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Department of Economics
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gjedsfugus@gmail.com
+2348134539669

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EXPLORING THE RELATIONSHIP BETWEEN MONETARY POLICY AND ECONOMIC WELL-BEING IN NIGERIA

Beauty Igbinovia (PhD)
Department of Economics, Faculty of Management and Social Sciences, Edo State University Uzairue, Edo State, Nigeria, beauty.igbnovia@edouniversity.edu.ng

Fred Osahon Okunmahie (PhD)
(Corresponding Author)
Department of Political Science and Public Administration, Faculty of Management and Social Sciences, Edo State University Uzairue, Edo State, Nigeria, fred.okunmahie@edouniversity.edu.ng

Sunny Oshorenoya Idode
Department of Economics, Faculty of Management and Social Sciences, Edo State University Uzairue, Edo State, Nigeria

ABSTRACT

This study empirically explored the impact of monetary policy instruments on the economic well-being of Nigerians from the period 1981 to 2020. Per capita income is used in the study as a stand-in for well-being. It focuses on the relationship between the money supply, currency in circulation, and loans to the private sector and the economic well-being of Nigerian citizens. The unit root test was used to determine the degree of stationarity, and the results indicate that all of the variables were stationary following the initial difference. As a consequence, the variables had to be approximated using the Johensen Cointegration test. The outcome demonstrates that there is neither a short-term dynamics link nor a long-term equilibrium relationship between the independent variables of prime lending rate (PLR), money supply (MNSt), currency in circulation (CIC), credit to the private sector (CPS), and per capita income (PCI) and the dependent variables of PCI. This does not necessarily mean that the population's per capita income in Nigeria is unaffected by monetary policy decisions made throughout time. Rather it points to the fact that other variables are important in the dynamics of per capita income which are not included in the model. So, the study recommends among others that the government provide the needed infrastructural development to enhance the performance of the real sector, promote economic growth and improve economic well-being in Nigeria.

Keywords: Exploring the Relationships, Monetary Policy, Economic Well-Being

Introduction

Particularly in emerging countries, monetary policy is essential to a country's ability to thrive economically. Omotosho, Akanbi, and Adeniyi (2020) monetary policy involves central bank actions aimed at managing the money supply to achieve macroeconomic goals, such as controlling inflation, stabilizing exchange rates, and promoting economic growth. Monetary policy plays a crucial role in emerging nations in preserving price stability, guaranteeing financial stability, and promoting sustainable economic growth, all of which impact the living standards of the populace (Nwaogwugwu, 2018). Controlling inflation is one of the main goals of monetary policy in emerging nations. Elevated rates of inflation can reduce the value of the currency, resulting in unstable economic conditions that affect households' standard of living (Ogundipe & Akinbobola, 2020).

However, because of their distinct political, social, and economic traits, emerging nations present several difficulties when executing monetary policy (Alago, 2014; Umar & Murtala, 2020). It is sometimes difficult for central banks in developing nations to effectively assess the status of the economy and make timely decisions about monetary policy due to a lack of timely and trustworthy economic data. In a similar vein, poor institutional frameworks in many developing nations, such as immature financial markets and insufficient regulatory frameworks, can impair the efficiency of mechanisms for transmitting monetary policy, Okorie, Sylvester, & Simon-Peter, (2017). Furthermore, developing countries frequently experience high levels of exchange rate volatility, which can complicate the implementation of monetary policy objectives such as price stability and economic growth and structural issues that contribute to inflationary pressures, such as supply-side constraints, food price volatility, and currency depreciation. These factors can make it challenging for central banks to control inflation through traditional monetary policy tools. Anumadu, Ihemeje, & Nwoko, (2016). Thus, implementing effective monetary policy in developing countries requires addressing these challenges through improved data collection mechanisms, strengthened institutional frameworks, enhanced exchange rate management strategies, targeted inflation control measures, and safeguarding central bank

independence from political interference. Arising from the above the broad objective of this study is to explore the relationship between monetary policy and the economic well-being in Nigeria. The paper is made up of introductory parts that present an insight into the study, followed by conceptual clarification and the review of empirical literature for a knowledge gap to be determined. Followed by the methodology section which led to the discussion of results and findings as well as the conclusion and drawing of findings.

