



Influence of money supply on inflation in Nigeria: (A review)

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Abstract

Despite numerous political pledges to combat inflation in Nigeria throughout both the pre-democracy and democratic eras, the inflation syndrome has been extremely concerning since the beginning of both the previous and present administrations. Regretfully, none of them have ever been able to even somewhat lessen or stabilise this heinous syndrome. The analysis looks at how Nigeria's money supply affects inflation by reviewing several other studies in the field. The review examines the causes of inflation, the impact of the money supply, the relationship between the money supply and inflation, and it makes recommendations for both passive variables that will stabilise the money supply and some of the causes of inflation. The government should endeavour to enhance stabilisation programmes, especially open market operations, to regulate surplus money in circulation and so reduce inflation, according to some of the researchers' recommendations. Inflation is caused by deficit financing because it promotes money circulation that is out of step with productivity. As a result, less money should be borrowed by the government. In order to lessen the negative impacts of inflation, the government should also make sure that money is invested in important and profitable economic areas rather than using traditional contractionary monetary measures. The report also recommends concentrating greater attention on variables other than the money supply that cause inflation in the nation in order to lessen its threat to the nation's economic security.

Keywords: Money, supply and inflation

Introduction

When an economy's money supply expands more quickly than its capacity to provide goods and services, inflation results. The definition of inflation, which has been subject to significant debate since it was initially proposed by neo-classical economists, has changed. Inflation, according to Farrokh and Rostami (2009) ^[24], is the percentage rate of change of a price index. A continual process of price increases overall is known as inflation, which is also known as a constant depreciation of the value of money. Specifically, the bone of contention is, influence of money supply on inflation in Nigeria. In an economy in which the production of goods and services was unchanged, but the money supply grew from round one to round two. Because the money supply grew, and the output of goods and services did not grow, the economy will experience inflation (Tejvan, 2017) ^[53].

According to Lipsey and Chrystal (2007) ^[34], the money supply is the total amount of money that is available throughout the economy, whereas inflation is the overall price level growing at a steady rate. The result of an increase in the money supply in relation to total output is inflation (Friedman, 1936) ^[26]. Price distortion, low savings and investment, depreciation of the home currency, and capital flight are some of the negative economic effects of inflation. In order to prevent inflation and lessen its negative effects on economies in both developed and developing nations, policymakers work to adopt appropriate policy options (Emerenini and Eke 2014) ^[21]. Price stability is one of the main macroeconomic issues that inflation causes in any economy. When money loses value due to inflation, citizens' standards of living also decline (Odior, 2013) ^[42]. Since 2016, Nigeria's inflation rate has been in double digits, which has eaten away at people's earnings and savings and forced the central bank to raise interest rates to

their highest point in almost 20 years. In July 2023, Nigeria's annual inflation rate surpassed estimates of 23.7% for the sixth month in a row, reaching 24.08%—the highest level since September 2005 (Nigeria Bureau of Statistics, 2023). The cost of food and non-alcoholic beverages—which includes oil and fat, bread and cereals, fish, potatoes, yam and other tubers, fruits, meat, vegetables, milk, cheese, and eggs—accounted for the largest increase in costs, rising to 26.78% from 25.25% in June. The CPI increased 2.9% over the previous month compared to June's 2.1% increase. Furthermore, the core inflation rate, which does not include volatile items, increased little to 20.8% in July on a year-on-year, from 20.3% recorded in June (NBC, 2023).

Despite serving as a store of value, a medium of exchange, and a unit of account, the worth of money is determined by the amount of products and services that it can be used to purchase in the economy. Taylor and Mankiw (2008) ^[36]. Economists define price stability as the state in which the amount of goods that a certain unit of an economy's medium of exchange may be exchanged for remains roughly constant across time. A low and steady inflation rate, rather than the complete absence of inflation, is what is meant by price stability. An economy's purchasing power vanishes, uncertainty permeates the economy, and economic progress is slowed down with growing inflation rates (Emerenini and Eke 2014) ^[21].

