

# **Asymmetrical Effect of Inflation on Economic Growth in Nigeria: Evidence by Nonlinear ARDL Approach**

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## **Abstract**

*Inflation and sustainable growth have been the primary macroeconomic goals of any growing country, including Nigeria. Many researchers have looked into the impact of inflation on economic growth in depth; previous studies assumed that inflation has an asymmetric effect on Economic growth. The goal of this study is to use the Nonlinear Autoregressive Distributed Lag (NARDL) approach to investigate the asymmetric effect of inflation on economic growth in Nigeria from 1990 to 2020. In the long run, the effects of inflation on economic growth are negative and asymmetric. In addition, the paper provides empirical evidence for policymakers to plan monetary policies. The study also provides empirical evidence for the authorities to plan monetary policies and control the inflation rate to achieve sustainable economic growth and development in the long run.*

**Keywords:** *Inflation, Money supply, Economic Growth, Asymmetry*

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## **I. Introduction**

The general debate and controversies on inflation and economic growth nexus have remained an issue of concern in developed and developing economies. This has emanated from a lack of consensus among conceptual definitions, theoretical and empirical evidence (Omoke and Oruta, 2015). One of such controversies was on the concept of inflation; for example, Milton Freidman (1963) contends that inflation every time and far and wide is a monetary phenomenon and can only be produced by a quick rise in the money quantity than growth output. This school of thought believes that too much money in circulation that does not correspond to the level of output leads to a general increase in the prices of goods and services, thereby causing disequilibrium in the economy.

On the contrary, Keynes (1936) and Khan (2017) noted that additional money in the economy would lead the way to a fall in the prices of goods and services. Thus, according to them, government spending will eventually lead to increased business activities and economic growth through the multiplier effect. This implies that government spending will boost aggregate output and generate more income, increasing the Gross Domestic Product (GDP). However, the economic situation in Africa concerning Inflation on economic growth produced a paradox. According to United Nations (UN) monthly briefing on global economic issues (2017). Nigeria, Africa's largest economy, faces challenging economic growth due to continued intense downward pressure on her domestic currencies.

However, Nigerian inflationary pressure has continued to increase, with consumer prices increasing by 18.7 percent in January 2016, the fastest pace in twelve years. The price increase is related to a 37 percent depreciation of the local currency (Naira) after the Central Bank of Nigeria formally removed its US dollar peg in June 2016. Due to a lack of foreign currency, parallel market rates surpassed the official rate by around 60 percent in mid-February 2016. Inflationary pressures in Nigeria have been exacerbated by capital outflows caused by a lack of long-term remedies to the primary causes of Naira's depreciation. In addition, oil revenues have decreased since 2014 as a result of pipeline assaults. As a result, Nigeria's GDP dropped by -1.54 percent in 2016, marking the country's first annual contraction in 25 years, Ministry of Budget and National Planning (2017). In addition, during the 2016 recession, the Economy of Nigeria was growing fast at 6.3%. By contrast, before COVID-19 struck, the economy was growing at 2.2%. As a result, inflation was in the single digits in 2014, compared to about 12% in 2019. Moreover, the monetary authority has implemented many policies to curb hyperinflation in the decade 1980s. As a result, the inflation rate tends to decrease below 10% in the last recent years.

The effects of inflation on the growth of the Nigerian economy, in particular, have therefore been a vital issue of considerable debate. This has attracted the attention of donor agencies, policymakers, and

practitioners. Soaring and sustained output growth in coexistence with a low inflation rate is the common objective of macroeconomic policy worldwide. However, whether such an objective could be achieved is an issue of concern in underdeveloped countries like Nigeria (Nazir & Saira, 2017). In the 2000s, Nigeria has witnessed a sharp rise in the inflationary rate up to 18.87 percent, until 2007 when it falls to 5.41. It further rose steadily from 11.58 percent in 2008 to 13.72 percent in 2010. Between 2011 and 2014, inflation had continuously dropped to as low as 8.0 percent, with a dotted increase of 1 percent in 2015, 9 percent (NBS 2017). Summarily, from 1974 to 2014, the average annual rate of headline inflation was a double-digit rate of 20.47 percent. This trend reveals negative signals of Nigeria's investment environment (CBN, 2018).

