

INFLATION AND ECONOMIC GROWTH IN NIGERIA: AN ARDL BOUND TESTING APPROACH

ONWUBUARIRI, SOPHIE EZINNE

Department of Economics,
Adeleke University, Ede, Osun State, Nigeria
oe.sophie@gmail.com

&

OLADEJI, SUNDAY IDOWU

Department of Economics,
Adeleke University, Ede, Osun State, Nigeria
oladeji2002@yahoo.com

&

BANK-OLA, REBECCA FOLAKE

Department of Economics,
Adeleke University, Ede, Osun State, Nigeria
bankolafolake@gmail.com

Abstract

Inflation has continued to pose severe challenges in Nigeria's economic growth and stakeholders have been on their toes to see that a stable economy is possible. This led the study to evaluate the impact of inflation on Nigeria's economic growth for the past four decades, beginning from 1980 to 2019. Inflation rate, interest rate, exchange rate and government expenditure were the independent variables, while the gross domestic product was the dependent variable. Annual time series secondary data covering the period 1980 to 2019 were obtained from the World Development Indicators (WDI) published by the World Bank. Data collected were analysed using the Autoregressive Distribution Lag (ARDL) model and the Error Correction Model (ECM). Results indicated that inflation has negatively affected economic growth over the years as it reduces competitiveness as well as lowering the purchasing power of money. The study concludes that while inflation and exchange rate negatively impact the Nigerian economy's growth, interest rate maintains a positive relationship. Government consumption proved to be an insignificant factor in the growth of the economy. The study suggested that measures be put in place by the CBN through the Monetary Policy Committee to ensure that the rate of inflation is reduced to the barest minimum.

Keywords: Inflation Rate, Gross Domestic Product, Economic Growth, Real Interest Rate, Auto-Regressive Distributed Lag (ARDL) Model.

1. Introduction

The relationship between inflation and economic growth has, over the ages, been a source of concern for policymakers, economists and even governments of both the developed and developing countries, including Nigeria. In Nigeria, one of the Monetary Policy Committee mandates, through

the Central Bank of Nigeria, is promoting and maintaining price stability and ensuring a sound and efficient financial system in the country (CBN Act, 2007). This is because it is believed that monetary policies help encourage sustained growth in the economy by increasing the value of money and preventing inflation and other macroeconomic uncertainties, which will further boost the economy. On September 22, 2020, the Central Bank decreased the Monetary Policy Rate (MPR) by 100 basis points, from 12.5 per cent to 11.5 per cent, in order to lower the economy's money supply (CBN Statistical Bulletin, 2020). This reduction was made to address the rise in domestic prices and attract capital into the economy, thereby increasing the level of external reserves.

Despite these efforts, inflation has continued to pose significant challenges to the Nigerian economy's growth and development. The prices of goods and services have been on the increase. There has also been little or no production of goods and services. In other words, aggregate demand is more than aggregate supply and this has caused more money to chase fewer goods, thereby leading to inflation. The relationship between inflation and economic growth has been a controversial issue in macroeconomic theory and has remained a deliberated subject among policymakers. They can be traced back to the Latin American context in the 1950s. Hence, it has further prompted a long-standing debate between the structuralists and the monetarists (Umaru et al., 2012). The structuralists argued that inflation is necessary for economic growth, while the monetarists opine that inflation is detrimental to economic growth. According to Vinayagathan (2013), whether inflation affects real output growth or not depends on whether it affects the savings and investment level both in the short and long-run, respectively.

Many studies on the effect of inflation on economic growth have been done and researchers have different contradictory results. This is attributed to different macroeconomic conditions of the individual countries, different dataset and years of investigation, and different analysis techniques and model specifications. Unfortunately, despite the numerous studies aimed at providing solution to the problem of inflation, it has persisted, hence this study. However, this paper will use a recent dataset (1980 – 2019) and it will have its focus on the Nigerian economy to provide meaningful information on the level of inflation and its effect on the economy. This will go a long way in helping policymakers and other stakeholders in subsequent economic decisions. Given this background, this paper aims to examine the effect of inflation on Nigeria's economic growth. The study adopted the Autoregressive Distributed Lag Model (ARDL). The main result showed that inflation had a negative significant effect on the economy. This research is divided into five sections: the introduction, the literature review, the methodology, the results and discussion and finally, the conclusion and policy recommendations.

2. Literature Review

This section reviews various literatures on inflation. First, the conceptual review defines inflation and explains more precisely the concepts. Second, the theoretical review gives insight into the various theories that have been propounded on inflation. Lastly, the empirical review that bothers on the empirical findings by other scholars will also be examined.

