International Journal of Intellectual Discourse (IJID)
ISSN: 2636-4832 Volume 8, Issue 4. December, 2025

Testing the validity of monetary misperception hypothesis in Nigeria: evidence from ARDL Model

*Saidu Mohammed Usman[1] Sadiq Muhammed Turi[2], Abdulmalik Sabo Albasu[3], and Faiza Adamu[4].

[1,2&3]*Department of Economic, Nigerian Defence Academy, Kaduna State, Nigeria.*
[4]*Department of Economics and Development Studies, Federal University Gashua, Nigeria.*

*Corresponding Author: mohammedsaidu803@gmail.com

Abstract
This research work testing the validity of monetary misperception hypothesis in Nigeria covering the period of 1985-2023, the data were analysed using Descriptive statistics and Correlation, Augmented Dickey-Fuller (ADF), Phillip-Perrons unit root test and Autoregressive Distributive Lag (ARDL) are employed, to carry out this analysis. Results of the study revealed that money supply (M2) shows a positive and statistically significant at 5% level, while actual inflation rate (AINFR), actual interest rate (AINR) and exchange rate (EXCH) value shows a negative sign and statistically insignificant at 5% level, except AINFR is significant, there is long-run impact perception of money supply on economic growth in Nigeria based on ARDL long run. This study concludes that there is a long run impact of monetary misperception hypothesis in Nigeria. A study recommends that, since economic actors base their decisions on local prices, they may incorrectly interpret inflation as a relative price movement. The public's learning from observable policy acts is a significant role in changing attitudes about monetary policy. Reasonable expectations: as people gain knowledge, their misconceptions diminish.

Keywords: Money Supply, Interest Rate, Inflation, ARDL, GDP, and Nigeria.

1. Introduction

The Federal Reserve and other central banks have placed a greater emphasis on informing the public about their monetary policy strategy during the last 30 years.
First, monetary policy approach is compli cated and depends on a variety of factors t hat change over time and in different glob al contexts (Baur et al., 2023).
Second, the success of monetary policy is greatly influenced by how the general pub lic views its objectives, structure, and dire ction (Baur et al., 2023).What monetary p olicy strategy does the public perceive? H ow do these perceptions vary over the cycl e and in response to actual policy rates? A nd what role do they play in the transmissi on of monetary policy to financial markets ?
To make empirical progress on these questions, however, a measure that captures the public's forward-looking perceptions of how the Federal Reserve (FED) will respond to future economic data at each point in time is necessary. Perceptions of the monetary policy framework may differ from the actual historical behavior of the Fed, which has been the focus of much empirical work since Taylor (1993). According to economist William S. Gray's Monetary

Misperception Hypothesis (MMH), which was first proposed in the 1970s, people's perceptions of inflation do not always match real changes in the level of prices. According to the MMH, people could mistake relative price changes the variations in the costs of certain goods and services for general price changes, such as inflation or deflation. People may make less-than-ideal choices about their investments, savings, and consumption as a result of this misconception. Evaluating the MMH's validity empirically is essential given its implications for economic theory and policy.

The Monetary Misperception Hypothesis (MMH), which has its roots in New Classical economic theory, economic agents may mistake nominal changes brought on by monetary shocks as actual price movements because of incomplete knowledge. This can result in macroeconomic swings in output and employment. While this hypothesis offers a theoretically appealing explanation for short-run deviations from full employment, its empirical validity has remained contested (Schmeling, 2022).

There are various methodological difficulties while testing the MMH. First, it is challenges to discriminate between expected and unexpected monetary shocks and to assess agents' expectations precisely. Second, empirical research produces contradictory findings; some discover no dissemble impacts, while others support the idea in particular situations. Third, the explanatory capacity of processes based on misperception has been called into question by developments in macroeconomic modelling; especially New Keynesian approaches that emphasize nominal rigidities.

The main question this paper attempts to answer in light of these difficulties is whether the MMH can be empirically verified with current data and methodologies and whether it continues to be reliable and pertinent explanation of short term macroeconomic dynamics in the face of changing monetary policy frameworks and more knowledgeable agents.

Against this context, the paper's main goal is to use time series data from 1985 to 2023 to examine the validity of monetary misperception hypothesis in Nigeria. The papers precise goals are to ascertain how Nigeria's economic growth is impacted by the perception of the country's real money supply. Investigate the impact of real interest rate on Nigerian's economic growth.