The money supply and the inventory of goods and services are two important variables that impact how much inflation occurs in an economy. According to Mankiw and Taylor (2008) ^[36], money is a collection of resources in the economy that people frequently use to purchase products and services from one another. The government, central bank, and other financial organisations within the monetary system control the quantity of money in an economy as a unique asset; yet, the private sector plays a major role in

deciding the volume of commodities in an economy. The quantity of money in circulation and the stock of goods and services become the main goals of policy when inflation becomes chronic (Gbadebo and Mohammed 2015) [27].

One of the main goals of monetary policy is to control inflationary pressures, as inflation is one of the key macroeconomic factors that can skew economic activity in both developed and developing nations (Muhammad and Mubarak, 2013). Monetary policy makers, however, face distinct challenges in their efforts to contain inflation because they must determine the precise portion of changes in the level of aggregate prices that can be linked to the expansion of the money supply in both domestic and foreign currencies. In addition, Jhingan (2002) [31] notes that the budget deficit and the difference between actual and potential GDP are other causes of inflation. Many economic actors, particularly those with fixed incomes, were concerned that rising inflation rates would cause their purchasing power to evaporate. In order to maintain price stability, policymakers therefore use a variety of decelerator versions. Reducing the expansion of the money supply is one of many medicines available. The determination of inflation, which results from money growth, and the effectiveness of the monetary tool that will be used, however, present the biggest challenge to monetary policy makers (Mbuto *et al.*, 2013).

Some African nations have yearly inflation rates that averaged higher than 15 percent, with some recording rates as high as 20 percent, according to Oladipo and Akinbobolo (2013) [45]. Even if some of these nations have seen an increase in prices, hyperinflationary circumstances have not yet been reached, unlike in many other Latin American nations. High public sector budget deficits, the monetization of public sector budget deficits, high military spending, insufficient rainfall, populist policies, particularly before elections, persistent inflationary expectations of economic agents, an increase in the money supply, an increase in the importation of manufactured goods and raw materials, and rising interest rates as a result of the crowding-out effect are some of the other reasons given for the sustained and persistent inflation rates in many developing countries. According to Kumpayi *et al.* (2012) [32], growing inflation in Nigeria has reduced the yield on investments and negatively impacted government policy objectives since rising inflation has made the real amount of the country's budget fall, which has slowed economic growth.

The overall empirical results indicated that money supply is not the primary source of inflation in Tanzania, according to Ayuba (2013) [8], who presents empirical evidence from Tanzania showing that inflation is determined by other factors and the degree of development of the financial sector rather than being a monetary phenomenon. The results show that every estimated variable contributes significantly to the economy's inflation. In contrast, inflation has a tendency to be more sensitive to shocks in real GDP over the long term, whereas the money supply is found to have the least role, particularly in the short run. Thus, the relationship between Nigeria's money supply and inflation is the crucial question that has to be looked into. The purpose of the article is to investigate how Nigeria's money supply affects inflation.

Causes of inflation

Although reasons of inflation are debatable, some macroeconomic academics and financial experts have

identified various causes of inflation. They contend that a number of variables, including the money supply, interest rates, exchange rates, government deficit spending, and a host of others, are mostly to blame for the inflation that plagues different regions of the world to varying degrees. The effects of inflation seem to be most severe for developing nations (Emmanuel and Tzeremes 2010) [23]. According to Bakare (2011) [9, 10], the money supply is a highly sensitive variable whose quantity affects the rate of all economic activity. Any economy's ability to increase investment and output is determined by its rate of expansion or decline. Therefore, knowing what causes inflation is essential to developing and implementing effective macroeconomic policies.

Three basic categories can be used to classify the causes of inflation: inflation expectations, cost-push, and demand-pull factors. As their names imply, "cost-push inflation" results from increased input costs on the supply side of the economy, and "demand-pull inflation" is driven by changes on the demand side of the economy. "Inflation expectations," or what people and businesses believe will happen to prices in the future, can also lead to inflation. This means that assumptions about future prices can affect actual prices. The Reserve Bank takes into account these several factors while analysing and projecting inflation.

1. Demand-pull inflation

When the aggregate demand for goods and services (also known as "demand-pull inflation") climbs over the amount that can be provided in a sustainable manner, it is referred to as "demand-pull inflation." In essence, the overabundance of demand drives up prices for a wide range of products and services, which in turn causes inflation to rise.