2.1. Conceptual Review

Inflation occurs when the price of goods and services rises. When a price increase is sustained and exceeds a predetermined threshold, it is referred to as inflation. For example, an increase

in the money supply would quickly lead to an increase in the price level. In the literature, there are different kinds of inflation. Some examples of these varieties are: Demand-pull, which occurs when aggregate demand increases without a corresponding increase in supply while a supply push, or cost-push inflation occur when there, is a decrease in supply due to an increase in the cost/price of the commodity produced (Anochiwa & Maduka, 2015).

Inflation is the steady rise in the price level that can lead to low productivity of the population. If productivity is low, the economy will not grow as it should. Money is a medium of exchange for goods and services and the strength and stability of the purchasing power of money can be affected by inflation, which influences individuals' ability to acquire goods and services (Jacobs et al., 2014).

2.2. Theoretical Review

Various theories exist in explaining the relationship between inflation, interest rate, and economic growth, including the Monetarist Theory pioneered by Milton Friedman (1967). According to the theory, increasing the money supply faster than the economy's growth causes inflation, which is detrimental to economic growth. Interest rate control can be used to affect inflation and economic growth by changing the short-term interest rate set by the Central Bank (Bain and Howells, 2003). However, the effect of monetary policy changes is indirect and effects several channels. Expansionary monetary policy causes real interest rates to fall and investment spending to rise, resulting in an increase in aggregate demand. The rise in aggregate demand leads to an increase in price level economy output. This implies a negative relationship between the interest rate and economic growth and a negative relationship between the interest rate and inflation.

Adam Smith's (1776) classical theory holds that an economy still achieves full employment through the invisible hand, allowing for price, wage, and other input price flexibility. According to the full employment assumption, an increase in Aggregate Demand (AD) as a result of monetary policy adjustments has no effect on output level but results in inflation; thus, inflation and output growth are not correlated. However, Keynes' (1936) Keynesian theory assumes a positive relationship between inflation and economic growth only in the short run. The theory is based on the AD and Aggregate Supply (AS) frameworks, and in the short run, inflation and output are unrelated due to wage and price stickiness. In the long run, inflation and output are unrelated due to full employment, while in the intermediate phase, inflation and output are linked positively due to price and wage flexibility.

Empirical Review

Ayinde et al. (2010) believe that inflation is irrefutably one of the leading macroeconomics issues facing almost all world economies, which made them examine the factors affecting inflation in Nigeria. Using Descriptive statistics and co-integration analysis to analyse their data, their result showed variations in the trend pattern of the inflation rate. They also discovered that previous total export has a negative impact on current inflation, while previous total import has a positive impact on current inflation as well as the food price index. They advocated for institutionalising policies that would set interest rates at a level that would stimulate investment and increase output. At the same time, importation should be reduced

in Nigeria as importation discourages local goods' patronage, which is one of the causes of inflation.

Ezeibekwe (2020) used the vector error correction model to determine how the inflation rate changes affect monetary policy tools' ability to stabilise the Nigerian economy and stimulate investment. The study's result suggested that the impact of the interest rates on investment depends on the inflation rate level. Also, the size of the effect of interest rates on investment gets weaker as the inflation rate increases suggesting that monetary policy tools like the monetary policy rate (MPR) are robust stabilisation tools during periods of declining inflation rates but are not significant during periods of rising inflation rates. The study added that the impact of the money supply target on investment does not depend on the inflation rate level, which suggests that monetary policy tools, such as open market operations, are relevant during economic booms and recessions. The suggested that the Central Bank of Nigeria should deepen the scale, capacity, and efficiency of its open market operations by ensuring that most people can participate with minimal transaction cost and make different financial instruments available.

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 January 1999-December 2018. Their findings showed that poor infrastructural development, exchange rate, political instability, corruption, and double taxation significantly stimulate inflation. The results showed a causal relationship between these other determining factors and inflation. The ARDL result showed a significant long-short run relationship. Hence, the study recommended that non-monetary factors instigating inflation should be controlled and security expenditure should be reviewed along with related mechanisms in order to achieve first, low inflation at single digits at most and second economic growth and development.

Odusanya & Atanda (2010) analysed the dynamic and simultaneous inter-relationship between inflation and its determinants in Nigeria between 1970 and 2007. Using the Augmented Engle-Granger (AEG) co-integration test and Error Correction Mechanism (ECM) model, the result showed inflation rate exerts a positive effect on the change in the inflation rate, while a change in GDP growth rate, real share of import and preceding rate of inflation rate significantly affects change in inflation rate in the short-run. Also, changes in the real share of fiscal deficit, exchange rate and interest rate negatively contribute to change in the inflation rate. Therefore, the study suggested that the money supply's growth should always be kept in check, given its long-run potential and the magnitude of exerting inflationary pressure on the economy. They also recommended that appropriate steps that will moderate the expansion of the money supply should be devised to ensure a stable non-accelerating price level in the economy.

