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Impact of Monetary Policy on Economic Development in Nigeria

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Abstract

This research analysed how monetary policy affects Nigerian economic growth from 1986 until 2023. The study's dependent variable was Gross Fixed Capital Formation (GFCF), which represented economic growth, and its factors were money supply, exchange rate, private sector credit, inflation rate, and GDP. The study examined how money supply, exchange rate, private sector lending, and inflation effect Nigeria's economic development. The auto regressive distributed lag (ARDL) model estimated that MS, EXCR, CPS, INFR, and GDP did not affect economic development over time. However, monetary policy indicators do not substantially impact Nigerian economic growth. To attract foreign investors, policymakers should keep the exchange rate favourable; the Nigerian government should use its monetary authority to boost the economy now and in the future; and to control inflation and boost economic growth, policymakers should regulate the money supply and exchange rate.

Keywords: Gross Fixed Capital Formation, Money Supply, Exchange Rate, Credit to Private Sector, Inflation Rate and Gross Domestic Product

Introduction

In Sub-Saharan Africa, understanding monetary policy's major causes and consequences on economic development is vital (Abdulkadir, Celestine & Victor, 2024). Njarendy, Hahatu, and Abdulkadir (2019) say economic progress is driven by money supply, monetary policy, cashless policies, and currency rates. The Emerging African Economies are globally significant and fast growing. These countries face more complicated monetary policy issues as they expand and integrate into global commerce and finance. Fixing these challenges will have political, social, and economic repercussions beyond these nations' borders due to their population and economic importance to the global economy. Macroeconomic policy seeks long-term production and employment stability (Awogbemi, 2022). Thus, long-term macroeconomic growth depends on monetary policy's liquidity management, transmission mechanism stabilisation, and financial sector coordination. Only the central bank and monetary

authorities can implement monetary policy to accomplish macroeconomic goals including employment, industrial growth, inflation, and consumption (Uju & Ugochukwu, 2021).

Monetary policy may expand or limit a nation's economy. Monetary policy seeks long-term economic growth (Ani & Onu, 2021). Nations have used monetary policy to reshape their economies. Monetary economists formalised how money impacts economic aggregates after Adam Smith. Monetary policy affects macroeconomic goals like GDP growth, price stability, and balance of payments equilibrium, thus policymakers should employ it to boost GDP. Nigeria uses monetary policy because the Central Bank of Nigeria formulates and implements it, 1958's Central Bank Act established the goal. It allowed the bank to influence Nigeria's monetary policy and other concerns. Treasury notes, used for government debt financing and open market activities, have become important assets for investors and a mechanism to stabilise market liquidity (Ani & Onu, 2021). Nigeria has gone through several monetary policy regimes. Monetary policy, which stabilises prices, may be restrictive or accommodating. Before 1986, the oil industry ruled monetary policy, the external sector was over-reliant, and the public sector was growing. Good monetary management is needed to preserve price stability and a solid balance of payments. Credit limits, selective credit restrictions, regulated interest and exchange rates, cash reserves, and special deposits are direct monetary tools for national economic objectives.

Market-based instruments were impractical due to the early financial markets and interest rate restrictions. Ufoeze et al. (2018) and Onwuteaka, Okoye, and Molokwu (2019) found that direct monetary control was used to stabilise prices in Nigeria before 1986. After 1986 market liberalisation, market processes became the focus. Monetary policy largely focused on credit restriction norms to foster sustainable development and diversify the economy away from consumer goods and crude oil imports, which distorted and undermined economic independence. Monetary policy protects these economies from various internal and external shocks, thus its accuracy is crucial. Nweke (2023) states that growing African countries struggle to establish stable monetary and financial policies. Many emerging market economies have undeveloped financial markets and institutions, low per capita incomes, and poor infrastructure, and a considerable part of the population lives in poverty. This hinders macroeconomic policymaking, according to Okonkwo, Okaro, and Ogbonna (2020). The CBN offered bank loans to boost economic activity and lower inflation (Ani & Onu, 2021). Low interest rates were intended to boost investment and growth. Periodic special deposit requirements lowered banks' free reserves and credit capabilities. In the mid-1970s, banks were compelled to maintain minimum cash ratios as a proportion of their deposit liabilities, but they were generally lower than their voluntary levels, so they did not impede lending.

Monetary policy objectives have grown increasingly elusive since the mid-1970s. Monetary aggregates, government budget deficit, GDP growth, inflation, and balance of payments were generally negative (Ani & Onu, 2021). Insufficient bank credit requirements, the key issues in monetary management were the monetary control structure, interest rate system, and fiscal-monetary policy discrepancy. Credit constraints and selective credit restrictions were essential to the monetary management system, but their execution deteriorated over time, and the system failed to meet its monetary aims (Ani & Onu, 2021). The framework's

strict control and moderate rates permitted monetary expansion without accelerating money and capital market development. Government debt instruments with low interest rates were unattractive to private sector depositors, thus the law obliged the CBN to absorb the unsubscribed share, bringing enormous quantities of powerful money into the economy. The oil boom caused monetary instability because the government spent more and swiftly monetised foreign currency profits. In the early 1980s, when oil profits weren't enough to satisfy expanding needs and unconstrained spending hurt monetary management, the government borrowed significantly from the Central Bank to cover massive deficits (CBN, 2012). The failure of monetary policy constraints before 1986 to achieve intended aims led to deregulation. In July 1986, the worldwide oil price meltdown and economic depression led to the Structural Adjustment Programme (SAP).

