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# THE EFFECT OF MONETARY POLICY ON SECTORAL GROWTH TRAJECTORIES IN NIGERIA

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**Abstract:** The study examined the effect of monetary policy on the growth trajectories from 1984 to 2023. Monetary policy rate was measured using exchange rate, interest rate, and inflation rate, while sectoral growth was measured using agricultural sector growth, industrial sector growth rate, and service sector growth rate. Unit root test was conducted using the Augmented Dickey Fuller (ADF) and Phillips-Perron (PP) test, and the result indicated mixed order of integration. The Autoregressive Distributed Lag (ARDL) bound test was employed, and the result indicated that there is no significant long-run relationship among the variables. Regression result shows that inflation rate, exchange rate, and interest rate had no significant effect on the agricultural sector, service sector, and industrial sector. The study concludes that monetary policy does not determine sectoral performance in Nigeria. The study recommends that the Central Bank of Nigeria should, among other things, transcend a general and single monetary policy framework to accommodate the development of sector-specific frameworks.

**Keywords:** Monetary policy, Service sector, Industrial sector, Agricultural sector, Exchange rate.

## 1.1 Introduction

Nigeria's economy is broadly divided into different sectors, such as agriculture, industry (manufacturing), and services, which respond differently to monetary policy measures. Sectoral Growth is the expansion in output, productivity, or value added of specific sectors of an economy over a given period of time. Between 2010 and 2024, Nigeria experienced frequent monetary policy adjustments as a result of the persistent inflationary pressures and exchange rate volatility, leading the CBN to adopt a tightening monetary stance, which resulted in an increase in interest rates and restricted liquidity (CBN, 2024). Sectoral Growth Trajectories describes the Pattern of growth of different sectors over time. Recent research shows that sectoral trajectories in Nigeria are closely linked to the transmission of monetary policy through the economy's interest rate and credit channels (Akinlo & Egbetunde, 2022; Ogunleye & Adeyemi, 2023), as agricultural and manufacturing sectors are studied to be adversely affected by high borrowing costs and limited access to credit (NBS, 2023; World Bank, 2023).

In the economic world of today, Monetary policy still remains one of the most effective macroeconomic tools used by governments to regulate the economy, control and reduce inflation rates, and promote sustainable development and economic growth. Monetary policy is the deliberate action taken by a country's central bank to

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regulate the supply of money and credit in the economy. Instruments of Monetary Policy, such as Interest Rates, Money Supply, Credit Control, Rate Management, etc, are used by the Central Bank of Nigeria in Nigeria to ensure sustainable growth (CBN, 2022; CBN, 2023). A monetary policy may be contradictory or expansionary. The former is an increase in the money supply and a fall in interest rate while the latter is a decline in the monetary base and an increase in loan rates, according to Anyanwu & Kalu (2015) (Hezekiah & Enaberue, 2024).

Monetary policy transmission mechanism explains how policy actions, made by Central Banks of Nigeria, such as changes in interest rates and liquidity conditions, influences real economic activities through channels such as interest rates and credit availability. Credit Channel Theory is very important as bank lending is the primary source of funding and finance in most economic sectors in Nigeria. Contractionary Monetary Policy, as explained earlier, reduces banks' capacity to extend credit, thereby constraining investment and productivity in credit-dependent sectors, which as studied is most of Nigeria's economic sectors, leading to a decrease in the Real Gross Domestic Product. (Akinlo & Egbetunde, 2022; Ogunleye & Adeyemi, 2023). While Expansionary monetary policy on the other hand, enhances credit availability, promotes sectoral investment, and improves growth trajectories (Abdulrahman & Yusuf, 2024; CBN, 2025).

Despite the continuous intervention of the monetary policy in the economy, the sectoral growth performance in Nigeria has remained unchanged. High interest rates have discouraged private sector investment, foreign investment in agriculture and manufacturing, which has affected and is still affecting employment availability, economic diversification, and sustainable growth (Abdulrahman & Yusuf, 2024; World Bank, 2024). According to the National Bureau of Statistics (NBS), Real Gross Domestic Product (GDP) grew by 3.54 per cent in the second quarter of 2022, compared with 3.11 per cent in the first quarter of 2022 and 5.01 per cent in the corresponding quarter of 2021 (CBN, 2022; Monetary policy communique no 141). Real output growth in the sector has shown a fluctuating trend, dropping from 5.4% in 2010 to as low as 1.3% in 2014. Although monetary policy has helped curb inflation and stabilize the economy, its disadvantages have caused damage in the output production of productive sectors in Nigeria. Manufacturing output growth has reduced, and agriculture has been heavily affected by high cost of production, high interest rates, and credit constraints (NBS, 2024). These outcomes question monetary policy effectiveness in promoting balanced sectoral growth in Nigeria. According to the IMF (2024), the dominance of the services sector in Nigeria's growth profile raises concerns about structural imbalances and the limited impact of monetary policy on real sector transformation. This situation needs a detailed examination of how monetary policy affects sectoral growth trajectories in Nigeria. This study aims to offer research-based insight into how monetary policy instruments affect different economic sectors in Nigeria. This article is to guide the Central Bank of Nigeria to design a new monetary policy instrument that controls inflation and have sectoral growth objective (CBN, 2025). This research should also enrich academic literature on monetary policy transmission in developing economies such as Nigeria (IMF, 2024).