Musarat et al. (2020) opine that the construction industry plays an essential role in economic growth and that countries' economy depends on several variables in which inflation is one of them as it is retaliating either positively or negatively. Hence, they explored the role of inflation and how it affects the economy and the construction industry. They concluded that the inflation rate is neglected in most construction projects and budgeting, resulting in project

cost overruns because building material costs, labour salaries, and equipment hire rates change annually. Their result highlighted a strong relationship between the inflation rate and the construction industry.

Osuji (2020) empirically examined inflation's effect on household final consumption expenditure in Nigeria from 1981 to 2018 using the ordinary least square econometric method. The study showed a positive significant long-run relationship between inflation and household consumption expenditure in Nigeria. The study also recommended that the government maintain low and stable prices at all time in order to reduce the adverse effect of inflation on private consumption.

Otto & Ukpere (2016) reported that a former Governor of the Central Bank of Nigeria (CBN) wanted to introduce the N5 000.00 currency bills into the Nigerian economy and claimed that such currency bill would help it manage the exchange rate, especially against the dollar which generated so much debate that once more threw up a need to re-examine the determinants of inflation in Nigeria. As a result, they were able to identify thirteen (13) factors that influence inflation and advised the government to focus on providing social infrastructure that would stimulate the private sector to invest and grow output, taking advantage of existing unemployed resources, as this would help to stem Nigerian inflation, which is typically caused by scarcity.

Adaramola & Dada (2020) examined the influence of inflation on the Nigerian economy's growth prospects. The study findings indicated that inflation and real exchange rate significantly negatively impact economic growth, while the interest rate and money supply indicate a positive and significant impact on economic growth. The causality result also shows the unidirectional relationships between interest rate, exchange rate, government consumption expenditures and gross domestic product, while inflation and the degree of openness show no causal relationship with gross domestic product. As a result, the study recommended that the monetary authorities need a more pragmatic effort

Idris & Bakar (2017) explored Nigeria's inflationary trend to determine its impact on economic growth. The study employed a descriptive method and further used charts to show the inflationary trend and GDP growth to better understand how Nigeria's inflation rates affect the desired economic growth level. The study concluded that Nigeria's current inflationary trend negatively affects sustainable growth and development, meaning that one of the requirements for reaching the desired growth level in Nigeria is to control the excessive increase in the inflation rate. Hence, they recommended there is a need to design a suitable framework that will encourage local producers to engage in innovative economic activities as this will create a platform for creativity and manufacturing of commodities with an international competitive advantage. The multiplier effects will undoubtedly increase the export volume of the growing economy, raise productivity level and competitive drives, reduce the exchange rate fluctuation, increase employment creations, raise income growth and economic welfare, and largely the fiscal prudence and macroeconomic growth.

3. Methodology

3.1. Theoretical Framework

Along with other economists and policymakers, Milton Friedman links inflation to monetary factors while others to production functions. The classical economists link changes in monetary demand and supply conditions to inflation, with a unit increase in money supply increases the aggregate price level. The monetary economists consider monetary policy a more effective instrument of economic equilibrium than fiscal policy. Keynesian economists link inflation to demand factors of a surplus in aggregate demand (consumption + investment + government spending) over aggregate supply with a unit increase in wages and prices of products and services, placing a demand on the monetary authorities to increase the money in circulation and support productivity. Economists acknowledge lack of agricultural value chain effect, social and economic infrastructural development, foreign exchange, saving-investment gap, economic, political and social imbalances as influencers of inflation, the uneven response of output to investment, money supply and deficit finance (Okoye et al., 2019).

3.2. Model specification

To examine if inflation is detrimental to Nigeria's economic growth, the study modifies the model developed by Idris & Suleiman (2019) and Inyiama (2013). In accordance with their models, the model for this study is as follows:

$$GDP = f(INF, INT, EXR, GOV) \dots \dots \dots (1)$$

Where;

- GDP = Gross Domestic Product
- INF = Inflation Rate
- RINT= Real Interest Rate
- EXR = Exchange Rate
- GOV = Government Consumption Expenditure
- f = functional relationship

From equation (1), the formula is further stated in an econometric form as:

$$RGDP = \alpha_0 + \alpha_1 INF + \alpha_2 RINT + \alpha_3 EXR + \alpha_4 GOV + \mu \dots \dots \dots (2)$$

Where:

- α_0 = Intercept of relationship in the model
- $\alpha_1 - \alpha_5$ = Coefficients of each independent or explanatory variable
- μ = Stochastic or Error term

3.3. Estimation Technique

Various econometric techniques have been employed in estimating the effects of financial liberalisation on capital flight. This study used Autoregressive Distributed Lag Model (ARDL). This is because the ARDL method yields consistent and robust results both for the long-run and short-run relationship between series with different integration orders. The data's stochastic properties in the form of descriptive statistics and unit root tests were

performed to know if the series were stationary or not. The lag selection test was also done to determine the appropriate lag length for the analysis.