Furthermore, according to the Economic Recovery and Growth Plan (ERGP, 2017) statistics, inflation has become a source of concern in Nigeria's economy. As real GDP increased by 4.62 percent in 2016, it increased by 2.19 percent in 2017 and by 7 percent in the year 2020. This expansion was fuelled by fiscal stimulus, aided by an increase in non-oil Federal income, increased oil output, and the resolution of payment arrears, particularly joint venture cash calls. In addition, growth in the non-oil sector, especially agriculture, manufacturing, services, and light industries, will be central to overall GDP growth. The slight dip in growth in 2019 has resulted from the general election with a quick recovery in the following year, 2020. Ultimately, the GDP growth in 2020 was flamboyant, significantly increasing to 7.00 percent (ERGP 2017).

Olu and Idih (2015) note that despite the relative annual increases in GDP, poverty and unemployment levels in Nigeria have been persistent. This is attributed to the fact that inflation had continued to impede the level of investment. It, therefore, shows that the Inflation in Nigeria is not lively to translate to sustainable development in the long run. This trend and dynamics of inflation generate controversies in several studies in Nigeria, for example, the work of Anidiobu (2018); Gatawa, Abdulgafar, and Olarinde (2017); Obi, Denis, Yuni, and Okezie (2016); Olu and Idih, (2015); Sa'idu and Muhammad (2015) and Bayo (2012) have found a positive economic growth and Inflation nexus in Nigeria, while others like Idris & Suleiman (2019); Jibrilla (2018); Okoroarfor & Olasahinde (2018); Idris & Bakar (2017); Doguwa (2010) have found that inflation is negatively related to economic growth, but the problem with the above studies is that they failed to include some variables that might be influential to economic growth. Such variables are; Broad Money (MS), Interest rate spread (IRS), Government Consumption Expenditure (GCX), and Population (POP), which may likely influence economic growth.

On the other hand, the Inflation rate in 2016 was 18.55 percent with a decline rate of 15.74 percent in 2017, which resulted from Nigeria's recovery from the recessionary trend it had found herself in 2016; accordingly, Inflation in Nigeria declined to 12.42 percent in 2018 with a slight increase of 13.39 percent in the early Q1 of 2019, ultimately, the inflation rate fell at a single-digit rate of 9.90 percent in the year 2020 (ERGP, 2020)

## **II. Theoretical Literature**

### ***Endogenous growth theory***

Endogenous growth theory illustrates economic growth generated by factors within the production process such as economies of scale, increasing return, or induced technological changes instead of exogenous factors such as increased population. The inflation rate (tax) lowers both the return on all capital and the growth rate when endogenous growth models are set within a monetary exchange framework of Lucas (1988), Lucas and Stokey (1983), McCallum and Goodfriend (1987). Furthermore, an increase in inflation, according to Gokal and Hamif (2004), lowers today's marginal values; the last want of consumption equals the marginal product of the previous unit's cost.

### ***Structural Inflation Theory***

This theory considers economic structural factors associated with more demand or less demand, supply increase or decrease. According to Mccullum (1987), structural improvement brings about rapid economic growth. Conversely, if less developed countries do not improve their deep-seated underdevelopment, they will face inflation. He also connects structural inflation, as defined by structuralism, to population growth and immigration-driven growth in the service sector.

### ***Keynesian Theory of Inflation***

John Maynard Keynes (1936) and his followers believed that a rise in aggregate demand (AD) originated demand-pull inflation. When total demand for goods and services exceeds aggregate supply (AS) and provision of goods and services in the economy, demand-pull inflation occurs. Consumption, investment, and government spending all contribute to aggregate demand in this sense.