The initiative sought fiscal equilibrium and balance of payments sustainability by reshaping the economy's production and consumption patterns, fixing price distortions, reducing dependence on crude oil exports and consumer goods imports, boosting the non-oil export sector, and encouraging sustainable growth. Other aims included boosting private sector growth and governmental sector efficiency. The initiative aimed to liberalise international commerce and payment networks and set a market-determined Naira exchange rate. They relied more on market forces to drive economic activity while enforcing government constraints and dramatic price reduction. Since 1986, monetary policy has promoted production, employment, and internal and external stability (Ani & Onu, 2021). Based on SAP's economic management theory, monetary policy promoted a market-oriented financial sector that effectively deployed resources and mobilised savings. Open market activities are key in a market-oriented environment. Reserve requirements and discount window activities improve this. Since macroeconomic stability was the goal, several efforts were taken to restrict money supply. Banks with CBN external payment arrears no longer need to deposit and have a lower loan growth limit. Naira loans could no longer be guaranteed by foreign guarantees or currency deposits, and banks had to transfer public sector deposits to the CBN. In August 1990, stabilisation securities were reinstated to decrease bank excess liquidity. According to Ani and Onu (2021), commercial banks needed more cash in 1989, 1990, 1992, 1996, and 1999. Growing unemployment, rising interest rates, inflation, a sinking naira, and widespread poverty indicate unsustainable economic development in Nigeria. The economy has grown and shrunk. Is proper monetary policy responsible for growth? Are there additional causes of recessions than monetary policy failure? What should monetary policy do to promote long-term economic growth? Monetary policy and GDP growth in Nigeria following structural adjustment were examined in this research. The paper sheds light on how monetary policy influences economic growth using short- and long-term analytical methods. This report provides a strong platform for the government to predict Nigeria's insurance industry's future. This will assist Nigeria's monetary authorities regulate the money supply and improve the government's loan acquisition and economic sector funding policies.

Literature Review

Monetary Policy

According to Abdulkadir, Celestine, and Voctor (2024), monetary policy involves the central bank and government controlling money generation and distribution to accomplish economic objectives. Governments try to restrict money supply because they think it impacts inflation. Thus, "monetary policy" refers to government measures that affect the financial sector. Monetary authorities, especially central banks, utilise direct and indirect monetary tools to ensure macroeconomic stability. Price and monetary stability are the goals of monetary policy. Monetary authorities—usually the central bank—control money supply and credit to meet macroeconomic objectives (Sax, 2019). Countries adopt three basic monetary strategies to manage the money supply and accomplish economic objectives. Money supply, interest rates, and money supply are the main monetary policy alternatives. Financial and credit market functions (Sax, 2019). These principles should regulate money availability, demand, and cost based on economic activity. Excess money boosts demand for goods and services, raising prices and deteriorating the balance of payments. The exclusive responsibility for successfully controlling monetary policy has always been with monetary authorities. Monetary policy has been more effective recently due to modest inflation and sustained domestic economic growth. Maintaining efforts requires fostering trust in the interbank market, financial market infrastructure, and fiscal authorities (Marco & Hernandez, 2021). Governments manage money supply using monetary policy, according to Ajibola and Oluwole (2019). According to Ajibola and Oluwole (2019), the Kenyan central bank implements constitutional monetary policy. They aim to maintain prices of goods and services low to promote development and help the nation reach its economic objectives (Thomas, 2022). This monetary policy regulates money circulation efficiently to ensure economic stability, which is vital to GDP (Simon & Elias, 2021). Monetary policy stabilises macroeconomic variables by regulating money supply to foster growth (Central Bank of Nigeria, 2021). Monetary authorities—usually the central bank—control money supply and credit to accomplish macroeconomic goals (Adeneye, 2021).

Money Supply

The money supply is a stock at one moment, but it indicates a flow throughout time (Ani & Onu, 2021). 'Amount of money,"money stock,' and'supply of money' imply the same. A sum of all cash in circulation is called the money supply. Money supply measurement has three primary schools of thinking. This concept aligns with classical and Keynesian theories that emphasise money as a medium of trade. The second idea covers Friedman and other recent quantity theorists (Ani & Onu, 2021). He claims that people's cash equals the money supply. Thus, this definition includes M1 and commercial bank time deposits. The more broad definition is M2.

Exchange Rate

Foreign exchange involves trading one country's currency for another (Ani & Onu, 2021). Financial institutions including banks, investors, and governments collaborate on the process. Exchange rates show how much two currencies are worth. When addressing Nigeria nationally, the word refers to the amount of naira required to acquire one US dollar. The naira's value against the US dollar or UK pound sterling at the moment (Ani & Onu, 2021). We'll focus on Nigerian money. The Nigerian foreign currency market has grown due to international trade patterns, institutional economic developments, and structural production changes. Before

the 1958 founding of the Central Bank of Nigeria (CBN) and the 1962 currency Control Act, commercial banks created foreign currency for Nigerian exporters and stored it abroad. The country's export earnings was mostly food, the seamless convertibility of the Nigerian pound to the British pound sterling and its parity prevented a vibrant foreign currency market. However, the CBN's formation and Central Bank centralisation of foreign exchange power necessitated a local foreign currency market.