Statement of the Problem

The relationship between monetary policy and economic growth in Nigeria has been the subject of extensive research and analysis. Researchers have examined how changes in monetary policy instruments, such as interest rates, money supply, and exchange rates, impact various macroeconomic variables, including GDP growth, inflation, investment, and employment. Thus, the critical issue that requires investigation is the relationship between monetary variables and per capita income in Nigeria, which will be used to capture the well-being of the citizens. This study seeks to ascertain the impact of monetary policy on the standard of living of citizens, that is, how economic expansion has affected the lives of the citizens in Nigeria. While much research has been done on the relationship between monetary variables and macroeconomic performance, this paper seeks to investigate how monetary instruments used by the monetary authority have influenced the well-being of the citizens in Nigeria. Because over the years, the standard of living of Nigerians has seemed not to be positively influenced by advantageous policies enacted by the monetary authorities it is pertinent that this topic is investigated. Although monetary policy is essential for maintaining price stability, ensuring financial stability, fostering sustainable economic growth and promoting economic well-being, Idowu (2010) argued that huge public spending has constrained the efficacy of monetary policy and the poor state of economic infrastructure, resulting from past neglect, influence monetary management adversely in Nigeria.

The study is guided by the following research questions; What is the relationship between money supply and per capita income in Nigeria? What is the relationship between credit to the private sector and per capita income in Nigeria? What is the relationship

between currency in circulation and per capita income in Nigeria? What is the effect of the prime lending rate on per capita income in Nigeria?

Research Objectives

Following the research questions above. The objectives of this study are to:

1. examine the relationship between money supply and per capita income in Nigeria;
2. determine the relationship between credit to the private sector and per capita income in Nigeria;
3. examine the relationship between currency in circulation and per capita income in Nigeria and;
4. highlight the effect of the prime lending rate on per capita income in Nigeria.

Literature Review

Conceptual Clarification

Monetary Policy

Monetary policy can be viewed as deliberate actions taken by the monetary authorities, such as the Central Banks to alter the cost and quantity of money, to attain its macro-economic goals and objectives. (Foxton, Grice, Heys & Lewis, 2018) Monetary policy involves manipulating the money market through regulation of money supply and credit flow. (Dwivedi, 2005).

Economic Well-being

Oftentimes, this is substituted for economic growth. However, they do not mean the same thing, though economic well-being is necessitated by growth and progress in the economy. The well-being of an economy focuses on how the expansion in the economy, affects the individual lives of the citizens, healthwise, educationally, in terms of income, etc. Quirós and Marshall (2018) opined the economic welfare of people is most times explained by consumption in the current and future seasons, and other resources such as wealth, income and endowments of households.

Theoretical Underpinning

Monetarist View of Monetary Policy

Monetarism, the school of thought established by Milton Friedman, is an

economic theory that looks at the big picture. The core argument of this school of thought is that the central bank should not worry about causing inflation but should instead concentrate entirely on ensuring price stability. Two major schools of thought trace their roots back to the hard money policies that ruled monetary theory in the late 19th century. John Maynard Keynes had suggested a monetary model that was driven by demand. Friedman was concerned with price stability, but Keynes was more concerned with the value stability of currency and the panics that ensued from an inadequate money supply, which led to rival currencies and collapse. The method by which monetary policy actions affect important macroeconomic variables is called the monetary policy transmission mechanism, according to Taylor (1995). Therefore, monetary policy is vital because it affects prices and economic activity via several pathways. The characteristics and organization of the economy determine the efficacy of a certain channel. The interest rate channel, currency rate channel, asset price channel, and credit channel are the individual pathways.

Empirical Review

Akinlo and Egbetunde, (2010) examined the long run and causal relationship between monetary policy development and economic growth for ten countries in sub-Saharan Africa using the Vector Error Correction Model (VECM), over the period 1980 to 2005. The results showed that there is a long-run relationship between monetary policy development and economic growth in the selected sub-Saharan African countries. Also, Odeniran and Udeaja, (2010) examined the relationship between monetary policy development and economic growth in Nigeria, using Granger causality tests in a vector autoregressive (VAR) framework, over the 1960 period to 2009. The results indicated a bidirectional causality between some of the proxies of monetary policy development and economic growth variables. Iheanacho (2016) focused on an oil-dependent economy and found no significant difference in the relationship between monetary development and economic growth in Nigeria and what is generally obtainable in other oil-dependent economies, such as Libya, Angola and Saudi Arabia. Christopoulos and Tsionas (2004) investigated the long-run relationship

between monetary policy depth and economic growth, using panel data, and a co-integrating regression model. Their results showed that there is no single equilibrium relation between monetary policy depth, growth and auxiliary variables and that causality runs only from monetary policy depth to economic growth.