2. Cost-push inflation

Cost-driven When the economy's entire producible supply of goods and services declines, inflation results. This is known as the aggregate supply. A rise in manufacturing costs frequently results in a decline in the overall supply. In the event that the total supply declines but the total demand stays constant, prices and inflation will rise, or be "pushed" higher.

3. Imported inflation and the exchange rate

Changes in exchange rates can also have an impact on pricing and the results of inflation. There are two ways in which a depreciation, or reduction in the value of the home currency, will raise inflation. First, compared to home production, the cost of goods and services produced abroad increases. As a result, companies that use imported materials in their production processes pay more for these inputs, and consumers pay more for the same imported goods. Through the cost-push mechanism, price increases for imported goods and services directly contribute to inflation.

Second, a decline in value of the currency increases overall demand. This happens as a result of exports becoming comparatively less expensive for overseas consumers, which raises aggregate demand and increases demand for exports. A rise in aggregate demand is also caused by domestic companies and consumers switching from purchasing relatively expensive imports to domestically produced goods and services at the same time. The potential for domestic businesses to raise their prices is increased by this

increase in aggregate demand, which also puts pressure on local production capacity. These price increases contribute indirectly to inflation through the demand-pull channel.

Effect of Money Supply on Inflation

The relationship between money supply and inflation has drawn significant attention in the world economy, particularly Nigeria. Numerous studies have used experimental research to examine the relationship between inflation and money supply in numerous countries across the globe. This is a result of some of these studies' contradictory and divergent findings. Thus, the relationship between money supply and money demand determines the aggregate price level, as explained by the classical theory of inflation. This study aims to focus on the premise that a given change in the rate of money growth causes an equivalent change in the inflation rate, leading Friedman (1968)^[25] to assert that inflation is a monetary phenomenon everywhere and everywhere.

Relationship Between Money Supply and Inflation

The money supply in a nation affects the rate of inflation in its economy. Inflation rises in tandem with an increase in the money supply in the national economy, and vice versa. Quantity Theory states that inflation results from the money supply growing more quickly than real output growth, such as when more notes are printed. This is the situation because there is more money chasing the same amount of commodities. Therefore, businesses raise their prices in response to an increase in monetary demand. If the rate of increase in the money supply is the same as the pace of actual output, then prices are assumed to stay constant.

Because of the necessity of achieving sustainable economic growth and development, the linkages between money supply and inflation are important concerns in developing nations. In many developing nations, like Nigeria, the main objective of monetary policy makers is to attain extremely low rates of inflation; nevertheless, the majority of government initiatives to do so instead serve to drive inflation higher. The Quantity Theory of Money states that an economy's money supply is what drives inflation. It follows that a rise in the money supply generates credits for spending, output, and investment, all of which promote economic growth (Bello and Saulawa, 2013)^[12].

Despite the distinct time lags, the research by Lahiri and More (1991)^[33] and Chaudhary and Ahmed (1995)^[16] looked into the causal relationship between money and inflation in Argentina and Yugoslavia. Their empirical findings demonstrated a two-way link between inflation and money stock in Yugoslavia and Argentina. As opposed to the previous statement, Makinen and Woodward's (1989)^[35] study on Taiwan's hyper-inflation showed through their empirical research that there is a unidirectional causal relationship between the money supply and inflation, with the causality moving from inflation to money growth in the country's economy.

Impact of Money Supply on Economic Growth

Isiaka *et al.* (2011)^[30] used a simple regression technique to analyse the link between money supply and economic growth in Nigeria during a 9-year period (1995-2004). The results indicated that there is a long-run, statistically insignificant positive relationship between money supply and GDP. In contrast to their findings, Amassona *et al.*

(2011)^[5] looked into how Nigeria's money supply affected a few macroeconomic factors. Using annual data from 1986 to 2009 using a basic OLS model, it was determined that, for the time under consideration, there is an inverse association between the two variables. Taiwo (2012)^[52] employed Ordinary Least Square (OLS) as an estimating approach to examine the effects of money stock injection and withdrawal on economic growth in Nigeria over the period of 1970-2008. The findings demonstrated that while money stock withdrawal had a negative effect on Nigeria's GDP, monetary aggregate infusion had a favourable influence on economic growth. According to a recent study on the Nigerian economy by Chinuba, Akhor, and Akwaden (2015), who estimated time series data covering the years 1981-2008 using a basic ordinary least squares method, the money supply has a significant positive influence on economic growth. An analysis by Omotor (2010)^[47] on the short- and long-term effects of Nigeria's money supply on economic development over the years 1986-2006 utilising VAR Model, the results provide evidence in support of the long run positive impact of money supply on growth in income but has no impact in the short-run.