Credit to Private Sector

The real sector and the economy depend on bank lending to grow (Nwagu & Udeagbala, 2024). Bank credit allows people, organisations, and governments to borrow money in the form of loans and advances. Credit intermediaries like banks support productive activities and economic growth, which is necessary to boost production, consumption, capital, and labour force. Schumpeter believed bank loans to businesses boost economic development. Branch, Cooper, and Moxey (2014) say bank credit is vital for economic development and living standards. It is the most significant aspect of the financial sector in any economy and accounts for a considerable portion of enterprises' international and local funding. Bank credit includes loans, advances, documentary bills, commercial papers, discounts, bankers' acceptances, and leases, which boost industrial production and national development (Nzotta, 2004). Higher private sector financing to manufacturing boosts national production. Reduced bank lending will lower sector production.

Gross Fixed Capital Formation

Capital creation is the purchase of lucrative equipment and structures to increase a country's capital stock, according to Oyegun and Eleh (2023). Using a nation's people and material resources better is capital asset augmentation. Allocating part of society's resources boosts material and human capital. Allocating and spending society's assets invests in material and human capital (Jhingan, 2006). A percentage of a society's resources are used to produce capital items including tools, equipment, transportation infrastructure, buildings, and other physical capital that boosts productivity. This is capital creation (Owolabi & Ajayi, 2013). Capital creation, which measures economic investment, boosts production and activity. It is essential for economic growth and technical advancement. According to economic theory, capital production achieves these aims independent of economic growth paradigm. It boosts domestic output. Thus, insufficient capital creation hinders economic progress, these pressures have continually pushed governments to emphasise capital production. Money-based gross fixed capital formation measures Nigeria's capital output. Gross Fixed Capital Formation is used in government financial reporting. After subtracting the cost of new fixed assets, it evaluates how much firms, governments, and individuals (excluding sole proprietors) spend on old or new fixed assets. Due to its inclusion in GDP expenditure, GFCF shows how much of the economy's newly produced value flows to investment vs consumption. GFCF is "gross" because it provides investment amounts without fixed capital consumption (fixed asset depreciation).

The Keynesian Theory of Interest Rate

John Maynard Keynes' 1936 article, "The General Theory of Employment, Interest, and Money," outlines the Keynesian interest rate theory. This book launched Keynesianism, which changed economic theory and influenced many nations' macroeconomic policy. Interest rates matter in Keynesian theory. The interest rate controls investment, employment, and production, according to Keynes (1936). Interest rates, set by the monetary authorities to affect resource allocation and production, drive economic development. Keynes saw the interest rate as compensation for temporarily withholding liquid cash. Interest rates indicate a person's inclination to hold onto money over time. Keynes said interest rates depend on whether people want to keep their money liquid or not. He named it liquidity preference. After the current interest rate (r) is fixed, Keynes thought liquidity preference was crucial to population money holdings. Where 'M' is the cash amount to retain, the interest rate determines the liquidity preference,

$M = f(r)$……. (1)

Keynes cited transaction, precautionary, and speculative motives for liquidity preference. Money want or liquidity preference is

$M = Mx + Mq$……. (2)

where Mx represents transaction and precautionary incentives for money demand and Mq represents speculative drive. Not just that, Keynes believed that income drove transaction and conservative drives, while interest rates drove speculation. The third equation illustrates:

Using equation (3), $M = Mx + Mq = Lx(Y) + Lq(r)$….. (3)

M is the total money demand, Mx is the Y-dependent money demand for transactions and precautions equal to Lx(Y), and Mq is the r-dependent money demand for speculation equal to Lq(r). Equation (3) shows how Lx and Lq affect money demand (Okey, Rimamtanung, Malachy & Eugene, 2022). Keynes's liquidity theory states that money supply and demand affect interest rates. Keynes's theory of monetary interest rates explains how capital affects marginal economic activity (McKinnon, 1973). Increased money supply lowers interest rates, improving marginal capital efficiency. This boosts investment, aggregate demand for products and services, employment, income, and economic growth. These effects are multiplier effects, raising interest rates will reverse this.

Solow Growth Model

In their 1956 Solow-Swan growth model, Swan and Solow emphasise labour, capital, and technology. This scenario increases production per capita and output per worker, albeit at a slower pace. An example of declining marginal return, therefore, capital and labour will eventually be in perfect harmony. A country may calculate its minimal capital and labour requirements to maintain peace, but technical development has a higher influence on economic growth (Dauda & Abdulkareem, 2023). According to the hypothesis, scientific advances are random and necessary for economic progress. Advancement needs labor-capital matching. It claims that if everyone gets the same technology, living standards will be equal. Neo-Keynesianism stems from Keynesianism. 'Potential output,' or natural output, advanced Neo-Keynesian theory. The economy operates best at this production level, taking into account

natural and institutional limits. Non-accelerating inflation rate of unemployment (NAIRU) is a typical natural unemployment rate acronym. In this hypothesis, internal forces influence the intrinsic inflation rate, matching how the economy works. Neo-Keynesian theory states that interest elasticity of private spending affects how effectively monetary policy works since interest rates affect GDP, prices, and output. Thus, neo-Keynesian growth theory centres on monetary policy. The endogenous growth hypothesis emerged from discontent with the concept that external influences drove long-term economic progress. The theory's forecast of economic growth without considering technological improvement directly opposed neoclassical exogenous growth models.