## 2. Literature Review

The transmission mechanism describes how changes in monetary policy are transmitted through the financial system, financial market prices and quantities to the real world, affecting the decisions and choices of households and firms, and also affecting aggregate demand, aggregate spending, and inflation in the long run (CBN, 2007). In other words, the monetary policy transmission mechanism describes the channels or processes through which monetary policies of the central bank pass to impact the inflation rate and the output of an economy. According to Ireland (2005), the monetary policy transmission mechanism describes how policy-induced changes in the nominal money stock impact real variables such as aggregate output and employment. This channel entails the

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process of how monetary decision actions of monetary authorities affect economic development in the sectoral section of Nigeria. In order for monetary authorities to make the right monetary decisions, the transmission mechanism must be properly studied.

The effectiveness of the monetary policy transmission mechanism depends on how the policy tools are used, where they are used, and when used. These tools form the operational foundation of the monetary policy transmission mechanism, as they initiate the process in which policy decisions affects financial market, sector market, and real-world activities. Policy interest rate, also known as the monetary policy rate, occurs when the policy rate is changed to influence borrowing, making it either expensive or cheap, and thereby controlling inflation in an economy. An increased policy rate leads to expensive borrowing, reducing investment and consumption spending, and a decrease in policy rate leads to cheaper borrowing, thereby encouraging investment and production in developmental sectors. Taylor (1995) and Mishkin (2019) both argue that the interest rate is the primary modern tool used to influence aggregate demand and inflation structure. Another tool is Open market operations (OMO), which basically involves the buying and selling of government securities in the open market. Purchasing of government securities by the central bank increases liquidity in the bank's system, increasing its capacity to extend credit and stimulate economic activities. According to Friedman and Schwartz (1963), OMOs are a powerful tool used to control money supply and influence economic stability. Another effective quantitative tool is the cash reserve ratio, which refers to the proportion of customer deposits that commercial banks are required to keep as reserves with the central bank. Jhingan (2010) explains that reserve requirements directly affect the bank's ability to create credit available for different sectors in Nigeria, especially the agricultural sector, making the cash reserve ratio a crucial instrument in developing countries like Nigeria.

The exchange rate channel is one of the most crucial modern channels in the transmission mechanism as a result of the increase in the internationalization rate across the world, most especially in developing countries such as Nigeria. It is advisable that, with this growing industrialization of economies, more attentions are paid to the monetary policy transmission mechanism that operates using exchange rate effects on the net exports. The exchange rate channel also plays a crucial role in Nigeria due to the overdependence on oil exports and imported inputs. The exchange rate channel describes how the appreciation and depreciation of an economy's currency affect the net exports, inflation, and production costs across sectors in the economy. When monetary policy becomes tight, and the interest rate rises in Nigeria, foreign capital inflow will increase, and then there is an appreciation of the naira. A stronger currency can reduce the cost of machinery, the cost of imported machinery, and the cost of production as a whole, benefiting manufacturers in different sectors, most especially service sectors, who rely on imports. A weak naira increases export competitiveness and the costs of imported goods, thereby affecting production rate and the gross domestic product of Nigeria. There is a relationship between the interest rate channel and the exchange rate channel in influencing the economy. It has been studied that an increase in the domestic interest rate, relative to the foreign rate/ exchange rate, would lead to a stronger currency and a reduction in both net exports and in the aggregate demand level in the economy.

### **Empirical Review**

Ekong and Ekong (2022) investigated the impact of monetary policy shocks on the performance of the industrial sector in Nigeria; and how this affects the general growth performance of the economy in the period 1980- 2018. They used monetary policies such as Money supply, monetary policy rate, treasury bill rate, and credit to the private real sectors. Utilizing Vector Autoregression (VAR) and Generalized Method of Moments (GMM) to find out that any unanticipated shock on monetary policy rate and money supply growth will produce a falling impact

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on industrial sector output that is consistent with no sign of convergence throughout the period. They recommend that the institutional, legal, and operational capabilities of the sector are strengthened to maintain such positive pass-through evidence if monetary policies are to deepen their impact on sectoral and economic-wide smoothing that it is designed to achieve.

Zubairu and Babalola (2024) examined the impact of monetary policy on economic performance in Nigeria from 2006Q1 to 2023Q4. The study utilized both Autoregressive Distributed Lag (ARDL) and Non-Linear ARDL (NARDL) models to investigate the asymmetric impact of monetary policy on economic performance in the short and long run. They used GDP to represent economic performance and used money supply and exchange rate to represent monetary policy. Based on their findings, it is recommended to manage monetary policy to attract domestic and foreign investment by maintaining an appropriate quantity of money supply, and the central bank should use other instruments aside from the exchange rate to motivate the economic performance of the nation.

Saibu and Nwosa (2011) examined the effects of monetary policy on sectoral growth output in Nigeria over the period 1986:1 to 2008:4. The study utilized an autoregressive Distributed Lag (ARDL) model, and the findings showed that the manufacturing sector is not sensitive to monetary policy variables, while the agricultural sector and the industrial sector are responsive to interest rate and exchange rate, respectively. The study concludes that monetary policy will be more effective if the inherent differences in these sectors are factored into the design of policies in Nigeria.

Ogbuagu and Olufemi (2019) exposes the fact that monetary policy actions were more effective and potent compared to fiscal policy actions; especially in the agricultural in the agricultural and construction sectors from 2010:1 to 2018:3. This study adopted the ARDL technique, it recommended that the government should provide robust macroeconomics environment to strengthen and grow the financial system such it would have a broader sectoral inclusion.

