MONETARISM, KEYNESIANISM AND STRUCTURALISM: A TEST OF COMPETING THEORIES IN THE CONTEXT OF CURRENT INFLATIONARY EXPERIENCE IN NIGERIA

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ABSTRACT

In Nigeria, the persistent experience of macroeconomic instability, likely brought on by the nation's high and sustained inflation rate, served as the impetus for our efforts to further examine the causes of Nigeria's inflation in the context of monetarist, Keynesian and structuralist causative factors. The study's model is made up of four inflation equations (equations 3, 4, 5 and 6). While equations 3, 4, and 5 are based on the monetarist, Keynesian, and structural theories of inflation, equation 6 is an integrated equation from these theories. The findings with regard to the increase in money supply, excess demand, food index, and advancement in methods of agricultural production contribute positively to the current inflation in Nigerian. The outcomes show that, in the short-run, inflation increases in the economy with time lags following a devaluation of the naira. However, in the long-run, the decline in the naira could result in lower prices. The study recommends that monetary authorities should control money supply to ensure that monetary outcomes do not deviate significantly from monetary policy targets; secondly, government should implement measures to reduce aggregate demand. Government should adopt a strategy to modernize the agricultural sector into a mechanized agriculture system.

Keywords: Monetarism, Keynesianism, Structuralism, Inflation rate, ARDL, Agricultural advancement.

INTRODUCTION

The main goals of macroeconomic policy are high and sustained economic growth and low inflation. A stable macroeconomic environment is created when low and stable inflation is combined with a manageable budget deficit, real interest rates, and exchange rates. However, experience in a number of emerging nations has demonstrated that monetary and fiscal policies meant to promote economic growth usually become the main cause of financial imbalances and macroeconomic instability. Thus, it has traditionally been a monumental undertaking to maintain monetary stability, which in turn leads to price stability in emerging nations like Nigeria. It is essential to realize economic stability as a prerequisite for long-term economic growth. This presupposes that appropriate monetary and fiscal policies are necessary to stabilize the economy by ensuring that money supply growth and aggregate demand are consistent with growth in real production as well as the level of the economy's absorptive capacity (Ogwuma, 1996). Maintaining stable prices among the primary targets of macroeconomic management is desirable in order to accomplish this. This is due to the fact that it is essential for money to serve as an exchange medium and a store of value in an inflationary environment without having an unfavorable impact on output, employment, and income distribution (CBN Briefs, 1998). The persistent macroeconomic instability in developing nations, particularly the high and prolonged rates of inflation, has forced these nations to concentrate on domestic price stability as a prerequisite for achieving sustainable economic growth.

Given that policymakers in various nations have had to deal with the societal effects of price increases, the debate over the factors that lead to price increases has received considerable attention. The disagreement between those who believed that inflation is a monetary enigma and others who believe it to be a socio-political wage-push phenomenon has been sparked by a number of diagnoses that have been put forth. The monetarist's recommended course of action is control of the money supply, while the opposing viewpoints advice wage and price controls. This study tries to reexamine three views on the causes of inflation and determine which view is more relevant in explaining the current inflationary situation in Nigeria, given the deep-seated and intricate nature of current inflationary problems in Nigeria and the disposition for economists and non- economists to vary in their explanation of its possible causes.

Inflation is an intractable problem that often proves difficult to control largely because any meaningful corrective measure

would imply a tradeoff among other important macroeconomic and social objectives such as employment generation, balance of payments equilibrium and economic growth, etc

The objective of price stability in Nigeria has so far turned out to be a elusive. Between 1972 and 1973, 1982, and from 1985 to 1986 due to the price adjustment that followed the start of the Structural Adjustment Program (SAP), inflation had been mild and within the single digit range. It also came down to single digit level in 1990, 1997, 1999 to 2000 and 2006, 2007

and the period 2013 to 2015. However, for the period as a whole, inflation remained unbeaten. It averaged 18.8 percent between 1970 and 1989, 21.14 percent between 1990 and 2009 and 11.8 percent from 2010 to 2018

Enoma (2011) argued that the monetization of oil earnings and rapid growth in money supply put upward pressure on the general price level. Secondly, a chain reaction occured in the Nigerian economy due to the 1980s decline in crude oil prices, which reached a low point of $9 in August 1986. The development that followed was a financial crisis that led to incessant budget deficit. Due to the fact that a significant part of the deficit was financed by expanding domestic credit to the economy, this resulted in accommodating expansionary monetary policy. From the foregoing, it can be concluded that the high inflation rate, which was about 40.7% in 1984, was also caused by significant shortages of imported goods and services due to insufficient foreign exchange revenues. Arising from the preceding therefore, the objective of this study is to identify the underlying causes of inflation in Nigeria taking into consideration the monetarist, Keynesian and structuralist causative factors. The hypothesis therefore, is that there isn't a strong, positive connection between inflation rate and money supply expansion, excess demand, changes in food production index and the extent of agricultural advancement in Nigeria.

The remaining sections of the study are broken down into five main sections, with part two concentrating on conceptual issues, inflation theories, and empirical literatures. The data sources and model formulation are presented in part three. The results are presented and discussed in part four and the conclusion and recommendations are covered in part five.

THEORETICAL AND EMPIRICAL LITERATURE

Conceptual issue: Inflation

The change in the magnitudes of price increases through time forced what was deemed unacceptable price increases in the past to be passed on as low or moderate

price increases in the future, making it difficult for the definition of inflation to simply guide itself to any kind of precision (Falegan and Ogundare, 1982) Anyanwu (1993) observed that there are numerous definitions of inflation in the literature. In this study, inflation is defined as a process of consistently rising prices, or alternatively, a process of consistently declining value of money. This suggests that when prices are consistently rising generally, inflation is present. Even if relative prices of different goods may change during an inflationary period, the essential feature of inflation is that all prices are generally rising.

Core inflation and headline inflation are two different ways to measure inflation. While headline inflation is a measurement of overall inflation in the economy and includes commodities like food and energy prices, which are more erratic and susceptible to inflationary surges, core inflation is typically defined as a measure of inflation that ignores changes in food and energy prices. The consumer price index (CPI) is used to calculate the headline inflation rate in Nigeria

Theories of inflation

Several researchers have focused their attention on the study of inflation. As a result, studies on inflation are proliferating. The root cause of inflation has been the subject of numerous diagnoses, particularly in emerging nations. Many prescriptions have been offered, but inflation in emerging nations—Nigeria in particular—has defied all of them. This motivated us to reassess the overall classification of inflationary processes into the three major schools of thought—monetarist, Keynesian, and structuralist. Their controversy on the causes of inflation are evidently different however, the three schools of thought still acknowledge that many factors that are analogous in most situations must be brought into focus at one and the same time, despite the fact that they have focused on different factors as the primary cause of inflation (Falegan and Ogundare, 1982). In line with this reasoning we present the following views about inflation.

Monetarist view of inflation

The monetarist maintained that a financial phenomenon called inflation occurs all the time and everywhere (Friedman, 1968), as a result, prices tend to increase as long as the rate of expansion in money supply goes beyond the limit in the real output of goods and services. In the context of the quantity theory of money, the monetarist concept is investigated. Irving Fisher proposed the theory. The theory says that the greater the amount of money in circulation, the more elevated the price level and conversely. Ahuja (2009) simplified the theory by stating again that the price level

rises proportionately with a given quantity of money and falls proportionately with a given quantity of money, all things being equal. Fisher expressed the association between both the amount of money and the level of prices in an exchange equation expressed as follows:

$$MV = PT \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (1)$$

$$\text{or } P = MV/T \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (2)$$

where; P = average price level, T = total amount of transactions (total trade on goods and services, raw materials, etc.), M = quantity of money, and V = transactions velocity of circulation of money. The T in the transaction method to the quantity theory of money depicted within equation (1) and (2), appear to be conceptually undetermined and challenging to quantify. This led to the income version of the quantity theory of money. The income version, instead of taking into account all transactions, assesses actual income or national production that only involves transactions involving finished goods. The income variant of the quantity theory is used more frequently now that data on national income are easily accessible (Ahuja, 2009). The term "income velocity of money" is used in the income approach in place of the term "transaction velocity of circulation.

Therefore, the income interpretation of the quantity theory of money is presented as follows:

$$MV = PY \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (3)$$

$$\text{or } P = MV/Y \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (4)$$

where P is the average price level of finished goods and services, M is the amount of money, V is the income velocity of money, and Y is the real national income. Based on the premise that the velocity of circulation (V) and the volume of transactions (Y) remain constant at the full employment level, Fisher deduced from equation (4) that an increase in the money supply (M) will in general, result in a rise in

the price level. Increases in the money supply have a direct correlation with increases in the general level of prices

The equation of exchange is an identity and not a behiavioural relationship. This has been found to be incompetent in explaining the general price movement in both the developed or developing economies (Adejugbe, 1982). Ajayi and Ojo (1981)

demonstrated the proportional relationship between money supply and price level by making use of the concept of elasticity. Price level elasticity in relation to money supply, written as E_{PM} is given thus:

$$E_{PM} = \frac{dP}{dM} \cdot \frac{M}{P} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (5)$$

By taking total differentiation from equation (3), we arrive at:

$$MdV + VdM = PdY + YdP$$

If we let dV and dY = 0,

This translates to:

$$VdM = YdP \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (6)$$

$$\therefore \quad dP/dM = V/Y \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (7)$$

Substituting equation (7) into equation (5), we have:

$$E_{PM} \quad V/Y.P/M \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (8)$$

From equation (3), it is implied that:

$$V = PY/M \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (9)$$

Therefore, $E_{PM} = dP/dM \cdot M/P = V/Y \cdot M/P$

$$= PY/M \cdot I/Y \cdot M/P = 1 \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (10)$$

Equation (10) demonstrates that the elasticity of price level with respect to money supply (E_{PM}) is equal to one. This confirmed the proportionality between the money supply stock (M) and price level (P) when income (Y) and velocity (V) are held constant while money supply and price level are allowed to change. According to Fisher, V is fixed by objective economic factors while Y is determined at its full employment equilibrium level by the forces of demand and supply. Accordingly, Fisher concluded that a rise in the money supply will directly and proportionately raise the level of prices.