Empirical Review

The impact of Nigeria's monetary policy on economic development from 1991 to 2020 was investigated by Chuba and Yusuf (2022). This research employed an ordinary least squares regression model to predict that Nigeria's money supply, Treasury bill rate, and bank domestic credit are positively connected with long-term economic growth. Economic theory states that bank money supply and domestic credit boosted Nigeria's economic growth, but the short-term policy interest rate hurt it. Nigeria can support the SDGs via its monetary policies. Lowering the short-term policy interest rate and expanding bank money supply and domestic lending might help Nigeria achieve the Sustainable development Goals (SDGs) and promote economic development. The SDGs need a creative and proactive approach, yet the Central Bank of Nigeria's monetary policy goals support economic development.

Effiong, Udonwa, and Udofia (2022) examine how trade balance and exchange rate fluctuations affected the Nigerian economy from 1981 to 2020. Four research models were calculated using autoregressive distributed lag. Model I shows that the exchange rate has a negative and large influence on economic growth, unlike trade. In another world, the oil trade imbalance and currency exchange rates severely impede monetary expansion. Ukangwa, Ikechi, and Ogonda (2023) examined Nigeria's monetary policy and economic development from 1981 to 2021. Autoregressive distributed lag estimated if monetary policy affected Nigeria's economic growth. The central bank should prioritise the quality-based nominal anchor (M2) to regulate monetary aggregate, reserve ratios, liquidity ratios, and treasury bill transactions, according to the paper. Monetary authorities should disregard interest rates since they hardly affect economic development. Instead of manipulating money supply, manage interest rates to affect economic dynamics. Osunkwo, Uke, and Omoruyi (2023) assessed Nigeria's monetary policies and economy from 1981 to 2022. The Autoregressive Distributed Lagged (ARDL) model predicts that Nigeria's GDP would benefit from the CRR and TBR. The Monetary Policy Rate hinders Nigeria's economic development, research reveals. Nigeria's GDP suffered from the liquidity ratio. ECM findings demonstrate that the model has reached short-run equilibrium with a negative and statistically significant error correction term.

Thus, the CRR and TBR should be promoted by the monetary authorities to boost economic stability. Nweke (2023) examined Nigeria's economic performance from 1981 to 2021 and how fiscal and monetary policies influenced it. The autoregressive distributed lag (ARDL) co-integration methodology, Granger causality test, Augmented Dickey-Fuller (ADF)

unit root test, and error correction model assessed variable values. The budget deficit, reserve requirement, Treasury bill rate, and monetary policy rate do not effect economic growth. Researchers discovered that fiscal and monetary policies did not effect Nigeria's long-term economy, save for government expenditure. Olawumi (2023) examined how monetary policy affects Nigeria's manufacturing subsector from 1981 to 2021. The autoregressive distributed lag (ARDL) model showed that the parameters have statistically significant long-term effects on Nigeria's manufacturing industry. Thus, Nigeria's monetary policy fails to stimulate key sectors, and its policy instruments typically fail. In 2000–2021, Ogboghro (2023) examined Ghana and Nigeria's domestic debt and economic development. The research compared the two nations' economic growth using Real GDP and government debt instruments such Treasury Bills, Certificates, Bonds, Progress Stock, and Promissory Notes. Interest rate was the sole control variable. Descriptive statistics, correlation, and multiple regression approximate. Treasury Bills substantially influenced Nigeria and Ghana's GDP ($p=0.0039$), whereas Treasury Certificates and RGDP did not ($p=0.4523$). The p-values for both nations were 0.303 and 0.0700, respectively. According to the paper, Treasury Bills, Certificates, Bonds, Development Stock, and Promissory Notes increase Ghana and Nigeria's GDP.

Omar and Yousri (2023) analysed Egypt's production and inflation from Q3 2007 to Q3 2019 under symmetric and asymmetric monetary policy. This research used linear and non-linear Auto-regressive Distributed Lag (ARDL) models for estimate. The research computes the dynamic multiplier and tests the co-integration with F-bounds to show uneven impacts. Long-term macroeconomic indicators are altered, however inflation is more affected than output, according to research. The article concludes with policy implications for Egypt's inflation-targeting (IT) regime.

Onwuasoeze et al. (2023) examined how Nigeria's informal sector and monetary policy tools influenced economic development from 1991 to 2020. The research estimated using the ADF unit root test, OLS-based Autoregressive Distributed Lag model, and Granger Causality test. In the near term, the interest rate affected Nigeria's economic growth, according to statistics. Inflation is complicated and may affect people and companies due to the money supply's inverse connection with GDP.

Kamal and AboElsoud (2023) explored how input factors affect economic growth in Egypt using the Augmented Solow Model and quintile regression econometric modelling. The findings show that savings volatility and population growth rates affect human capital, productivity, and capital trends, which are closely connected with economic growth. Savings and population increase affect Egypt's economic cycle.

Mwamkonko (2023) evaluated Tanzanian monetary policy transmission channels' effectiveness. The research utilised a co-integration and error correction modelling approach to predict that monetary policy's growth benefits rely on transmission channels. Tanzania's findings suggest that neither interest rate nor stock price channels operate. The bank credit method works, but the outcomes are poor. Results demonstrate that Tanzania's monetary policy is mostly conveyed via the currency rate and projected inflation.