3.4. Data Description and Sources

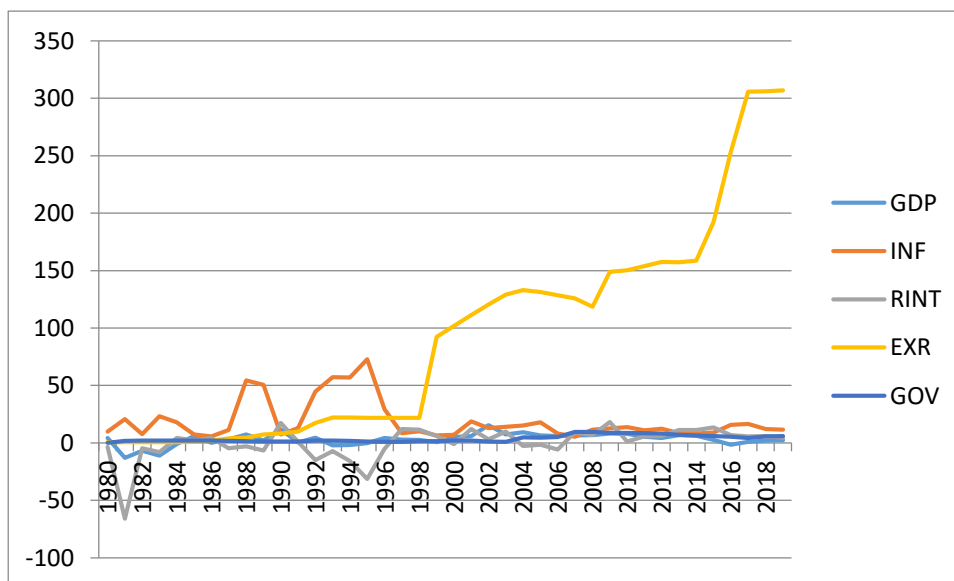
To estimate the concerned models and examine the statistical significance of the variables that relate to inflation and economic growth, this study employed annual time series data from 1980 – 2019. The variables under consideration are: Gross Domestic Product (GDP) which is a measure for Economic Growth, Inflation Rate (INF), Real Interest Rate (RINT), Exchange Rate (EXR) and Government Consumption Expenditure (GOV). The variables are obtained from the World Development Indicators online (Data Bank, 2021).

4. Results and Discussion

4.1. Preliminary Analysis

Figure 1 shows a line graph for the variables under consideration. GDP was at the lowest point in 1981 while its highest point was in 2002. INF had its lowest and highest points in 2007 and 1995 respectively. RINT was relatively stable within the period of study. EXR was always on the increase, with the highest value in 2019 and GOV was stable during the period under consideration.

Figure 1: Line graph for variables



Source: Authors' computation (2021)

4.2. Descriptive Statistics

This shows a summary of statistics: the mean, median, maximum, minimum, standard deviation, kurtosis, and Jarque-Bera values for the variables under consideration. Table 1 below shows the mean value of GDP, INF, RINT, EXR and GOV are 3.18, 19.92, 0.21, 91.8 and 3.64, respectively.

EXR has the highest level of discrepancy, as shown in the standard deviation result. This means that the exchanges rate is more volatile and unpredictable. GOV shows the lowest level.

Skewness is a measure of the rate of asymmetry or discrepancy of the variables. Accordingly, GDP and RINT have long left tail. This is because the variables exhibit negative values, while INF, EXR and GOV are positively skewed.

Kurtosis measures the peakedness and flatness of the series. The result shows that GDP, INF and RINT are leptokurtic relative to their normal distribution because their value is greater than three, while EXR and GOV are platykurtic because their kurtosis values are lesser than 3. Jarque-Bera statistical test indicates the normally distributed variables as it measures the differences in skewness and kurtosis. The result shows that Jarque-Bera statistic rejects the null hypothesis of no normal distribution for all the variables. Thus, it is concluded that they are all normally distributed.