Ganev, Krisztina, Krzysztof and Prsemyslaw (2002) studied the effects of monetary shocks in ten Central and Eastern European (CEE) countries and found no evidence that suggests that changes in exchange rates and not interest rates affect output. Hameed, Khalid and Sabit, (2012) in presenting a review on how the decisions of monetary authorities influence macro variables like GDP, money supply, interest rates, exchange rates and inflation using the method of least square OLS found that tight monetary policy (in term of increase interest rate) had significantly negative impact on output, therefore asserting that increase in money supply has a strong positive impact on inflation but affects output negatively. In addition to this exchange rate was found to be negatively related to output. Adeniyi et al. (2020) examined the relationship between monetary policy and economic growth in Nigeria. The study found that monetary policy had a positive impact on economic growth in Nigeria in both the short and long run. Specifically, the study found that an increase in money supply had a positive impact on economic growth, while an increase in interest rates hurt economic growth. Alabi and Olarinde (2020) investigated the relationship between fiscal policy and economic growth in Nigeria. The study found that government spending and taxation had a significant impact on economic growth in Nigeria, with government spending having a positive impact and taxation having a negative impact. The study also found that the impact of fiscal policy on economic growth varied by sector, with government spending having a stronger positive impact on the service sector compared to other sectors. Ogundipe and Akinbobola (2020) employed an Autoregressive Distributed Lag (ARDL) bounds-testing approach to investigate the relationship between monetary policy variables (money supply, interest rate, and exchange rate) and economic growth. The empirical results suggest that there is a significant positive relationship between money supply and economic growth in the short run, while in the long run, both money

supply and exchange rate have significant positive impacts on economic growth. On the other hand, the study found that interest rate harms economic growth both in the short and long run. The study concludes that the monetary policy variables considered in the analysis can be used to promote economic growth in Nigeria if appropriately implemented by policymakers.

Furthermore, Umar and Murtala (2020) investigated the impact of fiscal policy on economic growth in Nigeria using the Autoregressive Distributed Lag (ARDL) approach over the period 1981-2017. The findings indicate that government spending and taxation have significant impacts on economic growth in Nigeria in the short run and the long run. The study further reveals that government spending has a stronger positive impact on economic growth than taxation. The study concludes that the Nigerian government should focus on using fiscal policy to stimulate economic growth, especially through increased government spending on sectors that have a higher multiplier effect on economic growth, such as infrastructure development. Gambetti (2008) reviewed the contribution of policy shocks to the dynamics of inflation using a medium-scale structural model estimated with US post-WWII data and Bayesian techniques over rolling samples captured a fall in inflation volatility and attributes a portion of the changes to monetary policy shocks. Umaru and Zubairu (2012) examined the impact of inflation on economic growth and development in Nigeria between 1970-2010 and discovered that inflation exhibits a positive impact on economic growth via production and output level and on the evolution of total factor productivity. Saibu and Nwosa (2011) examine the effect of monetary policy on sectorial output growth in Nigeria over the period 1986 to 2008. The study utilized an Auto Regressive Distributed Lag (ARDL) model and the findings showed that the manufacturing sector is not sensitive to any of the monetary policy variables. In sharp contrast with the manufacturing sector, the agricultural sector is responsive to the exchange rate. Their study concluded that the effectiveness of monetary policy depends on whether the observed differences in the sectors are brought in while designing policies in Nigeria.

Additionally, Chimobi and Uche (2010) examined the relationship between money, inflation and output in Nigeria. The research

made use of co-integration and granger-causality test analysis. The co-integration result revealed that the variables granger cause each other. The money supply was seen to granger-cause both output and inflation. The research concluded that monetary stability can contribute towards price stability in the Nigerian economy. Chuku (2009) carried out a controlled experiment using a structural vector autoregression (SVAR) technique to investigate the effects of monetary policy shocks on output and prices in Nigeria, using three alternative policy instruments; broad money (M2), Minimum Rediscount Rate (MRR) and the Real Effective Exchange Rate (REER). He concluded that M2 is the most influential instrument for monetary policy implementation. Arising from the review above, the area of study has empirical contributions from scholars over the years but something obvious from the review is that scholars have presented varying evidence to support one school of thought or the other. Meanwhile, the literature review revealed that the variables considered in previous studies are predominantly on monetary policy rates and economic growth. Moreover, the ultimate goal of any policy measure is the economic well-being of the populace, but studies that consider monetary policy variables and well-being proxied with per capita income are not common. Therefore, this study considered this variable to fill that gap in the literature and contribute to the advancement of knowledge in the field of study.

Methodology

Theoretical Framework

The theoretical framework identifies the theoretical underpinning of the study. That is the theory on which the theoretical analysis is anchored. The credit channel of Taylor (1995) is chosen as the theoretical underpinning of the study. The process by which monetary policy actions affect important macroeconomic indicators such as nominal GDP, real GDP, per capita income, and others is known as the monetary policy transmission mechanism, according to Taylor. Due to its multi-channel impact on macroeconomic variables, monetary policy is so essential. The economic structure determines how well a certain channel works. The interest rate channel, currency rate channel, asset price channel, and credit channel are the individual pathways. The

route involving interest rates and credit is essential to our investigation.