The impact of Nigeria's monetary policy on economic development from 1990 to 2020 was analysed by Dauda and Abdulkareem (2023). The research estimated using the Augmented Dickey-Fuller test, ARDL bounds test, and ARDL model. The Monetary Policy Rate (MPR) and Money Development Rate (M2) affect Nigeria's economy. This research shows that monetary policy strongly impacts Nigeria's economy. To boost economic development, Nigerian government should tighten monetary policy.

Abdulkadir, Celestine, and Victor (2024) examined how monetary policy affects economic development in Nigeria by evaluating data from four nations between 2000 and 2022: Nigeria, Egypt, South Africa, and Kenya. The Monetary Policy Rate (MPR) has a small but positive influence on growing African economies, according to the research. It estimated using unit root testing and co-integration. Broad Money Supply (M2) positively and statistically substantially affects selected developing African nations. Level of Credit (LOC) has a slight but considerable negative influence on economic development in numerous emerging African nations. Although statistically negligible, the Exchange Rate (EXCR) hurts rising African nations' economic development. The chosen rising African nations' economic development is somewhat hampered by Cash Reserve Ratio (CRR). The research found that Nigeria's economic growth was affected by monetary policy, liquidity, credit, currency rate, and cash reserve ratio. The study's authors suggest that Nigeria's central bank drop the reserve ratio to lower loan interest rates, increase the money supply, and stabilise the currency rate to enhance economic activity and development.

Research Method

The study employed an empirical model that is built based on the modification of the model used in the study carried out by Chuba and Yusuf (2022). The model is expressed below as:

$$GFCF = f(MS, EXCR, CPS, INFR, GDP) \quad \ldots\ldots 3.2$$

This model can, for simplicity, be stated in the econometric form of the equation as depicted below:

$$GFCF = \beta_0 + \beta_1 MS + \beta_2 EXCR + \beta_3 CPS + \beta_4 INFR + \beta_5 GDP + \mu \quad \ldots\ldots 3.3$$

where:

GFCF = Gross Fixed Capital Formation

MS = Money Supply

EXCR = Treasury Bills

CPS = Credit to Private Sector

INFR = Inflation Rate

GDP = Gross Domestic Product

μ = Error Term

β_0 = constant Parameterr

β_1- β_6 = Coefficients of Regression

Data Analysis and Interpretation

This research examines the long-term effects of monetary policy on Nigerian economic growth from 1986 to 2023 using the Auto Regressive Distributed Lag (ARDL) model and various integration orders. Gross Fixed Capital Formation (GFCF) was employed to represent economic progress in this research, along with money supply, exchange rate, private sector credit, inflation, and GDP. As the ARDL methodology involves short-run outcomes that the OLS method tries to highlight, the Unit Root Test will be used to analyse the findings first, not the OLS results. Meaning from the study's results is the sole emphasis of this section.

Data Presentation

The raw and log-linearized data used in the study were secondary data spanning from 1986 to 2023 culled and analysed and is duly presented as shown in table below

Test for Sattionary of Variables (Unit Root Test)

Since time series data typically display stationarity, the Augmented Dickey-Fuller Unit Root Test (ADF URT) must prove data stationarity. To prevent false regression, test and Under this assumption, the study evaluates the research model's stationary variables:

H_0: X has a unit root i.e. data is non-stationary

$H_{0:}$ X has no unit root i.e. data is stationary

Decision Rule:

A 5% absolute MacKinnon critical value, regardless of sign, is needed for the modified Dickey-Fuller test statistic to reject the null hypothesis and accept the alternative. Unless this is true, the research will accept H_0 and reject H_1. Table below summarise the ADF Root test.

Table 1: Result of ADF Unit Root Test

Variable	ADF Statistical value @level	Mackinnon Critical Value	ADF Statistical value @first diff	Mackinnon Critical Value @first diff	Decision
D(LNGFCF)	NA	NA	-4.720516	-2.945842	I(1)
D(LNMS)	NA	NA	-4.162908	-2.945842	I(1)
D(LNEXCR)	NA	NA	-6.265348	-2.945842	I(1)
D(LNCPS)	NA	NA	-4.482435	-2.945842	I(1)
LNINFR	-3.910537	-2.945842	NA	NA	I(0)
LNGDP	-4.139531	-2.943427	NA	NA	I(0)

Source: Author's computation (2025)

From table 1, Only INFR and GDP demonstrated stability before the first differencing since their ADF statistics were over the MacKinnon critical level of 5%. Thus, we reject the

null and support the alternative hypothesis for INFR and GDP. Since other variables at the level are not stationary, initial differencing is needed to establish stationarity. As indicated in the table, LNGFCF, LNMS, LNEXCR, and LNCPS have 5% significance level ADF statistics over the MacKinnon critical threshold. Thus, we may reject the null hypothesis and adopt the variable alternative hypothesis. Since variables integrate in various orders, the Auto Regressive Distributed Lag (ARDL) model is used to assess their long-term relationship. The co-integration test requires identically integrated variables.

ARDL Bound Test Approach to Co-integration

The study use Pesaran, Shin, and Smith (2001)'s limits testing technique to the ARDL framework and examine co-integration to find long-term equilibrium. The working hypothesis for this study is:

$H_{0:}$ There is no co-integration among variables

$H_{0:}$ There is co-integration among variables

Decision Rule:

The model's F-statistic must exceed the test's upper threshold to prove co-integration at 5%. F-Statistics over the 5% significance level support the alternative hypothesis of a long-term connection between variables. Alternatively, we support the null hypothesis. Table 4.5 summarises and shows co-integration data. Studies used the Schwarz Information Criterion to choose the ARDL (1, 0, 1, 0, 0, 1, 0) model.