Table 1: Descriptive statistics of variables

	GDP	INF	RINT	EXR	GOV
Mean	3.176302	18.91711	0.211257	91.80354	3.636279
Median	4.200378	12.38637	3.666917	97.01772	2.084226
Maximum	15.32916	72.83550	18.18000	306.9210	9.448340
Minimum	-13.12788	5.388008	-65.85715	0.546781	0.000000
Std. Dev.	5.399415	16.90501	14.43095	92.81156	2.862594
Skewness	-0.890935	1.823472	-2.640212	0.839392	0.796212
Kurtosis	4.762573	5.151977	12.44914	2.889805	2.211082
Jarque-Bera	3.46954	3.88535	5.2818	2.717433	5.263676
Probability	0.005328	0.000000	0.000000	0.094541	0.071946
Sum	127.0521	756.6842	8.450279	3672.142	145.4511
Sum Sq. Dev.	1136.994	11145.39	8121.836	335945.5	319.5833
Observations	40	40	40	40	40

Source: Authors' computation (2021)

4.3. Unit Root Tests

As shown in Table 2 below, the series showed that while INF and RINT were stationary at level, GDP, EXR and GOV were stationary at 1st difference. There was no autocorrelation problem amongst variables; hence, the ARDL model can capture the long-run relationship among variables.

Table 2: Unit Root Test using ADF Technique

Statistics	Statistics at level		Statistics at 1 st difference		
Variables	ADF	Critical value @5%	ADF	Critical value @5%	Integration Order
GDP	-2.72	-3.55	-4.89	-3.54	I(1)
INF	-3.72	-3.53	-6.21	-3.54	I(0)
RINT	-3.82	-3.57	-4.26	-3.51	I(0)
EXR	-2.01	-3.53	-4.57	-3.53	I(1)
GOV	-2.96	-3.54	-2.39	-1.95	I(1)

Source: Authors' computation (2021)

4.4. VAR Lag Order Selection Criteria

Table 3 presents the optimal lag length of the ARDL model variables with 5% critical bound level to be the lag length of one (1). This decision was based on all decision criterion available.

Table 3: VAR Lag Order Selection Criteria

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-680.9207	NA	8.71e+09	37.07680	37.29449	37.15354
1	-568.5541	188.2901*	78556702*	32.35427*	33.66042*	32.81475*
2	-549.7558	26.41923	1.19e+08	32.68950	35.08411	33.53371
3	-530.7964	21.52146	2.03e+08	33.01602	36.49909	34.24396

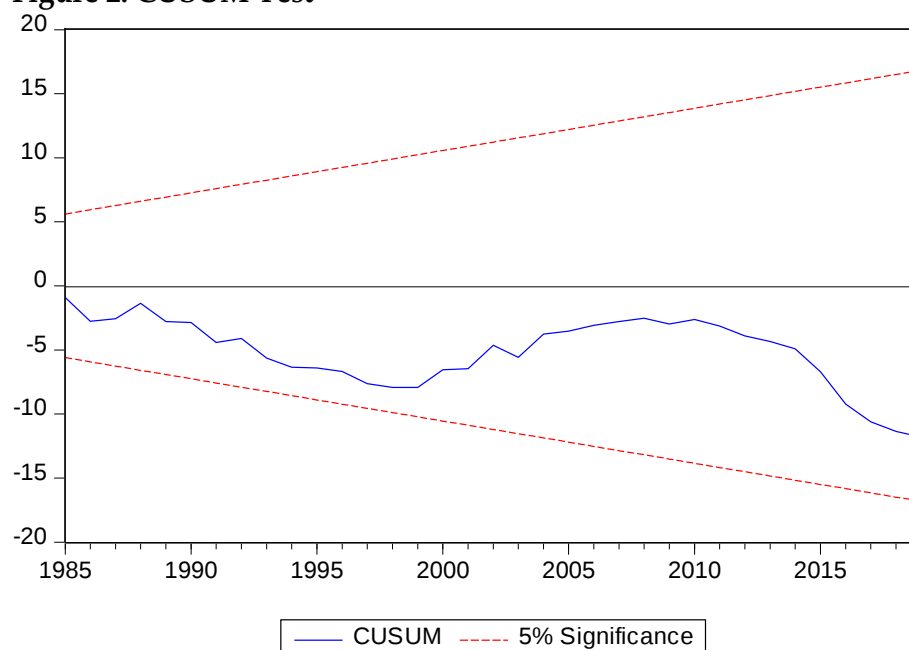
* indicates lag order selected by the criterion (each test at 5% level). LR = Likelihood Ratio Test; FPE = Final Prediction Error; AIC = Akaike Information Criterion; SC = Schwarz Information Criterion; HQ = Hannan-Quinn Information Criterion

Source: Authors' computation (2021)

4.5. Stability Test

In Figure 2 below, the recursive CUSUM test result shows no break or changes in the regression coefficients since the straight line is within the 5% critical band of the CUSUM test.