2. Literature Review

2.1 Conceptual Framework

The public's comprehension of the policy framework and plan is crucial for effectiv e monetary policy to stabilize prices and e conomic activity.

For instance, markets can sometimes "do t he central bank's work for it" if investors a re aware of how monetary policy will resp ond to shifts in the economic outlook. Thi s is because financial conditions adapt to n ew economic data before the central bank modifies policy rates (Bauer et al, 2023).

According to Taylor (1993), a policy rule that links the policy interest rate to inflation and economic activity is a straightforward method of describing how the general public feels about monetary policy. The idea that central banks raise interest rates in response to better economic activity and higher inflation is captured and quantified by simple principals.

2.2 Theoretical Review

Robert Lucas first proposed the Monetary Misperception Hypothesis (MMH) in 1972 as a fundamental component of new classical macroeconomics. Lucas maintained that because economic agents are subject to imperfect information, they are unable to differentiate between changes in relative prices and changes in the

general level of prices. Temporary variations in output are caused by this misunderstanding. The Lucas Islands Model is the most referenced framework supporting this hypothesis, where agents respond to apparent real shocks when in fact they are experiencing nominal shocks.

2.3 Empirical Review

Abduletif et al, (2024), examined the dynamics of monetary policy and economic growth in Ethiopia. The study employed ARDL and error correction model (ECM) based on annual data from 1993 to 2022. Granger causality test was also employed. The study revealed that, in the short run, deposit interest rate, reserve required amount, and open market operation have positive and statistically significant effects on real GDP growth of Ethiopia; however, money supply has negative and statistically significant effects on real GDP growth of Ethiopia. In the long run, money supply has positive and statistically significant effects on real GDP growth of Ethiopia; however, deposit interest rate and reserve required have negative and statistically significant effects on real GDP growth of Ethiopia. The Granger causality test result shows that there is bidirectional causality between monetary policy and economic growth; except there was a unidirectional relationship between deposit interest rate and economic growth.

Bekele (2024), investigated and analyzed factors those effects of transmission mechanism of monetary policy channels on economic growth in Ethiopia using a 36 years' time series data. The study had employed the co-integration and vector error correction model (VECM) analysis with impulse response and variance decomposition analysis to provide robust long run effects and short run dynamic effects on the real GDP. All variables under consideration are integrated of order one I (1) and also co-integrated. Vector Error Correction Model/VECM/ results show that real GDP was positively and significantly affected by the real effective exchange rate, money supply, gross capital formation (investment), credit for private sector, trade of openness over a period of long-run; while real leading interest rate and consumer price index (inflation) have significant negative effect. The estimate of the speed of adjustment coefficient found in this study indicates that about a 31 percent of the variation in the real GDP from its equilibrium level is corrected within a year.

Mwamkonko. (2023), examined the relative efficacy of monetary policy transmission channels in Tanzania. The study applied co-integration and error correction modeling approach to analyze the short-run and long-run comparative effects of five monetary policy transmission mechanisms on economic growth. The study found that growth-effects of monetary policy depends on transmission channels used. The results show that interest rate channel and stock price channel are not effective in Tanzania.Using a model in which the Federal Reserve (FED) and the market disagree about future aggregate demand, Caballero and Simsek (2022), investigated the public Federal Reserve (FED) disagreement and its implications for monetary policy surprises in an effort to support the validity of the monetary misperception hypothesis. They discovered that the market expects monetary policy "mistake," which impact current demand and cause the fed to partially accommodate the market's view. The Fed anticipates a gradual implementation of its perspective. Statements that disclose a sudden shift in the Fed's perspective serve as a micro foundation for shocks to monetary policy. And Baur et al. (2023), examine new time-varying estimates of the monetary policy rule perceived by professional forecasters, using rich panel data of monthly survey

forecasts. With our estimates of the perceived monetary policy rule, document a number of new facts that are relevant for monetary policy and asset pricing. First, the Fed's changing worries about economic data versus financial and other dangers are reflected in the wide variations in the perceived responsiveness of monetary policy to the economy over time. It is typically low during periods of easing and considerable economic and financial uncertainty and high during periods of monetary tightening when Fed policy is thought to be data dependent. Second, forecasters revise their estimates of the monetary policy rule after high frequency monetary policy surprises on Federal Open Market Committee (FOMC) announcement dates, suggesting that they believe monetary policy surprises provide useful information about the Fed's rule. Strategic communication between the central bank and market participants is examined by Stein and Sunderam (2018). The study's data cover a set of agents who are highly relevant for the transmission of policy perceptions to financial markets, and it supports the findings of Reis's (2020) study on the gap between market and household expectations. The study found that a misperception between monetary authorities and households leads to price increases.