A resurgent to the quantity theory of money has taken place over time. The leading proponent is University of Chicago professor Milton Friedman. Friedman (1968) argues that the demand for the number of real money balances and a few independent variables have a functional connection that is consistent over time. This suggests that the interaction between goods and services supplied and demanded determines the price of money. The monetarists contend that money supply

expansion will lead to an increase in real cash balances that people and businesses possess, which is greater than what they desire, if the economy under consideration is producing at a level consistent with full employment. They make an effort to get rid of their surplus holdings of the accumulated cash balances as their first course of action. They will try to exchange their extra cash balances for other assets, goods, and services, as well as other forms of currency. In the end, this will result in a rise in the economy's total demand. If output does not rise correspondingly, excess demand will result. Price increases will eventually result from this.

The supply of money, according to monetarists, is the primary factor influencing aggregate demand. Therefore, it is believed that expansion money supply is the primary causes of price increases. The Monetarists readily acknowledge that non- monetary variables like OPEC cartels, trade union wage pressure, crop failure, etc. directly influence some prices. However, in the absence of an excessive amount of money supply, such non-monetary factors that lead to price rises in some commodities would be counterpoise by price decreases in others, thus, maintaining the average price level.

Keynesian view of inflation

The income-expenditure flow, as opposed to the money supply growth, was the focus of the Keynesian theory of inflation. They contend that demand-pull factors are what drive inflation. Demand pull inflation, according to Ahuja (2009), depicts a situation in which the main factor at play is the rise in aggregate demand from investors, consumers, or the government, which could not be satisfied simultaneously given the current output supply, particularly in a situation of full employment. If any one of the three components of aggregate demand rises in a scenario of full employment, it will inevitably have an inflationary effect on the economy.

Inflation, in Keynes' view, starts when there is an inflationary gap in the economy, which develops when total demand exceeds total supply at full employment. According to Ahuja, an economy should function so that income is distributed and spent in a manner in which the total demand for output is equal to the total expenditure of producing that output, including revenue from taxes and profits. nonetheless, if any of these three sectors of aggregate demand decide to pursue a larger portion of the national output than that which is allotted to it and other sectors are unwilling to give in, all of the sectors will engage in competition in an effort to obtain a larger portion of the national output than the means of production can supply. This will result in a

rise in aggregate demand, hence increase in prices.

To further explain, and in accordance with the conventional Keynesian classification, real expenditure may be divided into expenditures for consumption (C), investment (I), and government (G). Giving rise to the aggregate expenditure function (C terms.

+ I + G). The equilibrium level of real national income at X2 is determined by the interplay of the total spending function and the 450^{o} (aggregate supply) line, as seen in figure 1. At X2, the sum of all goods and services produced within the country in monetary terms equals the total amount of planned expenditure in real

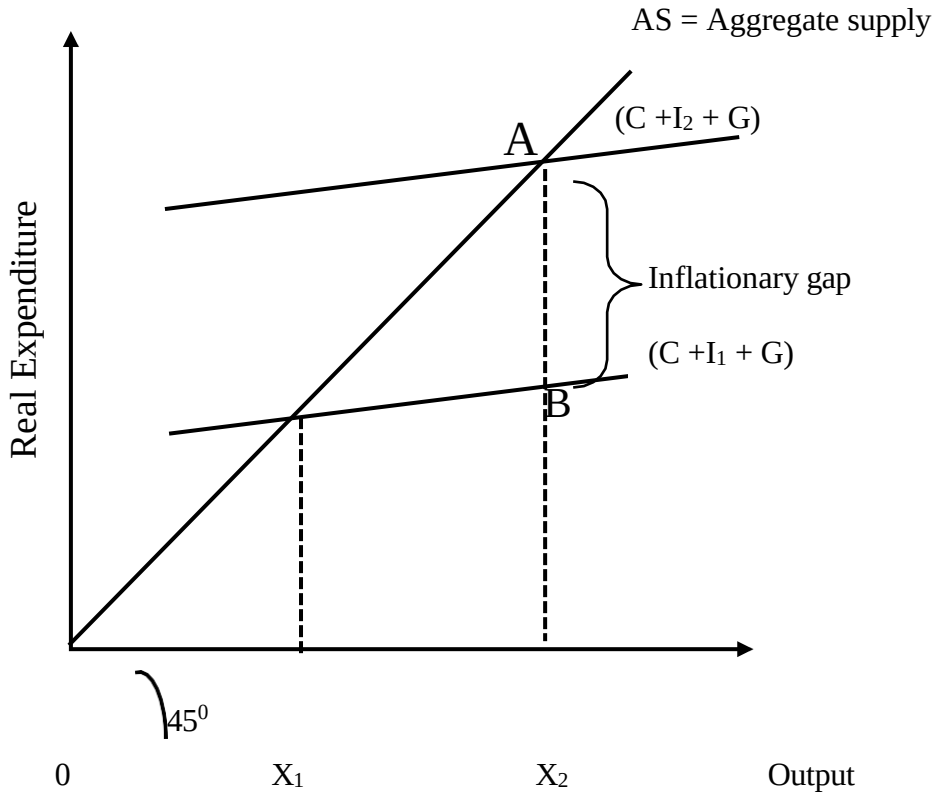

Fig. 1. Aggregate demand and inflationary gap

If X1 represents the absolute greatest level of production that can be produced with the available resources and X2 represents an inconceivable level of income, then X1 will effectively represent the upper limit beyond which output cannot increase. If (C + I_1 +

G) is the expenditure function at full resource utilization. Therefore, should demand rise to (C + I_2 + G), the required output would be OX_2, which is unachievable. This creates excess demand for the economy's output. There will,

consequently, be upward pressure on prices and an inflationary gap of AB will exist, which the Keynesians are in general agreement.

According to Onoh and Obioma (2017), the Keynesians believed that rising production costs, particularly through workers salaries and wages, had a positive demand control during the 1930s Great Depression.

It is important to stress that Milton Friedman, among other modern monetarists, also outlined how excess demand for goods and services is the root cause of inflation. The increase in the economy's money supply, which will lead to an increase in overall demand for goods and services, is how monetarists explain the origin of excess demand and the subsequent price increase. The Keynesians, however, understand the appearance of excess demand as the result of an increase in autonomous expenditure unrelated to any kind of expansion of the money supply.

into consideration for testing in the majority of investigations of structural inflation (Argy, 1970; Falegan and Ogundare, 1982; Jhingan, 2009). These include the scarcity of foreign exchange hypothesis, the export instability hypothesis, the agricultural bottleneck, and the demand-shift hypotheses.

The demand-shift hypothesis, which is seen to be more applicable to emerging nations, is a result of industrialization, which affects the output mix and demand structure over time as tastes and patterns of income distribution change. This theory states that prices will increase if wages in the falling sector are kept rigid due to minimum wage and trade union power, relative factor immobility, and a significant difference in the skills necessary in the increasing and declining sectors. The export impact on product prices. In terms of policy, Keynes is associated with excessive government spending, a growing budget deficit, income policies, and wage-price controls, according to Humphrey (1981). Thus, Keynes' concern about inflation led him to support the strategy of aggregate

Structuralist view of inflation

The structuralists explain developing countries propensity for long-term inflation in terms of those countries' structural rigidities (Anyanwu, 1993). Fisher and Mayer (1980) emphasized two primary factors that contribute to inflation in various Latin American nations, namely the rigidity of food supply and the inadequate and unstable foreign exchange markets that limit the importation of sufficient food. The combination of the two factors results in higher prices, particularly when the demand for agricultural products is rising. About four structural hypotheses are often taken

instability hypothesis holds that changes in export receipts have a propensity to cause long-term increases in price level. According to Ahuja (2009), the lack of modern agricultural technology, population growth, inequitable land tenure systems and disparity in land ownership are the main agricultural bottlenecks that emerging countries must deal with. The combination of all these elements prevents the agriculture sector from expanding. According to this theory, urbanization, rising living standards, and population increase all contribute to a need for food. It's possible that the agricultural sector won't be able to meet these expectations, which will lead to a rise in the demand for domestic food supply. This will cause prices to rise. According to the foreign exchange scarcity concept, developing nations ultimately shortage of foreign currency to pay for the imports they need for development. Their low income elasticity of demand for exports and high income elasticity of demand for imports are the causes of their difficulties with balance of payments situation. Imports must be restricted in the face of balance of payments issues, typically through the imposition of import taxes and other trade restrictions. These actions all contribute to the inflationary process (Argy, 1970).

Fashoyin (1986) noted the dearth of financial resources. He made the case that developing nations' insufficient public revenue combined with fast growing public services had resulted in deficit financing with inflationary effects. Other structural limitations include: a lack of infrastructure facilities, such as inadequate transit options, insufficient electricity, insufficient petroleum product supplies, etc. The social, political, and economic structure of developing economies serves as an anchor for these restrictions (Ahuja, 2009). The independent elements that the structuralists identified as driving inflation include changes in demand, export volatility, agricultural bottlenecks, a lack of infrastructure, and a lack of foreign exchange. However, they view the budget deficit, exchange rate, and wage-price spiral as the key the propagation factors.

Empirical literature

On the causes of inflation in both developed and developing nations, and Nigeria in particular, there is an avalanche of empirical literature. Due to inadequate data or improper approximations, the majority of studies on Nigeria yield inconclusive results (Fashoyin, 1986). Since they acknowledged the significance of non- monetary factors in explaining inflationary trends in Nigeria, the studies also fell short of providing any consensus on the contribution of monetary growth in explaining inflation in the Nigerian economy. However the main claims of the

monetarist position, according to Humphrey (1975), must be included in any model that attempts to explain monetarism. These claims include the exogeneity of the nominal stock of money, the long-run stability or near-constancy of the velocity or rate of turnover of money, and the assertion that price rises is solely a unique financial occurrence that can only be generated by increasing the monetary growth. He continued by saying that not all of the monetarist ideas could be considered to be totally monetarist and that some would be understood by non-monetarists to a greater or lesser degree.