Table 2: Co-Integration Result

F-Statistics	Lower Bound @5%	Upper Bound @5%
20.39514	2.39	3.38

Source: *Eviews 10* (2025)

Since the value exceeds the upper threshold at the 5% critical value as shown in table 2, F-Statistics reveals that the variables have a stable long-run equilibrium link.

Long-Run Results

The long run result of the model obtained through the use of the ARDL technique as presented in table is summarized below in table 3:

Table 3: Results of ARDL Long-Run Regression Estimates

Dependent Variable: Real Gross Domestic Product Growth Rate (RGDP)

Variable	Coefficient
LOG_MS	11.1044*
	(32.2526*)
LOG_EXCR	0.1128****
	(2.0654**)
LOG_CPS	-9.0045**
	(25.7240*)
LOG_INFR	5.3275**
	(14.4465*)

LOG_GDP	-1.0830**
	(6.0018**)
C	-9.0954**
	(28.1071*)
Model Diagnostics	
Jarque Bera Normality, χ^2	0.567900{0.752804}
Serial Correlation LM, *F*-statistics	0.573959{0.5700}
Heteroscedasticity Test, *F*-statistics	0.701581{0.6705}
Stability Tests (CUSUMs)	Lies within 0.05 level of significance

Notes: ****, **, and * imply the significance of the variables at 1%, 5%, and 10% significance level, respectively. Standard errors are reported in parentheses ( ), while p-values are reported in brackets { }.*

Source: Author's Computation, (2025).

From the table 3, the long run equation specifying the long run relationship among the variables can be presented below as:

$$GFCF = \underset{(1.045146)}{1.299391} - \underset{(0.804610)}{0.5489}*_{LNTDD} + \underset{(0.291931)}{0.5439}*_{LNTXD} + \underset{(0.598648)}{0.7536}*_{LNINFL} + \underset{(0.523640)}{0.8808}_{LNGDS} + \mu$$

Note: The standard error statistics are those stated in parenthesis

If all other variables remain constant, the long-run equation predicts GFCF will decline by -9.095426 units. This is because the constant parameter coefficient is -9.095426. Money supply (MS) and gross fixed capital formation (GFCF), 11.10443 units, were positively correlated. For every unit increase in domestic debt, GFCF will rise 11.10443 units over time. A positive correlation between EXCR and GFCF (r=0.11289) suggests that a one-unit exchange rate rise would boost GFCF by 0.112890 units over time. Private sector credit (CPS) had a negative correlation of -9.004595 units with gross fixed capital formation (GFCF), implying that a one-unit increase in CPS decreased GFCF over time. There was also a 5.327575-unit positive connection between inflation (INFR) and gross fixed capital formation (GFCF). A one-unit rise in inflation would enhance GFCF over time. The correlation between GDP and gross fixed capital formation (GFCF) is -1.083045 units, meaning that a one-unit rise in GDP depresses GFCF over time. According to the Error Correction Model (ECM), the rate of correction of any historical divergence towards long-run equilibrium in the current time is -0.027897. The GFCF value is sensitive to model explanatory element modifications. Diagnostic and stability tests employ many methods to evaluate the whole model's dependability, stability, and robustness. Diagnostic tests include normalcy, heteroskedasticity, and serial correlation (autocorrelation). The P-Value is above 5% and the F-Statistics is 0.573959 at 0.5700. There is evidence that auto-correlation does not occur. Thus, the model may be used to provide results and appropriate policy suggestions. F-Statistics probability values above 5% support the null hypothesis and demonstrate the lack of heteroskedasticity in the investigation. Values below 5% support the alternative hypothesis. The white heteroskedasticity test F-Statistic is 0.701581, and the Probability Value is 0.6705 over 5%. Since the null hypothesis that there is no such entity is accepted, heteroskedasticity in the model is accurate. After the normality test showed that the model has a normal distribution, the null hypothesis is accepted because the Jarque-Bera statistic is 0.567900 with a probability value of 0.752804. Skewed data between -1 and +1 follows a normal distribution.

Discussion of Findings

The study aims to determine how monetary policy has influenced Nigerian GDP growth. All variables were stationary at level in the Augmented Dickey-Fuller Unit Root Test except GDP and INFR. Auto Regressive Distributed Lag (ARDL) was utilised to estimate the long-term equilibrium connection generated by heterogeneous variable integration at varying stationarity. The ARDL Bounds test for co-integration showed a robust, long-term association. The ARDL long-term model says that money supply, currency rate, private sector credit, inflation rate, and GDP do not impact gross fixed capital output. Long-term gross fixed capital production was favourably connected with inflation, money supply, and exchange rate, whereas private sector loans and GDP were adversely related. It seemed everything went as planned. Diagnostics assessed model stability and reliability. The study tested normality, Breusch-Pagan Godfrey Heteroskedasticity, and Breusch-Godfrey Serial Correlation LM. Also, tested normal distribution, functional correlations, serial or autocorrelation, and heteroskedasticity. No autocorrelation, functional problems, instability, or heteroskedasticity was found, and the data were normal. The alternative hypothesis is supported when the F-statistic is larger than the higher threshold at the 5% critical value, indicating a stable long-term equilibrium relationship between the variables. The research may provide helpful advice.

