance, and growth. Methodology: Survey-based approach combined with logistic regression analysis. Surveyed 1,500 SMEs across various sectors and geographic regions (2020-2023) Findings: Credit availability more important than interest rates for SME growth, with 68% of respondents citing access to finance as their primary constraint. A 1% increase in credit supply to SMEs associated with a 0.4% increase in SME employment and a 0.6% increase in revenue growth. Sector-specific differences observed, with manufacturing SMEs more sensitive to interest rate changes compared to service-oriented businesses. Recommendation: Focus on improving credit infrastructure for SMEs, potentially through credit guarantee schemes or specialized SME lending facilities. Develop sector-specific monetary policy transmission assessments to better target interventions. Gap: Did not comprehensively address potential moral hazard issues in targeted lending programs. Limited analysis of the role of informal financing in SME growth and its implications for monetary policy effectiveness.

2.3 Theoretical Framework

The study is on “the impact of Monetary policies on economic growth in Nigeria (2000 – 2023) is anchored on several economic growth theories and theoretical frameworks that provide a basis for understanding the dynamics between Monetary policies and economic growth. This is so, given the critical role of Monetary policies in enhancing economic growth. These theoretical reviews explore into important theoretical perspectives that ramparts the study research questions.

This study herefore anchored on the theory of Economic growth is a sustained rise in the output of goods, services and employment opportunities with the sole aim of improving the economic and financial welfare of the citizens (Ogbulu & Torbira, 2012) Hardwick, Khan and Langmead (1994) have defined economic growth as an increase in a country’s productive capacity, identifiable by a sustained rise in real national income. The economic growth is an important issue in economics and is considered as one of the necessary conditions to achieve better outcomes on social welfare, which is the main objective of economic policy. It is thus an essential ingredient for sustainable development. Economic growth in a country is proxied by Gross Domestic Product (GDP).

3. Methodology

The study employed the expo-facto design. The study proposes to estimate the models numerically using time series secondary data for the period of 2000-2023. The data were primarily extracted from the Central Bank of Nigeria (CBN) Statistical Bulletin and the National Bureau of Statistics (NBS). Multiple regression will be used for the analysis of the data.

Taking a leaf from we intend to develop a model that is able to investigate how monetary policies affect economic growth in Nigeria. The study here is that analysis is center around a small core model with only four key behavioral equations. This model attempts to allow for consistent projections for real GDP, the real interest rate, and the real exchange rate, all in terms of deviations from equilibrium levels. The study adopts an econometric model in determining the impact of monetary policy on economic growth in Nigeria.

3.1 Method of Data Analysis

Multiple regression was employed to estimate the parameters of the model numerically. Model was used to analyze the relationship between monetary policy variables (interest rate, exchange rate, and money supply) and GDP.

3.2 Model Specification

Multiple Predictors (ExchRate, InterestRate, MoSupplyM1, MoSupplyM2)

The regression equation for this model, which includes multiple predictors, is:

$$\text{TotalGDP} = \beta_0 + \beta_1 \times \text{ExchRate} + \beta_2 \times \text{InterestRate} + \beta_3 \times \text{MoSupplyM1} + \beta_4 \times \text{LMoSupplyM2} + \epsilon$$

Where:

TotalGDP is the dependent variable (Total GDP).

ExchRate{L}ExchRate}ExchRate is the log of Exchange Rate.

InterestRate{Interest Rate}Interest Rate is the log of Interest Rate.

MoSupplyM1{LMoSupplyM1}MoSupplyM1 is the log of Money Supply M1.

MoSupplyM2{LMoSupplyM2}MoSupplyM2 is the log of Money Supply M2.

These equations describe how the logarithm of total GDP (Total GDP) changes with respect to changes in the independent variables (exchange rate, interest rate, money supply M1, and money supply M2). The coefficients (β /beta β) provide information on the impact of each independent variable on Total GDP.

4. Results and Discussion

Table 1: Regression Variables

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	ExchRate ^b	.	Enter

a. Dependent Variable: TotalGDP

b. All requested variables entered.

Source: Authors Computation

Table 2: Regression Results

Model	R	R Square	Adjusted Square	R	Std. Error of the Estimate
1	.232 ^a	.054	.011		.37136

a. Predictors: (Constant), ExchRate

Source: Authors Computation

Regression Model (ExchRate as the only predictor)

R-Square: 0.054 indicates that only 5.4% of the variance in TotalGDP can be explained by ExchRate.