Variables in the Model

PCI_t = Real GDP per capita

MNS_t = Money supply

CIC_t = Currency in Circulation

CPS_t = Credit to the Private Sector

PLR_t = Prime Lending Rate

3.3 Model Formulation and Specification

To examine the relationship between monetary policy and monetary variables in Nigeria. The mathematical model is specified as follows;

$PCI_t = f(MNS_t, CIC_t, CPS_t, PLR_t)$ …….. 3.1

The econometric model becomes

$PCIt = \beta0 + \beta1MNS_t + \beta2CIC_t + \beta3CPS_t + \beta4PLR_t + U_t$ …….. 3.2

Equation 3.2 states per capita income PCI depends on money supply (MNS_t), currency in circulation (CIC), and credit to the private sector (CPS) while the prime lending rate is the control variable.

A priori Expectation

From a theoretical point of view, money supply (MNS_t), currency in circulation (CIC), and credit to the private sector (CPS) should be positively related to per capita income (PCI). An increase in any of these variables, theoretically, should lead to an increase in per capita income (PCI).

Method of Data Analysis

Descriptive Statistics

The table below contains the descriptive statistics

Table 1 Descriptive Statistics Result

	LPCI	LCIC	LCPS	LMNS	LPLR
Mean	12.47871	5.262487	6.622218	6.963684	2.806262
Median	12.40923	6.069124	6.737771	7.231713	2.855296
Maximum	12.84596	7.985626	10.57010	10.78854	3.394508
Minimum	12.20262	1.469647	2.148274	2.672158	2.047693
Std. Dev.	0.238516	2.220009	2.842293	2.743188	0.286835
Skewness	0.266350	-0.524233	-0.137230	-0.168890	-0.582120
Kurtosis	1.394439	1.818508	1.578232	1.597422	3.313401
Jarque-Bera	5.007792	4.366606	3.669319	3.642313	2.543927
Probability	0.081766	0.112669	0.159668	0.161838	0.280281

Sum	524.1058	221.0245	278.1331	292.4747	117.8630
Sum Sq. Dev.	2.332490	202.0661	331.2237	308.5283	3.373239
Observations	42	42	42	42	42

Source: Author's Compilation.

To better understand the connection between Nigeria's national debt and poverty, the descriptive statistics of the time series variable used in this research are shown in Table 1. A log of per capita income (LPCI) of 12.47871 is the mean and 12.40923 is the median. The range of possible values is from 12.84596 to 12.20262. Since there is almost little variance in the figures, it may be concluded that the growth rate of per capita income is rather minimal. The median value of money in circulation is 6.069124, while the mean amount is 5.262487. The range of possible values is from 7.985626 to 1.469647. that is, in turn. If we compare the minimum and maximum figures, we can observe that the money supply has grown at a considerable pace throughout the years. Credits extended to private companies have a median value of 6.737771 and an average value of 6.622218. The range of possible values is from 2.148274 to 10.57010. Since there is a considerable disparity between the minimum and highest figures, the data demonstrate that the growth rate of DOD throughout the years is enormous. In terms of LMNS, the median value is 7.231713 and the mean value is 6.963684. The range of possible values is from 10.78854 to 2.672158. In comparison to its minimum and maximum levels, the money supply (LMNS) has grown at a considerable pace throughout the years. Prime lending rate (LPLR) values range from 2.855296 to 2.806262 on the extremes. Values as low as 2.047693 and as high as 3.394508 are possible. Since there is little variation between the lowest and highest values, the rate of growth of the prime lending rate (LPLR) over time is negligible**.**

Results and Discussion

Unit Root Test

Table 2 Phillip Perron (PP) Unit Root Test

Variable	Test Equation	Level		First Difference		Order
		Stat	PV	Stat	PV	
LCIC	I	-1.6721	0.4375	-3.7071	0.0077	I(1)
	I & T	-0.3416	0.9866	-4.1017	0.0130	
	N	2.2922	0.9939	-2.2497	0.0253	
LCPS	I	-0.8847	0.7831	-4.5336	0.0008	I(1)
	I & T	-0.7066	0.9658	-4.4892	0.0048	
	N	4.0899	1.0000	-2.4754	0.0146	
LMNS	I	-0.8923	0.7807	-4.1581	0.0023	I(1)
	I & T	-0.7965	0.9577	-4.2713	0.0084	
	N	4.2914	1.0000	-1.5874	0.1048	
LPCI	I	-0.4787	0.8851	-4.1008	0.0026	I(1)
	I & T	-3.1023	0.1193	-3.9958	0.0168	
	N	0.6519	0.8530	-3.8768	0.0003	
LPLR	I	-3.3485	0.0189	-8.8664	0.0000	I(1)
	I & T	-3.0595	0.1294	-9.3585	0.0000	
	N	0.1612	0.7277	-8.9708	0.0000	

Source: Author's Compilation.