Methodologically Gap: this study is closely related to earlier research that uses survey and financial market data to estimate monetary policy rules. The core premise of this literature is to apply the Lucas (1972) style empirical monetary misperception hypothesis. While some studies have used individual forecasts to estimate constant parameter rules, potentially permitting a single parameter break (Carvalho & Nechio, 2014; Andrade et al. 2016, 2019), others have used consensus surveys forecasts to estimate perceived policy rules (e.g., Bundick et al., 2015; Kim & Pruitt, 2017; Jia et al., 2023). A related contribution to this field is this study, which uses the Autoregressive Distributed Lag Model (ARDL) to estimate the validity of monetary misperception hypothesis in Nigeria for the years 1985-2023.

3. Methodology

3.1 Methodological Framework

The Lucas Islands model is the most cited framework supporting the monetary misperception hypothesis (MMH), which was first proposed by Robert Lucas in 1972 as a fundamental component of New Classical macroeconomics. Lucas contended that economic agents respond to perceived real shocks when they are actually experiencing nominal shocks because they operate under imperfect information and therefore cannot immediately distinguish between changes in the general price level and relative price changes.

The equation is specified as follows;

$$Y_t - Y = a(P_t - E_t[P_t])$$

$$Y_t = actual\ output, Y = long - run\ output, P_t = actual\ price\ level, E_t[P_t] = expected\ price\ level\ (formed\ with\ imperfect\ imformation.$$

3.2 Research Design

In order to investigate the empirical validity of the Monetary Misperception Hypothesis (MMH), this study uses a quantitative research methodology and time series econometric analysis. According to the MMH's theoretical predictions, the emphasis is on examining how the real money supply, inflation, interest rate and exchange rate impact economic growth.

3.3 Model Specification

The objective of the paper is: to determine the impact perception of actual money supply and actual interest rate on economic growth. The model of estimation is

specified to achieve the objective of this study. The model is; Autoregressive Distributed Lag (ARDL). The study is built essentially from determinants of monetary misperception hypothesis captured by the New Classical macroeconomic paradigm particularly the work of Robert Lucas (1972). This study adopted and modified the model specified by Stein and Sunderam (2018), which determined the validity of monetary misperception hypothesis in Nigeria 1985-2023. The variables in the model are economic growth, money supply, actual inflation rate, actual interest rate and exchange rate

The model of this study is specified as follows in a functional form:

$$GDP = f(M2, AINFR, AINR, EXCH) \quad (3.1)$$

Equation 3.1 is transform into an econometric form as:

$$GDP_t = \beta_0 + \beta_1 M2_t + \beta_2 AINFR_t + \beta_3 AINR_t + \beta_4 EXCH_t + \varepsilon_t \quad (3.2)$$

Taking the natural log of equation 3.2 yields;

$$LogGDP_t = \beta_0 + \beta_1 LogM2_t + \beta_2 AINFR_t + \beta_3 AINR_t + \beta_4 LogEXCH_t + \varepsilon_t \quad (3.3)$$

Where: GDP_t is Economic Growth, $M2_t$ is Money Supply, $AINFR_t$ is Actual Inflation Rate, $AINR_t$ is Actual Interest Rate, $EXCH_t$ is Exchange Rate, β_0 is Constant Parameter, β_s is Coefficient of the Independent Variables, μ_t is Stochastic Disturbance Term.β_1**to**β_4**> 0**

3.3.1 Autoregressive Distributed Lag (ARDL) Model

To achieve the objective of the study, the Autoregressive Distributed Lag (ARDL) model is employed by the study. The ARDL model was developed by Pesaran & Shin (1999) and Pesaran, Shin and Smith, (2001). This model analyzed the possible impact between two or more variables.