## **2.2 Empirical Literature**

Gillman and Harris (2008) investigate the effect of inflation on economic growth. The purpose was to

look at how inflation affected economic growth in 13 transition nations between 1990 to 2013. The result indicates a negative impact of inflation on economic growth.

Odusanya & Atanda (2010) Investigate the inter-relationship between inflation and its determinants in Nigeria between 1970 and 2007. Using the Augmented Engle-Granger and Error Correction Mechanism (ECM). The finding indicates that the rate of change in the inflation rate influences the rate of change in the inflation rate positively. Changes in GDP growth rate, imports, and the prior inflation rate, on the other hand, all have a significant impact on the change in inflation rate in the short run.

Bittencourt (2012) investigated the inflation and economic growth in Latin America: Some panel time-series evidence (Argentina, Bolivia, Brazil, and Peru). The study used panel data from 1970-2007. The study employed fixed effect (FE), random coefficient estimators (RC), and pooled ordinary least square (POLS). The result shows a negative relationship between inflation and economic growth.

Aminu and Anono (2012) study the effect of inflation on Nigeria's Economic Growth and Development from 1970 to 2010. The objective was to explore the impact of inflation on economic growth and development in Nigeria. The study used Augmented Dickey-Fuller in testing the unit root and the Granger causality test between GDP and inflation. The result shows that inflation is insignificant and positive.

Umaru and Zubairu (2012), using regression analysis and causality estimation test on data ranging from 1970 to 2010, examine how inflation impacts the Nigerian economy. The result shows a unidirectional relationship between gross domestic product and the rate of inflation. The result also indicates that inflation reveals a positive influence on the growth of the economy.

Hossain *et al.* (2012) Investigate inflation and economic growth in Bangladesh. Data from 1978 to 2010 was used in the study. The objective of the study was to discover the long-run relationship between inflation and economic growth. A co-integration and Granger causality test were used in the investigation. In Bangladesh, the Johansen-Juselius co-integration result suggests that there is no co-integration between inflation and economic growth.

Kasidi & Mwanamela (2013) investigated the impact of inflation on economic growth in Tanzania using annual time series data from 1990 to 2011. The objective of the study was to explore the effect of inflation on growth in Tanzania. The correlation coefficient and Johansen Co-integrating relationship between inflation and economic growth show no long-run relationship between inflation and economic growth in Tanzania.

Inyama (2013) examined whether inflation weakens Economic Growth? from 1970 to 2010. The objective was to explore the link between inflation and Economic Growth in Nigeria. Using the ordinary least square (OLS) approach to examine the relationship among the variables, causality was assessed using the Granger causality test. In addition, Johansen Co-integrated test was also adopted to check whether short-term relationships would be maintained in the long run. The result shows that inflation is negatively related to the real GDP.

Rahman (2014) examined the relationship between inflation and economic growth in Bangladesh. The study used time series data between 1976 to 2011. The objective was to evaluate the empirical relationship between inflation and economic growth in Bangladesh. The study used the VAR model and VAR Granger Causality test. The result indicates a significant negative relationship between inflation and economic growth in Bangladesh.

Ahiakpor and Akapare (2014) examined short-run and long-run inflation and Economic Growth Nexus in Ghana using quarterly data from 1986Q1 to 2012Q4. The major goal was to look into the relationship between Ghana's inflation and economic growth. Co-integration and ECM were used in the investigation. Economic growth and inflation have a negative association, according to the findings.

Olu and Idih (2015) investigated the relationship between inflation and economic growth in Nigeria using annual time series data from 1980 to 2013. The Ordinary Least Squares method was employed in the research (OLS). Inflation has a positive impact on Nigeria's economic growth, according to the findings.