Table 2 displays the results of the unit root test. After taking the initial difference, it was discovered that LCIC, LCPS, LMNS, LPCI, and LPLR are stationary, indicating an I(1) order of integration. The null hypothesis that the variables are non-stationary at level cannot be rejected since the LCIC probability values for the three test equations—intercept, intercept with trend, and none at level—are 0.4375, 0.9866, and 0.9939, respectively. These values are larger than 0.05. But for the second difference, all three equations have LCIC probability values that are less than 0.05: 0.0077, 0.0130, and 0.0253. After that, we may conclude that LCIC is stationary at the first difference, thereby rejecting the null hypothesis. Following the initial difference, LCIC reaches a stationary point. The null hypothesis that the variables are non-stationary at level cannot be rejected since the LCPS probability values for the three test equations—intercept, intercept with trend, and none at level—are 0.7831, 0.9658, and 1.0000, respectively. All three values are larger than 0.05. But for the second difference, all three equations have LCPS probability values that are less than 0.05: 0.0008, 0.0048, and 0.0146, respectively. As a result, we may conclude that LCPS is

stationary when we compare the two sets of data. After the initial difference, LCPS becomes stagnant. The null hypothesis that the variables are non-stationary at level cannot be rejected since the LMNS probability values for the three test equations—intercept, intercept with trend, and none at level—are 0.7807, 0.9577, and 1.0000, respectively. These values are larger than 0.05. The three equations' LMNS probability values are less than 0.05 at the second difference; nonetheless, they are 0.0023, 0.0084, and 0.1048, respectively. So, we may conclude that LMNS is stationary when we compare it to a non-stationary variable. Hence, LMNS attains stationary behaviour after the initial difference. The null hypothesis that the variables are non-stationary at level cannot be rejected since the LPCI probability values for the three test equations—intercept, intercept with trend, and none at level—are 0.8851, 0.1193, and 0.8530, respectively. All three values are larger than 0.05. But for the second difference, all three equations have LPCI probability values that are less than 0.05: 0.0026, 0.0168, and 0.0003. After that, we may conclude that LPLR is stationary at the first difference, thereby rejecting the null hypothesis. Thus, after the initial difference, LPLR attains stationary behaviour. The null hypothesis that the variables are non-stationary at level cannot be rejected since the LPLR probability values for the three test equations—intercept, intercept with trend, and none at level—are 0.0189, 0.1294, and 0.7277, respectively. These values are larger than 0.05. The LPLR probability values for the three equations are 0.0000, 0.0000, and 0.0000 at the second difference, respectively, which is less than 0.05. After that, we may conclude that LPCI is stationary at first difference, thereby rejecting the null hypothesis. Thus, after the initial difference, LPLR attains stationary behaviour.

Cointegration Test

Table 3 Johenson Cointegration Test Result

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.673047	93.00436	69.81889	0.0003

At most 1 *	0.426685	48.28680	47.85613	0.0455
At most 2	0.269182	26.03399	29.79707	0.1277
At most 3	0.218527	13.49037	15.49471	0.0980
At most 4	0.086694	3.627385	3.841466	0.0568

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.673047	44.71756	33.87687	0.0018
At most 1	0.426685	22.25281	27.58434	0.2077
At most 2	0.269182	12.54362	21.13162	0.4950
At most 3	0.218527	9.862985	14.26460	0.2211
At most 4	0.086694	3.627385	3.841466	0.0568

Source: Author's Compilation.

Two cointegrating equations were found in the cointegration test, which was conducted using the Maximum Eigenvalue test and the Trace test. It is then calculated to use a vector error correction model.

Vector Error Correction Model

Table 4. Vector Error Correction Model Test Result.

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	-0.066863	0.041642	-1.605667	0.1179
C(2)	0.332562	0.134780	2.467449	0.0190
C(3)	-0.135142	0.049155	-2.749288	0.0096
C(4)	-0.023925	0.044989	-0.531805	0.5984
C(5)	0.153281	0.072347	2.118693	0.0417
C(6)	-0.010497	0.032968	-0.318399	0.7522
C(7)	0.003836	0.012409	0.309089	0.7592
R-squared	0.455125	Mean dependent var		0.009423
Adjusted R-squared	0.356056	S.D. dependent var		0.043226
S.E. of regression	0.034687	Akaike info criterion		-3.727272
Sum squared resid	0.039705	Schwarz criterion		-3.431718
Log-likelihood	81.54544	Hannan-Quinn criteria.		-3.620409

F-statistic	4.594053	Durbin-Watson stat	2.215871
Prob(F-statistic)	0.001712		

Cointegration, or long-term equilibrium, may be established if the ECT coefficient in the cointegrating equation is negative and has a 5% level of statistical significance. The coefficient of the error-correcting term ECT(-1) with a one-period lag is shown in Table 4. With a probability of 0.1179, which is more than 5%, the value of 4 is -0.066863. The results demonstrated that the model does not meet the necessary conditions for a long-term equilibrium connection. This leads us to specify and estimate the first difference model using ordinary least squares.