A study by Adeyeye *et al.* (2006)^[4] used empirical research to examine how the GDP was affected by interest rates and a money supply proxy—bank loans. The outcome demonstrated that, despite their importance, bank loans had a detrimental effect on economic expansion. To get the conclusion, secondary annual data covering the years 1970-2003 were subjected to the ordinary least square method. Suleiman (2010)^[50] investigated how Nigeria's money supply affected the country's economic growth. Using secondary annual data for 37 years, from 1970 to 2007, the study used the ordinary least square method and came to the conclusion that, during the study period, Nigeria's money supply had a negative effect on the country's real GDP.

Impact of Inflation on Economic Growth.

In the WAMZ scenario of Ghana and Nigeria, Christian *et al.* (2010)^[18] evaluated the inflation threshold; nonlinear (conditional least square techniques) were used in the work for a 34-year period from 1975 to 2008. The outcome demonstrates that inflation has a statistically significant positive impact on economic growth in the two nations, but the lag-based causality test reveals no causal relationship between the two variables in either nation. Aminu and Amono's (2012)^[6] paper, which carried out an empirical investigation into the impact of inflation on the expansion and advancement of the Nigerian economy, is comparable to this. Using secondary annual data from 1973 to 2010, the study used the Cobb Douglas Production function with the ordinary least squares approach to show that inflation had a positive impact on economic growth.

Over a thirty-one-year period, Osuala (2013)^[48] conducted an empirical study on the effect of inflation on economic growth. The findings of the VAR analysis indicated a statistically significant positive correlation between inflation and economic growth in Nigeria. However, the causality test indicates no discernible relationship between the two variables. Similarly, Taiwo (a), (2011)^[51] used annual secondary data from 1981 to 2006 and the ordinary least square (OLS) method to examine the effects of investment and inflation on economic growth in Nigeria. The investigation based on GDP showed that inflation has a significant and negative impact on GDP, meaning that economic growth decreases as inflation rises.

In a more thorough analysis, using cointegration and the vector error correction technique, Ogunmuyiwa *et al.* (2010)^[44] examined the relationship between the money supply, inflation, interest rate, and economic development in Nigeria between 1980 and 2006. The findings showed that whereas interest rates are favourably and strongly correlated with economic growth, the money supply has a negligible beneficial impact on GDP. On the other hand, no long-term or short-term causal relationship between the variables was discovered.

Similar to this, Adesoye (2012)^[3] used the inflationary gap model, which derives from the quantity theory of money, to investigate the causal relationship between price, the monetary aggregate, and real output in Nigeria from 1970 to 2009. According to econometric research, Nigeria's output gap was a reliable indication of the country's ability to control the money supply, which shows that money supply has a beneficial effect on economic growth. Using secondary data from 1970 to 2005, Omoke (2010)^[46] found that inflation has a positive impact on economic growth and that the causal relationship is from inflation to economic growth, in contrast to the findings of Ogunmuyiwa *et al.* (2010)^[44] regarding the relationship between inflation and economic growth in Nigeria.

Review of Related Empirical Studies

In his 2018 study, C. Ugwuanyi investigated the long-term equilibrium link between money supply, inflation, and economic growth in Nigeria. He employed the Augmented Dickey-Fuller technique to test for the unit root of five variables—economic growth, inflation, broad money supply, real exchange rate, and real interest rate—as well as the ECM model and the Co-integration test. Error correction and co-integration mechanisms were used. According to his research, the money supply has a positive and considerable impact on economic growth. This suggests that increasing the money supply while keeping inflation under control will boost economic growth. Although Nigeria's economic development is negatively impacted by inflation, this suggests that rising inflation will lead to decrease in economic growth and also its show it is statistically significant.