Egor et al (2020) evaluate the impact of monetary policy on the economic growth in Nigeria using the econometric regression technique of Ordinary Least Squares (OLS). From the result, it is observed that the monetary policy rate, cash reserve ratio, and liquidity ratio have a positive relationship with economic growth. It suggested that the government should, as a matter of urgency, make a monetary policy that cuts the interest rate to help lower borrowing cost thereby increasing investment activities. Ayorinde (2023) analyzed how monetary policy affects Nigerian economic growth from 1986 until 2023. The dependent variable was gross fixed capital formation (GFCF), and the factors were money supply, exchange rate, private sector lending, inflation effect, and GDP. The study adopted the Auto-regressive Distributed Lag (ARDL) model. He recommended that the exchange rate should be kept favourable to attract foreign investors in Nigeria. Abebe (2024) assessed the effect of monetary policy on private sector growth in Nigeria, focusing on key policy instruments such as money supply and monetary policy rate from 1992 to 2024. It adopted the vector error correction model (VECM). It suggested that moderating the cash reserve rate to encourage lending and keeping interest rates low to facilitate investment, particularly for small and medium-sized enterprises (SMEs).

### **Research Gap**

Although numerous studies have examined the effect of monetary policy on economic growth in Nigeria, many empirical studies, such as Ekong and Ekong (2022), Zubairu and Babalola (2011). These studies focus primarily on aggregate economic growth indicators like GDP, Gross Fixed Capital Formation (GFCF), or private sector output. While these provide useful macroeconomic insights, they do not adequately capture the dynamic and comparative sectoral growth trajectories (agriculture, industry, and services) as structural transformation evolves.

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Secondly, earlier sector-specific studies, such as Saibu and Nwosa (2010) and Ogbuagu and Olufemi (2020), are based on relatively older datasets. Given Nigeria's recent macroeconomic developments, including exchange rate volatility, financial sector reforms, post-2016 recession adjustments, COVID-19 shocks, and the 2023–2024 monetary tightening cycle by the Central Bank of Nigeria, there is a need for more updated empirical evidence reflecting current structural realities.

### 3. Methodology

This study adopts a quantitative and longitudinal research design in order to examine the period between 1984 and 2023. The data were sourced from Central Bank of Nigeria (CBN) Statistical Bulletin (2024) and World Development Indicators (WDI) database. The study employs an Autoregressive Distributed Lag (ARDL) estimation technique. This is of the unit root test, where exchange rate, inflation, and interest rate are stationary at level (I(0)), while all dependent variables such as Agricultural, service and industry sector, are stationary only after first difference (I(1)). The optimal lag length was determined by using the Akaike Information Criterion (AIC), which selected a lag structure of 1.

### Model Specification

The dependent variable of the study is Sectoral Growth (Y). However, sectoral growth is disaggregated into three major sectors of the economy: agricultural sector growth (AGRG), industrial sector growth (INDG), and services sector growth (SERG). Since each sector represents a distinct component of total sectoral performance, three separate functional forms are specified. The independent variables are inflation (INF), exchange rate (EXR), and interest rate (INTR).

$$Y = f(\text{INF}, \text{EXR}, \text{INTR})$$

Where Y represents overall Sectoral Growth. Because Y is divided into three sectors, the model is specified into three separate functional forms.

#### Model 1: Agricultural Sector Growth

$$\text{AGRG} = f(\text{INF}, \text{EXR}, \text{INTR}) \dots \dots \dots (3.1)$$

#### Model 2: Industrial Sector Growth

$$\text{INDG} = f(\text{INF}, \text{EXR}, \text{INTR}) \dots \dots \dots (3.2)$$

#### Model 3: Services Sector Growth

$$\text{SERG} = f(\text{INF}, \text{EXR}, \text{INTR}) \dots \dots \dots (3.3)$$

### Econometric Models:

$$\begin{aligned} \Delta \text{AGRG} = & \alpha_0 + \alpha_{1t} \sum_{i=1}^p \Delta \text{AGRG}_{t-1} + \alpha_{2i} \sum_{i=1}^p \Delta \text{INF}_{t-1} + \\ & \alpha_{3t} \sum_{i=t}^p \Delta \text{EXR} + \alpha_{5t} \sum_{i=1}^p \Delta \text{INTR} + \varepsilon_t \dots \dots \dots 3.3 \end{aligned}$$

$$\begin{aligned} \Delta \text{INDG} = & \alpha_0 + \alpha_{1t} \sum_{i=1}^p \Delta \text{INDG}_{t-1} + \alpha_{2i} \sum_{i=1}^p \Delta \text{INF}_{t-1} + \\ & \alpha_{3t} \sum_{i=t}^p \Delta \text{EXR} + \alpha_{5t} \sum_{i=1}^p \Delta \text{INTR} + \varepsilon_t \dots \dots \dots 3.4 \end{aligned}$$

$$\begin{aligned} \Delta \text{SERG} = & \alpha_0 + \alpha_{1t} \sum_{i=1}^p \Delta \text{SERG}_{t-1} + \alpha_{2i} \sum_{i=1}^p \Delta \text{INF}_{t-1} + \\ & \alpha_{3t} \sum_{i=t}^p \Delta \text{EXR} + \alpha_{5t} \sum_{i=1}^p \Delta \text{INTR} + \varepsilon_t \dots \dots \dots 3.5 \end{aligned}$$



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### 4. Analysis Result and Discussion of Findings