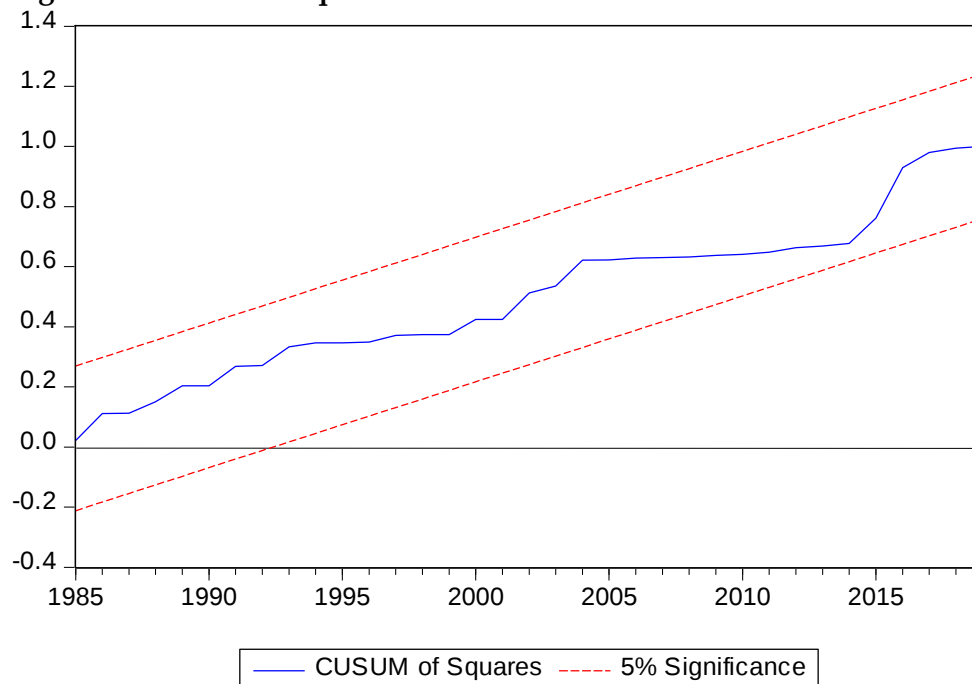
Figure 2: CUSUM Test



Source: Authors' computation (2021)

On the other hand, the CUSUMSQ test result revealed that the departure of the constancy parameters is within the straight line that represents a critical band at 5% significant level.

Figure 3: CUSUM of Squares Test



Source: Authors' computation (2021)

4.6. Bound Test

The result of the ARDL bounds testing approach for the capital flight (LCF) model in table 4 below shows that the F-statistic value of 7.52 calculated at $K = 4$ (number of independent variables) falls above the upper bound critical value at 5% significance level. Therefore, we conclude that there is a long-run relationship among the model variables and thereby reject the hypothesis of no co-integration at 5% significance level. This indicates a long-run relationship between the variable for the period.

Table 4: ARDL Bound Test for Co-integration Analysis

GDP		
Wald F-statistic = 7.522715; K = 4		
Dependent Variable		
F-statistic	Lower bound	Upper bound
Bounds level		
Significance	I(0)	I(1)
10%	1.9	3.01
5%	2.26	3.48
2.5%	2.62	3.9
1%	3.07	4.44

Source: Authors' computations (2021)

4.7. Short Run Analysis

Table 5 below displays the estimated results of the short-run relationship between GDP and its macroeconomic variables INF, RINT, EXR and GOV in Nigeria. The coefficient of INF is

negative and statistically significant. This means that a percentage increase in INF will reduce GDP by 7% and vice versa. RINT showed a positive and statistically significant coefficient. This means that a one per cent increase in RINT will cause a 23% rise in GDP. A percentage increase in EXR will reduce GDP by 5% since the coefficient is negative and statistically significant. Although statistically insignificant, GOV had a negative coefficient even after one lag. This means that a percentage increase in GOV will negatively affect GDP by 1.1%.

Table 5: Short Run Coefficient of ARDL (1, 0, 0, 0, 1)

Variable	Coefficient	t-Statistic	Prob.*
GDP(-1)	0.391898	3.116702	0.0038
INF	-0.069939	2.104358	0.0430
RINT	0.229119	4.231098	0.0002
EXR	-0.049471	-1.534651	0.0344
GOV	-0.009571	1.519560	0.1381
GOV(-1)	-0.011478	0.214832	0.1312
C	-7.356127	-2.172549	0.0194

Source: Authors' computations (2021)

4.8. Long-Run Analysis

Table 6 below presents the long-run ARDL results of GDP. The selected model is based on Akaike Info Criterion (AIC), and it shows that all the variables except GOV are statistically significant. Our main variable of interest, INF impacts negatively on GDP. Specifically, in the table below, a percentage increase in INF reduces GDP by 11.5%. RINT maintains a positive relationship with GDP in the long run. This implies that a percentage increase in RINT will have GDP increasing by 37.7%. On the other hand, EXR, in the long-run, has a negative relationship with GDP owing to the fact that from the table, a percentage increase in EXR will cause a 10.1% fall in GDP. Though statistically insignificant, GOV will lead to a 1.4% decrease in GDP in the long run if increased by one per cent.