Using time series data from 1973 to 2013, Gawata, Akinola, and Muftau (2017) conducted an empirical investigation on the effects of inflation, money supply, and interest rates on economic growth in Nigeria. Within the error correction frame, the Var Model and the Granger Causality test were applied. According to its results, the wide money supply has a beneficial impact on growth, whereas interest rates and inflation have a negative impact, particularly over the long term. This is supported by the results of the VEC model that was utilised. In contrast, the short run showed that broad money supply, interest rates, and positive inflation were inversely correlated with economic growth, suggesting that these variables have no effect on growth.

In the context of the Nigerian economy, Abeng, Itodo, and Nwamaka (2021) also reexamined the traditional money supply-inflation relationship as it is shown in Fisher's equation, but they modified the equation's fundamental premise of a constant level of output. According to his research, during times of slow economic growth, the money supply has a positive and statistically significant impact on inflation. In high economic growth periods, however, the impact is statistically substantial and negative.

Olorunfemi and Adeleke (2012) look at Nigeria's money supply and inflation rate. In his research, he employs the Vector Auto Regressive (VAR) model with secondary data from 1970 to 2008. The results demonstrate that while oil revenue and interest rates were stagnant at the difference, the money supply and exchange rate were stationary at the level. The results of the causality test indicate that the money supply and inflation rate, as well as interest and inflation rate, are unidirectionally related. His research led him to the conclusion that the government ought to gauge the success of its monetary policies by looking at the rate of inflation.

A cross-sectional study of the genesis and evolution of inflationary pressures in six particular African nations was carried out by CBN in 1974. The information was collected between 1960 and 1972. Changes in the money supply, financing of the deficit, and real gross domestic product were among the explanatory variables. The conclusion obtained using Ordinary Least Square (OLS) shows that the current changes in domestic credit and money supply have no discernible effect on the level of prices. The coefficient of determination for the third variable, which had a positive sign, was 0.06. In their study of ten African nations, Canetti and Greene (1992)^[14] found that models of inflation based only on monetary expansion and real income growth—which is inversely correlated with the inflation rate—leave out a significant portion of the inflationary process.

The West Africa Monetary Agency (WAMA) (2009) examined the connection between inflation and the expansion of the money supply in each of the participating nations. The findings suggest that the correlation between the expansion of the money supply and inflation is contingent upon the specific conditions of the individual nations. The money supply and inflation showed a positive correlation in Benin, Guinea-Bissau, Mali, Ghana, Guinea, Cape Verde, and Liberia. Thus, changes in the overall level of prices in these nations were influenced by monetary policy. However, in Senegal, Togo, Nigeria, Burkina Faso, Cote d'voire, Niger, and Sierra Leone, the relationship was bad. The presence of additional inflation variables, which could be supply-side or structural in character, is confirmed by the negative correlation shown in some nations.

According to a 2008 study by Barnichon and Peiris on the causes of inflation in Sub-Saharan African nations, the primary cause of inflation is a rise in the money supply growth rate. Similarly, research by Thornton (2008)^[54] demonstrated that money supply affects inflation more in high-inflation nations than in low-inflation nations. Using the band spectral analysis technique, Assenmacher-Wesche and Gerlach (2006)^[7] examined the relationship between money growth and inflation over various frequency bands for Japan, the Euro area, and the Swiss Bank. They found that the relationship held true only for low frequencies, with high frequencies causing inflation due to output gaps.

De Grauwe and Polan (2005)^[19] investigated the connection between money supply and inflation using a sample of 160 nations from around the globe over a thirty-year period. They found a significant positive correlation between the two factors. For nations with low inflation, their research shows a tenuous relationship between money growth and inflation. According to a 1991 study by Greene and Cavetti, exchange rates and monetary expansion were major factors in the spread of inflation in 10 African nations. At that time, it was noted that opinions regarding the entirety of causes

contributing to inflation in emerging nations, such as Nigeria, were not entirely in agreement.

Mukhtar and Zakari (2010) looked into Pakistan's money supply, financing of the deficit, and inflation. The empirical results imply that, over the long term, inflation and the budget deficit are only tied to the money supply, and that there is no causal relationship between the two.

Adenuga *et al.* (2009) ^[1] used the ordinary least square approach to investigate whether inflation in Nigeria from 1970 to 2009 is solely a monetary phenomenon. The analyses' results demonstrate that Nigeria's inflation is not solely a monetary issue because the country's wide money supply coefficient is less than unity. Adenuga *et al.* (2010) also investigated the causal long-term relationship between Nigeria's inflation, money growth, and budget deficit. The Philip-Perron (PP) and enhanced Dickey-Fuller (ADF) tests were employed to determine whether the variables were stationary. The study's findings indicated that the money supply and inflation have a tight, long-term relationship.