**Table 4.1: Descriptive Statistics**

	SERG	AGRG	INDG	EXR	INT	INF
MEAN	46.83761	24.34426	27.85155	120.9050	1.635665	17.63807
MEDIAN	47.31850	24.47535	28.20158	100.5038	3.023542	11.11892
MAXIMUM	59.78510	36.96508	37.70961	482.7452	18.18000	75.40165
MINIMUM	35.35823	18.02043	18.17313	49.77484	-31.45257	0.686099
STD. DEV	5.997521	3.999771	6.043040	78.92246	10.56179	15.82340
SKEWNESS	0.043621	0.943583	-0.000171	2.932489	-1.183308	1.869366
KURTOSIS	2.315508	4.240211	1.850627	12.83330	4.716428	6.471405
JARQUE-BERA PROBABILITY	0.773729 0.679183	8.286724 0.015869	2.146720 0.341858	213.0242 0.000000	13.88887 0.000964	42.29674 0.000000
SUM	1826.667	949.4260	1086.210	4715.293	63.79092	687.8847
SUM SQ. DEV.	1366.870	607.9302	1387.697	236692.7	4238.950	9514.436
OBSERVATION	39	39	39	39	39	39

*Source: Author's computation (2026) using E-Views 12*

**Table 4.2 ADF Unit Root Test**

ADF								
AT LEVELS					AT FIRST DIFFERENCE			
	INTERCEPT		TREND AND INTERCEPT		INTERCEPT		TREND AND INTERCEPT	
VARIABLES	ADF STATISTICS	5% CRITICAL VALUE	ADF Statistics	5% CRITICAL VALUE	ADF STATISTICS	5% CRITICAL VALUE	ADF STATISTICS	5% CRITICAL VALUE
INDG	-0.277204	-2.945842	-5.279317	-3.536601	-8.224637	-2.945842	-8.190877	-3.540328
AGRG	-1.979434	-2.945842	-3.395838	-3.536601	-6.647005	-2.945842	-6.546641	-3.540328
SERG	-1.195557	-2.941145	-3.319918	-3.536601	-4.940370	-2.943427	-4.927571	-3.536601
INTR	-4.283302	-2.941145	-4.389353	-3.533083	-----	-----	-----	-----
EXCH	-6.876339	-2.941145	-6.468903	-3.533083	-----	-----	-----	-----
INF	-3.892054	-2.941145	-4.181038	-3.533083	-----	-----	-----	-----

Source: Author's computation (2026) using E-Views 12

**Table 4.3 Phillip-Perron Unit Root Test**

PHILLIP-PERRON
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AT LEVELS					AT FIRST DIFFERENCE			
VARIABLES	INTERCEPT		TREND AND INTERCEPT		INTERCEPT		TREND AND INTERCEPT	
	ADF STATISTICS	5% CRITICAL VALUE	ADF Statistics	5% CRITICAL VALUE	ADF STATISTICS	5% CRITICAL VALUE	ADF STATISTICS	5% CRITICAL VALUE
INDG	-1.318266	-2.941145	-2.513195	-3.533083	-4.831572	-2.943427	-4.816235	-3.536601
AGRG	-0.818570	-2.941145	-4.404387	-3.533083	-7.764356	-2.943427	-7.696840	-3.536601
SERG	-2.495232	-2.941145	2.479271	-3.533083	-7.343474	-2.943427	-7.656857	-3.536601
INTR	-4.2726287	-2.941145	-4.402797	-3.533083	-----	-----	-----	-----
EXCH	-6.214402	-2.941145	-5.926940	-3.533083	-----	-----	-----	-----
INFL	-3.866631	-2.941145	-4.153610	-3.533083	-----	-----	-----	-----

**Source: Author's computation (2026) using E-Views 12**

Results from Tables 4.2 and 4.3 show that the variables have mixed orders of integration, as some variables are stationary at levels, while some are at first difference.

### Lag Length Criteria

**Table 4.4 Lag Criteria (Service Sector model)**

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-542.2779	NA	1.78e+08	30.34877	30.52472	30.41018
1	-491.5025	87.44665*	25971825*	28.41680*	29.29654*	28.72385*
2	-477.2153	21.43073	29613919	28.51196	30.09548	29.06465
3	-459.9902	22.00989	30365122	28.44390	30.73120	29.24223

**Source: Author's computation (2026) using E-Views 12**

**Table 4.5 Lag Criteria (Agric Sector Model)**

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-540.7563	NA	1.64e+08	30.26424	30.44019	30.32565
1	-495.0912	78.64541	31702279	28.61618	29.49591*	28.92323*
2	-477.9132	25.76708	30784620	28.55073	30.13425	29.10342
3	-456.8252	26.94577*	25468992*	28.26807*	30.55537	29.06640

**Source: Author's computation (2026) using E-Views 12**

**Table 4.6 Lag Criteria (Industrial Sector)**

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Lag	LogL	LR	FPE	AIC	SC	HQ
0	-530.6287	NA	93189339	29.70159	29.87754	29.76301
1	-498.1801	55.88372*	37637196*	28.78778	29.66752*	29.09483*
2	-485.0698	19.66540	45814825	28.94832	30.53184	29.50101
3	-465.8465	24.56311	42041126	28.76925*	31.05656	29.56758

**Source: Author's computation (2026) using E-Views 12**

Results from Tables 4.4, 4.5, and 4.6 show that lag 3 is the best lag length criterion for the Agric sector and the industrial sector, while lag 1 is the best lag length criterion for the service sector model.