Bakare *et al.* (2015) The impact of Nigeria's inflation rate on economic growth was investigated (1986-2014). The stationarity of the variables was tested using the Augmented Dickey-Fuller unit root test, and regression analysis was employed to assess the effect of inflation on economic growth. The Granger causality test, on the other hand, was employed to determine whether inflation and economic growth are linked. Inflation has a negative impact on economic growth, according to the findings. Furthermore, the Granger connection demonstrates that GDP causes inflation, but inflation does not cause GDP.

Oladipo *et al.* (2015) Using annual time series data from 1981 to 2014, researchers looked at inflation, interest rates, and economic growth in Nigeria. This used the Augmented Dickey-Fuller test to test the unit root properties of the series. The result of the unit root shows that all the variables are stationary at the first difference, but inflation is stationary at the level. The Ordinary Least Square (OLS) approach was used in the research. The Johansen co-integration test was used to examine the long-run relationship between the variables, as well as the causality test.

Al-Taeshi (2016) Using co-integration and the Granger causality test, this study looks at how inflation

affects the Malaysian economy from 1970 to 2014. According to the findings, there is an inelastic relationship between the inflation rate and economic growth

Svigir and Milos (2017) The relationship between economic growth and inflation in Italy and Austria was studied using a comparative threshold statistical analysis from 1980 to 2016; the results showed that low inflation is essential but not sufficient for economic growth.

Enejoh & Tsauni's (2017) study examines the impact of inflation on economic growth in Nigeria from 1970 to 2016. They employed the ARDL technique to co-integration and the error correction mechanism (ECM) to examine the influence of inflation on economic growth in the short and long run. Inflation and foreign exchange have a favorable impact on economic growth in both the short and long run, according to the findings.

Idris and Suleiman (2019) investigate the influence of inflation on the economic growth of Nigeria from 1980 to 2017. The study applies a vector error correction mechanism on the following variables: Gross Domestic Product, Inflation rate, Interest rate, and the country's exchange rate. The findings show that there is a long-run relationship between the variables and that interest rates and inflation have a significant and negative long-run impact on the growth of the Nigerian economy.

Obinna (2020) examined inflation's effect on household final consumption expenditure in Nigeria from 1981 to 2018 using the ordinary least square (OLS) method. The study indicates that a positive long-run relationship between inflation and household consumption expenditure in Nigeria.

Adaramola & Dada (2020) studied the impact of inflation on the economic potential of the Nigerian economy According to the study's conclusions, inflation, and the real exchange rate have a detrimental influence on economic growth. Interest rates and money supply, on the other hand, have a positive and significant impact on economic growth.

Ezeibekwe (2020) examines how variations in the inflation rate affect the efficacy of monetary policy tools to stabilize the Nigerian economy and boost investment Using the VECM, the study's findings show that the effect of interest rates on investment is dependent on the rate of inflation.

Inim *et al.* (2020) examined aside money supply, other determinants of inflation in Nigeria using the Auto Regressive Distributed Lag (ARDL) method on quarterly data from 1999Q1-2018Q4. Their research revealed that poor infrastructure, an unstable exchange rate, political instability, corruption, and double taxation all contribute considerably to inflation. The findings revealed a link between these other influencing factors and inflation. The ARDL analysis revealed a substantial long-short run link.

Onwubuariri *et al.* (2021) study use the Autoregressive Distribution Lag (ARDL) model and the Error Correction Model (ECM) to examine the inflation and economic growth in Nigeria from 1980 to 2019. Results indicated that inflation has negatively affected economic growth over the years as it reduces competitiveness and lowers the purchasing power of money.

### III. Methodology

#### 3.1 Sources of Data

This study uses the data sourced from the World Development Indicators. In addition, the study used time series data between the periods of 1990 to 2020 on an annual basis for the analysis. The data include; data on Gross Domestic Product (GDP), Inflation, and Broad Money (MS), all sourced from the World Bank data portal (2020).