Olorunfemi and Adeleke (2013) did a study titled Money Supply and Inflation in Nigeria: Implications for National Development in order to examine the link between these two variables. The vector auto regressive model (VAR) was used in the investigation. The study came to the conclusion that money supply has a vital role in determining inflation and that there is a positive relationship between the two. The results showed a significant relationship between inflation and money supply. According to the study's findings, the Nigerian government should work to make sure that a sizable portion of the money in circulation is utilised in the country's productive sector and that the rate of inflation serves as a benchmark for evaluating the efficacy of the country's monetary policies.

In their 2019 study on money supply and inflation in Nigeria, Udo, Ben, Abner, Okoh, and Okolo proved that the structuralist school of thought applies to emerging nations such as Nigeria, but the quantity theory of money does not. Using the vector error correction model, the Granger causality test, and the Johansen co-integration, they looked at the missing link in Nigeria. According to their theory, non-monetary issues like political unpredictability, corruption, inadequate infrastructure, etc., are what drive inflation rather than the money supply. They found that non-monetary factors, rather than monetary ones, influence price levels through inflation in developing nations like Nigeria. The research also suggested that non-financial aspects be looked into to get a low inflation in Nigeria.

Conclusion and Recommendations

One of the main macroeconomic issues facing the Nigerian economy is inflation. We investigate the factors that influence inflation in Nigeria in this study. The study concluded that the money supply has little to no effect on inflation in the short term and that there is a positive long-term relationship between money supply growth and inflation rate after conducting an empirical review of previous literature to investigate the impact of money supply on inflation in the Nigerian economy. According to certain study findings, cutting the money supply might not always be the best way to lower inflation. One of the main macroeconomic issues facing the Nigerian economy is inflation. A portion of the literature that was examined for this study also demonstrates that in Nigeria, there is a positive correlation between the money supply and inflation

as well as between deficit financing and inflation. Furthermore, the analysis shows that increasing productivity is a practical way to lower long-term inflation in Nigeria. The following findings were drawn from the analysis of earlier research; In Nigeria, inflation is a phenomenon related to money supply. During times of slow economic growth, the money supply has a positive and statistically significant effect on inflation, and there is a close correlation between the two. Based on the findings of the review, the following policy proposals were developed to increase agricultural exports:

1. To regulate the amount of extra money in circulation and reduce inflation, the government should endeavour to improve stabilisation programmes, especially open market operations.
2. Insufficient funding promotes money circulation, which is out of step with productivity and leads to inflation. As a result, less money should be borrowed by the government.
3. In addition, rather than using traditional contractionary monetary measures to lessen the negative consequences of inflation, the government should make sure that money is invested in important and profitable economic areas.
4. In order to attain low inflation—single digits at most—the review also suggests that non-monetary forces be restrained and placed in the appropriate context.
5. The Central Bank of Nigeria should target monetary aggregates in a way that consistently ensures the money supply rises at a constant rate, lower than the rate of growth of real production, in an effort to maintain price stability, which is her principal goal.
6. The central bank should stop printing cheap money in order to reduce the excess supply of money in the economy, and the government should cut her extravagant spending and regulate the ongoing budget deficit that Nigeria has recorded.
7. In order to lessen the threat that inflation poses to the nation's economic stability, the review further recommends concentrating more attention on variables other than the money supply that cause inflation.

References

1. Adenuga BH, Taiwo, Efe EP. Is inflation purely a monetary phenomenon? Empirical investigation from Nigeria, 1970-2009. *Eur Sci J*,2009;8(17):57-74.
2. Adenuga IA, Bello HT, Ejumedia PE. Is inflation a purely monetary phenomenon? Empirical investigation from Nigeria (1970-2009). *Eur Sci J*,2012;8(17).
3. Adesoye AB. Price, money, and output in Nigeria: A cointegration-causality analysis. *Afr J Sci Res*,2012;8(1):428-442.
4. Adeyeye PO, Fajemibola OD. An empirical study of interest rate policy on economic growth in Nigeria (1970-2007). *Bus Finance Herald*,2006;2(1):225-251.
5. Amassona D, Nwosa PI, Olaiya SA. An appraisal of monetary policy and its effect on macroeconomic stabilization in Nigeria. *J Emerg Trends Econ Manage Sci*,2011;2(3):232-237.
6. Aminu U, Amono AZ. Effect of inflation on the growth and development of the Nigerian economy: Empirical analysis. *Int J Bus Soc Sci*, 2012;3(10):183-191.
7. Assenmacher-Wesche K, Gerlach S. Money at low frequencies. *J Eur Econ Assoc*, 2007;5:534-542.