### ARDL Bound Test

**Table 4.7 Bound Test and Critical Values (Service Sector Model)**

F-Bounds Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Signif.	I(0)	I(1)
F-statistic	1.924649	10%	2.37	3.2
k	3	5%	2.79	3.67
		2.5%	3.15	4.08
		1%	3.65	4.66

**Table 4.8 Bound Test and Critical Values (Industrial Sector Model)**

F-Bounds Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Signif.	I(0)	I(1)
F-statistic	1.467680	10%	2.37	3.2
k	3	5%	2.79	3.67
		2.5%	3.15	4.08
		1%	3.65	4.66

**Table 4.9 Bound Test and Critical Values (Agricultural Sector Model)**

F-Bounds Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Signif.	I(0)	I(1)
F-statistic	1.318797	10%	2.37	3.2
k	3	5%	2.79	3.67
		2.5%	3.15	4.08
		1%	3.65	4.66

**Source: Author's computation (2026) using E-Views 12**

The ARDL bound test was employed to check for a long-run relationship between inflation, exchange rate, interest, and service sector output growth, industrial sector output growth, and agricultural sector output growth. Results from Tables 4.7, 4.8, and 4.9 show that there is no significant long-run relationship among the variables. This implies that there is no significant long-run relationship between monetary policy and sectoral growth in Nigeria.

### Short Run Model (Agricultural Sector)

VARIABLES	COEFFICIENT	STD-ERROR	T-STATS	PROBABILITY
AGRICULTURAL(-1)*	-0.227597	0.145151	-1.568002	0.1277



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REAL_EXCHANGE_RA...	0.009463	0.009335	1.013727	0.3191
INFLATION**	0.106137	0.094896	1.118455	0.2726
REAL_INTEREST_RATE**	0.127050	0.139064	0.913611	0.3685
C	0.227597	0.083087	-2.739252	0.0104

Source: Author's computation (2026) using E-Views 12

### Short Run Model (Service Sector)

VARIABLES	COEFFICIENT	STD-ERROR	T-STATS	PROBABILITY
SERVICE_SECTOR(-1)*	-0.196704	0.087433	-2.249780	0.0320
REAL_EXCHANGE_RA...	0.013356	0.010678	1.250756	0.2207
INFLATION**	-0.136672	0.103818	-1.316462	0.1980
REAL_INTEREST_RATE**	-0.022056	0.137288	-0.160657	0.8734
C	0.196704	0.059563	-3.302475	0.0025

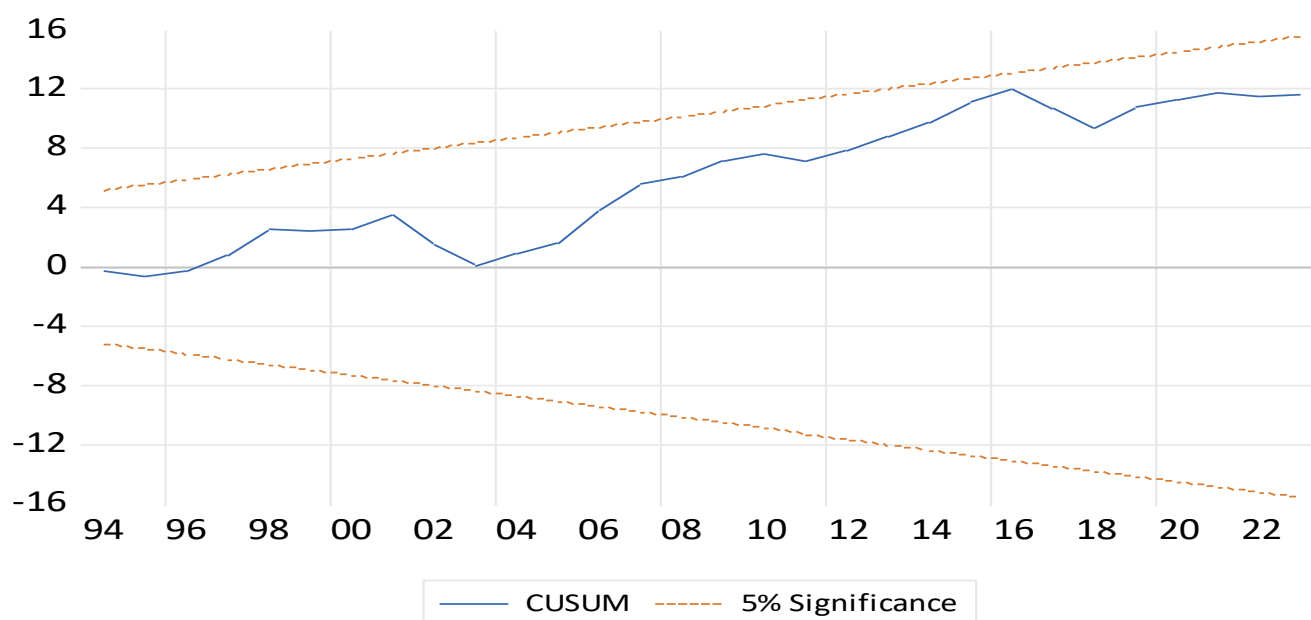
Source: Author's computation (2026) using E-Views 12

### Short Run Model (Industry Sector)

VARIABLES	COEFFICIENT	STD-ERROR	T-STATS	PROBABILITY
INDUSTRY_SECTOR(-1)	0.032158	0.103114	0.311872	0.7574
REAL_EXCHANGE_RA...	-0.010362	0.009080	-1.141214	0.2631
INFLATION**	-0.131528	0.114388	-1.149840	0.2596
REAL_INTEREST_RATE**	-0.240586	0.159484	-1.508532	0.1422
C	0.032158	0.011128	2.889739	0.0072