The model is specified as follows:

$$\Delta GDP_t = \beta_0 + \beta_1 GDP_{t-i} + \beta_2 M2_{t-i} + \beta_3 AINFR_{t-i} + \beta_4 AINR_{t-i} + \beta_5 EXCH_{t-i} + \sum_{i=0}^{p} \beta_5 \Delta GDP_{t-i} + \sum_{i=0}^{p} \beta_6 \Delta M2_{t-i} + \sum_{i=0}^{p} \beta_7 \Delta AINFR_{t-i} + \sum_{i=0}^{p} \beta_8 \Delta AINR_{t-i} + \sum_{i=0}^{p} \beta_8 \Delta GDP_{t-i} + ECM + \mu_t \quad (3.4)$$

3.4 Stationarity Analysis

Stationarity of the series is a basic condition that must be satisfied in order to avoid the problem of spurious regression result, and also as means of selecting an estimation technique. Hence, the study tested for unit root with and without consideration of structural breaks. The study considered Augmented Dickey Fuller test and Phillips-Perron (PP) test assess unit root properties and integration order of the series without considering structural break.

The ADF and PP tests are method of testing the size of the co-efficient in the equation.

$$\Delta_x = \alpha 0 + ax_{t-i} + ab\sum\Delta_{x_{t-i}} + \mu_t$$

Where:

Ut is a white noise error term, and Δ is the first difference operator. The test hypotheses that there is a unit root or the variable is not stationary.

The Augmented Dickey-Fuller (ADF) test and Phillips-Perron tests are employed to analyse unit roots.

3.4.1 Augmented Dickey-Fuller (ADF) Test

Song and Witt (2000) indicate that the ADF approach obtains critical values based on Monte Carlo simulations. The ADF approach employed is based on three regressions:

$$\Delta y_t = \emptyset_0 + \gamma y_{t-1} + \sum \beta_i \Delta y_{t-1} + \varepsilon_t \quad (3.6)$$

$$\Delta y_t = \emptyset_0 + \emptyset_2 t + \gamma y_{t-1} + \sum \beta_i \Delta y_{t-1} + \varepsilon_t \quad (3.7)$$

$$\Delta y_t = \gamma y_{t-1} + \sum \beta_i \Delta y_{t-1} + \varepsilon_t \quad (3.8)$$

$$\boldsymbol{Where}: \Delta y_t = (y_{t-1} - y_{t-2});\ \Delta y_{t-2} = (y_{t-2} - y_{t-3})$$

The variables are tested at level and first difference, based on the procedure recommend by Enders (1995), a flow chart, as illustrated below.

Estimate equation: $\Delta y_t = \theta_0 + \theta_2 t + \gamma y_{t-1} + \sum \beta_i \Delta y_{t-1} + \varepsilon_t$ (3.9)

$$y_t - y_{t-1} = H_0 : \gamma = 0 \quad (3.10)$$

$$H_0: \gamma \neq 0$$

3.4.2 Phillips-Perron (PP) Test

Phillips and Perron (1988) developed the PP test to be employed in this study that is similar to ADF tests. However, the PP test is more comprehensive because the test incorporates an automatic correction to the Augmented Dickey-Fuller procedure to allow for auto-correlated residuals and heteroscedasticity. Also, unlike the ADF test, the PP test does not require the specification of the lag length (P). The PP test is based on the t – statistic calculation specified:

$$t_\alpha^{pp} = t_\alpha \left(\frac{\gamma_0}{f_0}\right)^{1/2} - \frac{T(f_0 - \gamma_0)(s_{\eth})}{2 f_0^{1/2} s} \quad (3.11)$$

Where: f_0 = Residual estimator; Y_0 = Error variance estimator with; Frequency = 0; $s_{\eth}$ = standard error coefficient; s=standard Error.

Similar to the ADF tests, the conclusions and hypothesis for the PP tests is the same.

3.5 Sources of Data

The study employed secondary data and annual time series in nature.

Table 1: contain the variables and their sources:

Table 3.1 Data, Sources

Variables	Sources
GDP	World Bank
Actual Money Supply	World Bank
Actual Interest Rate	World Bank
Actual Inflation Rate	World Bank
Exchange Rate	World Bank

Source: World Bank (2023)

4. Result and Discussion

This section deals with the analysis of the data and interpretation which will help in drawing conclusion and recommendation of the study.