Implication of Research Findings

Nigerian GDP growth and monetary policy are examined in this research. All variables except money supply, exchange rate, and inflation rate boosted economic development in the long term, according to the Auto Regressive Distributed Lag (ARDL) model. All variables supported a priori assumptions. Money supply has a tiny positive link with long-term economic growth, as predicted. According to Ahi and Onu (2021) and Nwankwo and Agbo (2021), increasing the money supply would boost economic growth. Exchange rates should have boosted GDP growth, however little. Contrary to Okey, Rimamtanung, Malachy, and Eugene (2022), an exchange rate hike would improve economic growth. In contrast, private sector financing had a negative and minor effect on long-term economic growth, supporting theoretical expectations. Increasing private sector loans would decrease economic growth, according to Chuba and Yusuf (2022). Inflation positively correlates with economic growth, hence a one-unit rise in inflation will benefit Nigeria's economic development over time, contrary to Omar and Yousri (2023). The probability test for the long-term statistical significance of total domestic debt, total foreign debt, inflation rate, and gross domestic savings showed no significant long-term explanation for Nigeria's economic performance. The results pass the LM correlation, heteroskedasticity, normality, stability, and functionality reset tests, indicating their reliability and accuracy in reflecting monetary policy on Nigerian economic growth.

Conclusion

The research examined how Nigerian monetary policy influences GDP growth. The independent variables were money supply, exchange rate, private sector loans, inflation rate, and GDP, whereas the dependent variable was Gross Fixed Capital Formation. The research employed Auto Regressive Lag modelling to determine long-term variable relationships. The research covered 1986–2023. Long-term economic development in Nigeria was not affected by monetary policy variables, according to the research.

Recommendations

The report recommended that Nigeria maintain an advantageous exchange rate to attract international investment. To prevent inflation and boost economic development, the government should manage money supply and exchange rates. Finally, government monetary authorities should execute more policies.

References

Abdulkadir, I. B., Celestine, S. O., & Victor, I. O. (2024). Monetary policy and economic growth of selected emerging African economies. *African Banking and Finance Review Journal (ABFRJ), 9* (9), 1-17.

Abille, A. B., & Mpuure, D. M., (2020). Effect of monetary policy on economic growth in Ghana. *Applied Economics Journal, Kasetsart University, Faculty of Economics, Center for Applied Economic Research. 27* (2).

Abubakar, A., & Lawal, S. (2022). Impact of monetary policy on economic growth in Nigeria (1986 -2019). *Gusau Journal of Business Administration (Gujoba), 1* (1), 367-372.

Akintola, A. A., Oji-Okoro, I., & Itodo, I. A. (2020). Financial sector development and economic growth in Nigeria: An empirical re-examination. *Central Bank of Nigeria Economic and Financial Review, 58* (3), 59-84.

Aliu, T. I. (2022). Effectiveness of monetary policy in stimulating economic growth in Nigeria. *International Journal of Research in Social Science and Humanities, 3* (2), 34-42.

Ani, K. E., & Onu, C. (2021). Effect of monetary policy on economic growth in Nigeria in the post structural adjustment programme. *INDEPENDENT JOURNAL OF MANAGEMENT & PRODUCTION (IJM&P), 12* (8), 2364-2379.

Anu, K. T., Oluwatoba, O. A., Francis, O. L., Anayo, V. E., Friday, C. N., & Isaac, A. (2022). Monetary policy shocks and economic growth in Nigeria. *Indonesian Journal of Contemporary Education, 4* (2), 71-79.

Awogbemi, T. O. (2022). The impact of monetary policy on Nigeria's economic growth. *Innovations, 70*, 1076-1084.

Awopegba, O. E., Afolabi, J. O., Adetoye, L. T., & Akpokogdje, G. O. (2022). Effect of monetary policy rate on market interest rates in Nigeria: A threshold and NARDL approach. *CBN Journal of Applied Statistics, 13* (1), 93-121.

Dauda, R. O., & Abdulkareem, M. (2023). Impact of monetary policy on economic growth in Nigeria (1990-2020). Journal of Emerging Economies & Islamic Research 11(1) 2023, 71-90.

Daudaa, R. O., & Abdulkareem, M. (2023). Impact of monetary policy on economic growth in Nigeria. *Journal of Emerging Economies & Islamic Research, 11* (1), 71-90. Retrieved from http://myjms.mohe.gov.my/index.php/JEEIR, on 15 September 2023

Effiong, U., Udonwa. U. E., & Udofia, M. A. (2022). Trade balance, exchange rate movements and economic growth in Nigeria: A Disaggregated Approach. *Academic Scientific Journal, 12* (6), 21-33.

Everlyne, M., Erickson, M., & Naftaly, M. (2022). Effect of fiscal and monetary policy on gross domestic savings in Kenya. *Journal of Economics and Sustainable Development, 13* (2), 44-52.

Gideon, G. G., Gylych, J., Paul, T. I., Bilal, C., & Onyinye, M. D. W. (2020). Asymmetric effects of monetary policy shocks on output growth in Nigeria: Evidence from nonlinear ARDL and Hatemi-J causality tests. *Wiley, 6* (3), 1-11.

Ibrahim, V. (2019). Monetary policy and economic growth in Nigeria: An autoregressive distributed Lag (ARDL) analysis. *Advances in Social Sciences Research Journal.* 6. 10.14738/assrj.63.6273.