Source: Author's computation (2026) using E-Views 12

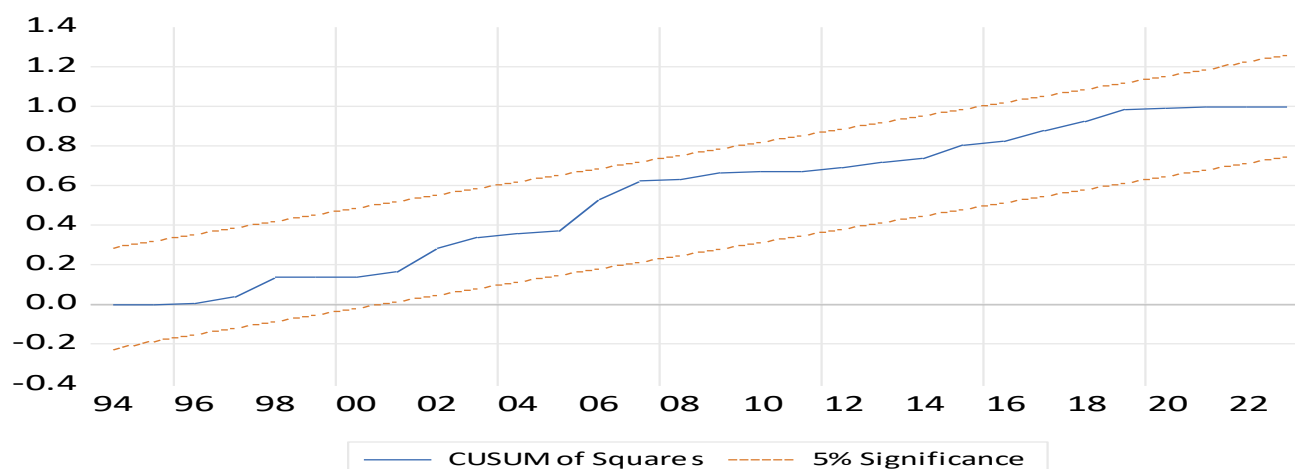
### CUSUM GRAPH



Source: Author's computation (2026) using E-Views 12

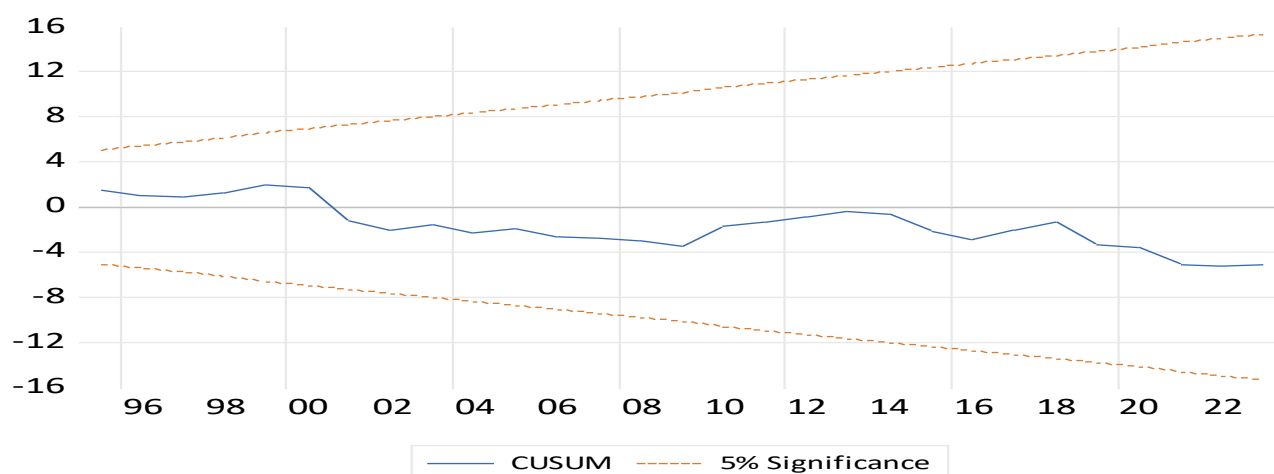
### CUSUM SUM GRAPH (SERVICE)

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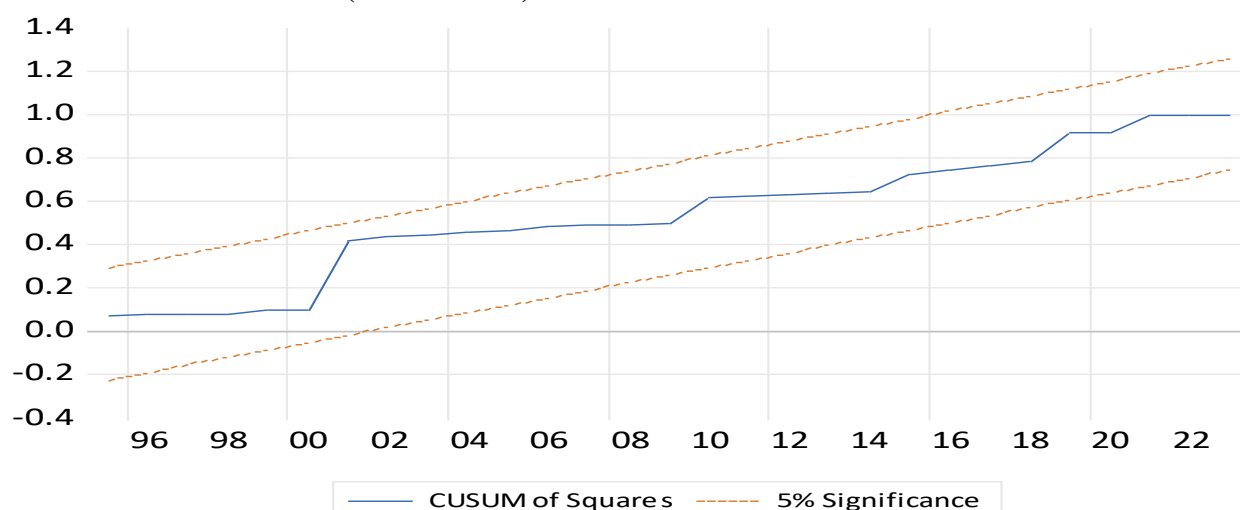
Source: Author's computation (2026) using E-Views 12