4.1 Descriptive Statistics

Descriptive statistics has been used in this study to provide summary in the form of mean, standard deviation, minimum and maximum of the variables.

Table 1: Result of Descriptive Statistics

	GDP	M2	AINFR	AINR	EXCH
Mean	17.21917	1.05E+13	19.07783	6.816815	120.9056
Median	14.66963	1.77E+12	12.87658	7.203185	100.5039
Maximum	27.37879	5.22E+13	72.83550	11.06417	482.7641
Minimum	9.063329	2.12E+10	5.388008	0.316667	49.77684
Std. Dev.	6.091984	1.45E+13	16.97716	2.448488	78.92530
Skewness	0.327441	1.323321	1.829618	-0.997731	2.932668
Kurtosis	1.424650	3.652750	5.123914	4.158635	12.83408
Jarque-Bera	4.729722	12.07504	29.08915	8.651989	213.0559
Probability	0.093962	0.002387	0.000000	0.013220	0.000000
Sum	671.5477	4.10E+14	744.0353	265.8558	4715.319
Sum Sq. Dev.	1410.266	8.03E+27	10952.51	227.8136	236709.7
Observations	39	39	39	39	39

Source: Author's computation using Eviews10.

The result revealed that both the mean and median for each of the variables value are above unity. The skewness value shows that (GDP, M2, AINFR and EXCH) are recorded a positive skewness, which implies that the distribution has a long right tail. This is in exception of (AINR), recording a negative skewness, which implies has a long-left tail. Also the values of kurtosis such as M2, AINR, AINFR and EXCH, are greater than 3 hence they are leptokurtic, GDP is less than 3, and means is platykurtic. This is in agreement with the study conducted by Bauer et al. (2023) and Schmeling et al. (2022). The normality result shows that the probability of value of (M2, AINFR and EXCH) are statistically significant at 5% level of significant, while GDP is statistically insignificant at 5% level of significant.

4.2 Correlation Matrix

To determine the simple relationship between the variables, pair wise correlation analysis was carried out and the result is below.

Table 2: Result of Pair Wise Correlation Result

Correlation Probability	GDP	M2	AINFR	AINR	EXCH
GDP	1.000000 -----				
M2	0.847099 0.0000	1.000000 -----			
AINFR	-0.283323 0.0805	-0.240007 0.1411	1.000000 -----		
AINR	0.296201 0.0671	0.202130 0.2172	0.049590 0.7643	1.000000 -----	
EXCH	-0.136055	-0.054305	0.070041	-0.346904	1.000000

	0.4089	0.7427	0.6718	0.0305	-----

Source: Author's computation using Eviews10.

Table 2 revealed that M2 and AINR have a positive relationship with GDP, while AINFR and EXCH have a negative relationship with GDP.

4.3 Unit Root Test

The unit root test has been conducted to determine the stationary condition of the time series, and also to know their order of integration. Augmented Dickey-Fuller (ADF) and Phillips-Perron test were employed. The result test is presented below:

Table 3: Results of Unit Root Test (ADF & P-P At Level and At First Differenced)

Variables	ADF Statistics	5% Critical Value	Prob. Value	Status	Order of Integration
ADF AT LEVEL VARIABLES					
LGDP	-1.500760	-2.943427	0.5221	Non Stationary	I(0)
LM2	-2.247831	-2.945842	0.1938	Non Stationary	I(0)
AINFR	-2.321268	-2.945842	0.1711	Non Stationary	I(0)
AINR	-4.063495	-2.945842	0.0032	Stationary	I(0)
LEXCH	-4.306368	-2.943427	0.0016	Stationary	I(0)
ADF AT FIRST DIFFERENCE VARIABLES					
LGDP	-4.598442	-2.954021	0.0008	Stationary	I(1)
LM2	-3.472132	-2.943427	0.0145	Stationary	I(1)
AINFR	-5.154867	-2.951125	0.0002	Stationary	I(1)
P-P AT LEVEL VARIABLES					
LGDP	-0.634632	-2.941445	0.8508	Non Stationary	I(0)
LM2	-1.484090	-2.943427	0.5307	Non Stationary	I(0)
AINFR	-2.706516	-2.941145	0.0823	Non Stationary	I(0)
AINR	-4.228760	-2.941145	0.0000	Stationary	I(0)
LEXCH	-4.122965	--2.941145	0.0026	Stationary	I(0)
P-P AT FIRST DIFFERENCE VARIABLES					
LGDP	-4.857559	-2.943427	0.0003	Stationary	I(1)
LM2	-3.308488	-2.943427	0.0216	Stationary	I(1)
AINFR	-7.531357	-2.943427	0.0000	Stationary	I(1)