Laidler (1976) published "A Monetarist Perspective" on British inflation. According to the study, Britain's problems in the 1970s were caused by poorly thought out policies. Their primary budgetary mistake was their inability to manage the money supply while seeking an unrealizable low unemployment target. Laidler came to the conclusion that the high inflation rate during the early 1970s in Britain was principally the end result of monetarygrowth, which was a side effect of full employment fiscal policy. He added that a decrease in public sector borrowing was necessary to sustain a reasonable rate of monetary expansion in Britain.

Argy (1970) made an effort to assess the structural factors influencing inflation in developing nations. The study suggested many indicators for the structural determinants and built an econometric model to see how much they might affect the variability in inflation rates in developing nations. Four structural theories were matched with four structural elements. The export instability hypothesis, which postulates that inflation rate is positively correlated with export variability; the demand-shift hypothesis, which is predicated on the idea that shifts in the composition of demand, rather than generalized excess demand, will lead to an upward bias in price level. The last two hypotheses were the paucity of foreign exchange and the agricultural bottlenecks theory which highlighted the rigidity of the food supply. The findings indicated that structural variables might not have provided a sufficient rationale for the different inflation rates in the developing world. The monetary variables, however, fared better. Bolivia, Brazil, Chile, Columbia, Ecuador, and Peru were listed as prime examples in another study (Fischer and Mayer, 1980) when discussing countries that have historically been extremely susceptible to inflation.

The study's objective was to provide additional empirical support for the structuralist theory of inflation in those nations. Two equations served as the study's foundation. Equation (1) was essentially a two-period lagged money supply version of Herberger's (1963) inflation model which

also regressed inflation rate as a function of GDP growth. The structural factors, such as changes in relative food prices and changes in relative export prices, were captured by Equation (2). The findings demonstrated that the structuralist perspective of inflation was only outperformed in the case of Ecuador by the monetary view of inflation. However, structuralist components were more applicable in Peru, Columbia, Bolivia, and Chile for the understanding of the inflationary process.

Adejugbe (1982) used models that were both static and dynamic and combined monetarist and structuralist elements. From a static perspective, the various effects of each factor on the price level revealed a positive connection linking the expansion of the monetary growth and changes in price level in Nigeria. Another inflation model with lag patterns in the monetary variables was developed by Ajayi and Teriba (1982). They provide a delay response explanation for why the lagged values of the explanatory variable were included. The underlying assumption is that price fluctuations result from changes in money supply over the course of time. Their findings demonstrated that changes in the money supply had a relatively gradual effect on the level of prices.

The impact of cost-push and monetary evaluation of Pakistan's inflation was assessed by Javed, Farooq, and Akram (2010). There were two equations used in their methodology. In the first approach, consumer price index (CPI) was regressed on wheat support price, wage rate, and the value of imported raw materials. An additional equation evaluated the impact of narrow money supply, broad money supply and it's lagged values and the previous values of index of consumer price on the current value the CPI's.

According to the result, the study came to conclude that a variety of approaches should be used to reduce inflation in Pakistan's economy.

Recent studies to determine how much Nigeria's money supply affects inflation include those by Mbuto (2014), Amassoma, Keji, and Emma-Ebere (2018), Okotori (2019), and Ekpenyong, Emefiele, Olugbemi, and Ita (2020). Some of these investigations came up with conflicting findings. The outcome of Mbuto's research indicated that the money supply is the primary factor influencing inflation in Nigeria. The results of Amassoma et al (2018), alternatively, indicated that expansion of the monetary flows and the one-period lagged rate had adverse effect on the present rate of inflation in Nigeria. This outcome defies the monetarist thesis regarding the association connecting monetary growth and inflation. Secondly, contrary to theoretical predictions, the study discovered that rising output levels have an

impact on inflation that is positive in Nigeria. The study concluded as Akinbobola (2012) that the money supply is not a major factor driving price increases in Nigeria and encouraged the Nigerian government to implement alternative strategies to combat inflation in the country.

Otto, Ukpere, and Wilfred (2016) looked at potential causes and anticipated solutions for price increases in Nigeria. Despite the common theories price increases, the study explicitly identified additional factors that contribute to inflation in Nigeria, such as corruption, instances of manifold taxes, production barriers, unfortunate work practices, insufficient societal facilities, government fiscal deficit, unanticipated pay rise, etc. The majority of these elements are covered by the conventional inflation theories.

In a related investigation, Ayinde, Olatunji, Omotesho, and Ayinde (2010) looked at the variables influencing inflation in Nigeria from 1970 to 2006. The result from the co-integration estimated method revealed that imports, the index of food prices, and exchange rates had a positive impact on Nigeria's inflation rate, but total exports, agricultural output, interest rates, and crude oil exports helped to mitigate rate of inflation in Nigeria. Asekunowo (2016) attempted to identify the conventional and institutional macroeconomic variables and the extent to which they are accountable for the persistently high inflation rate in Nigeria. The study discovered that over the inquiry period, real exchange rates increased, and that these increases may have been the result of either one of endogenous demand impacts or external foreign producer price disturbances. The report advocated adopting a consistent monetary policy stance and replacing imported commodities with domestically produced ones.

Odonye, Odeniran, Oduyemi, Alaoye, and Ajayi (2014) examined the structural dynamics of inflation in Nigeria and came to the conclusion that despite the slow expansion of the money supply, other factors, in addition to it, are also responsible for price increases in the country. The study discovered that real gross domestic product, exchange rate, demand shift, and broad money supply factors were relevant in explaining the amount of inflation in Nigeria. However, despite being significant, the fiscal deficit variable was negative, defying theoretical expectations. The report indicated that efforts to reduce inflation should go beyond the assessment of monetary aggregates due to the major implications of structural determinants on inflation in Nigeria.

Harvey and Cushing made an effort to distinguish monetary factors from structural causes of inflation in Ghana (2014). They concentrated on exchange rate depreciation,

monetary expansion, and shocks to output growth in relation to inflation dynamics. The outcome demonstrated that in the inflation dynamics, structural variables were more important than monetary growth. Considering the monetarist and Keynesian causal elements, Ono and Obioma (2017) examined the Nigerian economic policies relating to money supply growth and inflation. Their study determined that expansion of the monetary growth is a key factor driving price hikes in Nigeria. But no actual testing of the Keynesian elements was done.

Ikechukwu and Olaniyi (2015) conducted a study on the possibility of using inflation targeting as Nigeria's monetary framework. The study noted that Inflation rates in Nigeria have been consistently high, possibly due to the continuous rise in interest rates, money supply growth, exchange rates, and domestic credit. Their methodology involved a simultaneous equation model consisting of two equations: the inflation equation and the economic growth equation. It was determined using a Granger Causality test that the money supply, domestic credit, real exchange rate, and government recurrent expenditure all contribute to inflation. In a similar vein, the link connecting inflation and economic expansion demonstrated how inflation in the economy affects economic growth.

Nse and Anietie (2018) did a study on the Nigerian inflation forecasting model. Using quarterly data spanning the years 1995 to 2016, the study estimated a dynamic model. According to the study, the leading predictors of inflation in Nigeria are inflation expectations. The impact of exchange rates, money supply and imports on inflation in Irag from 1995 to 2015 was empirically evaluated by Mohamed and Hatem (2019). The study discovered that monetary growth was the primary cause of high inflation in Irag. The study also discovered that the general level of pricing in Irag increased as a result of imports and openness.

In a further study, Ebipre and Amaegbere (2020) looked at the connection between Nigeria's money supply and inflation. The findings indicated a positive link between Nigeria's inflation, budget deficit, and money supply growth. The study found that increasing productivity may be a way to lower long-term inflation in the country. However, the conclusion of a recent investigation on the impact of inflationary trends on the Nigerian economy by Echekoba, Okpala, and Anachedo (2022) showed that the rate of inflation in Nigeria is positively and significantly associated to GDP growth.

Mandeya (2022) studied the literature on the relationship between inflation, inflation uncertainty, and economic growth.

The main question of the study is whether economic growth is influenced by inflation, inflation uncertainty, or a mix of both. According to the study's findings, there is a negative correlation between inflation and economic growth. The impact of inflation uncertainty on economic growth, however, is yet unclear. According to the study's findings, it is challenging for policymakers to develop an effective monetary policy because there is no agreement on how uncertainty about inflation affects economic growth.

The results of a cursory examination of the literature on opposing theories for why inflation occurs in developed and emerging nations are diverse. Secondly, as far as I am aware, there has been no research ever combining or integrating the three schools of thought in a single investigation. This suggests that in order to properly identify and analyze the variables influencing inflation in developing nations, specifically Nigeria, a broad approach encompassing the pertinent variables from the three schools of thought and beyond be adopted in order to precisely disentangle the relative influence of the factors identified.

METHODOLOGY

Specification of the model

The required model to this research is anchored on the three leading schools of thinking regarding the cause of inflation in both the developed and developing countries. Therefore, starting with the monetarist proposition, Otto and Ukpere (2016) articulated that Fischer’s quantity theory characterize price (P)
as a result of the money supply as a result of the money supply (M), number of transactions (T) and velocity of flow of money (V). Hence:

$$P = f(M, V, T) \qquad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots. \qquad (14)$$

When we equate V and T to zero based on the assumption of constancy of velocity of circulation and volume of transaction, M will vary directly and proportionately with P. Therefore:

$$P = f(M) \qquad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots.. \qquad (15)$$

As of any given moment, the actual amount of inflation reflects current and past rates of monetary expansion (Harberger, 1963; Humphrey, 1975). Thus, the influence of monetary growth on inflation is examined by the current and lagged values of money supply growth. Therefore, in line with Harberger’s model, we specify monetarist inflation equation thus:

$$INF_t = \alpha_0 + \alpha_1 M2_t, + M2_{t-1} + \alpha_2 GDP_t + U_1 \quad (16)$$

$\alpha_1 > 0; \alpha_2 < 0$

Where: INF_t = inflation rate in current period, M2 = current values of broad money supply growth,

$M2_{t-1}$ = lagged value of broad money supply growth, GDP_t = real GPD growth in current period.