#### 3.2 Model Specification

To investigate the asymmetric effect of inflation on Nigerian economic growth from 1990 to 2020, and in accordance with previous research (Dornbusch, 1993; Marvalova, 2013; Law & Singh, 2014; Hoang, 2019), we propose the following study model:

$$\ln GDP_t = +\lambda_0 + \lambda_1. INF_t + \lambda_2. MS_t + u_t \quad (1)$$

LnGDP is the logarithm of GDP, INF is the inflation rate, and MS is broad money.

An estimate of Eq.1 demonstrates the long-run consequences of exogenous variables Furthermore, as indicated in the literature review, the assumption of the symmetric effect of inflation may not be precise because changes in inflation may have varying degrees and orientations on economic growth. Therefore, to test inflation and asymmetry effects, we adopt Shin *et al.* (2013).

$$INF_t = INF_0 + INF\_POS + INF\_NEG \quad (2)$$

Where:  $INF_0$  is constant. Therefore,  $INF\_POS$  and  $INF\_NEG$  are sums of positive and negative changes in inflation. These are calculated as follows:

$$INF\_POS_t = \sum_{i=1}^t \Delta INF\_POS_i = \sum_{i=1}^t \max(\Delta INF_i, 0) \quad (3)$$

$$INF\_NEG_t = \sum_{i=1}^t \Delta INF\_NEG_i = \sum_{i=1}^t \min(\Delta INF_i, 0) \quad (4)$$

Note:  $\Delta INF_t = INF_t - INF_{t-1}$

The long-run relationship in Equation 1 can be rewritten as follows:

$$LnGDP_t = \lambda_0 + \lambda_1 \cdot INF\_POS + \lambda_1 \cdot INF\_NEG + \lambda_2 MS_t + u_t \quad (5)$$

Note:  $\lambda^+_1 + \lambda^-_1, \lambda_2$  are the regression coefficients that present long-run impacts

In order to prepare the short-run effects, we follow Pesaran et al., (2001); Shin et al. (2013) Bounds testing approach and rewrite Equation 2 as and ECM, as follows:

$$LnGDP_t = +\beta_0 + \beta_1 \cdot LnGDP_{t-1} + \beta_2 \cdot INF\_POS_{t-1} + \beta_2 \cdot INF\_NEG_{t-1} + \beta_3 \cdot MS_{t-1} + \sum_{i=1}^{m1} \alpha_{1i} \Delta LnGDP_{t-i} + \sum_{i=0}^{m2} \alpha_{2i} \Delta INF\_POS_{t-i} + \sum_{i=0}^{m3} \alpha_{2i} \Delta INF\_NEG_{t-i} + \sum_{i=0}^{m4} \alpha_{3i} \Delta MS_{t-i} + \mu_t \quad (6)$$

Where:  $\Delta$  shows the first differences of the variables,  $\beta_i$  are coefficients of long-run effects,  $\alpha_i$  are coefficients of the short-run effects,  $\mu_t$  is the error term.  $m_1, m_2, m_3, m_4$  are lag lengths corresponding to each variable, calculated by ARDL model following AIC, SC, HQ criteria and adjusted R-squared.

#### IV. Empirical Results and Discussion

##### 4.1. Descriptive Statistics

*Table 1: Descriptive statistics*

| Variables    | Mean   | Median | Max    | Min   | Std.Error |
|--------------|--------|--------|--------|-------|-----------|
| LnGDP        | 7.512  | 7.523  | 7.844  | 7.202 | 0.242     |
| INF          | 18.021 | 12.218 | 72.836 | 5.388 | 16.662    |
| MS           | 17.705 | 15.788 | 27.379 | 9.063 | 6.028     |
| Observations | 30     | 30     | 30     | 30    | 30        |

##### 4.2. Results

###### 4.2.1. Stationarity Test

It is documented in the existing time series econometric literature that regression results may be spurious if the estimated variables are non-stationary or not cointegrated. As a result, testing for a unit root of each series is required. To determine the order of co-integration, we utilized the Augmented Dickey-Fuller (1981) (ADF) and Perron and Phillips (1988) (PP) tests. Results of the ADF test and PP test are shown in Table 2.