Short Run Analysis

Table 5. Short Run Analysis Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLPCI(-1)	0.235724	0.167855	1.404334	0.1699
DLPCI(-2)	0.182875	0.157944	1.157851	0.2555
DLCIC	-0.020247	0.045007	-0.449867	0.6558
DLCPS	0.010465	0.045346	0.230785	0.8190
DLMNS	-0.031731	0.070990	-0.446988	0.6579
DLPLR	0.010363	0.030362	0.341326	0.7351
C	0.017255	0.011212	1.538909	0.1337
R-squared	0.217354	Mean dependent var		0.013273
Adjusted R-squared	0.070608	S.D. dependent var		0.036181
S.E. of regression	0.034880	Akaike info criterion		-3.712645
Sum squared resid	0.038932	Schwarz criterion		-3.414057
Log-likelihood	79.39658	Hannan-Quinn criteria.		-3.605514
F-statistic	1.481159	Durbin-Watson stat		2.030116
Prob(F-statistic)	0.216062			

Source; Author's computation

In that order, the probability values of DLPCI (-1), DLPCI(-2), DLCIC, DLCPS, DLMNS, and DLPLR. All of these variables have P-values larger than 0.05, indicating that there is no significant link between them and the log of per capita income (LPCI): 0.1699,

0.2555, 0.6558, 0.8190, 0.6579, 0.7351, and 0.1337, respectively. Based on these findings, it seems that the other explanatory variables in the model and the first and second lags of LPCI do not have a significant short-run connection.

Serial Correlation Test

The model is subjected to a diagnostic test to assert the adequacy of the model

Table 6. Breusch-Godfrey Serial Correlation LM Test

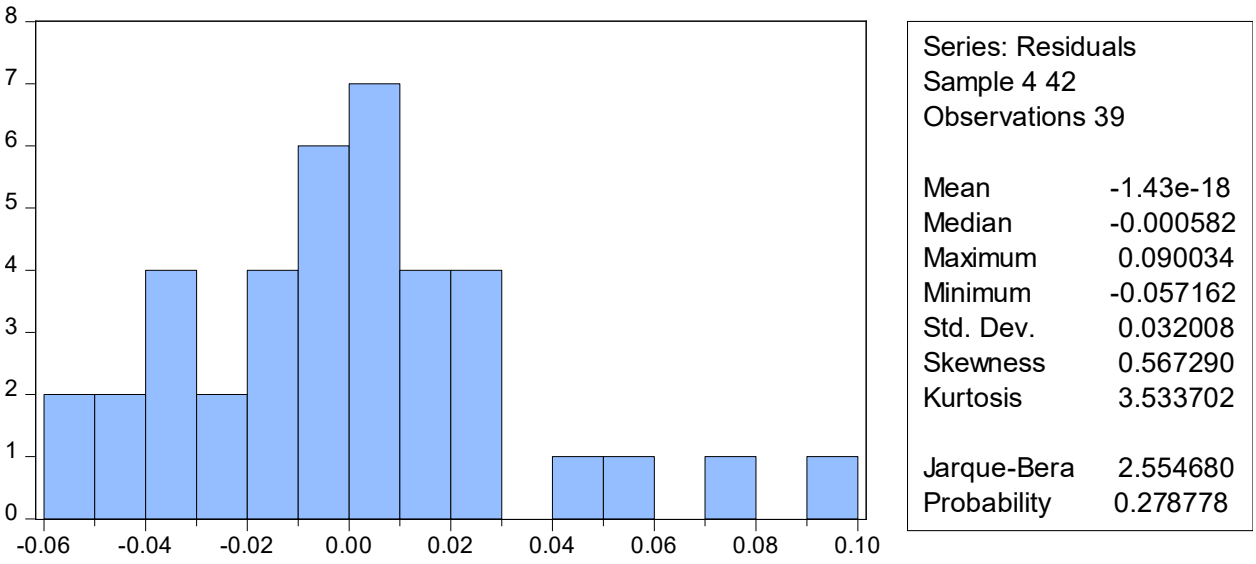
Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	2.178651	Prob. F(2,30)	0.1308
Obs*R-squared	4.946105	Prob. Chi-Square(2)	0.0843

Source; *Author's Computation*

In the Breusch-Godfrey serial correlation LM test, the absence of model correlation is used as the null hypothesis. The null hypothesis is not rejected according to the test's decision procedure until the observed R-squared p-value is less than 5%. The null hypothesis that the model does not include serial correlation cannot be rejected since the p-value for the observed R-square is 0.0843, which is more than 5%. The model was found to be free from the econometric issue of serial correlation, according to the findings.