8. Ayuba KA, Manaf LA, Sabrina AH, Azmin SWN. Current status of municipal solid waste management practice in FCT Abuja. *Res J Environ Earth Sci*,2013;5(6):295-304.
9. Bakare AS. An empirical study of the determinants of money supply growth and its effects on inflation rate in Nigeria. *J Res Int Bus Manag*,2011;1(5):124-129.
10. Bakare IA. The poverty-economic growth nexus in Nigeria (1981-2012). *Int J Res Arts Soc Sci*,2011;8(1):242-259.
11. Barnichon R, Peiris JS: Sources of inflation in Sub-Saharan Africa, *J Afr Econ*,2008;17(5):729-746.
12. Bello S, Saulawa LA: An assessment of the impact of foreign direct investment (FDI) on the Nigerian economy, *Kaav Int J Law Finance Ind Relat*, 2018;5(2):102-111.
13. Central Bank of Nigeria (CBN): Annual reports and statement of accounts, <http://www.cenbank.org/MacroIndicatorsFinal.asp>, Published 2003, Accessed December 17, 2023.
14. Canetti E, Greene J: Monetary growth and exchange rate depreciation as causes of inflation in African countries: An empirical analysis, *J Afr Finance Econ Dev*,1992;Spring:37-62.
15. Central Bank of Nigeria (CBN): Origin and development of inflationary trend in African countries (impact on their growth), *CBN Econ Financ Rev*, 1974;12(2).
16. Chaudhary MA, Ahmad N, Siddiqui R: Money supply, deficit, and inflation in Pakistan, *Pak Dev Rev*, 1995;34(4):945-956.
17. Chinwuba O, Akhor SO, Akwaden ST: Monetary policy innovations and growth rate of output in Nigeria, *Int J Econ Bus Manage*,2015;1(4):1-15.
18. Christian RK, Adedapo A, William O: An estimate of inflation threshold in the West Africa monetary zone (WAMZ): The case of Ghana and Nigeria, *J Monet Econ Integr*,2010;11(2):159-201.
19. De Grauwe P, Polan M: Is inflation always and everywhere a monetary phenomenon, *Scand J Econ*, 2005;107(2):239-259.
20. Ditimi A, Sunday K, Onyedikachi OE: The upshot of money supply and inflation in Nigeria, *Valahian J Econ Stud*, 2017, 8(2).
21. Emerenini FM, Eke CN. The impact of monetary policy rate on inflation in Nigeria, *J Econ Sustain Dev*, 2014;5(28).
22. Emmanuel Halkos G, Tzeremes NG: Measuring regional economic efficiency: The case of Greek prefectures, *Ann Reg Sci*,2010;45:603-632.
23. Emmanuel UC. Effects of money supply and exchange rates on inflation in Nigeria, *J Manage Corp Gov*, 2010;2.
24. Farrokh E, Rostami J: Effect of adverse geological condition on TBM operation in Ghomroud tunnel conveyance project, *Tunn Undergr Space Technol*,2009;24(4):436-446.
25. Friedman M: Have monetary policies failed, *Am Econ Rev*,1968;62(1/2):11-18.
26. Friedman M. Marginal utility of money and elasticities of demand, *Q J Econ*,1936;50(3):532-539.
27. Gbadebo AD, Mohammed N: Monetary policy and inflation control in Nigeria, *J Econ Sustain Dev*,2015;6(8):108-115.
28. Greenand Cavetti: In: Emmanuel UC: Effects of money supply and exchange rates on inflation in Nigeria, *J Manage Corp Gov*, 201, 2.
29. Isiaka SB, Abdulraheem A, Mustapha IY: Impact of fiscal and monetary policy on the level of economic activities in Nigeria, *Lapai J Manage Sci*,2011;1.2(0002):1-22.
30. Isiaka SB, Abdulraheem A, Mustapha IY. Impact of fiscal and monetary policy on the Level of economic activities in Nigeria. *Lapai Journal of management Sciences*,2011;1.2(0002):1-22.
31. Jhingan ML. *Macroeconomic theory*. 10th ed. New Delhi: Vrinda Publication Ltd, 2002.