*Table 2: Stationarity test*

| Variables      | ADF Test  | PP Test   |
|----------------|-----------|-----------|
| LnGDP          | -1.522    | -1.522    |
| $\Delta$ LnGDP | -1.8154   | -2.460*   |
| INF            | -9.048*** | -4.428*** |
| $\Delta$ INF   | -5.894*** | -4.442*** |
| MS             | 1.278     | 1.487     |
| $\Delta$ MS    | -1.042    | -4.381*** |

Note: \*\*\*, \*\* and \* respectively denote significance levels of 1%; 5% and 10%.

Results in Table 2 shown the MS and LnGDP variables are stationary at I(1). INF variable is stationary at I(0). Hence, the motivation for the study NARDL of Shin et al. (2013) are satisfied.

###### 4.2.2. Optimal Lag Length Selection

NARDL model, optimal lag length selection is essential. The NARDL model automatically selects the maximum lag length is 3 in the case of Nigeria.

###### 4.2.3. Bounds Test

According to Engle and Granger (1987) on series data, there may be long-run cointegrations between variables. The long-run cointegration can be determined by F-statistics suggested by Pesaran et al. (2001).

**Table 3: Results of the cointegration test**

| F-Bound test for Eq.3 |       | Null Hypothesis: No levels relationship |      |      |
|-----------------------|-------|---|------|------|
| Test Statistic        | Value | Significant                             | I(0) | I(1) |
| F-statistic           | 4.315 | 10%                                     | 2.36 | 3.21 |
| K                     | 3     | 5%                                      | 2.78 | 3.77 |
|                       |       | 2.5%                                    | 3.14 | 4.10 |
|                       |       | 1%                                      | 3.64 | 4.67 |

As the linear ARDL approach, Shin et al. (2013) proposed the Bounds test. Table 3 shows that F-statistic = 4.315 > Upper bound I(1) = 3.77 at the 5% significance level this implied the null hypothesis is rejected.

Consequently, the results of the Bounds test reveal that there exist long-run cointegrations between LnGDP, INF, MS variables.

**4.2.3. Error Correction Model (ECM)**

Because the variables in the model have long-run co-integration, Equation 3 is estimated using the error correction model to identify the effects of the short-run coefficients. Table 4 shows the short-run effects of inflation and money supply on economic growth. At the 1% significance level, estimated results reveal that  $ECM(-1) = 1.0010$ . This indicates that economic growth can adjust to long-run equilibrium after each short-run created by inflation and money supply. Table 4 also provides that the asymmetric effects of inflation on growth are unclear in the short run.

**Table 4: Results of Error Correction Model**

| Variables            | Coefficient | Std. Error | t-Statistic | Prob   |
|----------------------|-------------|------------|-------------|--------|
| ECM(-1)              | 1.0010      | 0.4768     | 2.0996      | 0.0510 |
| $\Delta$ LnGDP(-1)   | 1.2568      | 0.1815     | 6.9229      | 0.0000 |
| $\Delta$ INF POS     | 0.0013      | 0.0011     | 1.1702      | 0.2581 |
| $\Delta$ INF NEG     | -0.0019     | 0.0007     | -2.8200     | 0.0118 |
| $\Delta$ INF NEG(-1) | 0.0015      | 0.0006     | 2.4248      | 0.0267 |
| $\Delta$ MS          | 0.0068      | 0.0030     | 2.2999      | 0.0344 |

Because our model contains long-run cointegrations between variables, Equation 3 is estimated using the error correction model to determine effect coefficients in the short run. Table 4 shows the short-run effects of inflation and money supply on economic growth. At the 5% level of significance, estimated data reveal that  $ECM(-1) = 1.001$ . This implies that economic growth is able to adjust to long-run equilibrium after each short-run shock is created by inflation and money supply. However, the results in Table 4 show that the asymmetric impacts of inflation on growth are not obvious in the short run.