Table 6: Long Run Coefficient of ARDL (1, 0, 0, 0, 1)

Variable	Coefficient	t-Statistic	Prob.*
INF	-0.115011	2.009790	0.0327
RINT	0.376778	3.371492	0.0019
EXR	-0.101098	0.552561	0.0299
GOV	0.014001	1.216588	0.5843

Source: Authors' computations (2021)

4.9. Error Correction Model

The ECM result shown in Table 7 is negative and statistically significant. It shows a 61% speed of adjustment after disequilibrium within a year.

Table 7: Error Correction Model (1, 0, 0, 0, 1)

Variable	Coefficient	t-Statistic	Prob.
D(GOV)	-0.039471	-1.826730	0.0368
ECM(-1)	-0.608102	-6.494058	0.0000

Source: Authors' computations (2021)

4.10. Discussion of Findings

The study's hub is to determine the effect of inflation on the economic growth of emerging economies, with special inclination given to the Nigerian economy. A vivid observation shows that inflation compromises economic growth both in the short-run and long-run; this implies that all the explanatory variables and their lagged variables are related to economic growth. Its long-run impact on GDP turns out to be more severe than the short-run, implying that a continuous and persistent rise in prices is very detrimental to the economy.

Inflation negatively impacts Capital Flight. Its increase causes a decrease in GDP and vice versa. This can be attributed to the fact that an increase in inflation lowers the purchasing power of money and reduces the country's competitiveness in the international community. It makes room for so much uncertainty and this greatly discourages investment, thereby making the growth unsustainable. This is in line with Adaramola & Dada (2020), Idris & Suleiman (2019). Therefore, if inflation is not adequately checked, economic growth will be a mirage.

Given the positive and significant value of interest rate, growth in the real sector is encouraged as it will encourage savings, which will make money available for investment purposes. The coefficient of the exchange rate is negative and significantly related to the growth of the economy. This also agrees with Adaramola & Dada (2020). The implication of this is that the variations in the exchange rate are hostile and unfriendly to healthy economic growth. Government consumption expenditure is not statistically significant in explaining the economic growth of Nigeria.

5. Conclusion And Policy Recommendations

5.1. Conclusion

This research study aimed to examine the effect of inflation on Nigeria's economic growth from 1980-2019. Following a detailed time series that involved the use of ARDL estimation techniques, the empirical result of the study revealed the following:

1. There exists a negative and significant long-run relationship between inflation and the economic growth rate in Nigeria. This finding implies that inflation reduces the growth rate in Nigeria.
2. On the other hand, the real interest rate had a positive and significant effect on economic growth in Nigeria, meaning that a favourable interest rate boosts investment, thereby leading to economic growth.

3. The result also showed a significant negative relationship between exchange rate and gross domestic product growth rate as the volatility in the rates reduces the confidence in the economy.
4. Government consumption expenditure has a positive and insignificant relationship with economic growth. Hence, it is not a significant variable influencing changes the economic growth rate.

5.2. Recommendations

The study recommends that a more realistic effort is necessary by the monetary authorities to target inflation strongly by reducing inflation to a single digit as contained in the economic recovery growth plan (2017) should be enforced to prevent its adverse effect by ensuring a modest rate that would stimulate the economic growth in Nigeria.