Source: Author's Computation using EVIEW10

Table 3 revealed that the ADF and PP unit root test result. AINR and EXCH are stationary at level. This is true since the absolute value of ADF and PP test statistics for these variables are greater than the 5% critical values. While the variables of (GDP, M2 and AINFR) became stationary at first difference given the 5% level of significance, since the absolute value of ADF and PP are greater than the absolute value of 5% critical value of the ADF and PP.

4.4 Autoregressive Distributive Lag (ARDL) Results

The result of ADF and PP are combination of stationarity at I(0) and I(1) necessitated the need to run ARDL Long-run result.

4.4.1 ARDL Bound Test for Co-integration

Table 4: Bound Test for Cointegration

Test Statistic	Significance	Bound Critical Values		
		I(0)	I(1)	K
F-statistic	10%	2.2	3.09	4
14.18170	5%	2.56	3.49	
	2.5%	2.88	3.87	
	1%	3.29	4.37	

Source: Author's computation using Eviews10

The result of the bound test of co-integration is reported in Table 4, the result shows that the value of F-statistics 14.18170 is higher than upper bound of critical value at 5% level of significance. Therefore, the variables have long-run equilibrium impact. The long-run ARDL bound test result values indicate that there is long run equilibrium impact perception among the variables (economic growth, money supply, actual interest rate, actual inflation rate and exchange rate) in Nigeria. The findings is in line with Stein and Sunderam (2018).

4.4.2 ARDL Long-run Results

Table 5: ARDL Long-run Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
LGDP(-1)	1.084324	0.071759	15.11058	0.0000
LM2	1.001823	0.121125	8.270966	0.0000
LM2(-1)	-1.001358	0.124676	-8.031656	0.0000
AINFR	-0.004039	0.000953	-4.238417	0.0002
AINR	-2.59E-05	0.006779	-0.003817	0.9970
LEXCH	-0.055253	0.049401	-1.118478	0.2722
LEXCH(-1)	0.086314	0.047137	1.831136	0.0770
C	-0.503882	0.241517	-2.086315	0.0456

Source: Author's computation using Eviews10

The table 5 revealed that the coefficient value of money supply shows a positive and statistically significant at 5% level, 1% increase in money supply perception lead to an increase in economic activity of 18%. While actual inflation rate, actual interest rate and exchange rate values shows a negative sign and statistically insignificant at 5% level, except inflation rate is significant, 1% increase in actual inflation rate, actual interest rate and exchange rate it lead to a decrease of economic activity

about 40%, 59%, and 55%. Is in line with the study of Stein and Sunderam (2018).

4.4.3 ARDL Short-run Results

Based on the presence of co-integrating equations showed by the results of the ARDL Long-run Bound test, the error correction modeling was carried out to examine the short-run dynamic and long-run equilibrium reconciling the short run behavior (or value) of an economic variable with its long-run behavior (or value).This states the relationship between the two can be expressed as error correction mechanism.

Table 6: Error Correction Mechanism (ECM)

ECM Regression

Case 2: Restricted Constant and No Trend

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LM2)	1.001823	0.084730	11.82370	0.0000
D(LEXCH)	-0.055253	0.030906	-1.787787	0.0839
CointEq(-1)*	-0.804324	0.008463	9.963530	0.0000

Source: Author's computation using Eviews10

Table 6 shows that the error correction mechanism (ECM) of 80% in the short term disequilibrium has been corrected by economic growth. The coefficient of co-integration equation is correctly signed as negative (-0.89) less than 1 and statistically significant at 5% level of significance, this implies that fluctuation in economic growth in the short run are primarily caused by misperception about changes in interest rate, inflation rate, money supply and exchange rate.