The Keynesians on their part emphasised that inflation is caused by excess aggregate demand (ED) for goods and services in relation to growth in output (Y), rising cost of production because of wage-price spiral (W) and rise in fiscal deficit. Therefore, the Keynesian causes of inflation can be captured by the following empirical specification:

$$INF_t = b_0 + b_1 EDt + b_2 WAGEt + b_3 GDP_t + b_4 FD_t + U_2 \quad (17)$$

$b_1 > 0; b_2 > 0; b_3 < 0; b_4 > 0$

Where: ED is Excess demand in current period, WAGE is minimum wage in Nigeria, GDP is Real Gross Domestic Product, FD is Fiscal Deficit. The structuralists assume that price rise is neither brought about by cost-push nor demand-pull factorsbut structural factors. The effect of structural factors will be captured by the main autonomous and propagation factors identified by the structuralists. Therefore, we adopt the minimum wage (WAGE) in Nigeria as the appropriate variable to test for demand shift hypothesis. (2) The export instability variable can be captured by the openness indicator (OPEN). Theoretically, the inflation rate is assumed to be positively or negatively related to exports + imports GDP ratio. Thus, the sign constraint can either be positive or negative. The agricultural bottlenecks can be measured by food prices. This will, however, correlate with the rate of inflation since food price is a dominant component of consumer price index in Nigeria (Falegan and Ogundare, 1982). Similarly, the use of growth in output of major agricultural commodities may correlate with growth in GDP. Preferably, we adopt two indicators of agricultural bottlenecks: the food production index (FPI) and agricultural advancement (AA). Improvement or advancement in agriculture will increase agricultural output. This is anticipated to lower the rate of inflation. Agricultural advancement is captured by the number of tractors and agricultural machinery used per 1000sq.km of arable land.

In addition to the foregoing, Argy (1970) identified fiscal deficit (FD) and exchange rate changes (EXR) as the main

propagation elements in structural inflation.

Accordingly, the empirical representation of the structural inflation model can be described thus:

$$INF_t = c_o + c_1WAGE_t + c_2OPEN_t + c_3FPI_t + c_4AA_t + c_5EXR_t + c_6IMPY_t + u_3 \quad \text{……..…….(18)}$$

$c_1 > 0$; $c_2 > 0$ or < 0; $c_3 < 0$; $c_4 < 0$; $c_5 > 0$; $c_6 < 0$

The incorporation or synthesis of the specifications by the three schools of thought in equation (16) (17) and (18) will provide us with the following integrated empirical specification:

$$INF_t = d_0 + d_1M2 + d_2WAGE_t + d_3OPEN_t + d_4FPI_t + d_5ED_t + d_6AA_t + d_7EXR_t + d_8IMPY + \mu_4 \quad \text{……(19)}$$

Where $d_1 > 0$; $d_2 > 0$; $d_3 > 0$ or <0; $d_4 > 0$; $d_5 > 0$; $d_6 < 0$; $d_7 > 0$; $d_8 < 0$

u_1 to u_4 are the stochastic error terms for the respective equations.

Sources of data

Only secondary, annual time series data, spanning the years 1970 through 2018, are used in the study. The National Bureau of Statistics (NBS), World Development Indicators, and the Statistical Bulletins of the Central Bank of Nigeria (CBN), were the sources of data. The beginning of the study period was chosen to be 1970. This year is notable because it marks the beginning of the sustained double-digit inflation rate that developed over time, most likely as a result of the monetization of oil funds and the post-war reconstruction and rehabilitation of major projects. On the basis of the availability of data, 2018 was selected as the study's final year.

Testing model for autoregressive distributed lag (ARDL)

The autoregressive distributed lag (ARDL) bounds testing method suggested by Pesaran, Shin, and Smith (2001) is a cointegration procedure for determining the long-run relationships among the variables even when the systems have mixed order of integration. It is an alternative to Johansen and Juselius's (1990) multivariate cointegration test, which requires large samples for the results to be valid and depends on pre-tests for the order of integration as well as being inappropriate for systems with mixed order of integration,

However, when variables of order two are integrated i.e. /(2), the calculated F-statistic will give misleading results, consequently, the necessity for conducting the unit root tests to discard any doubt. Paseran et al. (2001) maintained that estimates from ARDL estimation method are highly consistent and that sound interpretation can be made from them.

According to Paseran et al (2001), the error correction ARDL model for the inflation equations in equation (16), (17), (18) and (19) are as follows:

For monetarist inflation in equation (16), the ARDL model as follows:

$$\Delta INF = a_0 + \sum_{i=1}^{n} a_1 \Delta INF_{t-1} + \sum_{i=1}^{n} a_2 \Delta M2_{t-1} + \sum_{i=1}^{n} a_3 \Delta GDP_{t-1} + \propto_1 INF_{t-1}$$

$$+ \quad \propto_2 M2_{t-1} + \propto_3 GDP_{t-1} + e_1 \qquad \ldots\ldots\ldots\ldots \quad (20)$$

Where $a_1$to a_3 = Short-run dynamic coefficients

$\alpha_1$to α_3 = long-run multipliers of the underlying ARDL model

For Keynesian inflation equation in equation (17), the ARDL model is represented as follows:

$$\Delta INF = b_0 + \sum_{i=1}^{n} b_1 \Delta INF_{t-1} + \sum_{i=1}^{n} b_2 \Delta ED_{t-1} + \sum_{i=1}^{n} b_3 \Delta WAGE_{t-1} + \sum_{i=1}^{n} b_4 \Delta GDP_{t-1}$$
$$+ \sum_{i=1}^{n} b_5 FD_{t-1} \propto_1 + \delta_1 INF_{t-1} + \delta_2 ED_{t-1} + \delta_3 WAGE_{t-1} + \delta_4 GDP_{t-1} + \delta_5 FD_{t-1}$$
$$+ e_2 \ldots\ldots\ldots \quad (21)$$

For structuralist inflation equation, the ARDL model for equation (18) is represented as follows:

$$\Delta INF = c_0 + \sum_{i=1}^{n} c_1 \Delta INF_{t-1} + \sum_{i=1}^{n} c_2 \Delta WAGE_{t-1} + \sum_{i=1}^{n} c_3 \Delta OPEN_{t-1} + \sum_{i=1}^{n} c_4 \Delta FPI_{t-1}$$
$$+ \sum_{i=1}^{n} c_5 \Delta AA_{t-1} + \sum_{i=1}^{n} c_6 \Delta EXR_{t-1} + \sum_{i=1}^{n} c_7 \Delta IMPY_{t-1} + \gamma_1 INF_{t-1} + \gamma_2 WAGE_{t-1}$$
$$+ \gamma_3 OPEN_{t-1} + \gamma_4 FPI_{t-1} + \gamma_5 AA_{t-1} + \gamma_6 EXR_{t-1} + \gamma_7 IMPY_{t-1} + e_3 \ldots\ldots\ldots \quad (22)$$

Finally, the ARDL model for the integrated inflation equation (19) is written asfollows:

$$\Delta INF = d_0 + \sum_{i=1}^{n} d_1 \Delta INF_{t-1} + \sum_{i=1}^{n} d_2 \Delta M2_{t-1} + \sum_{i=1}^{n} d_3 \Delta WAGE_{t-1} + \sum_{i=1}^{n} d_4 \Delta OPEN_{t-1} + \sum_{i=1}^{n} d_5 \Delta FPI_{t-1} + \sum_{i=1}^{n} d_6 \Delta ED_{t-1} + \sum_{i=1}^{n} d_7 \Delta AA_{t-1} + \sum_{i=1}^{n} d_8 \Delta EXR_{t-1} + \sum_{i=1}^{n} d_9 \Delta IMPY_{t-1} + \Pi_1 INF_{t-1} + \Pi_2 M2_{t-1} + \Pi_3 WAGE_{t-1} + \Pi_4 OPEN_{t-1} + \Pi_5 FPI_{t-1} + \Pi_6 ED_{t-1} + \Pi_7 AA_{t-1} + \Pi_8 EXR_{t-1} + \Pi_9 IMPY_{t-1} + e_4 \ldots\ldots\ldots \quad (23)$$

Where Δ = First difference operator

e_1, e_2, e_3 and e_4 = White noise error terms for equation (20), (21), (22) and (23)

The coefficients a_1 to a_3 are the short-run dynamics and α_1 to α_3 denote long-run dynamic relationships for equation (20). Also, the coefficients b_1, b_2, b_3, b_4, b_5 represent the short-run dynamic relationship, likewise the coefficients δ_1, δ_2, δ_3, δ_4 and δ_5 are the long-run elasticities. Again, for equation (22), short-run and long-run coefficients are represented as c_1, c_2, c_3, c_4, c_5, c_6, c_7, and γ_1, γ_2, γ_3, γ_4, γ_5, γ_6 and γ_7 respectively. Lastly, for equation (23), the interplay between the short and long runs coefficients are d_1, d_2, d_3, d_4, d_5, d_6, d_7, d_8 and π_1, π_2, π_3, π_4, π_5, π_6, π_7, π_8 respectively. For estimating long-run connections, the ARDL technique consists of two steps. To begin, you must identify if long-run relationships exist among the variables in the study. The ARDL testing procedure which makes F-test application is made use of. The following is the hypothesis that will be used to determine whether there is a long- run co-integration relationship between the variables:

For equation 20, the hypothesis is:

H_0: $\alpha_1 = \alpha_2 = \alpha_3 = 0$

H_1: $\alpha_1 \neq \alpha_2 \neq \alpha_3 \neq 0$

For equation (21), the hypothesis is:

H_0: $\delta_1 = \delta_2 = \delta_3 = \delta_4 = \delta_5 = 0$

H_1: $\delta_1 \neq \delta_2 \neq \delta_3 \neq \delta_4 \neq \delta_5 \neq 0$

For equation (22)

H_0: $\gamma_1 = \gamma_2 = \gamma_3 = \gamma_4 = \gamma_5 = \gamma_6 = \gamma_7 = 0$

H_1: $\gamma_1 \neq \gamma_2 \neq \gamma_3 \neq \gamma_4 \neq \gamma_5 \neq \gamma_6 \neq \gamma_7 \neq 0$

For equation (23), the hypothesis is:

H_0: $\pi_1 = \pi_2 = \pi_3 = \pi_4 = \pi_5 = \pi_6 = \pi_7 = \pi_8 = 0$

H_1: $\pi_1 \neq \pi_2 \neq \pi_3 \neq \pi_4 \neq \pi_5 \neq \pi_6 \neq \pi_7 \neq \pi_8 \neq 0$

The various null hypotheses state that the variables in the models are not co-integrated. Conversely, the alternate hypotheses indicate that the variables in the various models are co-integrated.