Normality Test

Figure 1: Normality Test Result

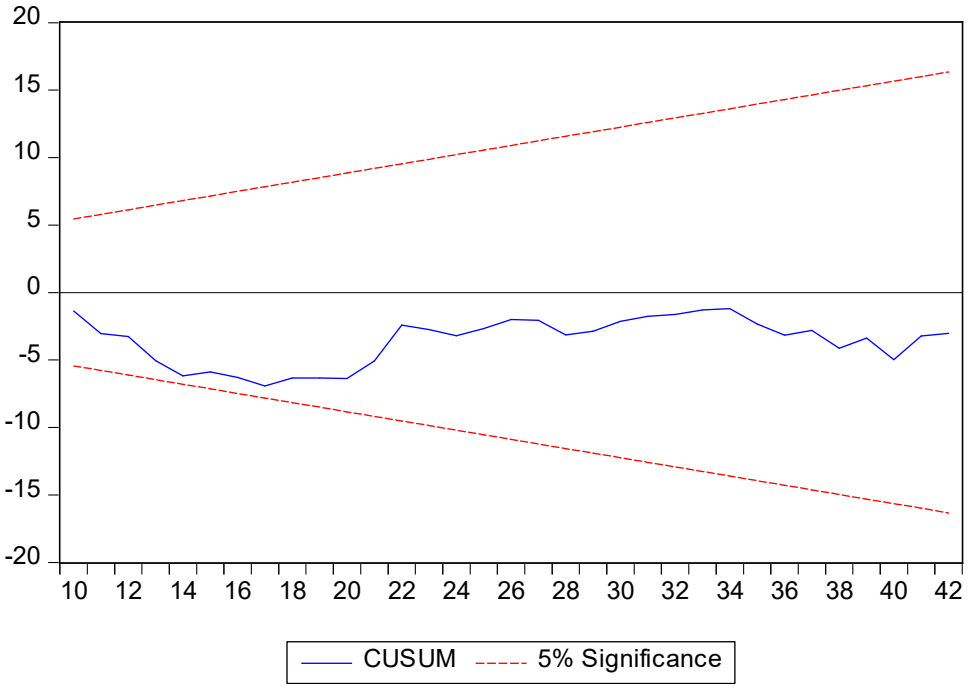


The Jarque-Bera normality test assumes normally distributed error terms as its null hypothesis. If the test statistic's probability value is less than 5%, the null hypothesis is rejected according to the test's decision criteria; otherwise, it is not rejected. The null

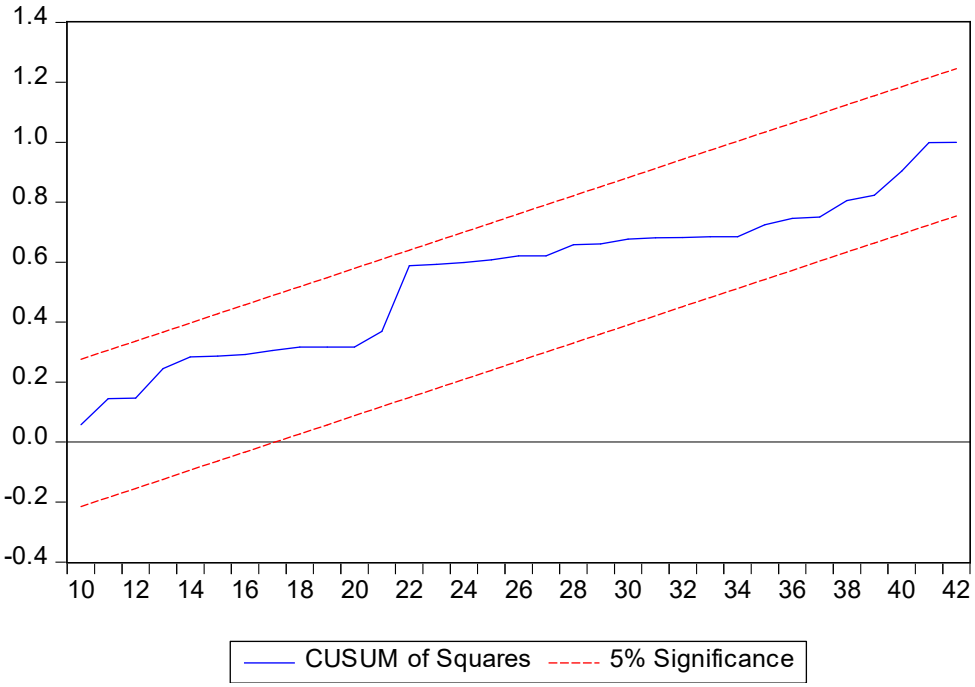
hypothesis that the error terms are normally distributed cannot be rejected since the p-value for the Jarque-Bera probability value is 0.278778, which is more than 5%. A normal distribution was seen in the model's error component, according to the results.