32. Kumpayi AA, Nana JU, Ohwofasa BO. Impact of inflation on monetary policy and economic development in Nigeria, 1980-2010. Evidence from empirical data. *Asian Journal of Empirical Research*,2012;2(2):28-39.
33. Lahiri K, Moore GH, editors. *Leading economic indicators: new approaches and forecasting records*. Cambridge: Cambridge University Press, 1991.
34. Lipsey RG, Chrystal KA. *Economics*. 11th ed. Oxford: Oxford University Press: 2007. Mbutor OM. Inflation in Nigeria: How much is the function of money? *Journal of Economics and International Finance*,2014;6(1):21-27.
35. Makinen GE, Woodward GT. A monetary interpretation of the Poincaré stabilization of 1926. *Southern Economic Journal*, 1989, 191-211.
36. Mankiw H, Taylor F. Debate: Financial panic, economic threat, and sovereign debt crises. *Public Money and Management*,2008;32(3):164-165.
37. Mbutor OM, Ochu RE, Okafor II. The contribution of finance to agricultural production in Nigeria, 2013.
38. Mohamed I, Mubarak K. Rice marketing: lesson and driver for Sri Lankan producers, 2013.
39. Muktar T, Zakaria M. Budget deficit, money supply and inflation: A case study of Pakistan. *Privredna Kretanja i Ekonomska Politika*. 2010, 122/2011.
40. Nigeria Bureau of Statistics [NBS]. *Government Capital Expenditure and Economic Development in Nigeria*, 2023, 1990-2021.
41. Niyong N. The demand for money under rational expectation of inflation: The Nigeria experience. *The Nigerian Journal of Economics and Social Studies*,2001;43(1):125-144.
42. Odior ESO. *Macroeconomic variables and the productivity of the manufacturing sector in Nigeria: A static analysis approach*, 2013.
43. Ogun O, Adenikinyu. *Money supply mechanisms in Nigeria*. African Economic Research Consortium, 1995.
44. Ogunmuyiwa MS, Francis EA. Money supply - economic growth nexus in Nigeria. *Journal of Social Sciences*,2010;22(3):199-204.
45. Oladipo SO, Akinbobola TO. Budget deficit and inflation in Nigeria: A causal relationship. *Journal of Emerging Trends in Economics and Management Sciences (JETEMS)*,2013;2(1):1-8.
46. Omoke PC. Inflation and economic growth in Nigeria. *Journal of Sustainable Development*,2010;3(2):159-166.
47. Omotor DG. The Nigerian economy and monetary policy: Some simple empirics. *MPRA Paper No. 22672*. 2010:127.

48. Osuala AT, Osuala KL, Onyeike SC. Impact of inflation on economic growth in Nigeria - A causality test. *Jorind*,2013:11(1):206-216.
49. Soludo CC. The challenges of ensuring appropriate inflation, exchange rate and interest rate regimes in Nigeria. Central Bank of Nigeria,2009.
50. Suleiman DM. The impact of money supply on economic growth in Nigeria (1970-2007). *European Journal of Scientific Research*,2010:41(2):314-322.
51. Taiwo M. Impact of inflation and monetary policy stabilization on economic growth performance in Nigeria. *Journal of Economics and Sustainable Development*,2011:2(8):26-38.
52. Taiwo M. Impact of injection and withdrawal of money stock on economic growth in Nigeria. *European Journal of Business and Management Sciences*,2012:4(2):33-42.
53. Tejvan P. How the housing market affects the economy, 2017.
54. Thornton J. Inflation and inflation uncertainty in Argentina 1810-2005. *Economic Letters*,2008:98:247-252.
55. West Africa Monetary Agency. Money supply growth and macroeconomic convergence in ECOWAS. Freetown, 2009.