To identify the asymmetry effects of inflation on the economic growth of Nigeria in the 1990-2020 periods, Table 5 below shows the estimated coefficients in the long run.

**Table 5: Estimated results of Long-run asymmetry test**

| Variables | Coefficient | t-statistic | Prob. |
|-----------|-------------|-------------|-------|
| INF_POS   | 0.001       | 1.170       | 0.258 |
| INF_NEG   | -0.002      | -2.820      | 0.012 |
| MS        | 0.007       | 2.299       | 0.034 |

Estimated results in Table 5 show that the results provide evidence to conclude the effect of inflation on economic growth is asymmetry. Accordingly, there is a negative effect on economic growth from inflation in the long run.

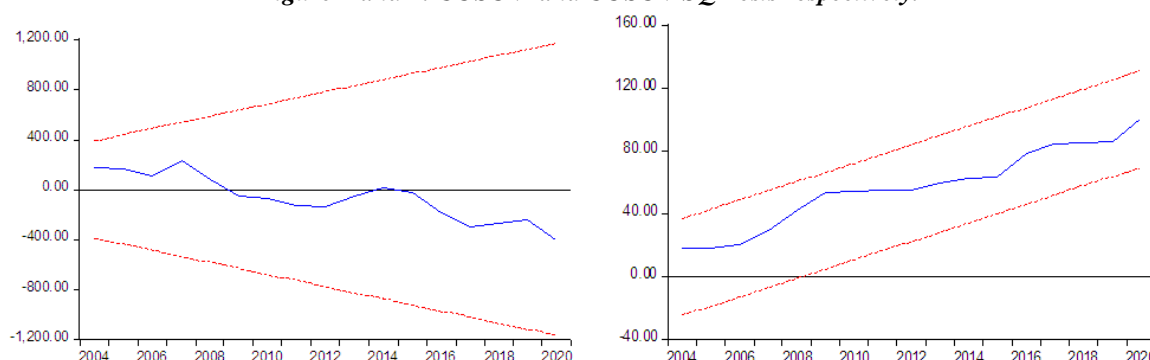
**4.2.4 Stability and Diagnostic Test**

Additional diagnostic tests are conducted, including autocorrelation, heteroskedasticity, distribution, and stability test through investigative the CUSUM and CUSUMSQ.

**Table 6: Diagnostic test**

| Type of test                  | Obs * R_square        |
|-------------------------------|-----------------------|
| Heteroskedasticity test       | 0.399 (Prob = 0.9289) |
| Serial correlation LM test    | 13.11 (Prob = 0.2384) |
| Ramsey RESET test             | 0.531 (Prob = 0.6030) |
| Jarque-Bera test on normality | 0.460 (Prob = 0.7944) |

**Figure 1 and 2: CUSUM and CUSUMSQ Tests respectively.**



## V. Conclusion and Policy Implications

This analysis confirms two primary aspects using time-series data from 1990 to 2020 and the Nonlinear Autoregressive Distributed Lag (NARDL) model proposed by Shin et al. (2013):

(i) There is strong statistical evidence to indicate that the long-run effect of inflation on economic growth is asymmetric. As a result, in the case of Nigeria, inflation has a negative effect on economic growth.

(ii) The money supply has a positive effect on economic growth in both the short and long run.

The policy implications are as follows:

1. The monetary authorities must expand the monetary policy. Because increasing the money supply encourages growth, but Nigeria's extreme money supply strategy may damage economic growth.

2. In Nigeria, inflation has a negative impact on economic growth, and high inflation will cripple economic activity. As a result, in order to attain strong and sustained growth rates, the Nigerian government needs to maintain low and steady inflation rates.

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