Jacob, A. O., Umoh, O. J., & Akpan, A. K. (2022). Effects of monetary policy on economic growth in Nigeria. *Economic Growth and Environment Sustainability (EGNES), 1* (1), 10-15.

Jhingan, M. L. (2006). *Economic Development, New Delhi*, Vrinda Publications (P) Ltd, 162.

Kamal, A. L. M., & AboElsoud, M. E. (2023). Modeling economic growth factors in Egypt: A quantile regression approach. *International Journal of Academic Research in Business and Social Sciences, 11* (5), 864-880.

Keynes, J. M. (1936). *The General Theory of Employment, Interest and Money.* London: Palgrave Macmillan.

McKinnon, R. I. (1973). *Money and Capital in Economic Development.* Washington, DC: The Brookings Institution. *Annals of Spiru Haret University Economic Series, 1,* 123-140.

Mwamkonko, M. A. (2023). The relative effectiveness of monetary policy transmission channels in Tanzania: Empirical lesson for post COVID-19 recovery. *African Journal of Economic Review, 11* (1), 17-24.

Njarendy, P. I., Ahmed, H. H., & Abdulkadir, I. B. (2019). An empirical investigation into the effect of monetary policy on economic growth in Nigeria. *Nigerian journal of accounting and financial (NJAF), 13* (1), 20-41.

Nwagu, K., & Udeagbala, J. C. (2024). Effect of bank credit to the private sector on the performance of manufacturing sector in Nigeria. *Saudi Journal of Economics and Finance, 8* (6), 174-184.

Nweke, O. (2023). Economic policies and the growth of the Nigerian economy: The role of monetary and fiscal policies. *British International Journal of Applied Economics, Finance and Accounting, 7* (1), 46-62.

Nwikpo, N. C. (2022). Monetary policy variables and economic growth in Nigeria. *Journal of Economics and Business Aseanomics, 7* (2), 001-015.

Ogboghro, V. I. (2023). Comparative analysis of the impact of domestic debt on economic growth in Nigeria and Ghana. *International Journal of Management & Entrepreneurship Research, 5* (7), 514-530.

Okey, O. O., Rimamtanung, N. I., Malachy, A. U., & Eugene, O. I. (2022). Monetary policy rate and economic growth in Nigeria. *International Journal of Economics and Financial Issues, 12* (3), 53-59.

Okoh, J. O., & Otene, S. (2020). Monetary policy and economic growth in Nigeria: An empirical analysis. *IOSR Journal of Economics and Finance (IOSR-JEF), 11* (4), 32-48.

Olawumi, O. R. (2023). Monetary policy instruments and the growth of manufacturing sub-sector in Nigeria: (1981-2021). *European Journal of Science, Innovation and Technology, 2* (7), 36-49.

Olofinlade, S. O., Oloyede, J. A., & Oke, M. O. (2020). The effects of monetary policy on bank lending and economic performance in Nigeria. *ACTA UNIVERSITATIS DANUBIUS, 16* (2), 150-159.

Omar, N., & Yousri, D. (2023). Investigating the effects of monetary policy shocks on growth and inflation in Egypt: Asymmetry and the long-term impact. *The Economic Research Forum (ERF), 8* (5), 303-313.

Osunkwo, F. O. C., Uke, K. E., & Omoruyi, P. O. (2023). Monetary policy and economic growth of Nigeria: Time series evidence from Nigeria. *International Journal of Advanced Studies in Economics and Public Sector Management | IJASEPSM, 11* (2), 15-27.

Owolabi, A., & Ajayi, N. O. (2013). Econometrics analysis of impact of capital market on economic growth in Nigeria. *Asian Economic and Financial Review, 3* (1), 99-110.

Oyegun, G., & Eleh, C. C. (2023). The impact of capital formation on economic growth in Nigeria. *Middle European Scientific Bulletin, 34* (3), 1-15.

Sena, P. M., Asante, G. N., & Brafu-Insaidoo, W. G. (2021). Monetary policy and economic growth in Ghana: Does financial development matter?. *Cogent Economics and Finance,* 1-19.

Solow, R. M. (1956). A contribution to the theory of economic growth. *Quarterly Journal of Economics, 70* (1), 65-94. https://doi.org/10.2307/1884513

Ufoeze, L. O., Odimgbe, S. O., Ezeabalisi, V. N., & Alajekwu, U. B. (2018). Effect of monetary policy on economic growth in Nigeria: An empirical investigation. *Annals of Spiru Haret University Economic Series, 1,* 123-140.

Ufoeze, L.O., Odimgbe, S. O., Ezeabalisi, V. N., & Alajekwu, U. B. (2018). Effect of monetary policy on economic growth in Nigeria: An empirical investigation.

Uju, E. A., & Ugochukwu, P. O. (2021). Effect of monetary policy on industrial growth in Nigeria. *International Journal of Entrepreneurship and Business Innovation, 4* (1), 47-60.

Ukangwa, J. U., Ikechi, V. I., & Ogonda, G. O. (2023). Analysis of the impact of monetary policy on the Nigerian economic growth. *Research Gate*, 1-19.

Umar, A. K., Al-Hussain, S. A., Issa, R. A., Moosa, A. A., & Mundhir, H. A. (2022). Analysis and impact of monetary policy during covid-19 and pre-covid-19 on economic growth: a case of Sultanate of Oman. *International Journal of Innovative Research in Technology, 9* (1), 278-287.