Presentation and discussion of empirical findings

This part examines the outcome of equations (16), (17), (18), and (19), starting with the outcomes of the unit root test.

Unit root test results

Table 1 shows the summary of the unit root test results of the data on the variables used to estimate the relevant equations in the model. We first established the basic characteristics of the processes that generated our time series variables before estimating equations (16), (17), (18), and (19). The goal of the exercise is to determine if the variables in our models are stationary or not. We establish the null hypothesis first, which is that the time series are not stationary or *I(*1), alongside the alternative proposition that the time series is stationary, or *I* (0).

Table 1: Results of the Augmented Dickey-Fuller Unit root test.

	Variable	t-statistic	Critical value	Percentage level	Order of integration (decision)
1	INF	-3.416	-2.9238	5%	I(0)
2	FDT	-4.2081	-3.5744	1%	I(0)
3	LGDP	0.7048	-2.6007	10%	Non-stationary
	D(LGDP)	-2.9408	-2.9281	5%	I(1)
4	LM2	-1.1252	-2.6007	10%	Non-stationary
	D(LM2)	-4.4804	-3.5777	1%	I(1)
5	OPEN	-2.9125	-2.5999	10%	I(0)
6	ED	-4.9099	-3.5777	1%	I(0)
7	FPI	0.0451	-2.6014	10%	Non-stationary
	D(FPI)	-3.6915	-3.5812	1%	I(1)
8	LEXR	-0.3011	-2.5999	10%	Non-stationary
	D(LEXR)	-4.4962	-3.5777	1%	I(1)

9	LAA D(LAA)	-1.9751 -4.1557	-2.6022 -3.5847	10% 1%	Non-stationary I(1)

10	LWAGE D(LWAGE)	-0.3181 -7.2949	-2.5999 -3.5777	10% 1%	Non-stationary I(1)
11	IMPY	-2.6648	-2.5999	10%	/(0)

Source: Computed by the author, 2021.

To check the order in which the variables are integrated, we use the Augmented Dickey-Fuller (ADF) unit root test. If the calculated statistic in the test is greater (in absolute) terms than the critical value, the null hypothesis is rejected. The contrary is true if the calculated statistic is less than the critical value.

From the results, INF, FDI, OPEN, ED, and IMPY were stationary at levels or I(0), while LGDP, LM_2, FPI, LEXR, LAA, LWAGE, RT were all stationary at first difference or /(1). The table distinctively demonstrates that because, the stationarity features among the variables in the model in this enquiry is a combination of *I*(0) along with *I*(1). The mixed data integration qualities demonstrated that the Author Regressive Distributed Lag (ARDL) bounds testing co-integration technique is particularly suitable for the investigation.

Two sets of critical values identify the lower and upper bounds used for the analysis are provided by Pesaran et al. (2001). It is demonstrated that the variables are integrated at order zero or *I*(0), in the first lesser values, and integrated at order one, or *I*(1), in the higher value . Therefore, if the estimated F-statistic is greater than the upper bound critical value, co-integration is present with the implication of a long-run relationship. To the contrary, if the computed F-statistic is smaller than the lower bound, we accept the null hypothesis that co-integration does not exist.

In addition, given a value within the boundaries, the results will be regarded as being inconclusive.

The optimal magnitude of lags in the short-run specification of the ARDL model is determined using the Akaike information criterion (AIC).

ARDL Bound Test: Monetarist inflation equation results

The ARDL bound test results for co-integration for monetarist inflation in equation (16) are presented in Tables (2), (3) and (4).

Table 2: ARDL bounds test results for co-integration in monetarist inflation equation

Test Statistic	Value	Significance levels	Lower bound I(0)	Upper bound I(1)
		10%	2.63	3.35
F-satistic	3.4493	5%	3.10	3.87
		2.5%	3.55	4.38
		1%	4.13	5.00

Source: Computed by the author, 2021.

Table 2 demonstrates that the bound test's F-statistic is 3.45. This predicted value exceeds the values of 2.63 and 3.35 for *I*(0) and *I*(1), respectively, at the percent level of significance. As a result, we draw the conclusion that the variables in the monetarist inflation equation are co-integrated and that there is a long-run connection linking them.

Table 3: ARDL Long-run results for monetarist inflation

Dependent variable: D(INF)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	774.1549	323.6004	2.392317	0.0224
INF(-1)	-0.652593	0.180004	-3.625437	0.0009
LM2(-1)	3.176046	1.738256	1.827145	0.0765
LGDP(-1)	-27.34557	11.77201	-2.322930	0.0263
D(INF(-1))	0.542419	0.177720	3.052093	0.0044
D(INF(-2))	-0.113951	0.156215	-0.729449	0.4707
D(INF(-3))	0.270464	0.153753	1.759087	0.0876
D(LGDP)	-121.0596	37.15650	-3.258100	0.0025
D(LM2)	0.77890	0.35670	2.21124	0.0187
D(LGDP(-1))	63.59972	36.01252	1.766045	0.0864
D(LGDP(-2))	-27.92705	38.04298	-0.734092	0.4679
D(LGDP(-3))	95.77272	37.41370	2.559830	0.0151

Source: Computed by the author, 2021.

Table 4: Error correction model (ECM) short-run results for monetarist inflation equation
Dependent variable: D(INF)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(INF(-1))	0.542419	0.168139	3.226015	0.0028
D(INF(-2))	-0.113951	0.148852	-0.765529	0.4492
D(INF(-3))	0.270464	0.145706	1.856229	0.0721
D(LGDP)	-121.0596	32.51272	-3.723454	0.0007
D(LM2)	0.77890	0.31570	2.41133	0.0157
D(LGDP(-1))	63.59972	33.37228	1.905765	0.0652
D(LGDP(-2))	-27.92705	35.07463	-0.796218	0.4314
D(LGDP(-3))	95.77272	32.74709	2.924618	0.0061
CointEq(-1)*	-0.652593	0.168418	-3.874840	0.0005

R-squared	0.544337	Mean dependent var	0.148713
Adjusted R-squared	0.458131	S.D. dependent var	14.67320
S.E. of regression	10.80120	Akaike info criterion	7.757002
Sum squared resid	4316.638	Schwarz criterion	8.078187
Log likelihood	-166.5326	Hannan-Quinn criter.	7.876737
Durbin-Watson stat	2.021383		

Source: Computed by the author, 2021.

Tables 3 and 4 provide the ARDL results for the long-run and short-run connections, correspondingly. According to the estimated coefficients, the money supply growth and previous inflation rates, which reflect inflation permanence and persistence, are the main factors driving inflation in the Nigerian economy together within the short- run and long term (Asekunowo, 2016). The outcome further demonstrate that, at 10 percent and 5 percent significant levels, in that order, the coefficients on the monetary growth variables [LM2(-1) and D(LM2)] in the long-run along with short-runs are consistent with the a priori expectation. Specifically, a 1 percent positive rise in monetary growth will bring about a rise in inflation rates of 3.18 percent in the long run and 0.78 percent in the short run, respectively.

Alternatively, obtain results demonstrate that the level of current GDP

growth rate help to mitigate the effect of inflation both in the short-run and one period lagged in the long-run. Interestingly, D(LGDP) and LGDP(-1) are both negative in their coefficients in accordance with theoretical expectations. Accordingly, a 1 percent increase in both the previous levels of GDP and the current level of GDP will result to 27.35 percent and 121.06 percent reduction in the rate of inflation respectively in the Nigerian economy.

Table 4 displays the ARDL results for the monetarist inflation equation. The error rectification term (Coint Eq(-1) is as anticipated and significant at 1 percent level. The coefficient of -0.652593 indicates that the rate of adjustment is high. The proportion of disequilibrium errors accumulated over the previous period that are rectified throughout the present period is the error correction coefficient. The outcome reveals that roughly 65 percent of the disequilibrium errors from the previous year have been corrected in the current year. Our findings that the specified variables in the monetarist inflation equation are in fact co-integrated are supported by the highly significant error-correction term coefficient.

The multiple determination adjustment coefficient ($\overline{R}^2$) is 0.46. This shows that changes in all the explanatory variables together account for roughly 46% of the overall systematic variations in the rate of monetarist inflation. No first order serial correlation is present in the data utilized in this investigation, according to the Durbin-Watson statistic value of 2.02..

ARDL bounds test results for Keynesian inflation equation

Tables 5, 6, and 7 show the findings of the Keynesian inflation equation's ARDL bound test

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Table 5: ARDL bound test result for co-integration in the Keynesian inflation equation.

Test Statistic	Value	Significance levels	Lower bound I(0)	Upper bound I(1)
		10%	2.20	3.09
F-satistic	4.831572	5%	2.56	3.49
		2.5%	2.88	3.87
		1%	3.29	4.37

Source: Computed by the Author, 2021.