Stability Test

Figure 2: Stability Test Result



Model stability was demonstrated by the CUSUM line, which is inside the 5% significant line. Having said that, the CUSUM result is an essential prerequisite. Finding the CUSUM of squares is the only necessary criterion for stability.



There are enough conditions for stability to be present, and the model is determined to be stable, as the CUSUM line of the result falls inside the 5% significant line.

Discussion of Results

The outcome demonstrates that there is neither a short-term dynamics link nor a long-term equilibrium relationship between the independent variables of prime lending rate (PLR), money supply (MNSt), currency in circulation (CIC), credit to the private sector (CPS), and per capita income (PCI) and the dependent variables of PCI. Cointegration, or long-term equilibrium, may be established if the ECT coefficient in the cointegrating equation is negative and has a 5% level of statistical significance. The coefficient of the error-correcting term ECT(-1) with a one-period lag is shown in Table 4. With a probability of 0.1179, which is more than 5%, the value of 4 is -0.066863. The results demonstrated that the model does not meet the necessary conditions for a long-term equilibrium connection. This leads us to specify and estimate the first difference model using ordinary least squares.

Also, the short-run result in Table 5 shows the probability values of DLPCI (-1), DLPCI(-2), DLCIC, DLCPS, DLMNS, and DLPLR. All of these variables have P-values larger than 0.05, indicating that there is no significant link between them and the log of

per capita income (LPCI): 0.1699, 0.2555, 0.6558, 0.8190, 0.6579, 0.7351, and 0.1337, respectively. Based on these findings, it seems that the other explanatory variables in the model and the first and second lags of LPCI do not have a significant short-run connection. This does not necessarily mean that the population's per capita income in Nigeria is unaffected by monetary policy choices made throughout time. Instead, it draws attention to the fact that the model does not account for several key factors that are crucial to understanding the fluctuations of per capita income. The findings are comparable to those of Idowu (2010), who found that substantial public expenditure has limited Nigeria's ability to implement effective monetary policy. Furthermore, the deteriorating condition of the economy due to historical neglect hurts monetary management. The outcome, however, differs from that of Adeniyi et al. (2020), who found that monetary policy factors had a significant beneficial impact on Nigeria's economic development**.** Summarily the research findings showed that there is no statistically significant short-term dynamics or long-term equilibrium link between the money supply and per capita income (PCI) in Nigeria and neither the short-term dynamics nor the long-term equilibrium link between currency in circulation and per capita income (PCI) are statistically significant. Further to the above, the study further established that there is no statistically significant short-term dynamics or long-term equilibrium link between per capita income (PCI) and credit to the private sector and neither the short-term dynamics nor the long-term equilibrium link between the prime lending rate and per capita income (PCI) is statistically significant.

Conclusion

While monetary policy is essential for long-term, sustainable economic development and, eventually, for raising the standard of living in an economy, there are still many obstacles that must be overcome before monetary policy measures and variables can have a significant impact on living standards. The study's findings indicate that raising the quality of living in an economy depends on some non-policy factors, even if raising living standards is still a top policy priority. Therefore, based on the results, we conclude that there is no connection between Nigeria's economic prosperity and the dynamics of monetary policy variables. This emphasizes how important it is to address the unique

characteristics of developing nations, such as structural rigidities, shoddy institutional frameworks, undeveloped financial markets, and insufficient regulatory frameworks, to improve the transmission mechanisms and guarantee the success of monetary policy in Nigeria.

Recommendations

The study's conclusions and findings inform the following policy recommendations and suggestions for additional research: the government should fund the necessary infrastructure development to boost the real sector's productivity, encourage economic growth, and improve Nigeria's overall economic well-being. The government creates and carries out the policies required to guarantee the strong institutions required to boost productivity and promote Nigeria's economic prosperity. To serve the financial demands of Nigeria's real sector, the Central Bank of Nigeria (CBN) develops and maintains policy measures that foster the growth of the financial sector. Financial authorities encourage financial inclusion to increase entrepreneurs' access to investment funds, boost production growth, and advance Nigeria's economy.

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