This suggests a very weak model fit. **Adjusted R-Square:** 0.011 further confirms the weak explanatory power of the model, adjusting for the number of predictors.

Table 3: ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.172	1	.172	1.249	.276 ^b
	Residual	3.034	22	.138		
	Total	3.206	23			

a. Dependent Variable: TotalGDP

b. Predictors: (Constant), ExchRate

Source: Authors Computation

F-statistic: 1.249 with a significance level of 0.276 indicates that the model is not statistically significant. The relationship between ExchRate and TotalGDP is

likely not strong enough to be considered significant in this context.

Table 4: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	10.220	.531		19.230	<.001
	LExchRate	.237	.212	.232	1.117	.276

a. Dependent Variable: TotalGDP

Source: Authors Computation

Constant (Intercept): 10.220, with a p-value < 0.001, indicates that when ExchRate is zero, TotalGDP is expected to be 10.220 (in the log-transformed form).

F-statistic: 229.026 with a p-value < 0.001 shows that

the model is statistically significant, meaning the predictors have a strong collective impact on TotalGDP.

Table 5: Regression Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	LMoSupplyM2, LExchRate, LMoSupplyM1, LInterestRate ^b	.	Enter

a. Dependent Variable: TotalGDP

b. All requested variables entered.

Source: Authors Computation

Table 6: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.990 ^a	.980	.975	.05855

a. Predictors: (Constant), MoSupplyM2, ExchRate, LMoSupplyM1, InterestRate

Source: Authors Computation

From table 5 Regression Model (Multiple predictors: ExchRate, MoSupplyM1, MoSupplyM2, InterestRate):

R-Square: 0.980 indicates that 98% of the variance in TotalGDP can be explained by the predictors

(ExchRate, LMoSupplyM1, LMoSupplyM2, InterestRate), showing a very strong model fit.

Adjusted R-Square: 0.975 suggests that even after adjusting for the number of predictors, the model remains very strong.

Table 7: ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.141	4	.785	229.026	<.001 ^b
	Residual	.065	19	.003		
	Total	3.206	23			

a. Dependent Variable: TotalGDP

b. Predictors: (Constant), MoSupplyM2, ExchRate, MoSupplyM1, InterestRate

Source: Authors Computation

F-statistic: 229.026 with a p-value < 0.001 shows that the model is statistically significant, meaning the

predictors have a strong collective impact on TotalGDP.

Table 8: Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.731	.445		15.138	<.001
	LExchRate	-.068	.038	-.067	-1.779	.091
	LInterestRate	.049	.056	.060	.881	.389
	LMoSupplyM1	.364	.106	.168	3.429	.003
	LMoSupplyM2	.355	.023	1.074	15.686	<.001
a. Dependent Variable: LTotalGDP						

Source: Authors Computation

The coefficient is 0.237 with a p-value of 0.276, indicating that the effect of ExchRate on TotalGDP is not statistically significant. Each unit increase in ExchRate is associated with a 0.237 increase in TotalGDP, but this relationship is not statistically reliable.

Constant (Intercept): 6.731 with a p-value < 0.001, representing the expected value of TotalGDP when all predictors are zero. ExchRate: The coefficient is -0.068 with a p-value of 0.091. Although the p-value is

slightly above 0.05, it suggests that ExchRate has a negative relationship with TotalGDP, though it is not quite significant. InterestRate: The coefficient is 0.049 with a p-value of 0.389, indicating that InterestRate has a positive but statistically insignificant effect on TotalGDP. MoSupplyM1: The coefficient is 0.364 with a p-value of 0.003, indicating a statistically significant positive relationship with LTotalGDP. MoSupplyM2: The coefficient is 0.355 with a p-value < 0.001, suggesting a very strong and statistically significant positive relationship with LTotalGDP.