Table 5 illustrates that the F-statistic produced by the bounds test is 4.83. This value is higher than 3.29 and 4.37 for *I*(0) and *I*(1) respectively at 1 percent level of significance. The variables used in the Keynesian inflation equation are consequently inferred to be co-integrated. As a result, we draw the conclusion that the variables in the Keynesian inflation equation have a long-run relationship.

The results of the Error correction term in both the long and short runs of the Keynesian inflation in the equation (17) are listed in Tables 6 and 7. The Keynesian inflation outcome in Tables 6 and 7 demonstrate that, over the long run, Nigeria's previous level of excess demand is the main factor that feeds the flame of inflationary tendencies. In contrast, the short-run inflation in Nigeria is influenced by the previous levels of inflation rate, GDP growth, and budget deficit. The results show that, the coefficient of the excess demand variable lagged one period is positively signed thus, satisfying theoretical expectations and also statistically significant at the 5percent level. This means that, for every 1 percent increase in the previous level of excess demand the rate of inflation will increase by 0.25 percent.

Table 6: ARDL long-run results for the Keynesian inflation equation.
Dependent variable: D(INF)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-234.1066	247.4908	-0.945921	0.3511
INF(-1)	-0.574042	0.134127	-4.279828	0.0002
LWAGE(-1)	-2.153520	1.790499	-1.202749	0.2376
LGDP(-1)	8.011949	8.285291	0.967009	0.3406
FD(-1)	-1.566953	0.554981	-2.823433	0.0080
ED(-1)	0.248906	0.099278	2.507148	0.0173
D(INF(-1))	0.245498	0.128969	1.903548	0.0657
D(INF(-2))	-0.194706	0.126476	-1.539471	0.1332
D(LGDP)	-67.56607	38.04515	-1.775944	0.0850
D(LGDP(-1))	88.38078	37.34207	2.366788	0.0240
D(FDT)	0.402976	0.523604	0.769619	0.4470
D(FDT(-1))	0.907043	0.424262	2.137929	0.0400
D(ED)	0.012523	0.093775	0.133541	0.8946

Source: Computed by the Author, 2021.

Table 7: Results of the short-run dynamics of the error correction model (ECM) equation for Keynesian inflation.

Dependent variable: D(INF)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(INF(-1))	0.245498	0.105978	2.316507	0.0269
D(INF(-2))	-0.194706	0.106186	-1.833635	0.0757
D(LGDP)	-67.56607	30.93487	-2.184139	0.0362
D(LGDP(-1))	88.38078	31.14524	2.837698	0.0077
D(FD)	0.402976	0.427897	0.941758	0.3532
D(FDT(-1))	0.907043	0.361321	2.510352	0.0171
D(ED)	0.012523	0.076151	0.164447	0.8704
CointEq(-1)*	-0.574042	0.099355	-5.777696	0.0000

R-squared	0.645503	Mean dependent var	0.187763
Adjusted R-squared	0.580201	S.D. dependent var	14.51166
S.E. of regression	9.402381	Akaike info criterion	7.476574
Sum squared resid	3359.381	Schwarz criterion	7.794598
Log likelihood	-163.9612	Hannan-Quinn criter.	7.595708
Durbin-Watson stat	2.092617		

Source: Computed by the Author, 2021.

Despite being significant at a level of 5 percent, the long-run one-period lagged fiscal deficit variable has a negative sign, which is against the *a priori* expectation. The short-run coefficient of the one period lagged fiscal deficit variable, however, is not only statistically important with regard to 5 percent level, it is also positively signed according to theoretical expectation, indicating that a 1% increase in the previous fiscal deficit level in the short-run will lead to a rise in the rate of inflation of 0.91 percent.

The empirical evidence demonstrates a positive association between the one period lagged GDP growth rate in both the long and short-runs, however, the short-run estimation's coefficient is statistically

significant at the 5 percent level. In contrast, the short-term coefficient of the current level of the LGDP growth rate variable is negative, which is consistent theoretically. At a level of 5%, the LGDP coefficient is statistical significant, as a result of which a 1 percent rise in the pace of expansion of the LGDP will result in a 67.57 percent reduction in inflation rate in the Nigerian economy

The expected negative sign of the error-correction expression (CointEq)(-1) turns out to be -0.57, havin a probability of 0.000. Additionally, at the 1 percent level it is highly significant. Our earlier conclusions that the identified variables in the Keynesian inflation equation are in fact co-integrated are supported by the strong impact of the coefficient of the error rectification term. According to findings, adjusted R-squared ($\bar{R}^2$) is 0.58. This is a good fit. The Keynesian inflation study's data series did not exhibit any autocorrelation, as indicated by the Durbin-Watson value of 2.09.

ARDL bounds test results for structuralist inflation equation

The structuralist inflation results are reported in Table 8, 9 and 10.

Table 8: ARDL bounds test result for co-integration in the structuralist inflation equation

Test Statistic	Value	Significance levels	Lower bound I(0)	Upper bound I(1)
		10%	1.99	2.94
F-satistic	7.940598	5%	2.27	3.28
		2.5%	2.53	3.61
		1%	2.88	3.99

Source: Computed by the Author, 2021.

The co-integration test result is shown in Table 8. It demonstrates that the bounds test's F-statistic is 7.94. This result indicates that there is cointegration in the variables used for the structuralist inflation estimation because it is higher than 2.88 as well as 3.99 for $I(0)$ and $I(1)$, correspondingly, at the 1percent level of significance. Consequently, the variables in the structuralist inflation equation have long-term relationships.

Table 9: ARDL long-run results for the structuralist inflation equation.

Dependent variable: D(INF)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-61.34298	134.0030	-0.457773	0.6508
INF(-1)	-1.434064	0.190513	-7.527379	0.0000
LWAGE	-7.231117	3.596550	-2.010570	0.0545
OPEN(-1)	0.795850	0.328593	2.421993	0.0224
LFPI(-1)	86.63034	24.33512	3.559890	0.0014
LAA	-24.01662	13.09706	-1.833741	0.0777
LEXR(-1)	-11.16055	5.646865	-1.976415	0.0584
IMPY**	0.402356	0.522868	0.769517	0.4483
D(INF(-1))	0.494298	0.129293	3.823078	0.0007
D(OPEN)	0.018983	0.222092	0.085473	0.9325
D(OPEN(-1))	-0.746627	0.238391	-3.131946	0.0041
D(OPEN(-2))	-0.678206	0.229720	-2.952311	0.0065
D(OPEN(-3))	-0.262638	0.191260	-1.373201	0.1810
D(LFPI)	41.84401	35.16181	1.190041	0.2444
D(LEXR)	5.888703	7.452496	0.790165	0.4363
D(LEXR(-1))	30.36779	9.043793	3.357860	0.0023
D(LEXR(-2))	54.09952	9.658719	5.601107	0.0000
D(LEXR(-3))	17.33169	11.62400	1.491027	0.1475

Source: Computed by the author, 2021.

Table 10: Error correction model (ECM) short-run results for the structuralist inflation equation. Dependent variable: D(INF)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(INF(-1))	0.494298	0.096480	5.123307	0.0000
D(OPEN)	0.018983	0.131131	0.144762	0.8860
D(OPEN(-1))	-0.746627	0.167183	-4.465928	0.0001
D(OPEN(-2))	-0.678206	0.159000	-4.265439	0.0002
D(OPEN(-3))	-0.262638	0.135590	-1.937000	0.0633
D(LFPI)	41.84401	22.17558	1.886941	0.0700
D(LEXR)	5.888703	5.182336	1.136303	0.2658
D(LEXR(-1))	30.36779	5.938956	5.113321	0.0000
D(LEXR(-2))	54.09952	7.890583	6.856213	0.0000
D(LEXR(-3))	17.33169	9.894916	1.751575	0.0912
CointEq(-1)	-0.444064	0.160339	-8.933946	0.0000

R-squared	0.812311	Mean dependent var	0.148713
Adjusted R-squared	0.757108	S.D. dependent var	14.67320
S.E. of regression	7.231552	Akaike info criterion	7.003371
Sum squared resid	1778.042	Schwarz criterion	7.445000
Log likelihood	-146.5759	Hannan-Quinn criter.	7.168006
Durbin-Watson stat	2.117738		

Source: Computed by the Author, 2021.

Table 9 and 10 exhibit the structural inflation equation's ARDL long-run and short-run outcomes. The tables show that contrary to *a priori* expectations, the wage rate variable produces a negatively signed coefficient over the long term. However, at a 5 percent level, it is significant statiscally. At the long-run, the openness variables show a positively signed coefficient, whereas in the short run, a negatively signed coefficient. But at the usual level of 5 percent, both coefficients are statistically significant. Additionally, at the 1percent and 10 percent levels, respectively, the first and second period lagged openness variables have negatively signed coefficients that are statistically significant.

In contrast to theoretical predictions, the log of food production index (LFPI) exhibits a positively signed coefficient both at long-run and short-run, with statistically significant coefficients. This points out that,

in the long-run and short-run, a 1percent improvement in food production will lead to a rise in the rate of inflation of around 86.63 and 41.84 percent, respectively. Interestingly, the long-run, coefficient of the log of agricultural advancement (LAA) is negative, as predicted theoretically, and significant statistically t at the 10% level, indicating that a 1percent enhancement in agricultural advancement leads to 24.02 percent decline in inflation rate in Nigeria. In the long-run estimate, the coefficient of the one-period lagged openness variable has a positive sign, but in the short-term estimates, they are negative for the first, second, and third lags. This shows that while the openness of the Nigerian economy has a positive long-run impact on the country's high rate of inflation, it has a negative short-run consequences on price increases.

within the long-term, the log of the rate of exchange variable lagged by one period (LEXR(-1)) exhibits a negatively signed coefficient that is significant at a 10 intensity, whereas the first, second, and third lags in the short run dynamics exhibit positively signed coefficients that are statistically significant at a 1percent level. The exception is the third lag, which is significant at the 10 percent level.