4.4.4 Diagnostic Results of ARDL

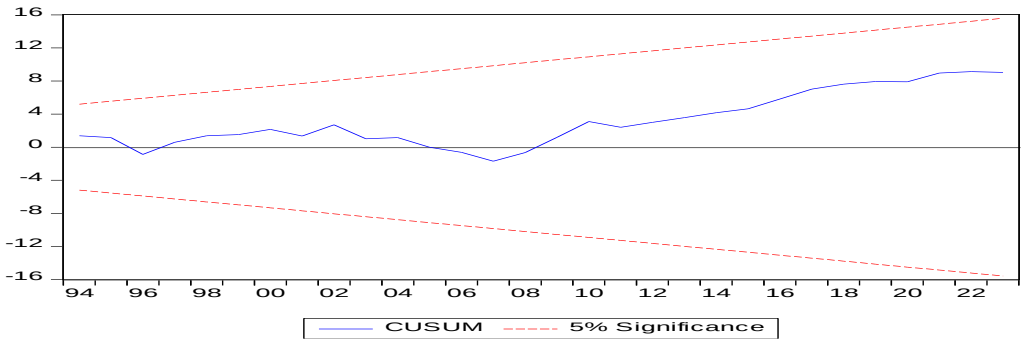
To check the reliability of the long-run and short-run models, diagnostics test such as serial correlation (Bruch & Godfrey LM Test), heteroskedasticity (Bruch-Pagan-Godfrey), and normality test were performed.

Table 7: Diagnostic Test Result

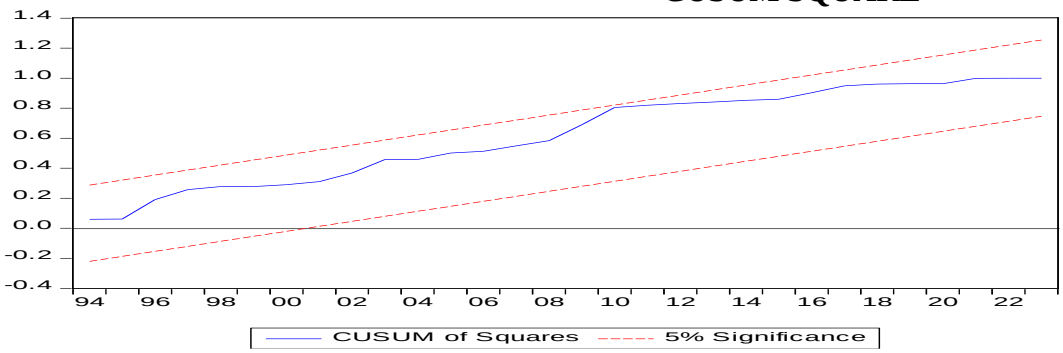
Breusch-Godfrey Serial Correlation LM Test			
F-statistics	0.654536	Prob. F(2,28)	0.5275
Obs R-squared*	1.697247	Prob. Chi-Square(2)	0.4280
Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistics	1.096926	Prob. F(7,30)	0.3902
Obs R-squared*	7.744001	Prob. Chi-Square(7)	0.3557
Scaled explained SS	5.319858	Prob. Chi-Square(7)	0.6210
Normality Test			
Jarque-Bera	3.423867	Probability	0.180516

Source: Author's Computation using Eview10.

CUSUM



CUSUM SQUARE



Source: Author's Computation using EVIEW10.

The results of diagnostics tests have been presented in Table 7 which showed that the error terms are normally distributed, because the probability value of Jarque-Bera (0.180516) is statistically insignificant at 5% level of significance. Similarly, the model is well specified and free from serial correlation and heteroscedasticity problem. The Stability of both the short and long run parameters were checked using CUSUM and CUSUMsq, both the figures revealed that, the plots are within the 5% critical bounds and justifies the stability of the models during the study period (1985-2023).

This research studied the validity of monetary misperception hypothesis in Nigeria covering the period from 1985-2023. This study specifically determines the impact perception of actual money supply and actual interest rate on economic growth in Nigeria. The study used annual data, various econometric techniques such as, Correlation, and Descriptive statistics, Augmented Dickey-Fuller (ADF), Phillip-Perrons unit root test and Autoregressive Distributive Lag (ARDL) test are employed, to carry out this analysis. The results of the analysis revealed some relevant findings on the validity of monetary misperception hypothesis in Nigeria.