References

- Adaramola, A. O., & Dada, O. (2020). Impact of inflation on economic growth: evidence from Nigeria. *Investment Management and Financial Innovations*, 17(2), 1–13. [https://doi.org/10.21511/imfi.17\(2\).2020.01](https://doi.org/10.21511/imfi.17(2).2020.01)
- Anochiwa, L. I., & Maduka, A. (2015). Inflation and Economic Growth in Nigeria: Empirical Evidence? *Journal of Economics and Sustainable Development*, 6(20), 113–121. <https://www.iiste.org/Journals/index.php/JEDS/article/view/26596>
- Ayinde, O. E., Olatunji, G. B., Omotesho, O. A., & Ayinde, K. (2010, September). Determinants of Inflation in Nigeria: A Co-integration Approach. *Joint 3rd African Association of Agricultural Economists (AAAE) and 48th Agricultural Economists Association of South Africa (AEASA) Conference*. <https://doi.org/10.22004/AG.ECON.94301>
- Bain, M., & Howells, P. (2003). *Monetary economics: policy and its theoretical basis*. Sarum Editorial Services.
- CBN Act. (2007). *An Act to repeal the Central Bank of Nigeria Act 1991 and to establish the Central Bank of Nigeria Act; and for related matters*. [https://www.cbn.gov.ng/OUT/CIRCULARS/CSD/2007/CBN ACT 2007.PDF](https://www.cbn.gov.ng/OUT/CIRCULARS/CSD/2007/CBN%20ACT%202007.PDF)
- CBN Statistical Bulletin. (2020). *Decisions of Monetary Policy Meetings*. <https://www.cbn.gov.ng/MonetaryPolicy/decisions.asp>
- DataBank. (2021). *World Development Indicators*. <https://databank.worldbank.org/source/world-development-indicators>
- Dickey, D. A., & Fuller, W. A. (1979). Distribution of the Estimators for Autoregressive Time Series with a Unit Root. *Journal of the American Statistical Association*, 74(366a), 427–431. <https://doi.org/10.1080/01621459.1979.10482531>
- Ezeibekwe, O. F. (2020). Monetary Policy and Domestic Investment in Nigeria: The Role of the Inflation Rate. *Economics and Business*, 34(1), 139–155. <https://doi.org/10.2478/eb-2020-0010>
- Friedman, M. (1977). Nobel Lecture: Inflation and Unemployment. *Journal of Political Economy*, 85(3), 451–472. <https://doi.org/10.1086/260579>
- Idris, M., & Bakar, R. (2017). The Relationship between Inflation and Economic Growth in Nigeria: A Conceptual Approach. *Asian Research Journal of Arts & Social Sciences*, 3(1), 1–15. <https://doi.org/10.9734/arjass/2017/33365>
- Idris, T. S., & Suleiman, S. (2019). Effect of inflation on economic growth in Nigeria: 1980–2017.

- Maiduguri Journal of Arts and Social Sciences, 18, 33–48.
[https://www.unimaid.edu.ng/Journals/Social Sciences/Masscomm/Majass Online/Effect of inflation on economic growth in Nigeria 1980-2017.- Idris Tijani Shehu & Suleiman Sa'ad.pdf](https://www.unimaid.edu.ng/Journals/Social_Sciences/Masscomm/MajassOnline/Effect%20of%20inflation%20on%20economic%20growth%20in%20Nigeria%201980-2017.-%20Idris%20Tijani%20Shehu%20&%20Suleiman%20Sa%27ad.pdf)
- Inim, V., Samuel, U. E., & Prince, A. I. (2020). Other determinants of inflation in Nigeria. *European Journal of Sustainable Development*, 9(2), 338–348.
<https://doi.org/10.14207/ejsd.2020.v9n2p338>
- Jacobs, D., Perera, D., & Williams, T. (2014). Inflation and the Cost of Living. *RBA Bulletin (Print Copy Discontinued)*, 33–46.
<https://econpapers.repec.org/RePEc:rba:rbabul:mar2014-04>
- Musarat, M. A., Alaloul, W. S., & Liew, M. S. (2020). Impact of inflation rate on construction projects budget: A review. *Ain Shams Engineering Journal*, 12(1), 407–414.
<https://doi.org/10.1016/j.asej.2020.04.009>
- Obinna, O. (2020). Effect of Inflation on Household Final Consumption Expenditure in Nigeria. *Journal of Economics and Development Studies*, 8(1), 104–111.
<https://doi.org/10.15640/jeds.v8n1a8>
- Odusanya, I. A., & Atanda, A. A. (2010). Analysis of inflation and its determinants in Nigeria. *MPRA Paper*, 7(2), 97–100.
- Okoye, L. U., Olokoyo, F. O., Ezeji, F. N., Okoh, J. I., & Evbuomwan, G. O. (2019). Determinants of behavior of inflation rate in Nigeria. *Investment Management and Financial Innovations*, 16(2), 25–36. [https://doi.org/10.21511/imfi.16\(2\).2019.03](https://doi.org/10.21511/imfi.16(2).2019.03)
- Otto, G., & Ukpere, W. I. (2016). Inflation in Nigeria: Possible determinants and remedies to tackle it in Nigeria. *Risk Governance and Control: Financial Markets and Institutions*, 6(2), 35–43. <https://doi.org/10.22495/rcgv6i2art5>
- Pesaran, M. H., Shin, Y., & Smith, R. J. (2001). Bounds testing approaches to the analysis of level relationships. *Journal of Applied Econometrics*, 16(3), 289–326.
<https://doi.org/10.1002/jae.616>
- Umaru, A., Zubairu, A. A., & Adama, M. (2012). Effect of inflation on the growth and development of the Nigerian economy (An empirical analysis). *International Journal of Business and Social Science*, 3(10), 183–191.
http://ijbssnet.com/journals/Vol_3_No_10_Special_Issue_May_2012/19.pdf
- Vinayagathan, T. (2013). Inflation and economic growth: A dynamic panel threshold analysis for Asian economies. *Journal of Asian Economics*, 26, 31–41.
<https://doi.org/10.1016/j.asieco.2013.04.001>