The one period lagged inflation rate variable INF(-1) produces a short-run positively signed coefficient and a long-run negatively signed coefficient. The fact that both coefficients are statistically significant at the 1percent level means that a 1percent increase in the rate of one period lagged inflation rate will result in a 1.43 percent drop in current inflation rate over the long- run, but a 0.49 percent increase in the short- run . The import-GDP ratio (IMP/Y) performs poorly. The expected negative value of the error rectification coefficient (EcointEq(-1)) is -0.44, and highly significant at 1percent level. This provides further evidence on the variables in the structuralist inflation equation that they are indeed, co-integrated. The coefficient implies a speed of adjustment of about 44 percent. The adjusted coefficient of determination ($\overline{R}^2$) which reveals the goodness of fit of the model indicates that about 76% of the changes in the rate of structural inflation is accounted for by the independent variables during the time frame under study. The region where there is no autocorrelation is defined by the Durbin- Watson statistic of 2.12.

ARDL bounds test results for the integrated inflation equation

A synthesis of the specification by the three schools of thought generates the following integrated results, starting with the bounds test results.

Table 11: ARDL bounds test result for co-integration in the integrated inflation equation

Test Statistic	Value	Significance levels	Lower bound I(0)	Upper bound I(1)
F-satistic	4.684736	10%	1.92	2.89
		5%	2.17	3.21
		2.5%	2.43	3.51
		1%	2.73	3.90

Source: Computed by the Author, 2021.

As of Table 11, the calculated F-value of 4.69 indicates that the no co-integration null hypothesis could be discarded at 1% significance level. This is because the F-statistic of 4.685 exceeded the upper bound of the critical values. Consequently, a co-integration relationship is said to exist among the variables in the integrated equation within the study period.

Table 12: ARDL long-run results for the integrated inflation equation.
Dependent variable: D(INF)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-209.8758	256.7545	-0.817418	0.4284
INF(-1)	-0.896364	0.466492	-1.921498	0.0769
LM2(-1)	-1.291828	5.209301	-0.247985	0.8080
LWAGE(-1)	2.055059	9.871682	0.208177	0.8383
OPEN(-1)	-1.507260	0.890419	-1.692753	0.1143
LFPI(-1)	88.94312	59.34741	1.498686	0.1578
ED(-1)	1.98756	0.76325	2.35124	0,0436
LAA(-1)	-12.69465	18.27467	-0.694658	0.4995
LEXR(-1)	-15.09578	9.005126	-1.676354	0.1175
IMPY(-1)	3.051987	1.757059	1.736986	0.1060
D(INF(-1))	-0.217699	0.399197	-0.545342	0.5948
D(INF(-2))	-0.475086	0.268600	-1.768748	0.1004
D(INF(-3))	-0.334432	0.223809	-1.494276	0.1590
D(LM2)	1.355007	18.82021	0.071997	0.9437
D(LM2(-1))	73.00690	17.00188	4.294049	0.0009
D(LM2(-2))	12.06778	15.05279	0.801697	0.4371
D(LM2(-3))	36.71236	17.08128	2.149275	0.0510
D(LWAGE)	7.401229	7.657510	0.966532	0.3514
D(LWAGE(-1))	-6.052453	5.955797	-1.016229	0.3281
D(LWAGE(-2))	-4.739864	4.589958	-1.032659	0.3206
D(OPEN)	0.004948	0.370183	0.013366	0.9895
D(OPEN(-1))	0.692258	0.494289	1.400514	0.1848
D(OPEN(-2))	0.518120	0.368259	1.406946	0.1829
D(LFPI)	25.72470	46.93805	0.548057	0.5929

D(ED)	1.87642	0.87223	2.01267	0.0458
D(LAA)	219.9008	157.4879	1.396303	0.1860
D(LEXR)	-4.446135	8.596234	-0.517219	0.6137
D(LEXR(-1))	42.33659	10.79125	3.923231	0.0017
D(LEXR(-2))	56.24031	11.61254	4.843067	0.0003
D(LEXR(-3))	30.75806	13.35507	2.303099	0.0384
D(IMPY)	-0.600823	0.769996	-0.780294	0.4492
D(IMPY(-1))	-2.788346	1.052184	-2.650057	0.0200
D(IMPY(-2))	-2.180884	0.804186	-2.711916	0.0178
D(IMPY(-3))	-0.753017	0.496238	-1.517452	0.1531

Source: Computed by the Author, 2021.

Tables 12 and 13 present the ARDL long-run and short-run outcomes of the integrated inflation equation. The combined findings demonstrate that, at a 10 percent level, the coefficient of the prior level of inflation rate is negative and significant in the long-run. The consequence is that previous inflation rate causes Nigeria's current rate of inflation to decline. Similar to this, the expectation coefficients of the second and third lags of inflation rate in the short-run aid to lower Nigeria's inflation rate. Regarding the long-term performance of the broad monetary supply growth variable, which is lagged by one period, its coefficient is negative in contrast to what would be predicted theoretically and statistically insignificant. However, within short-run, lag one, lag two, and lag three of the money supply growth variable all yielded positively signed coefficients in line with what was anticipated *a priori*, but only the first and third lags coefficients are significant at the 1 percent point.

At the long-run, the minimum wage rate variable produced a positively signed but statistically insignificant coefficient that was lagged by one period. Nevertheless, the current minimum wage coefficient at a level of 5 percent is both positive and statistically significant in the short term. However, the short run coefficients of the first and second lags are both negative and significant at the 5 and 10 percent levels. In the long-run, price movement in Nigeria is not significantly impacted by the openness variable. However, the first and second lags of the openness variable's coefficients are positive and significant at levels of 1 and 5%, respectively, in the short-run. Contrary to theoretical expectation and statistically insignificant, are the coefficients of the log of food production index (LFPI) variable, which are positive over the long run and short run.

In line with *a priori* expectation, excess demand variables yield positively signed and significant coefficients both in the long period and the short period. The positive and remarkable coefficient at 5% level implies that excessive demand in the Nigerian economy has a significant role in driving up prices. In the long-run, the coefficient of agricultural advancement (D(LAA)(-1) variable's is negative and statistically insignificant, while it ispositive in the short run and statistically significant at the 1% level.

The coefficient of the exchange rate variable in the long-run, with a one-year lag (LEXR(-1)) is negative and statistically insignificant. Furthermore, the current exchange rate level's coefficient in the short run is negative and insignificant also. In addition, the short run exchange rate variable's first, second and third lags all have positive coefficients that are highly significant at 1% level. The import- GDP ratio (IMP/Y) variable's long-run outcome signify that it has a positive and significant coefficient at the 10% level. The first, second, and third lags' coefficients, however, appear negative and at the time highly significant at 1% level for lags one along with two, and significant at the 5% level for lag three.

Table 13: Short-run error correction model (ECM) results for the integrated inflation model.

Dependent variable: D(INF)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(INF(-1))	-0.217699	0.091023	-2.391687	0.0326
D(INF(-2))	-0.475086	0.076694	-6.194568	0.0000
D(INF(-3))	-0.334432	0.098630	-3.390759	0.0048
D(LM2)	1.355007	8.002763	0.169317	0.8682
D(LM2(-1))	73.00690	9.322721	7.831073	0.0000
D(LM2(-2))	12.06778	10.91409	1.105706	0.2889
D(LM2(-3))	36.71236	9.476829	3.873908	0.0019
D(LWAGE)	7.401229	3.128893	2.365447	0.0342
D(LWAGE(-1))	-6.052453	2.504247	-2.416875	0.0311
D(LWAGE(-2))	-4.739864	2.411259	-1.965721	0.0711
D(OPEN)	0.004948	0.166841	0.029656	0.9768
D(OPEN(-1))	0.692258	0.195521	3.540576	0.0036
D(OPEN(-2))	0.518120	0.174052	2.976807	0.0107
D(LFPI)	25.72470	22.77899	1.129317	0.2792
D(ED)	1.36498	0.55672	2.33287	0,0265
D(LAA)	219.9008	39.02031	5.635548	0.0001
D(LEXR)	-4.446135	4.483007	-0.991775	0.3394
D(LEXR(-1))	42.33659	5.507871	7.686562	0.0000
D(LEXR(-2))	56.24031	7.731920	7.273783	0.0000
D(LEXR(-3))	30.75806	9.888585	3.110461	0.0083
D(IMPY)	-0.600823	0.343179	-1.750755	0.1035
D(IMPY(-1))	-2.788346	0.429837	-6.486979	0.0000
D(IMPY(-2))	-2.180884	0.394027	-5.534856	0.0001
D(IMPY(-3))	-0.753017	0.296297	-2.541429	0.0246
CointEq(-1)	-0.896364	0.108613	-8.252809	0.0000

R-squared	0.932895	Mean dependent var	0.148713
Adjusted R-squared	0.859400	S.D. dependent var	14.67320

S.E. of regression	5.501966	Akaike info criterion	6.552615
Sum squared resid	635.7043	Schwarz criterion	7.516168
Log likelihood	-123.4338	Hannan-Quinn criter.	6.911818
Durbin-Watson stat	2.373827		

Source: Computed by the Author, 2021.

Table 13 shows the integrated inflation model's error-correction description of the short-run dynamics. The lagged error correction term's coefficient, which is -0.90, has the predicted negative sign and is highly significant at the 1percent level. Our prior findings of the co-integrating relationships among the variables in the integrated inflation model are supported by the negative and significant error correction term.

The coefficient implies a relatively high speed of adjustment of -0.90. The adjusted coefficient of determination ($\overline{R}_2$) is about 0.86. This demonstrates that changes in all the approximately 86 percent of the overall fluctuations in the current inflation rate are explained by explanatory factors. The auto-correlation concern is not present in our specification, according to the Durbin-Watson statistic of 2.37.