### CUSUM GRAPH



Source: Author's computation (2026) using E-Views 12

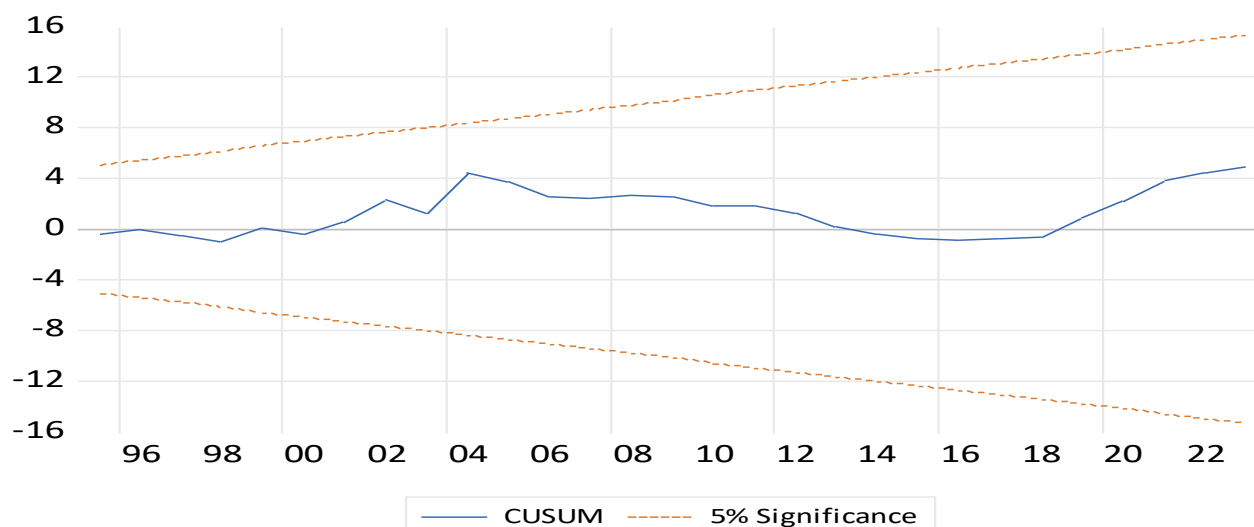
### CUSUM SUMGRAPH (INDUSTRY)



Source: Author's computation (2026) using E-Views 12

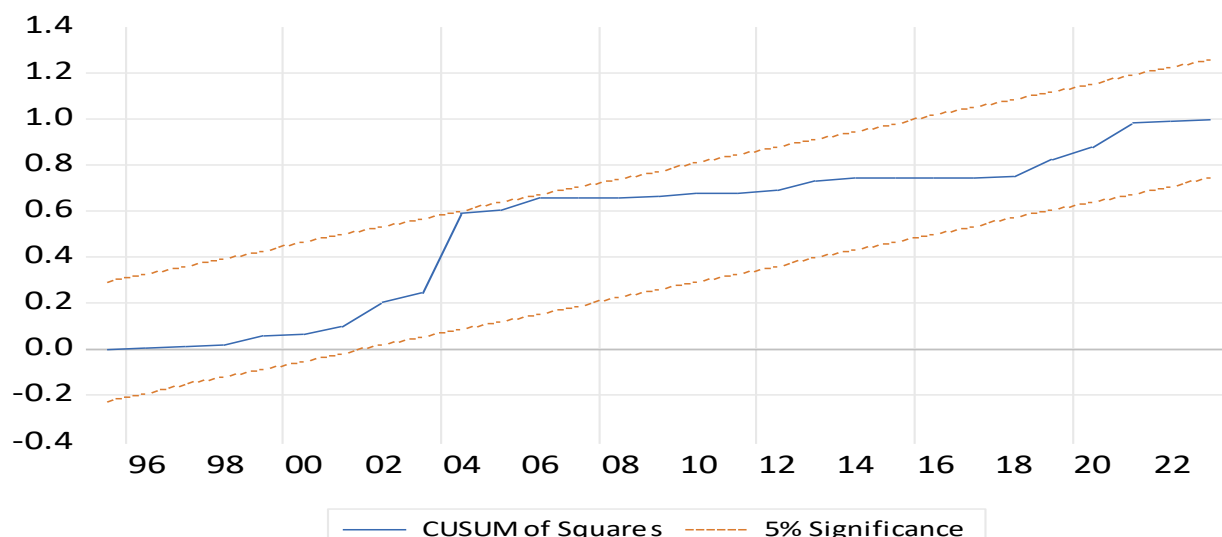
### CUSUM TEST

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Source: Author's computation (2026) using E-Views 12

### CUSUM SUM GRAPH



Source: Author's computation (2026) using E-Views 12

**CUSUM AND CUSUMSQ TESTS:** This analysis is done to test parameter stability. And since no instability was reported or confirmed in the analysis, then it is safe to conclude that the models are stable over time.