Table 9: Correlations

		LTotal GDP	LExchRate	LInterestRate	LMoSupplyM1	LMoSupplyM2
LTotalGDP	Pearson Correlation	1	.232	.824**	-.644**	.982**
	Sig. (2-tailed)		.276	<.001	<.001	<.001
	N	24	24	24	24	24
LExchRate	Pearson Correlation	.232	1	.460*	-.269	.294
	Sig. (2-tailed)	.276		.024	.204	.162
	N	24	24	24	24	24
LInterestRate	Pearson Correlation	.824**	.460*	1	-.680**	.846**
	Sig. (2-tailed)	<.001	.024		<.001	<.001
	N	24	24	24	24	24
LMoSupplyM1	Pearson Correlation	-.644**	-.269	-.680**	1	-.735**
	Sig. (2-tailed)	<.001	.204	<.001		<.001
	N	24	24	24	24	24
LMoSupplyM2	Pearson Correlation	.982**	.294	.846**	-.735**	1
	Sig. (2-tailed)	<.001	.162	<.001	<.001	
	N	24	24	24	24	24
**. Correlation is significant at the 0.01 level (2-tailed).						
*. Correlation is significant at the 0.05 level (2-tailed).						

Source: Authors Computation

4.1 Correlation Analysis

TotalGDP and ExchRate: A positive but weak correlation (0.232, $p = 0.276$), indicating that LExchRate does not have a strong direct relationship with LTotalGDP. TotalGDP and InterestRate: A strong positive correlation (0.824, $p < 0.001$), indicating a significant positive relationship. TotalGDP and MoSupplyM1: A strong negative correlation (-0.644, $p < 0.001$), indicating an inverse relationship. TotalGDP and MoSupplyM2: A very strong positive correlation (0.982, $p < 0.001$), indicating a significant positive relationship.

4.2 Discussion of Major Findings

From the finds R-Square is 0.980 which indicates that 98% of the variance in Total GDP can be explained by the predictors (ExchRate, LMoSupplyM1, LMoSupplyM2, Interest Rate), showing a very strong model fit. The **F-statistic**: 229.026 with a p-value < 0.001 shows that the model is statistically significant, meaning the predictors have a strong collective impact on Total GDP. The Exchange rate coefficient is -0.068 with a p-value of 0.091. Although the p-value is slightly above 0.05, it suggests that ExchRate has a negative relationship with TotalGDP, though it is not quite significant.

The interest rate coefficient is 0.049 with a p-value of 0.389, indicating that InterestRate has a positive but statistically insignificant effect on Total GDP. The MoSupplyM1 The coefficient is 0.364 with a p-value of 0.003, indicating a statistically significant positive relationship with Total GDP. MoSupplyM2: The coefficient is 0.355 with a p-value < 0.001 , suggesting a very strong and statistically significant positive relationship with LTotalGDP

5. Conclusion and Recommendations

The first model with only Exchange Rate as a predictor is weak and not statistically significant. The second model, including multiple predictors, is very strong and statistically significant, explaining 98% of the variance in TotalGDP. This research aims to address the three primary problems of money supply ,

exchange rate , interest rate and economic growth . Empirical findings presented in the research suggest the presence of a long term money supply and economic partnership has a beneficial relationship . The exchange rate has a beneficial and negligible impact on economic growth in Nigeria Among the predictors, LMoSupplyM1 and LMoSupplyM2 have significant impacts on Total GDP, while Exchange Rate and Interest Rate have weaker, non-significant impacts. Whilst Interest Rate, Terms of Trade, and Exchange Rate are negative so they should be strengthen to enhance growth,

Based on the research findings, here are the recommendations to enhance economic growth in Nigeria:

- i. **Strengthen Money Supply Policies:** Given that LMoSupplyM1 and LMoSupplyM2 have significant impacts on Total GDP, it's crucial to maintain a stable and well-regulated money supply. The government and central bank should focus on policies that optimize the growth of money supply, ensuring that it supports economic activities without leading to inflationary pressures.
- ii. **Enhance Exchange Rate Stability:** Although the exchange rate has a beneficial but negligible impact on economic growth, it is important to maintain a stable exchange rate. This could be achieved through targeted interventions in the foreign exchange market, encouraging export diversification, and reducing dependence on volatile external factors. A stable exchange rate environment will boost investor confidence and promote economic growth.
- iii. **Revise Interest Rate Policies:** Interest rates have shown weaker, non-significant impacts on Total GDP and are currently negative in their influence on growth. The central bank should consider revising interest rate policies to make them more conducive to investment and economic activities. Lowering interest rates might stimulate borrowing and investment, particularly in key growth sectors.

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