DISCUSSION OF FINDINGS

The study's major goal is to identify the root causes of inflation in Nigeria while taking into account the monetarist, Keynesian, and structuralist causal elements. To do this, the order of integration of the variables utilized in the models was determined by the use of the Augmented Dickey-Fuller (ADF) unit root test. The test results are shown presented in Table 1. According to the table, the variable's stationarity characteristics are a blend of *1*(0) and *I(*1). This allowed us to estimate our inflation model using the ARDL (Author Regressive Distributed Lag) bound testing co integration approach. Tables 2, 5, 8, and 11 contain results of the bound test. The outcomes demonstrate the co- integration of each variable in the estimated equations.

Tables 3, 4, 6, 7, 9, 10, 12 and 13 provide information on the long-run and short-run dynamics of the monetarist, Keynesian, structuralist, and integrated inflation results. The findings consistently show that the one period lagged inflation rate (INF(-1)) helps to reduce the adverse impact of inflation on the Nigerian economy. In contrast, the first lagged coefficient of the inflation rate variable (D(INF(-1)), which represents inflation permanency, makes a positive and significant contribution toward the high pace of inflation in the short-term in Nigeria. The integrated result's negative coefficient, however, stands out as an

exception. A significant factor in the current inflation in Nigeria appears to be the lagged inflation rate.The outcome is in line with Asekunowo's (2016) findings.

Findings presented in Tables 3 and 4 make it abundantly evident that, both over the long term and short-run, the coefficients of the money supply growth variable (LM2) are positive and statistically significant at levels of 10 percent and 5 percent, respectively. The effect is instantaneous in the short run, but it lags by one period in the long run. However, in the integrated result, the one-period lagged money supply variable has an insignificant long-run impact on the inflation rate while having a positive and sognificant short-run impact, particularly in the first and third lags.

An interesting feature of the monetarist and Keynesian results is that the coefficients of the current GDP growth in the short-run for both schools of thought which, at the 1% and 5% levels, respectively, are negative and statistically significant. Only one period lagged variable over the long run in the monetarist result produced a negative coefficient that is significant statistically at 5 percent level. The Keynesian results demonstrate that the coefficient on fiscal deficit variable lagged one period (FD(-1)) is negative over the long run and positive over the short run. This indicates that with respect to short-run, fiscal deficit contributes to upward price movement in Nigeria. However, in the long-run, the percentage of inflation rate contributed by fiscal deficit may have decreased substantially. The justification for the negative coefficient could be that the budget deficit is invested in productivity enhancing projects and at the same time restraining the monetization of such deficit. This result agrees with the result of the study by Odonye, Odeniran, Oduyemi Olaoye and Ajayi (2014).

In both the Keynesian and integrated results, the long-run coefficient of excess demand variable lagged one year (ED(-1)) has a positive and significant impact on Nigeria's inflation rate. Although positive in the short-run, the current level of excess demand variable's coefficient is not statistically significant in the Keynesian model; however, it is significant at a level of 5% in the integrated result only.

The one-period lagged wage rate variable (LWAGE(-1)) has a long-run coefficient that is statistically significant in the structuralist inflation equation result and negative and inconsequential statistically in- the Keynesian result. Despite being positive nonetheless, it has little long-run impact on the integrated result. However, in the integrated result in the short run, the existing wage rate variable's coefficient is positive as well significant at the 5% level demonstrating that in the short term, an increase in the minimum wage in Nigeria

positively contributes to an increase in prices. In contrast, the first and second lags of the minimum wage variable in the short run show negative coefficients that are statistically significant at 5 percent and 10percent levels, respectively. This finding suggests that in the short run, the previous levels of the minimum wage in Nigeria contribute to lowering the current rate of inflation in the country. This outcome is consistent with what MacDonald and Nilsson (2016). Discovered. They noted that little increases in the minimum wage for the American economy do not result in higher prices and may even bring prices down. This would be feasible if modest increases in the minimum wage, as is the case in Nigeria, result in more employment in low- wage labor markets and a corresponding rise in output.

In the long term, the lags of agricultural advancement (LAA) and one period lagged exchange rate (LEXR(-1)) variables are negative in both the structural and integrated inflation results, but only the structural inflation coefficients are statistically significant at 10 per cent level. In the short-run, the current level of agricultural advancement contributes positively to inflation rate. The coefficients of lag one, two and three of the exchange rate variable are all encouraging and significant at 1% level in both the structural and integrated inflation results. This portrays that either outright devaluation or depreciation of the naira causes prices to rise in Nigeria. The imports-GDP ratio variable is more relevant in the integrated inflation result in explaining price level movement in the Nigeria economy in the short term. This is because, in the short term, the coefficients of the current level and lag one, two and three of the imports- GDP ratio variables are all negative and statistically significant at 1 percent level for lag one and two variables and 5 percent level for lag three variable respectively. This demonstrate that imports (especially raw materials, food items and other essentials) contribute in ameliorating the depressing effects of inflation in emerging economies and Nigeria in particular.

CONCLUSION AND RECOMMENDATIONS

Conclusion

Based on what we have found, we make the following conclusions: The empirical evidence obtained with respect to broad money supply growth shows that, money supply is a significant predictor of inflation in Nigeria, both in the short and in the long run. The study finds that excess demand induces price increases in the Nigerian economy. This result tallies with that of Nwankwo (1982), who emphasized that the major cause of inflation in Nigeria

has been excess demand made effective by inflationary spending by government.

The minimum wage rate does not contribute significantly to high inflation rate in the Nigerian economy, it rather assists in mitigating the negative effect of price rise in the country. In the short-run, the previous level of fiscal deficit contributes positively to high inflation rate in Nigeria. However, in the long-run, it causes the rate of inflation to fall. The openness of the Nigerian economy impacted negatively on the Nigerian inflation rate in the short-run. However, it contributes positively in the long-run. The index of food production, both in the short and long-runs causes price to go up in the Nigerian economy.

Advancement in methods of agricultural production, captured by the total numbers of tractors and farm machineries per 1000 square kilometers of arable land contributes positively to inflation rate within the short run nevertheless its outcome is negative within the long run. We can confidently say that inflationary pressures of agricultural bottlenecks are strongly established by the empirical results. In the short-run, the signs of coefficients for various exchange rate variable lags are all positive and significant statistically, signifying that devaluation or depreciation of the Nigerian naira as is being experienced currently causes inflation in the Nigerian economy with some time lags. However, in the long-run, devaluation or depreciation of the naira may cause prices to fall. This result is in line with those of the research on Africa by Canetti and Greene (1991), where inflation in ten African countries studied was basically explained by exchange rate depreciation.

One striking outcome of the estimated results of the three schools of thought is that the coefficient of one period lag current inflation rate variable that measures inflation permanence is consistently positive and significant statistically within short-run with relatively large negative outcome in the long run. The exception is the integrated inflation result where coefficients of lags of current inflation rate are all negative both in the short-run and in the long-run. The study finds a large negative link between the current GDP growth and current monetarist and Keynesian rates of inflation. This negative relationships underscore the need for appropriate policy response that will enhance productivity in the Nigerian economy.

The study has unequivocally shown that Nigeria's inflation is determined by a variety of dynamic factors. The results of this study do not, therefore, support any particular theory for why the Nigerian economy is exhibiting inflationary tendencies.

Recommendations

The estimates derived from the inflation results may have various policy outcomes, which can be inferred from the conclusions. To prevent monetary outturns from substantially deviating from monetary policy's targets, monetary authorities should periodically restrict money supply growth in the Nigerian economy. Second, the CBN should adjust monetary growth in agreement with the economy's capability for absorption. This will largely ensure that there is a balance between growth in money supply and overall national output, especially as more financial resources are directed toward the economy's productive sectors.

Aggregate demand should be reduced in the short-run because of its short run and longrun consequences on inflation in the country. Falegan as well as Ogundare (1982) observed that the Nigerian economy does not easily react to demand management policy instruments through interest rate variation, tight monetary policy and price control due to structural deficiencies and inelasticities. Therefore, supply management will probably be a better approach. Again, government should come up with a deliberate policy of family planning. This, undoubtedly, will reduce excess demand for services and products over supply over the long run.

This study has demonstrated that Nigeria's inflation has a lagged cumulative impact. Consequently, preceding the formulation of monetary policies, the Central Bank of Nigeria (CBN) should, on a regular basis, gather and evaluate consumer's expectations in order to integrate them into the monetary policy framework.

The short-run results demonstrate how inflationary, deficit financing is. This need not be so. Government should be highly transparent in its fiscal measures to guarantee a reasonable fiscal deficit in order to avoid inflation. According to Nwankwo (1982), cutting back on the government's excessive deficit spending is the genuine solution to excess demand. Thus, fiscal deficit should be directed to productive investments in public works such as the provision of basic infrastructural facilities. Increased domestic supply and high GDP will result from this. To stop the rise in food prices in the nation, more domestic food production is desirable. This can be accomplished by adopting a systematic strategy to modernize the agriculture industry by gradually replacing outdated, manual agricultural practices with mechanized agricultural systems.

The findings show that Nigeria's inflation is very vulnerable to exchange rate depreciation. This implies that steps should be taken to boost domestic export volume in

order to generate more foreign currency. To ensure that legitimate firms that will add value to the real sectors of the Nigerian economy have appropriate access to foreign exchange, the exchange rate needs to be adequately managed. This will relieve pressure on foreign exchange market and, in turn, lower the pace of inflation brought on by the extreme depreciation of the naira as it is at the moment.

We discover a long run positive connection between inflation and degree of openness and a short run negative association based on the structuralist inflation result. The strong significant of the short-run negative association suggests that an outward looking industrial policy with a global focus will be best for the Nigerian economy. This will contribute to sustaining the economy's negative effects of openness on inflation in Nigeria, particularly in the in the short-run. The overall result shows that imports in the short-run helps in lowering the country's inflation rate. In order to continue to realize this healthy development, the government will need to keep subsidizing the importation of necessities like fertilizer for farmers and refined petroleum products etc. until there is sufficient domestic production to meet domestic demand for them.

Inflation in Nigeria cannot be cured by a single measure. Government should therefore support a comprehensive approach that not only takes into account the recommendations of the three schools of thought, but also goes above and beyond them to take into account the unique characteristics of a growing economy like Nigeria.

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