The findings of the study are summarized as follows:

i. There is long-run impact perception of money supply and interest rate on economic growth in Nigeria based on ARDL long-run result and ARDL bound test co-integration.

ii. The fluctuations in economic growth in the short run are primarily caused by misperception about changes of price level in Nigeria based on ECM result

5. Conclusion and Recommendation

5.1 Conclusion

Based on its major findings, the study concludes that there is existence of long-run monetary misperception hypothesis in Nigeria. Similarly, the fluctuations in economic growth in the short run are primarily caused by misperception about changes of price level in Nigeria. It is concluded that the misperception of money supply, interest rate, inflation and

exchange rate it lead to a negative response on economic growth in Nigeria.

5.2 Recommendation

Based on the empirical findings of this study the following recommendations were put forward:

The public's learning from observed policy acts is a major factor in shifting attitudes toward monetary policy. In accurate information: Economic actors may mistakenly interpret inflation as a relative price shift since they base their judgements on local prices. Rational expectations: people change beliefs over time, lowering misperceptions as they learn.

References

Abduletif, A. A., Walle, A. Y., Baylie, F. S., Berihun, W. E., & Menelek, D. A. (2024). Analyzing the Dynamics of Monetary policy and Economic Growth in Ethiopia: an Autoregressive Distributed Lag (ARDL) Approach. *Discover Sustainability.*

Afrouzi, H., & Choongryul, Y. (2021), "Dynamic Rational Inattention and the Phillips curve," *Working Paper 8840, CESifo.*

Andrade, T., Philippe, H., Gaetano, G., Eric, M., & Benoit, M, (2019), "Forward Guidance and Heterogeneous beliefs," *American Economic Journal: Macroeconomics, 11(3), 1–29.*

Bauer, G., Michael, D., Ben, S. B., & Eric, M., (2023) "Risk Appetite and the Risk taking Channel of Monetary Policy," *Journal of Economic Perspectives, 37 (1), 77–100.*

Bauer, G., Michael, D., & James, D. H., (2018) "Robust Bond Risk Premia," *Review of Financial Studies, 31 (2), 399–448.*

Bekele, G. (2024). Effects of Transmission Mechanism of Monetary Policy Channels on Economic Growth in Ethiopia: Cointegration and Causality Analysis Approach. *International Journal of Business and Economics Research.* 13(4), pp. 106-127.

Bundick, B., et al. (2015) "Estimating the Monetary Policy Rule Perceived by Forecasters," *Federal Reserve Bank of Kansas City, Economic Review, 100 (4), 33–49.*

Caballero, R. J., & Simsek, A, (2022a) "A Monetary Policy Asset Pricing Model, *National Bureau of Economic Research working paper wp30132.*

Carvalho, C., & Fernanda, N, (2014) "Do People Understand Monetary Policy?" *Journal of Monetary Economics, 66, 108–123.*

Carvalho, C, Fernanda, N., & Tiago, T, (2021) "Taylor Rule Estimation by OLS," *Journal of Monetary Economics, 124, 140–154.*

Cogley, T., Christian M., & Argia, M. S, (2015) "Optimized Taylor Rules for Dis-inflation when agents are learning," *Journal of Monetary Economics, 72, 131–147.*

Cogley, T., & Thomas, J. S, (2005) "Drifts and Volatilities: Monetary policies and Outcomes in the post WWII US," *Review of Economic Dynamics, 8 (2), 262–302.*

Jia, P., Haopeng, S., & Shikun, Z, (2023), "Monetary Policy Rules and Opinionated markets," *Economics Letters, 223, 110995.*

Kim, C., & Charles, R. N, (2006) "Estimation of a Forward-Looking Monetary Policy rule: A time-varying Parameter Model Using Ex post Data," *Journal of Monetary Economics, 53 (8), 1949–1966.*

World Bank (2023). World Development Indicators. DC. *Available athtt://www.worldbank.org*

Stein, F. N., & Sunderam, E. O. (2018). Monetary policy transmission

mechanism on economic growth: A FAVAR approach. *International Journal of Economics and Finance, 7(8). http://dx.doi.org/10.5539/ijef.v7n8p22*.