### BREUSCH-GODFREY SERIAL CORRELATION TEST( service)

F-statistics	0.967021	Prob. F(3,27)	0.4226
Obs*R-squared	3.58916	Prob. Chi-sqaure(3)	0.3093

Source: Author's computation (2026) using E-Views 12

### Heteroskedasticity Test.

F-statistics	0.449377	Prob. F(6,30)	0.8396
Obs*R-squared	3.051165	Prob. Chi-Square(6)	0.8024
Scaled explained SS	2.708807	Prob. Chi-squared(6)	0.8444

Source: Author's computation (2026) using E-Views 12

### BREUSCH-GODFREY SERIAL CORRELATION TEST(INDUSTRY)

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F-statistics	0.917668	Prob. F(3,26)	0.4461
Obs*R-squared	3.446879	Prob. Chi-sqaure(3)	0.3277

**Source: Author's computation (2026) using E-Views 12**

### Heteroskedasticity Test

F-statistics	0.775503	Prob. F(6,29)	0.5957
Obs*R-squared	4.977520	Prob. Chi-Square(6)	0.5467
Scaled explained SS	2.080830	Prob. Chi-squared(6)	0.9121

**Source: Author's computation (2026) using E-Views 12**

### BREUSCH-GODFREY SERIAL CORRELATION TEST(AGRICULTURAL)

F-statistics	0.486233	Prob. F(3,26)	0.6948
Obs*R-squared	1.912440	Prob. Chi-sqaure(3)	0.5908

**Source: Author's computation (2026) using E-Views 12**

### Heteroskedasticity Test

F-statistics	1.234931	Prob. F(6,29)	0.3176
Obs*R-squared	7.326234	Prob. Chi-Square(6)	0.2917
Scaled explained SS	16.99309	Prob. Chi-squared(6)	0.0093

**Source: Author's computation (2026) using E-Views 12**

The Serial correlation test result of all three models indicates that there is no serial correlation, as all probabilities are greater than 0.05,  $p > 0.05$ . The Heteroskedasticity test shows that the service sector has no effect of heteroskedasticity in the model, the industry sector also has no heteroskedasticity, but the agricultural sector has one scaled chi-squared p-value of 0.0093, which is less than 0.05 ( $p < 0.05$ ), indicating the presence of heteroskedasticity.

### Findings

The short-run result for the agricultural sector shows that the constant term is positive (0.2276) and statistically significant ( $p = 0.0104$ ), indicating that agricultural output in Nigeria experiences a stable baseline growth independent of monetary policy variables. This finding is consistent with previous studies, which report that monetary policy has a limited short-run influence on agriculture due to the sector's structural characteristics and low level of financial integration. For instance, studies on developing economies have shown that agricultural output responds weakly to interest rates and credit channels because many farmers operate outside formal financial systems (Mishra et al., 2012). Similarly, Nigerian-based studies Soludo (2004), emphasize that structural bottlenecks reduce the sensitivity of agriculture to monetary policy, thereby supporting the result obtained in this study.

For the service sector, the constant term is also positive (0.1967) and highly significant ( $p = 0.0025$ ), indicating strong autonomous growth in the absence of monetary policy effects. This reflects the demand-driven and rapidly expanding nature of the service sector in Nigeria, particularly in areas such as telecommunications, banking, and informal services. The finding aligns with existing literature which suggests that the service sector in developing economies is less sensitive to monetary policy in the short run because it is largely driven by consumption and private sector dynamics rather than credit conditions. Empirical studies have shown that monetary policy transmission to the service sector is often indirect and weak in the short run due to structural rigidities and informality (Bernanke & Blinder, 1992; Mishra et al., 2012).

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In contrast, the industrial sector exhibits weaker short-run performance, with a relatively small but significant constant term (0.0322;  $p = 0.0072$ ), while the lagged dependent variable and other monetary policy variables are statistically insignificant and mostly negative. This suggests that monetary policy has a weak and possibly contractionary, though insignificant, effect on industrial output in the short run. This finding is in line with previous empirical studies, which highlight the limited effectiveness of monetary policy in stimulating industrial growth in developing economies due to high borrowing costs, poor infrastructure, and credit constraints. In the Nigerian context, studies have found that the industrial sector is particularly sensitive to structural challenges, which dampen the transmission of monetary policy (Soludo, 2004). Furthermore, the weak and insignificant relationship supports the argument that monetary policy effects on the real sector often occur with lags (Bernanke & Blinder, 1992), making short-run impacts less visible. Overall, the findings across the three sectors are consistent with the broader literature, reinforcing the view that structural and institutional factors largely determine sectoral growth in Nigeria, while monetary policy plays a limited role in the short run.

### Conclusion/Recommendation

The study concludes that monetary policy has no significant effect on sectoral growth. This implies that the service sector, industrial sector, and agricultural sector do not depend on monetary policy in their operation. In light of the above findings, this study concludes that the Central Bank of Nigeria should, among other things, transcend a general and single monetary policy framework to accommodate the development of sector-specific frameworks that take cognizance of the differential responses of agriculture, industry, and services to monetary stimuli.

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